MAI VIEW

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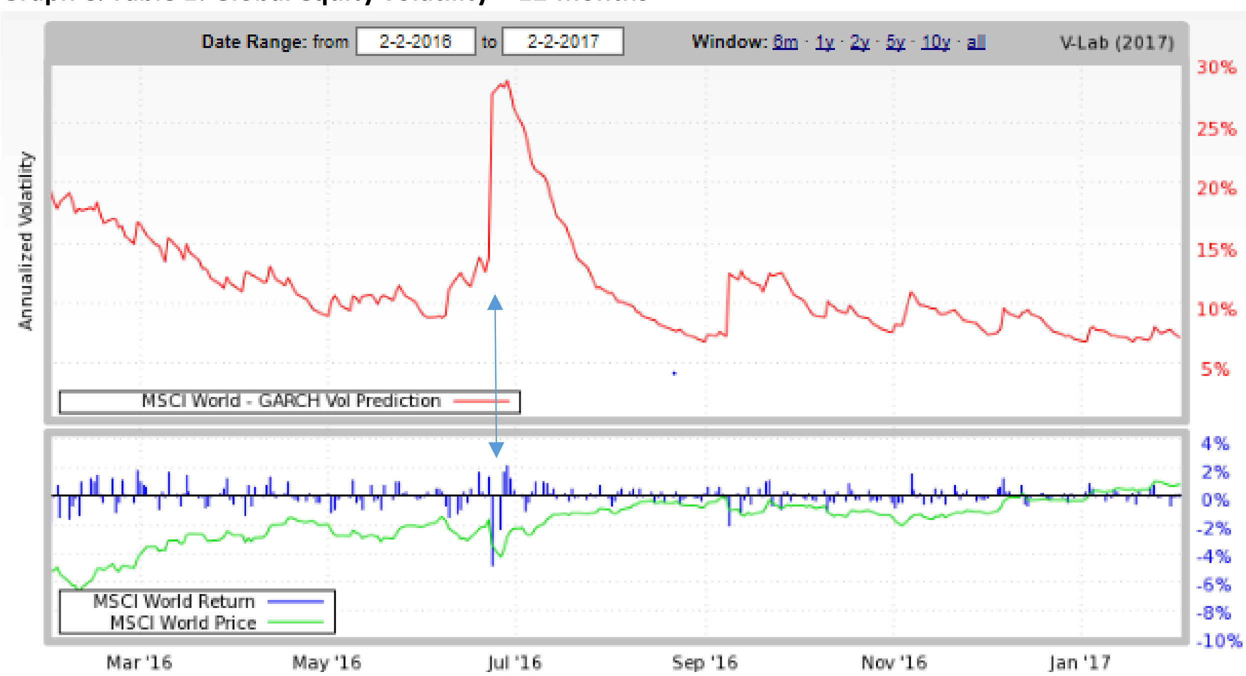
Alpha from Volatility

Global economic fragility has rarely been higher and market volatility has rarely been lower. It is a state of affairs that should not be expected to last. Wealth and alpha will be derived by positioning for change.

As we know, volatility is a measure of the dispersion of returns for a given security or index, expressed as an annual percentage.[1] Low volatility tends to accompany prevailing trends while trend reversals are usually accompanied by rising volatility. Thus, in a bull market, long-only investors equate rising volatility with risk and investors with a contrary point of view equate rising volatility with opportunity.

The graph below shows annualized volatility of the MSCI World Index over the past 12-months. As is obvious, volatility trended lower, excepting the abrupt spike on June 23 when British voters grabbed hold of a fat tail. Brexit dropped the index over 4% that day and annualized volatility spiked to almost 30%.

