Notes…from people way smarter than us

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From the following:

"Policy in a World of Pandemics, Social Media and Passive Investing"

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<u>What got us here?</u>

- The most important message coming out of the markets is not the overall severity of the economic crisis, but rather an indicator of the already in place fragile market structure that is being exposed.
    - In other words, the COVID-led crisis has not necessarily broken anything, but rather, exposed an already structurally unsound market.
    - The developments of the last six months have pulled forward events that were going to happen at some point in the future.
- In retrospect, post-2008 GFC, what we needed to see was real, structural reform.
    - One potential legislative reform that could have helped reduce incentives for speculation and leverage post-GFC would have been the elimination of the tax deductibility of interest paid on debt. This could have reduced the overall amount of leverage and potentially the number of debt-fueled stock buybacks, which further leveraged corporate balance sheets (see May Editorial "Airlines, Bailouts and Moral Hazard" where this is explored in detail).
    - Instead of real structural reform, we put our faith in politicians, regulators, and algorithms, all of whom have their own agenda.
- **<u>KEY POINT: Markets do not represent information, they represent transactions</u>**
    - This is in stark contrast to the market we believed existed, one governed by the Efficient Markets Hypothesis (EMH) and collective decision making.
    - Two new forces have changed the historically perceived market construct where EMH and collective decision-making rule the game:
        1. <u>Passive Investing (primarily through index funds and target date funds)</u>
            - This has been partially driven by the lobbying efforts of Vanguard and Blackrock, two of the largest passive investment vehicle managers. Both institutions lobby to force companies and financial advisors to favor passive vehicles (their main business) through the argument that passive investments tend to "protect" investors from greedy or negligent money managers/advisors.
            - For a point of reference, the "Securities & Investment" industry spent a combined ~$100M on lobbying efforts in 2019. Vanguard and Blackrock were the #5 and #6

spenders, respectively, behind SIFMA (trade group that represents securities firms, banks and asset managers), Investment Company Institute (the association of regulated funds including ETFs, mutual funds, closed end funds and unit investment trusts), Goldman Sachs, and Fidelity.

- Also note, Vanguard and Blackrock are both members who fund both SIFMA and the Investment Company Institute.

2. Synthetic attempts to generate yield by systematically selling volatility (the "long gamma" trade)

    - Yield enhancement strategies have been influenced by the historically low interest rate environment and have increased in popularity post-GFC.
    - Long Gamma means the position held by the broker-dealer has positive Gamma exposure. Gamma is the rate of change of Delta based on a $1 increase in the price of the underlying asset. This all means that the higher the Gamma, the more responsive the option price will be to the change of the underlying asset. For context, as Optionsplaybook.com explains:
        - *"If you're an option seller and your forecast is incorrect, high gamma is the enemy. That's because it can cause your position to work against you at a more accelerated rate if the option you've sold moves in-the-money. But if your forecast is correct, high gamma is your friend since the value of the option you sold will lose value more rapidly."*
    - This all means that you want to be on the right side of the Gamma trade.
    - The pursuit of yield has driven traders to write options for the premium (yield), dealers buy the options, then repackage them into index options, apply a markup and re-sell them as crash protection. The difference between what they buy and sell the options at leaves them with a net long volatility position.
    - If this condition holds true (the selling from investors to dealers then the dealers selling for index protection), we're left with a positive Gamma environment, and volatility is suppressed.
    - However, during volatility shocks (COVID, US – China Trade War, etc.), if the market is net long volatility, dealers are forced to sell the index (because they own the other side of the trade that pays off in the event of a crash), which then exacerbates the selling that is already taking place.

- The last 25 years have seen a massive growth in passive investing and is now the primary method to which investments occur.
    - Greater than 100% of new capital flows into the stock market go into passive funds (greater than 100% means that discretionary/active managers are actually facing redemptions).
    - ~85 cents of every retirement dollar flows into a target date fund (passive).
- Passive investing relies on the theory of Efficient Markets Hypothesis

- EMH states that all available information is already priced into the market, and therefore, it makes more sense for investors to passively invest as opposed to trying to beat the market.
- But the assumptions behind EMH (no transaction costs, costless information, homogenous expectations, and perfectly rational investors) do not necessarily hold true.

