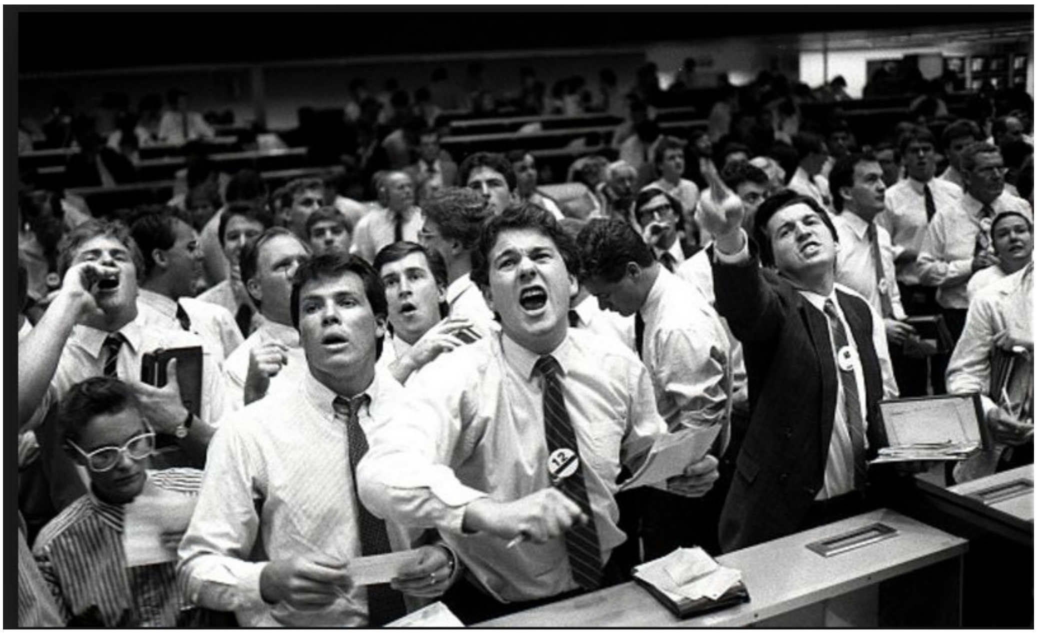
Will artificial intelligence algorithms create the next major move in financial assets?

30 year 'celebration' of the Crash of '87 - time for man vs machine again?

On 19th October 2017 it's 30 years ago stock markets across the globe plunged. The significant increase of algorithm-based investment strategies in the 2010ies could create the next major move - yet the direction is not certain.

Markets peaked in mid-August 1987 and then steadily declined before they collapsed. I was a stockbroker with 3 years' experience (I took my NYSE series 7 exam in October '87) and the sudden big move obviously made me nervous and thoughtful. In hindsight my stomach feeling was good. In September 1987 I interviewed a candidate for our firm, and I apparently painted a less attractive picture of the market prospects. In late October 1987 I got a call from the candidate and the candidate said, 'thank you for talking me out of going into stock broking'. I didn't recall I said a crash was coming during the interview, but obviously it was a good short-term advice and a lousy long term advice I gave the candidate.



Picture on via Google search 'crash '87'

After 19th October 1987 all kinds of investigations were made. What happened to the patient and how can we avoid it in the future? Program trading was the cause of the crash and to avoid similar speculative declines in the future a 'circuit breaker' system was introduced.

In 1991-92 I worked in my spare time with my cousin and his friend on computing parallel processing applied to prediction stock moves. We (which mean they as I'm not a programmer) did a very good system with above 60% correctness, however the computing time was more than 24 hours so the algorithm was useless for trading on a continuous basis.

Fast forward to 2017 and unconstrained investment thinking. The past 6 months I've been monitoring markets, individual stocks and news flow as 100% independent and unconstrained. I've met with a few Artificial Intelligence algorithm investors and looked deeper into what drives the market of the future. It's getting clearer to me that markets are driven by algorithms much more than I imagined from my previous outpost in a traditional value investment boutique.

Artificial intelligence data-mines billions and trillions of data points and connect it all into pattern recognition that increases your (the machines) ability to predict financial asset moves within microseconds, minutes, hours, days, weeks and even months. Price moves and volumes are the basis, but on top comes revenue and earnings trends, estimate changes, valuation matrixes and whatever you can think of can add value to the proces. At some point real-time data about parking lots utility and creditcard use will be put into the algorithm I guess.

As **volatility of financial assets decline** the hurdle rate or required return also declines, which in turn justifies higher valuations (less risk => lower return requirement). And in world where Central Banks provide free money the algorithm could conclude that stocks should be valued at 30-50x forward earnings when 10-year bond rates are 0-2%.

So, all the index funds and ETF's that get ever more sophisticated in their algorithms grind towards a bigger and bigger marketshare of funds under management the **next 'crash' could be a upward move** not seen since the IT bubble in late 1990ies. The two largest index fund managers have more than 10.000 billion $ under management (far from all is algorithm driven), so when I hear the investment officer from the biggest one says ' **our algo's are beating the hell out the market**' I pay attention.

Algorithms as price setters is dangerous as they would fulfill their own objective. I have no idea if the next major market move is up or down. Algorithm investing is still a small part of the total market, but I think its just a matter of time before they move from being 'price takers' to being 'price setters' as their successful returns eventually will dominate the price setting of financial assets. My most recent updates indicates that artificial intelligence primarily use prices as pattern recognition parameters. Yet, as factors such as valuation matrixes, absolute and relative financial data, estimate changes and qualitative value of news flows make inroads the complexity increases, and **the algorithm gets better than man**. Then man will say, we can do long-term thinking the machine cannot do, but in reality the long term is just the accumulated short terms, so man cannot win that game in theory.

Summary

Stock markets algorithms have arrived in force and reality, and they will change the investment gameplan going forward. The relatively simple momentum pattern (buy the ones that go up and sell the ones that go down) will be extended to hundreds of interactive datapoints and patterns, which in a world with indexed algorithm investors could result in dramatic moves in both directions.

The upside scenario more precise pricing and stock market pricing getting closer to the volatility of the underlying fundamentals (which are lower than stock market volatility). Hence, the human irrationality in pricing would be put aside and the VIX index would move towards low levels for long periods.

The downside scenario is the algorithms being programmed in such a simple way that the just buy more of the assets going or and sells more of the assets going down. In the situation where a recession is visible, then the negative market direction would be accelerated and hence putting the financial system under increased pressure.

Specifically for bond investors, its been much more easy to check into Hotel Easy Money than it will be to check out. When you checked in the short-term stay was for free and if you stay long the bill will be higher bond rates i.e. lower value of your payment currency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