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The Lack of Market Volatility

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Introduction

- Since the end of the Global Financial Crisis generally, and in recent months even more so, financial markets around the world have experienced unusually low levels of volatility.
- In this presentation we will describe several different conditions which we believe contribute to this situation.
- Most importantly we will present a new theory under which the current high levels of international and political tension around the world reduce current market volatility rather than contribute to it. The presentation will focus on the differences in how investors respond to news (an unanticipated event), scheduled announcements (e.g. an earnings release) and events which are considered inevitable but unknown with respect to time (e.g. the eventual eruption of an active volcano).
- The final portion of the presentation will discuss the implications for tactical asset allocation and active portfolio strategies.

An Empirical Retrospective

- As of last night the closing value for the VIX index was 10.7, which half the value at the end of February 2016.
  - The last time the VIX traded at a volatility around 10% was in January 2007, just before the onset of the Global Financial Crisis. The index peaked at about 60 in October 2008.
  - Before that the last observation of around 10% volatility was in January 1994, in the relatively benign period leading up to the tech bubble. The subsequent peak was around 45 in August, 1998.
  - Realized volatility for the major stock indices around the world have been equally quiet for the past couple years and generally materially below long term averages.

- The question for today is why have things been so quiet and why do investors ***seem*** to believe this will continue.

Reasons Why Volatility Should Be Low

- One view of why volatility has been and apparently is expected to be low in equity markets is that the intervention of central banks since the GFC has changed the game.
  - Central banks such as the US Fed, the BOJ, ECB and Bank of England have been massively injecting liquidity into financial markets and institutions. They are effectively removing the potential for financial institutions be low on cash.
  - New regulations have substantial removed speculative trading by levered institutions. Markets are again dominated by "real money" rather than highly leveraged trading desks and hedge funds.
  - Per Mervyn King's book "The End of Alchemy", central banks should be prepared to be the "buyer of last resort" of almost all financial assets as well as lender of last resort. The central banks are perceived as having essentially written a put option on the world's financial markets.

Reasons Why Volatility Should be Low

- The world economy has been doing rather well on a global level. Even Europe which lagged in the post GFC recovery seems to be pulling out of recession into a prolonged period of modest growth.
- Many negative assessments of the ability of China to "de-leverage" while maintaining adequate economic growth have not been realized.
- Many economists (e.g. Robert Shiller) have long argued that financial markets overreact to changes in the "real economy." *Maybe we're all just getting smarter.*
- Very large investors such as sovereign wealth funds, and big asset managers (Fidelity, Blackrock, Vanguard, etc.) continue to control increasing fractions of traded assets. These organizations know how big they are and are keen to avoid another "October 1987."
  – I recently visited one of our sovereign wealth clients who thinks of a "tactical" change in asset allocation *as taking several years.*

Reasons Why Volatility Should be Low

- While I would argue it is the view of a minority of investors, a case can be made that global geopolitical tensions are actually decreasing, thereby reducing the things that worry broad markets.
  - The potential disruption of western civilization by ISIS seems to be waning as they lose territory.
  - The Middle Eastern conflict between Saudi Arabia and Iran seems heated but certainly perceived as a lesser problem than many past conflicts between super powers such as the "Cold War" and the Cuban Missile Crisis. As a US former ambassador put it to me, "it's hard to take a high school football game as seriously as the NFL."
- Vast amounts of equity money have moved from active to passive management in recent years. If investors are really willing to be passive, it should follow that volatility should be low. Sleeping people are rarely very noisy.

The Calm Before the Storm

- The opposite view is that the current period of low volatility will continue until it ends for *some reason*.
- The idea that volatility has explicit time series behavior, at least in the short run is the basis of many prominent financial models (e.g. ARCH, GARCH) for which Rob Engle won the Nobel Prize.
  - Engle's students at NYU publish an excellent website on short term volatility trends, https://vlab.stern.nyu.edu/en/.
- Underlying the concepts of ARCH and GARCH modeling is the notion that investors undertake their actions as responses to "shocks" in which they receive new information that they had not anticipated.
- While the sample size is limited, very low VIX values have preceded very large increases to new all time high values as previously noted.

Calm Before the Storm?

- There are some market data statistics that seem to illustrate that many investors are in agreement with the "calm before the storm" view and have hedged themselves accordingly.
  - As of a few days ago, the put/call ratio on S&P 500 options was 2.1, the highest level in over five years.

- A number of prominent asset management firms have put out research releases discussing their view of the "low volatility" conditions, suggesting an effort to make investors aware of the issues.
  - A good example is this release by Franklin-Templeton, https://www.franklintempleton.com/investor/insights/investment-outlook?utm_source=outbrainpp&utm_medium=native_ad&utm_campaign=2017-io-sep&utm_content=pp_361827901.

