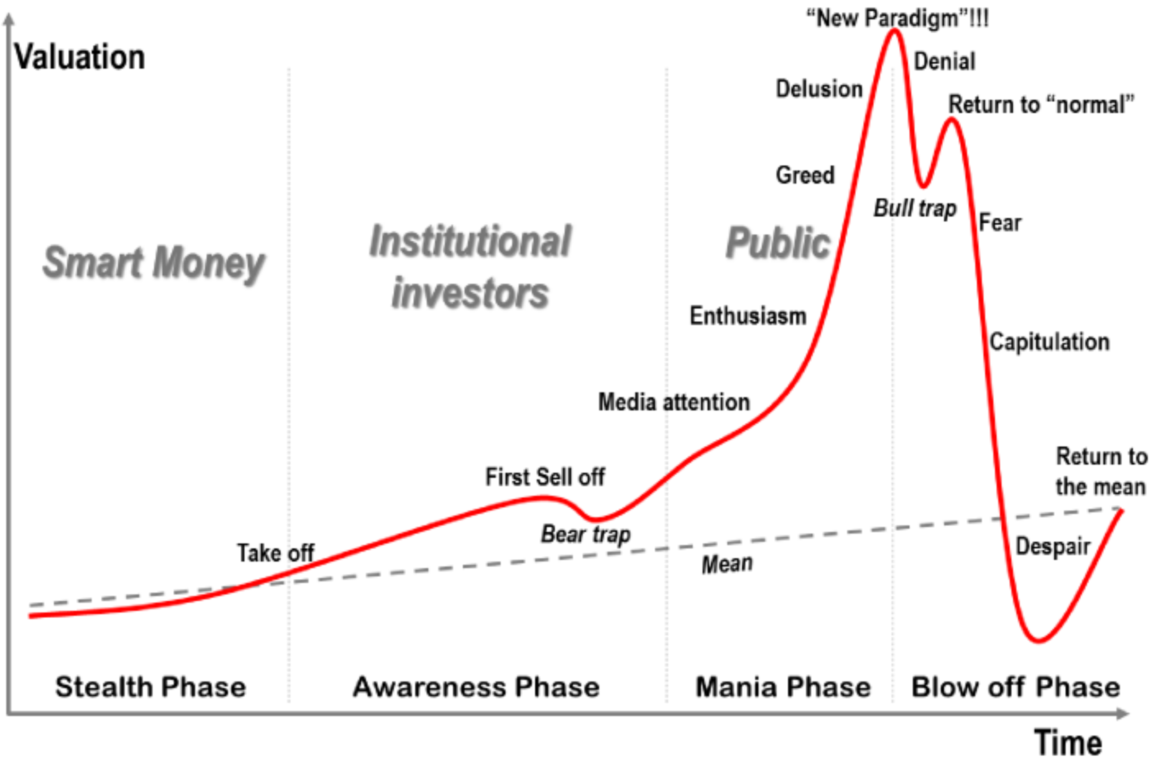

Stages in a Bubble

Business cycles are a well understood concept commonly linked with technological innovations, which are often triggering a phase of investment and new opportunities in terms of market and employment. The outcome is economic expansion and as the technology matures and markets become saturated, expansion slows down. A phase of recession is then a likely possibility as a correction is required to clear the excess investment or capacity that irremediably occur in the later stages of an economic cycle. The bottom line is that recessions are a **normal condition** to a market economy as they are regulating any excess, bankrupting the weakest players or those with the highest leverage. However, one of the mandates of central banking is to fight a process (business cycles) that occurs "naturally". The interference of central banks such as the Federal Reserve appear to be exaggerating the amplitude of bubbles and the manias that fuel them. It could be argued that business cycles are being replaced by phases of booms and busts, which are still displaying a cyclic behavior, but subject to much more volatility. Although manias and bubbles have taken place many times before in history under very specific circumstances (Tulip Mania, South Sea Company, Mississippi Company, etc.), central banks appear to make matters worst by providing too much credit and being unable or unwilling to stop the process with things are getting out of control (massive borrowing). Instead of economic stability regulated by market forces, monetary intervention creates long term instability for the sake of short term stability.

