

Convexity Maven

A Commentary by Harley Bassman

March 5, 2020

“Peeking out from the Foxhole...”



With textbook precision, the S&P 500 plunged almost 16% from its all-time high before executing a near perfect pirouette after kissing some highly technical chart points; including the geeky 61.8% Fibonacci level (from the 2016 election) and the more common 50% retracement level (from December 2018).

As such, a well-deserved interregnum offers a fine time to poke my head out from the foxhole and assess the investment landscape.

Unlike most other financial nattering nabobs, I will not pretend to offer any valuable insights into the spread or mortality of the COVID-19 virus. And truth be told, I do not believe this novel coronavirus is the true root cause of our financial and social turmoil (with all due sympathy to those who have suffered).

Rather, I believe this pandemic is the event that has finally pulled back the curtain on the downside of xenophobic nationalism, across the globe, where political leaders care only for their parochial interests as they scramble to slam the door shut on modern civilization. Such a pity that a passport is not required for this virus to travel across borders.

While there are obvious parallels to the populist nationalism of the 1930s (see Father Coughlin), this is clearly a different time. In late 1941 Japan could sail its armada to within 136 miles of Pearl Harbor without detection; in contrast, the iPhone in your pocket is accurate to within a meter.

The notion that sealing a nation's borders can advance its general welfare is more than foolishness; it can be downright dangerous. To be clear, I am not advocating an "open border" policy, but a 'pox on both houses' is deserved by our political class who has not been able to construct a comprehensive immigration policy despite bipartisan support for well-known compromises.

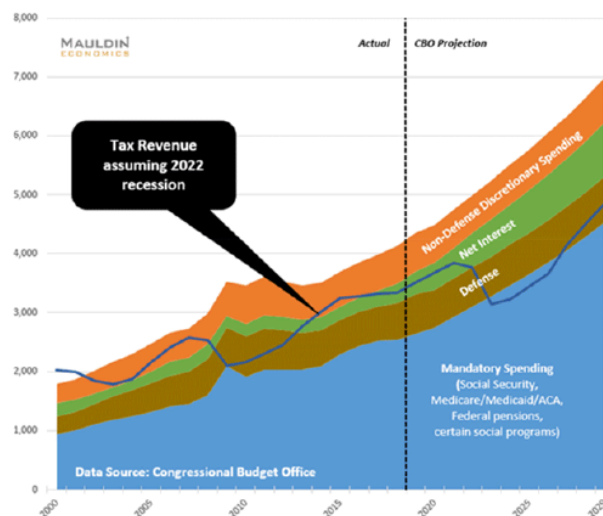
While D.C. experts can quickly tabulate the impact of Tax and Trade policies, projecting the economic path from changes in our Immigration laws will be more nuanced.

The bottom line is:

$$\text{GDP} = \text{Workers} * \text{Hours} * \text{Productivity}$$

To the extent we reduce the flow of immigrants (legal or otherwise), or even more extreme, reverse the flow of immigration (a.k.a. deportation), the GDP growth rate will decline without the offset of more hours worked or greater productivity. I appreciate the public policy arguments on both sides, and I will not try to sway your views; I will only state that the economic consequences to these decisions can be significant.

While I suppose Modern Monetary Theory (MMT) could be a local balm, the only fundamental way to offset the Mandatory demands of the retiring Baby Boomer demographic is to grow GDP (and tax revenues) at a speedier rate.



Source – Mauldin Economics, August 17, 2019

In concert with restrictive immigration is the notion that policies should be promoted that are seemingly 'best for our country'; "seemingly" being the operative word.

Does the United States pay more than our per capita share to support NATO, the United Nations, and other international organizations – yes. Is our defense budget larger than the next eleven countries combined – yes. Do we keep troops on the ground in nations that can well afford to protect themselves – yes.

Our benefit: We are allowed to play the game by our rules with our currency.

Imagine a game of Monopoly where you are both a player and the bank.

Circling back to the original premise, to the degree that the U.S. relinquishes its roll as 'Ma and Pa' of the Global economy, the greater the risk of a tail event that destabilizes the entire system. This was not news to many market participants; the only surprise was when a bright light would finally reveal the folly of this philosophy.

Let me repeat, I am not pointing a finger at any particular person or political party; nor are these policies unique to the U.S. as many countries are pulling up their drawbridges.

Specifically to current events, why was it thought to be reasonable that an extremely contagious virus with no vaccine could be contained in a well-traveled city of eleven million ? Why were there not CDC and NIH boots on the ground in in January ? You say this is China's fault for not allowing us to help, fine, that only proves my point that a disconnected world is more dangerous.