Graph & Table 1: Global equity volatility – 12-months

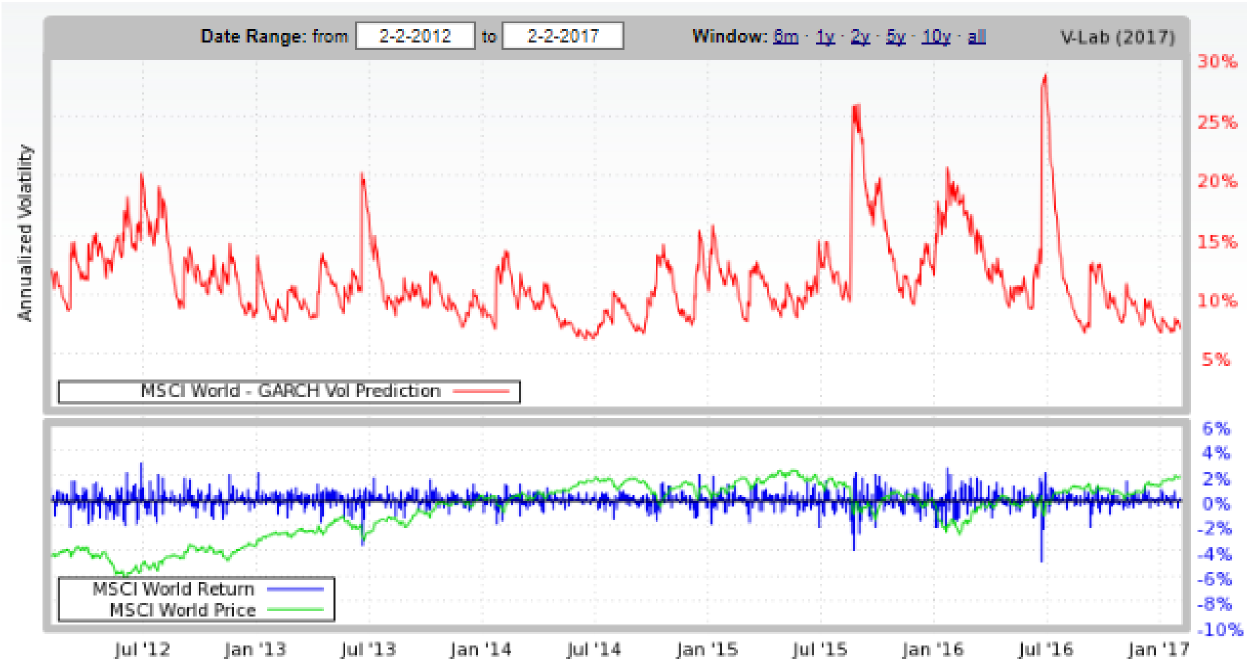


Source: V Lab; NYU Stern School; https://vlab.stern.nyu.edu/en/analysis/VOL.MXWD%3AIND-R.GARCH

When viewing the graph above one may begin to wonder whether it might pay to ignore market volatility altogether. We will explore this issue further, but not before providing a little more perspective. Below, please find graphs of world stock market volatility over five years…

[1] Volatility is the degree of variation of a price series over time as measured by the standard deviation of returns.

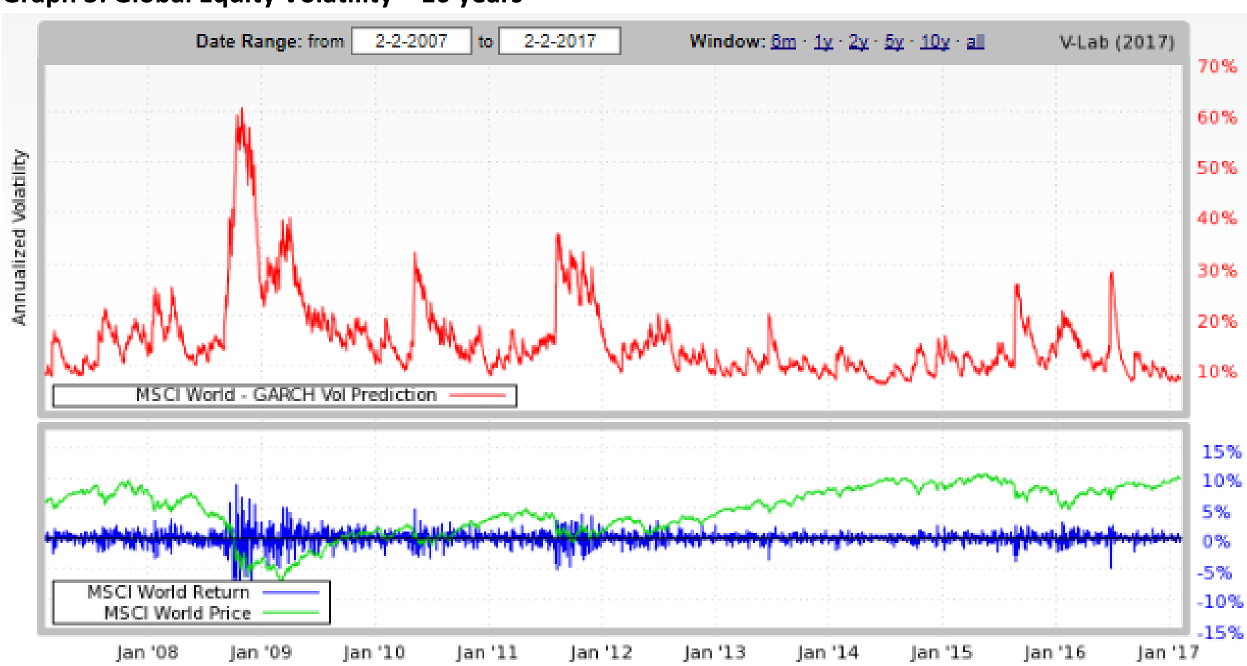
Graph 2: Global Equity Volatility – 5 years