Investor Response to News and Announcements

- There is a large financial literature on how investors respond to news. In this context, we define news as information that tells investors how the world is different than the world usually is.
  - Several papers have examined the relative market response to "news" and "announcements" such as Ederington and Lee (1996), Kwag, Shrieves and Wansley(2000), Abraham and Taylor (1993)
  - Jones, Lamont and Lumsdaine (1998) show a remarkable result for the US bond market. Total returns for long bonds and Treasury bills were not significantly different if announcement days are removed from the data set.
  - Brown, Harlow and Tinic (1988) provide a framework for asymmetric response to "good" and "bad" news. All new information is a "surprise", decreasing investor confidence and increasing discount rates for valuations. Positive returns are muted, while declines are exaggerated.

Anticipatory Behavior and Volatility Trends

- Our work in short horizon volatility forecasting suggests that when investors anticipate information coming to the market, such as a company earnings announcement or the release of a government economic statistic *they formulate a plan of action in advance of the actual announcement.*
  - As we get closer to the announcement being made, trading volumes and volatility trend downward as investors take a "wait and see" attitude
  - Once the announcement is made, investors act promptly since they've already set their plans, conditional on the information released. They don't need time to think over what to do, as they would with unanticipated "news."
  - Volatility may be high immediately after the information release but returns to normal quickly, as everyone quickly does what they had conditionally chosen to do.

A New Idea on Investor Information

- So far we've defined two types of information coming to investors, "news" which is unanticipated, and "announcements" which are wholly anticipated with respect to time but not content.
- We assert that the current low volatility condition arises from a new kind of situation where investors believe a major event (or set of events) is inevitable, but can only define that the event will occur at an unknown time in the future.
  - A good example might be the situation of living near an active volcano. Geologists can predict that the volcano will erupt someday, *but cannot predict when with sufficient accuracy to be useful in planning the day to day lives of people living nearby.*
  - The cumulative probability of the event occurring at some point can be represented as a Poisson distribution.   Even if the events are correlated it's easy to simulate multiple Poisson distributions.

Life in the British West Indies

- Many years ago, I had a residence on the island of Montserrat in the British West Indies. Since the 1950s geologists were had been warning that the local volcano could erupt at any moment.
- Unsurprisingly, capital investment in construction of large buildings was extremely modest on Montserrat. There were no major resort hotels or other developments common on other islands.
- Very detailed evacuation plans were prepared not only by civil authorities but by essentially every individual family. Each family had plans of where to move, and what jobs to obtain through existing connections with friends and relatives living abroad.
  – This unique process was addressed in "The Volcano Song" by Jimmy Buffet, which was recorded on island. The refrain is "I don't know where I'm gonna go when the volcano blow."
- Between 1995-1999 the volcano erupted several times, destroying almost all habitable areas, with almost no loss of life.

Anticipatory Paralysis

- In contrast to the benign view of a few slides ago, one could easily argue that the world circumstances are such that a major geopolitical disruption is inevitable within some finite horizon. Among the candidate events:
  - A mass casualty military confrontation between US and North Korea
  - Expansion of the Saudi/Iran conflict beyond the current situations in proxy civil wars in Yemen, Syria and perhaps Lebanon
  - Major political instability in the US due to legal entanglements of the Trump administration.
  - "Devolution" of the EU triggered by failed negotiations on Brexit.
  - A large scale global sell off of financial assets related to withdrawal of excess liquidity by central banks.

Anticipatory Paralysis

- Investors may be anticipating that some *truly cataclysmic event* will inevitably occur within a finite horizon, but don't know when. It may be reasonable to expect that with everyone taking a pathologically intense "wait and see attitude," **market volatility should be very low** and *we would indeed be in the calm before the storm.*
  - Declining trading volumes seem to be evident in many major equity markets, even after adjusting for the influence of ETF flows.
  - During an S&P telecast on Tuesday it was reported by Real Capital Analytics that transaction volumes in commercial real estate markets are down globally, even in markets where prices have increased.
  - Put options on major equity indices should be very popular, as has already been noted.

Strategic Implications

- If financial markets return to a high volatility regime, traditional benchmark relative active strategies may be impacted most adversely.
  - Many institutional asset managers ignore absolute risk considerations. They worry about tracking error and their risk management processes are not set up for crisis periods.
  - During crisis periods, correlations across stocks tend to rise which reduces the opportunity set for active managers.

- If the crisis results in "shooting war", a material period of low global performance for stocks is likely, with some recovery in the subsequent decade. Global bond markets perform poorly in periods of greater armed conflict, and do not recover subsequently.
  - See http://northinfo.com/Documents/646.pdf for more information.

Conclusion

If you believe that most investors are waiting for the financial volcano to erupt, I suggest you consider other lyrics from *The Volcano Song*

"Ground she's moving under me,
Like a wave on out on the sea.
Sulfur smoke up in the sky,
Pretty soon we learn to fly.
Lava come down soft and hot,
You better love me now, or love me not. "

https://www.youtube.com/watch?v=I0GhFuemipo