- **KEY POINT: William Sharpe's work on passive investing may have one incorrect assumption, that the passive investor merely holds the market portfolio**
  - Because of changing index construction and new investors getting into passive funds, passive investors are actually forced to trade (trading denotes activity) every day to get into the funds.
  - Each new dollar of new passive capital must purchase the underlying stocks in that portfolio.
  - ***So, as opposed to passive investors simply holding the portfolio, they are actually systematic active investors that purchase securities without any regard for underlying fundamentals.***
    - ***This means that the actual fundamentals of the underlying investments (stocks) that make up these passive investment vehicles do not matter to the buyers. Good companies and bad companies alike get bought indiscriminately.***
    - ***Juxtaposed against stock pickers (active managers), who try to identify good companies vs. bad companies through fundamental analysis, we can see how the market begins to react more to "flows" as opposed to "fundamentals".***
- We would expect see two identifiable trends as incremental dollars flow into passive investments:
  1. Momentum stocks should be rewarded (flows reward higher market cap companies, whose share price tends to increase as passive funds bid up their stock, ending up with an even larger portion of new flows)
     - Since 1995, momentum has outperformed value 73% of the time for all three-year periods. Since 2011, that number increases to 85%.
  2. Correlations should increase as securities are traded as a group.
     - Identifying an increase in correlations has been difficult to spot because of the obfuscation by other market factors.
       - Primarily, the rise of "yield enhancement strategies" (described above; selling volatility across asset classes to enhance yield/income)
       - Also, it's difficult to identify correlations in the short datasets that exist for correlations on the S&P 500 (only exists back to 2010). Additionally, running correlations daily on a dataset of 500 variables is a very data intensive analysis to perform.
         - Based on Logica's proprietary comovement score (to get around issues of running correlations), which represents the absolute number of stocks in the S&P 500 that move in the same direction on any given day (either up or down), the rise in correlations of stocks since index funds exceeded 1% of market caps, has grown from around 125 to almost 250 as of 3/15/20, and in the 20 days since the market decline in March, that number has risen, on average, to almost 470 *(See chart on page 8 of main publication)*

- **KEY POINT: The selloff thus far, has actually been professional investors selling risk, as opposed to retail/passive selling.**
  - Because passive does not respond to external signals (i.e. sell during a crisis), the flows into passive have remained almost unchanged since the beginning of the selloff.
  - Because the professional selloff was met with no additional buying, an imbalance was created, and prices fell rapidly.
- These conditions have been exacerbated through regulations which have created an environment where high frequency traders have replaced traditional floor traders as the primary market makers which has created a lack of depth in the market
  - This has resulted in a far less liquid market where smaller trades have the ability to move markets in a non-trivial way *(See chart on page 9 of main publication).*
- **Conclusion: what if this is all market structure and not a fundamental signaling?**

What's Next?

- When Logica's publication was written, the belief was that what we are experiencing with the shutdown is little more than the economic shutdown of a tourist town, with the main exception that this one is unexpected
  - Update from Mike in July:
    - "The length of the shutdowns has begun to change this dynamic. Extensive fiscal support (unemployment benefits, Paycheck Protection Program, etc.) has cushioned the blow, but it is looking likely that fundamental defaults will accelerate from here. We are already beginning to see deterioration in payrolls as even large businesses begin to restructure for a lower demand world."
- Policy has begun to be informed by financial markets (as opposed to employment or inflation, the two mandates of The Fed)
  - This is despite the fact that the markets (equity and to some extent the credit markets) are poor predictors of forward-looking GDP (they explain less than 16% of economic variation).
  - Per follow up with Mike: "Following the breakdown of traditional Keynesian economics in the 1970s (Philip's Curve), economists switched to the "expectations" channel to explain variations in behavior. Monetary (Fed) support is designed to influence the expectations channel."
- **Conclusion: passive investing, systematic selling of volatility, and illiquid markets are the primary drivers of the current market structure. And the drivers of the current market structure are what mainly explains market performance, which then informs regulators and influences reforms and regulation.**
- Reduced regulation and the reintroduction of specialist market makers (not high frequency traders) is not likely. Those two important market fundamentals are probably gone, at least for now (though regulation can come back under a potentially new administration)

- If we are unlikely to see substantive structural market changes, then markets could continuously reprice higher as more money flows into passive strategies, exacerbated further by increased fiscal and monetary stimulus
    - Stimulus is simply the transfer of public wealth (taxpayers) to private sector balance sheets
- Re-domesticating supply chains away from China back to onshore is likely to result in income transfers from emerging markets to the U.S. corporate and household sectors