Source: V Lab; NYU Stern School; https://vlab.stern.nyu.edu/en/analysis/VOL.MXWD%3AIND-R.GARCH

…ten years…

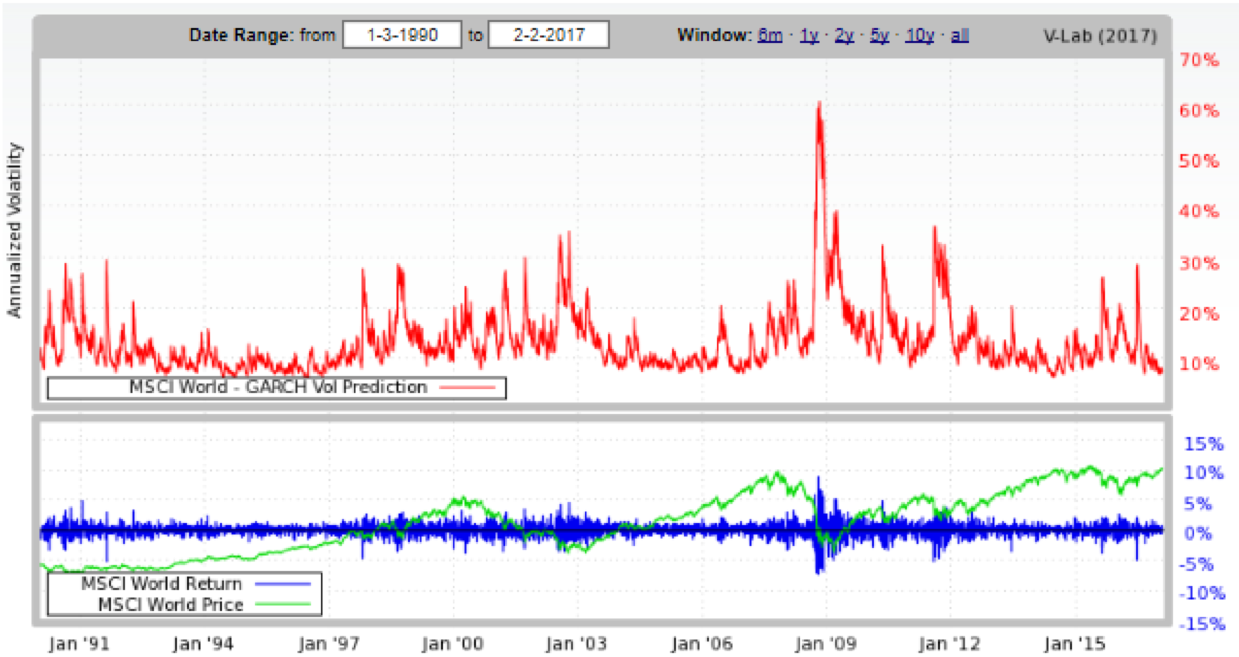
Graph 3: Global Equity Volatility – 10 years



Source: V Lab; NYU Stern School; https://vlab.stern.nyu.edu/en/analysis/VOL.MXWD%3AIND-R.GARCH

…and 27 years. The box in the table below Graph 4 provides average volatility figures since 1991.