At the height of the Cold War in the 1960s, when the Russians were sneaking nuclear bombs into Cuba, the U.S. worked hand in glove with the USSR via the World Health Organization (WHO) to eradicate smallpox. In fact, it was the Russians who initiated the project in 1958 by contributing 25 million doses of the vaccine to the WHO.

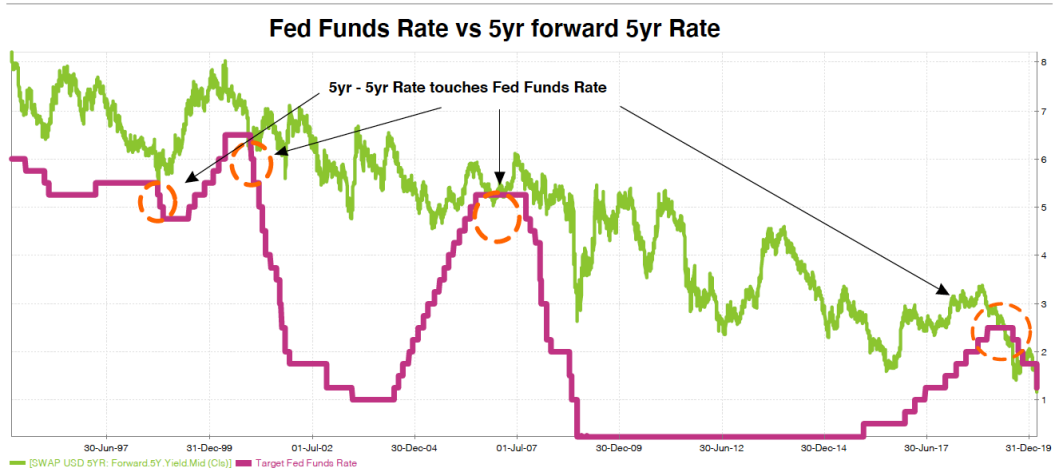
The political class has finally taken actions that will likely contain COVID-19 via the happy coincidence of warmer weather and a vaccine ready by next year.

I will note that naming the second highest ranking member of our political system to lead the response acknowledges the seriousness of the problem and sends the proper message to the world. (Of course, I suspect some in the scientific community may be disheartened that their new manager does not believe in evolution – oops, I promised no politics).

It's never different this time....

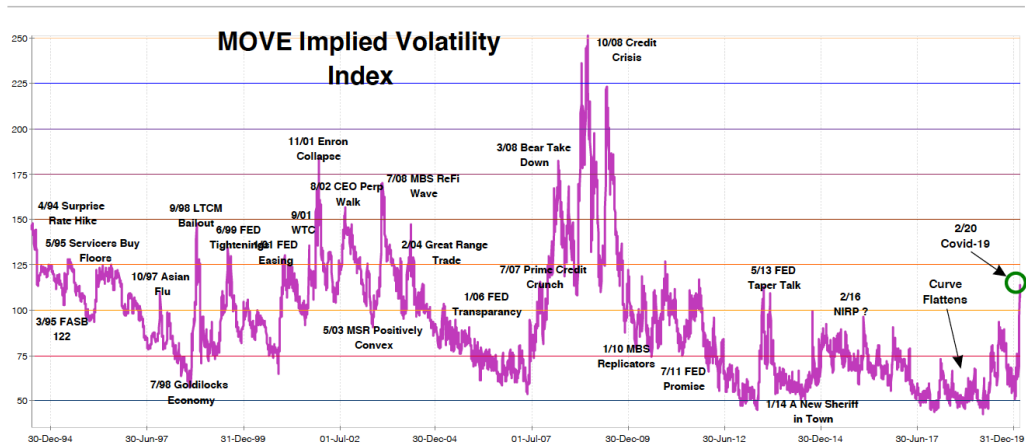
I first advertised this chart in "Wall Street Jenga" – February 6, 2019. Here I suggested that, despite all evidence to the contrary, a Yield Curve inversion signals a recession 18 months hence, roughly summer 2020.

Notice that even with an emergency rate cut, the **-feldgrau line-** Sw5yr-5yr rate at 1.15% is still below the upper band of the **-thistle line-** Fed Funds Rate.



Source for all charts unless otherwise noted: Credit Suisse LOCUS

It is not a certainty that COVID-19 will push the U.S. into a recession, but like all surprises, it did not knock on the door first; that's why it's called a surprise.



The VIX is called the Fear Index, and it almost kissed 50 on February 28; a level visited twice before over the past five years. But the real source of terror is in the bond market where the **-liseran line-** MOVE Index closed at 109.42 – up four standard deviations from its post-2012 average.

With that as background, let's sniff out a few investment opportunities.