Bubbles (financial manias) unfold in several stages, an observation which backed up by 500 years of economic history. Each mania is obviously different, but there are always similarities; simplistically four phases can be identified:

1. **Stealth**. Those who understand the new fundamentals realize an emerging opportunity for substantial future appreciation, but at a risk since their assumptions are so far unproven. So the "smart money" gets invested in the asset class, often quietly and cautiously. This category of investor tends to have better access to information and a higher capacity to understand the wider economic context that would trigger asset inflation. Prices gradually increase, but often completely unnoticed by the general population. Larger and larger positions are established as the smart money start to better understand that the fundamentals are well grounded and that this asset class is likely to experience significant future valuations.
2. **Awareness**. Many investors start to notice the momentum, bringing additional money in and pushing prices higher. There can be a short-lived sell off phase taking place as a few investors cash in their first profits (there could also be several sell off phases, each beginning at an higher level than the previous one). The smart money takes this opportunity to reinforce its existing positions. In the later stages of this phase the media starts to notice with positive reports about how this new boom benefits the economy by "creating" wealth; those getting in

becoming increasingly "unsophisticated".

3. **Mania**. Everyone is noticing that prices are going up and the public jumps in for this "investment opportunity of a lifetime". The expectations about future appreciation becomes a "no brainer" and a linear inference mentality sets in; future prices are an extrapolation of past price appreciation, which of course goes against any conventional wisdom. This phase is however not about logic, but a lot about psychology. Floods of money come in creating even greater expectations and pushing prices to stratospheric levels. The higher the price, the more investments pour in. Fairly unnoticed from the general public caught in this new frenzy, the smart money as well as many institutional investors are quietly pulling out and selling their assets. Unbiased opinion about the fundamentals becomes increasingly difficult to find as many players are heavily invested and have every interest to keep asset inflation going. The market gradually becomes more exuberant as "paper fortunes" are made from regular "investors" and greed sets in. Everyone tries to jump in and new intrants have absolutely no understanding of the market, its dynamic and fundamentals. Prices are simply bid up with all financial means possible, particularly leverage and debt. If the bubble is linked with lax sources of credit, then it will endure far longer than many observers would expect, therefore discrediting many rational assessments that the situation is unsustainable. At some point statements are made about entirely new fundamentals implying that a "permanent high plateau" has been reached to justify future price increases; the bubble is about to collapse.
4. **Blow-off**. A moment of epiphany (a trigger) arrives and everyone roughly at the same time realize that the situation has changed. Confidence and expectations encounter a paradigm shift, not without a phase of denial where many try to reassure the public that this is just a temporary setback. Some are fooled, but not for long. Many try to unload their assets, but takers are few; everyone is expecting further price declines. The house of cards collapses under its own weight and late comers (commonly the general public) are left holding depreciating assets while the smart money has pulled out a long time ago. Prices plummet at a rate much faster than the one that inflated the bubble. Many over-leveraged asset owners go bankrupt, triggering additional waves of sales. There is even the possibility that the valuation undershoots the long term mean, implying a significant buying opportunity. However, the general public at this point considers this sector as "the worst possible investment one can make". This is the time when the smart money starts acquiring assets at low prices.

Bubbles can be very damaging, especially for those who arrived late with the hope of getting something for nothing. Even if they are inflationary events, the outcome of a bubble's blow off is very deflationary as large quantities of capital vanish in the wave of bankruptcies and financial defaults they trigger. Historically, they tended to be far in-between, but between 1995 and 2008 three bubbles took place back-to-back; the stock market (deflated in 2000), real estate (deflated in 2006) and commodities (deflated in 2008).