Graph 4: Global Equity Volatility – 27 years



Volatility Summary Table

Closing Price:	$434.02	Return:	0.11%	1 Week Pred:	7.52%
Average Week Vol:	7.52%	Average Month Vol:	7.43%	1 Month Pred:	8.45%
Min Vol:	5.88%	Max Vol:	60.69%	6 Months Pred:	11.61%
Average Vol:	14.44%	Vol of Vol:	16.86%	1 Year Pred:	13.02%

Source: V Lab; NYU Stern School; https://vlab.stern.nyu.edu/en/analysis/VOL.MXWD%3AIND-R.GARCH.

We have two main observations about volatility, as borne out in the graphs above:

1. Periodic spikes in volatility should be considered a constant, and;
2. It has paid for equity investors to ignore periodic volatility spikes to stay long global equities (as represented by the green line showing annualized global returns of about 10% for a generation).

We also have two comments surrounding our observations above:

3. The secular rise in global equity prices cannot be extrapolated forward, and so;
4. The secular decline in equity volatility should not be expected to continue.

Much of what we have written lately has been based on the third point above. In *The Case for Caution*, we argued that valuation, balance sheet leverage and demographics provide a natural cap on real asset values. The unprecedented wealth effect from the extraordinary increase in asset and liability holdings among consumers and investors saving for retirement provided a powerful, but unrepeatable tailwind.

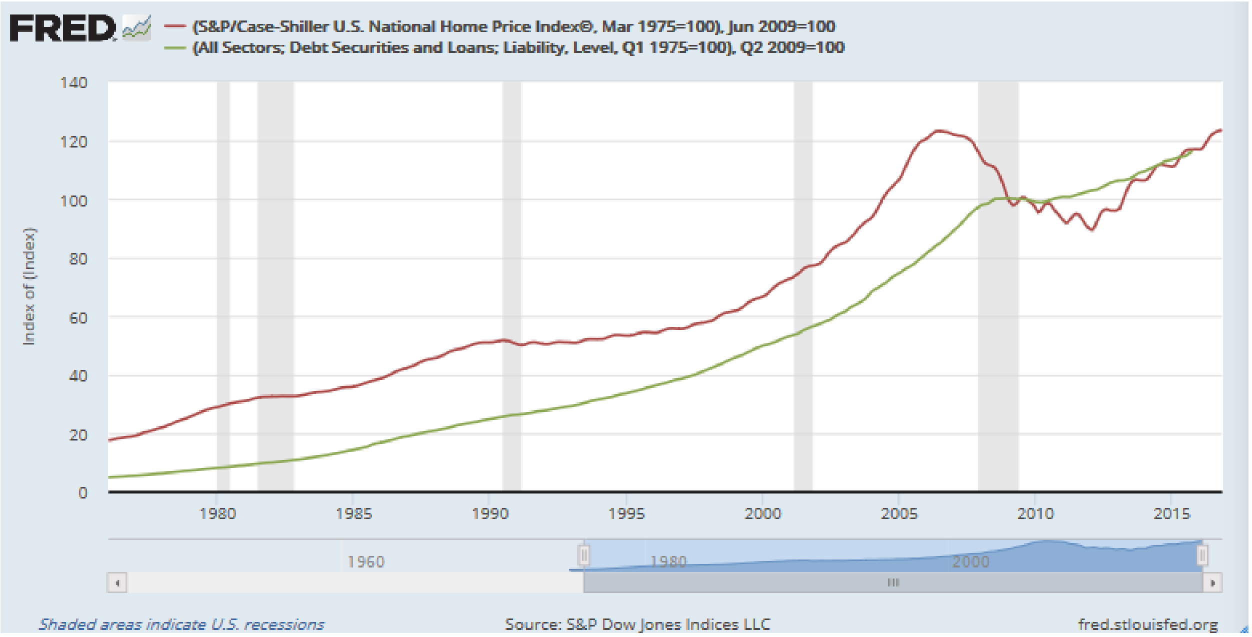
While assets are marked-to-market each day, depending upon the prospects for future demand and output growth, the principal values of liabilities have not fallen, and in fact have continued to rise at an accelerating pace. This implies two major consequences will occur sometime in the future:

5. The need to service rising debt loads will crowd out government investment, corporate capital spending and consumer spending, and demand and output growth, and;
6. The need to eventually repay a significant percentage of outstanding debt loads will retard and ultimately reverse the amount of outstanding debt, or else lead to substantial inflation.

That is our call. The likelihood of a balance sheet recession that will greatly stress the real (inflation-adjusted) value of credit and savings, including the purchasing power value of currencies and financial assets denominated in them, is substantial. (We would say it is 100%, but that would be bad form.)