Interest Rate Sensitive Closed-end Funds

I dine on plenty of my home cooking when I suggest building a diversified portfolio of high-quality Closed-end Funds (CEFs). That said, I nearly choked as the market closed last Friday, February 28th. The unfortunate reality is that while I believe a portfolio of CEFs will be a winner at the end of the day, by their nature they exhibit significant local mark-to-market volatility, and thus post terrible Sharpe Ratios – a marketing tool masquerading as a risk metric. (See *"Not the Sharpest Knife in the Drawer"* – September 6, 2018)

While I prefer not to name specific CEFs (for obvious reasons), as an interesting example (including all the usual disclaimers) let's look at Pimco's PCI, a \$3.15bn CEF with an average daily volume of almost 500,000 shares.

This is a mortgage-centric fund with about 60% Mortgage risk, 34% Corporate risk, and the balance in Government, Equity and Municipal risk. Of special note, this fund is highly leveraged at about 45%, which means they buy \$145 of bonds for each \$100 of capital, funded by borrowing \$45 at the short-term rate.

This fund currently pays a dividend that equates to roughly an 8.50% yield, and often declares a special year-end payout that plumps the yield a bit more.

The table below suggests what is anomalous about CEFs. The yield at 9ish% is similar to an equity return, yet its assets should be safer. Mortgage debt has an underlying collateral value, and Credit debt is higher in the capital structure.

While an oversimplification, notice the **-pansy-** credit spread for High Yield (junk) bonds widened by 85bps while the similar **-ocado-** Treasury yield declined by 44bps. This net 41bps increase in HY bonds properly resulted in a 2.67% decline in the **-tomato-** HYG (high yield) ETF. Yet PCI declined almost three times as much. Even adjusting for the leverage, and ignoring the value of a projected lower borrowing cost, it still underperformed.

The **-Princeton-** Actual Volatility reveals the problem with even high quality CEFs, in times of stress, they "power windows down" like equities. Size appropriately.

	PCI	S&P 500	HYG	HY-CDS	Tsy5yr %
February 14th	\$25.31	3380	\$88.40	284bps	1.42%
February 28th	\$23.50	2954	\$86.04	369bps	0.98%
Change	-7.15%	-12.60%	-2.67%	+85bps	-44bps
<i>10-day Actual Volatility</i>	<i>27.24%</i>	<i>27.76%</i>	<i>9.78%</i>		
<i>30-day Actual Volatility</i>	<i>16.56%</i>	<i>22.09%</i>	<i>7.51%</i>		

Mortgage REITs

M-REITs are a special subset of ordinary Real Estate Investment Trust. Instead of buying actual assets (Hotels, Shopping Centers, Multi-Family Housing, etc.) they purchase the bonds underlying these assets. And a subset of these buy Residential Mortgage bonds, often guaranteed by a Government Agency (such as Fannie Mae).

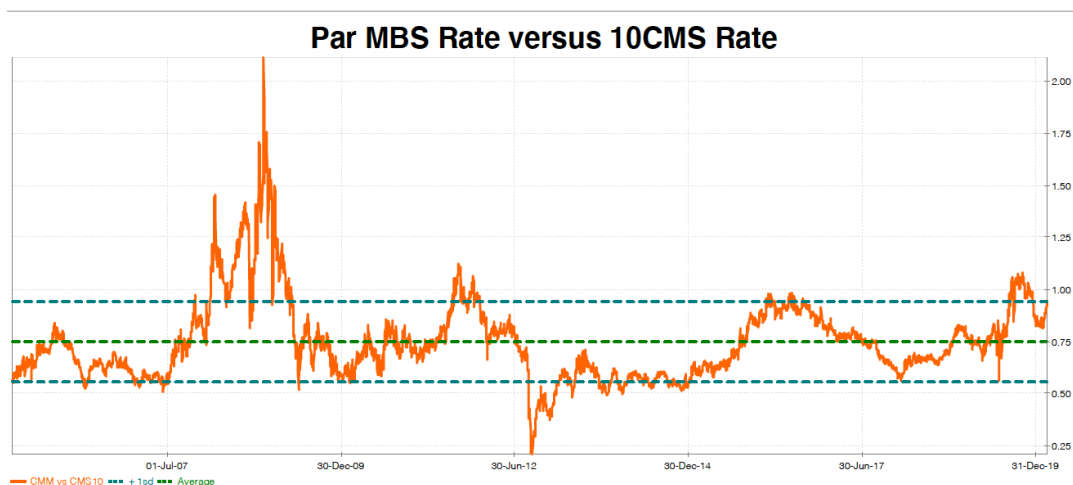
Some of them buy only such guaranteed “agency” bonds, while others will buy high quality “non-agency” securities. What they have in common is that they employ significant leverage, sometimes as much as ten to one; and this risk is reduced by hedging with Interest Rate derivatives, such as swaps (effectively shorting Treasury securities).