Graph 5 below visually illustrates the correlation linking rising home values in the US and rising debt outstanding. It seems clear that without rising debt loads the price of homes would not have risen, or risen beyond what demographics would allow. This is especially noticeable in the period leading up to and since the great recession in 2008. *The takeaway is that "wealth" has been borrowed*.

Graph 5: Wealth Effect from Rising Debt Loads



This concept is nothing new to most investors, but we cite it here to make the case that past periods of low financial asset market volatility cannot be repeated. A balance sheet recession that de-leverages broader economies – either through credit deflation, monetary inflation, or both – would turn the financial markets upside down. This will be a major tail event, not a Black Swan because we can easily identify and even quantify a range of outcomes such an event would elicit.

Practical Impact

We acknowledge the "sky-is-falling" aspect to this point of view, but prudence demands consideration of the argument's validity – if not completely, then in some measure.

The world's last major de-leveraging period occurred during the Great Depression. (Talk about bad form…) Such an example may seem a bit intellectually arcane to some, but the reality is that it provides legitimate precedent for the necessary de-financialization of the broader economy that must occur.

To be sure, there are structural differences between then and now, notably the prevalence and power of central banks with unlimited balance sheets. In today's world they can purchase unlimited assets and place them on their bottomless balance sheets in exchange for newly created money, thereby inflating the monetary base and decreasing the purchasing power of currencies.

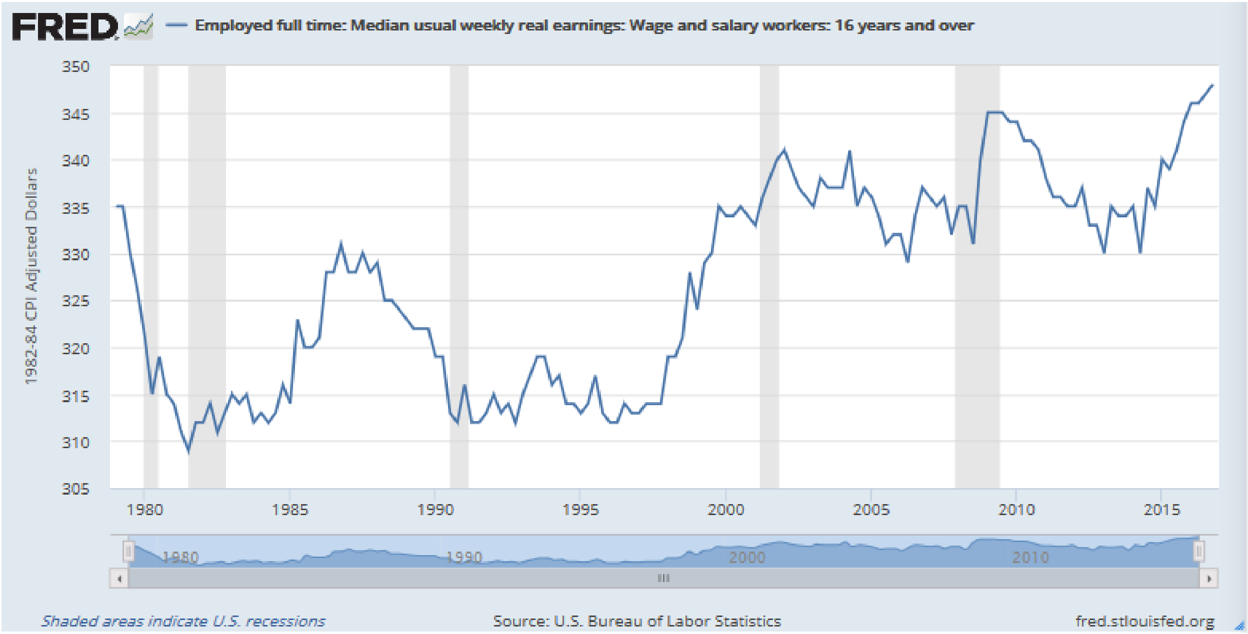
One might wonder whether such an action would matter to the broad perception of wealth, given that all currencies float against each other. If all major central banks coordinated a massive purchase of financial assets (stocks and bonds) denominated in the currencies they oversee, then *relative wealth* would not be affected as the currencies are diluted.