The yield on these M-REITs has two main drivers:

- 1) The spread between the asset and the hedge;
- 2) The spread between the asset and the cost to borrow.

The **-butterscotch line-** below is my preferred measure of the first spread, detailed in *"Nessie, Yetti, and CMM"* – February 12, 2009. This spread has expanded to nearly 100bps, a local wide, one of reasons this asset class has dropped in price.

As per the second spread, this too will soon widen as the FED’s emergency rate cut will lower the borrowing cost, which can be quite impactful when leveraged.



Similar to CEFs, this asset class can be more volatile than its underlying balance sheet; thus, the recent panic has pushed many of them below their Book Value, despite the fact a rate cut should improve their fundamentals.

SX5E Dividend Futures

I first detailed this anomalous investment opportunity in "*Holiday Stocking Stuffers - 2017*" – December 2, 2016, pages 6 - 7.

The proof that one can trade any risk vector can be found in the strange asset class of Dividend Futures. These were created in 2005 to support the expansion of equity Structured Note issuance in Europe. I will omit the boring details, here's the bottom line - Wall Street dealers needed an outlet to hedge the uncertain risk of dividend cashflows, so they found speculators willing to take that risk for a potential profit.

Once again ignoring the details, convexity hedging dynamics will at times depress the distant dividend futures for the SX5E – the Dow 50 of Europe.

As shown below, while the futures contracts for both the U.S. S&P 500 and the Japanese Nikkei 225 slope up on the expectation of economic growth, in contrast, the futures on the SX5E decline, presently at about 4% to 5% per year.

In my "*2018 Mid-year Update*" – May 30, 2018, I noted that I had closed out my position in the DEDZ-2020 contract as the term surface was fully compressed. I also noted that I would consider re-entering this trade if the fourth contract traded below 100, or a discount of twenty points (6 to 7 per year).

Ding Dong...we are almost there. Notice the **-oxfam price-** 2023 contract recently closed at 104.30, down almost 18 points from last year's settlement, or roughly a 15% discount. If I were not hiding in my Foxhole, I might have noticed a low print of 100.80 and a close of 102.40 on Friday, February 28th.

<i>Closing Prices</i>				<i>Normalized Prices to 2019 Settlement</i>			
	SPX	NKY	SX5E		SPX	NKY	SX5E
2019 Settlement	58.22	417.94	122.09	2019 Settlement	100.00	100.00	100.00
2020	61.45	457.80	122.90	2020	105.56	109.54	100.66
2021	62.40	447.60	116.70	2021	107.19	107.10	95.59
2022	62.85	448.40	110.00	2022	107.96	107.29	90.10
2023	62.85	451.70	104.30	2023	107.96	108.08	85.43
2024	62.55	452.70	100.00	2024	107.45	108.32	81.91
2025	62.70	455.70	96.70	2025	107.70	109.03	79.20

If you care to take this risk, the good news is that these listed futures have been approved to trade for US investors since the SEC and CFTC finally compromised.

But let me be perfectly clear: **This is a risky trade with huge MTM risk.** This trade exists because dealers have an embedded short convexity profile to manage, and they do this by selling these futures hard when the SX5E declines. This investment is functionally similar to selling puts on the SX5E – Size properly.

I tend to answer most of my email, if you are patient; and the question I receive most often, especially as this financial panic has spread:

“What is the best tail hedge”

For the record, there is no “right price” for a tail hedge, except for large professional market makers, since these “black swan” events occur so rarely that the sample size is too small to be relevant. I also appreciate that some investors cannot survive short-term tail events without being fired or bankrupted, this is how Las Vegas wins, one simply runs out of money before the casino.

As always, it is sizing that counts as that determines whether or not you can ride out an investment to its expiry.

Many pundits have dismissed the value of the Yield Curve in signaling a recession by saying it “would not count” if a consequence of the virus tips the economy over, as opposed to the usual FED tightening of financial conditions.

Pish posh... it is always something that is not on the market’s radar. If the markets saw it coming, the VIX would not have been at 13.68 and the MOVE at 62.38 on Valentine’s Day.

Like all such events, no one ever sees it coming – **that’s why it’s called a surprise.**

Harley S. Bassman
March 5, 2020

Your comments are always welcome at: harley@bassman.net
If you would like to be added to my distribution, just ping me.

For reference literature on the financial markets - particularly about options and derivatives - I will immodestly direct you to my educational archive at:

<http://www.convexitymaven.com/themavensclassroom.html>

If you still have kids in the house, please take a vacation that is more interesting than the Four Seasons, Costa Rica – life is not a dress rehearsal. Turn off the Crackberry (did I just date myself ?) and explore with the family. You don’t need to break the bank, rent an RV and see the U.S. We traveled with our four kids on five incredible RV trips.

<http://bassman.net>

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