This would not work for four big reasons:

7. As central banks increase the quantity of money there would be no commensurate increase in wages. The gap separating the relative stability of nominal financial asset prices and the significant decline in real (inflation-adjusted) wages would widen far more than they have already.
8. The purchasing power value received by global producers of natural resources and manufacturers of goods and services in exchange for their products would be greatly diminished. As a result, they would withhold their products in exchange for more money (higher prices, significant inflation). This would exacerbate the affordability problem above. (See Graph 6 below.)
9. The purchasing power value received by non-bank creditors (mostly bondholders) in exchange for their assets would be greatly diminished (even assuming all bonds were to be bought by central banks at par). Since bonds comprise about half of all assets held directly and indirectly by investors and pensioners at all income levels, the purchasing power of savings and household investment would be greatly diminished.
10. The purchasing power value received by equity holders in exchange for their shares would also be greatly diminished, as their end consumers suffer and demand for stocks declines.

Graph 6 below shows where the rubber meets the road in a way most people (non-investors) can understand. Wages would drop significantly during a de-leveraging event, as they did in 1979, only more so; much more so in fact, as goods and service prices rise significantly when producers demand more money in exchange. As it stands, real wages in the US have risen only 7.08% since 1979, which is only 0.19% per year. This has been glossed over by the wealth effect from asset gains, which cannot re-occur.

Graph 6: Real US Wages have risen only 7.08$ since 1979 (0.19% per year)



To be sure, income around the world has increased more than in the US, especially in large emerging economies. Emerging economies and other advanced economies, however, cannot pick up the slack should the US falter. America remains dominant when it comes to capital market stability and influence over trade and the global monetary system. A de-leveraging spell in the US would have a devastating impact on global output growth and asset prices. Were the Fed to have to revisit QE after ending it and trying to normalize rates, we imagine all major central banks would have to follow suit.

And that would be the best case. Trying to get central banks to coordinate a worldwide currency devaluation that makes it seem as though natural price levels are shifting organically based on global supply/demand flows would seem to be quite a feat, especially since there are so many conflicting political imperatives around the world. Christopher Hitchens observed that the most risky and volatile of all things is a self-pitying majority. The political zeitgeist is headed in that direction, if it has not arrived already.

Positioning for Alpha

Investors and allocators have been loath to position for financial Armageddon, and for good reason. Capital market allocation has migrated over the years to intermediaries - fee-based wealth managers and investment advisors, mutual and hedge funds, and ETFs. As a result, the sensitivity to ongoing economic wiggles and even the historic tie of asset prices to sustainable valuation has faded over time. Capital stays invested in the markets regardless of the fundamental backdrop. Thus, equity (and bond) market volatility has fallen over time with only very brief periods of sharp price declines and increasing volatility.

We believe fundamentals will reassert themselves soon – not because we are sentimental, but because they have to. Capital invested passively, either directly through ETFs or indirectly through closet indexers, is dead money. Financial markets are no longer creating capital and their returns are no longer keeping up with the rate of inflation AND the current and future debt service needs of investors. We believe volatility levels will rise and remain at higher levels for a period of years as the necessary structural shift to a de-leveraging global environment occurs.

The smart play is to position a portion of portfolio assets to benefit from a sustainable rise in equity, fixed income, currency and commodity price volatility. Using volatility as a direct positioning strategy – rather than emphasizing growth, value, arbitrage or momentum investing – is the rational way to capture excess returns when this structural shift occurs. We do not think buying the VIX or options at historically cheap volatility levels is sufficient. Such expressions tend to be short term in nature and only capture temporary, one-time volatility spikes.

The sounder, more systematic approach is a program that positions assets with embedded volatility properties. Those properties currently imply expected macroeconomic outcomes and would shift significantly from unexpected macroeconomic outcomes. (It is understandable if *macroeconomics* makes your eyes glaze over. Finance and economics have been running down separate tracks for a long time. Successful investors and allocators have been conditioned over the last generation to use macroeconomic discussions as convenient justifications or rationalizations that support market inertia, keep constituents invested, or rationalize poor returns from exogenous shocks "no one could have foreseen".)

We believe the two tracks will meet, as described above, and that alpha will be generated by investing in asset markets, sectors and specific assets that benefit from unexpected yet identifiable change, or by shorting or avoiding those that will suffer. One eye on volatility and another on real-returns should be the focus of investors seeking to create sustainable wealth or alpha in the financial markets.

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