

Convexity Maven

A Commentary by Harley Bassman

December 2, 2016

"Holiday Stocking Stuffers - 2017" **(A Model Portfolio)**

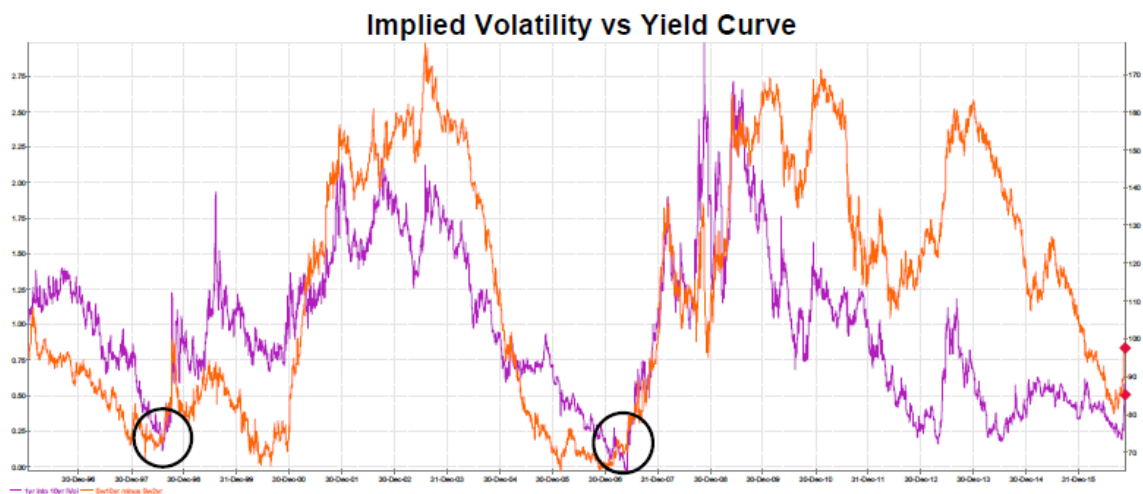


Come this time every year, I like to publish a list of "Investments" that I think will do well over the intermediate horizon. These are NOT meant to be nips to blips RV trades, but rather longer-term notions that capitalize upon either my strongly held themes or the weak hands of other investors.

What has changed from past years is that the western Central Banks have been quite successful in executing a policy of Financial Repression to collapse most risk vectors and encourage (some may say coerce under duress) asset substitution from safer investments to those a bit more off-the-run. The underlying theory is that an increase in asset velocity will transmogrify into monetary velocity, and thus, create inflation to both depreciate the real value of debt and create greater (nominal) wealth.

While the scientists at CERN have validated many of Einstein’s theories, it seems as if the excitement over the discovery of the Higgs boson has distracted further research upon the corollary notion of the “Conservation of Risk”. After all, does it not seem reasonable that if the FED employs Financial Repression to reduce risk today, that this same risk must surely re-enter the market with greater force at some later date ? This was certainly the case in the early 2000’s where risk managers were lulled into somnambulance by the FED’s risk-quashing policy of “Measured Pace” rate increases only to watch in horror as the entire system ran off the rails soon thereafter.

As detailed in my September 2016 Viewpoint - “[Listening for the Market’s Bell](#)”), while there is no date-certain indicator of when greater caution is warranted, there do seem to be common signals that precede market turbulence, such as the simultaneous bottoming of both the **–fig line–** of Implied Volatility and the **–yam line–** slope of the Yield Curve. And perhaps coincidentally, I would note that those so called 100-year floods happen about once a decade (1987, 1998, 2008.....2017 ?)



Source: Unless otherwise noted, Credit Suisse LOCUS

Notwithstanding the above, active financial managers do not earn their fees by hiding in cash; as such, we need to find investments where there is some wind from behind to act as a cushion.

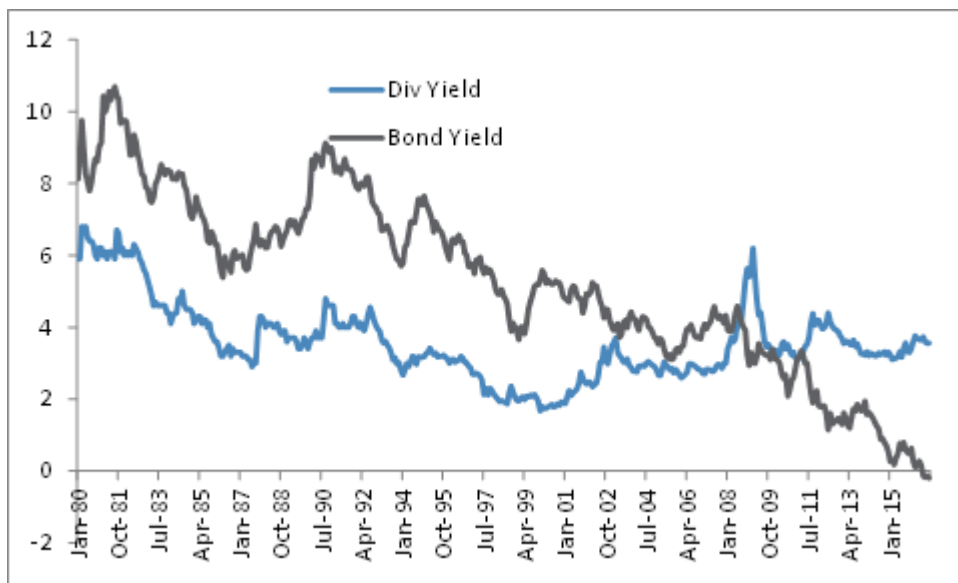
Fortunately, as much as Central Bank activity has dampened the return potential for many of the standard portfolio constructions, increased regulation on financial institutions has created return enhancing opportunities. Investment banks that routinely warehoused risk for proprietary gain must now quickly transfer this risk to a third party; and thus is investment opportunity born.

With this in mind, here are the 2017 stocking stuffers; please enjoy.

EURO Stoxx (SX5E) long-dated risk reversal:

I will let you determine if owning this European equity index is a good idea, but if you do, this is the best toy in Santa's sack and a most terrific "better beta" investment.

The European Central Bank has gone to financial DefCon 2 in their effort to juice the economy. What is anomalous here is the massive negative spread between the [-regil line-](#) dividend yield and the [-argenium line-](#) funding rate, which by the magic of compound cash-flow discounting produces a tradeable five-year forward price that is about 85% of its spot price.



Source: JPMorgan

When this forward price construction is combined with the irrational inversion of long-dated skew (see Commentary - "[Skewed by Skew](#)"), a superior replacement portfolio can be built.

Buy 100mm December 2021 SX5E call, K = 3000 @ 325 (ATM spot)
Sell 100mm December 2021 SX5E put, K = 2200 @ 325 (26.7% OTM)
Post 25mm of cash as Initial Margin for the short put option
Invest 75mm into PIMIX with a current yield of 5.50%

- 1) One for one upside participation since the long call is at-the-money;
- 2) A 26.7% terminal cushion versus owning the spot index;
- 3) Dividend replacement of 4.12% exceeds the 3.95% of the spot index.

This portfolio is levered and less liquid, but as a buy and hold investment it has similar upside, less downside, and is income neutral. It's my best idea for 2017.

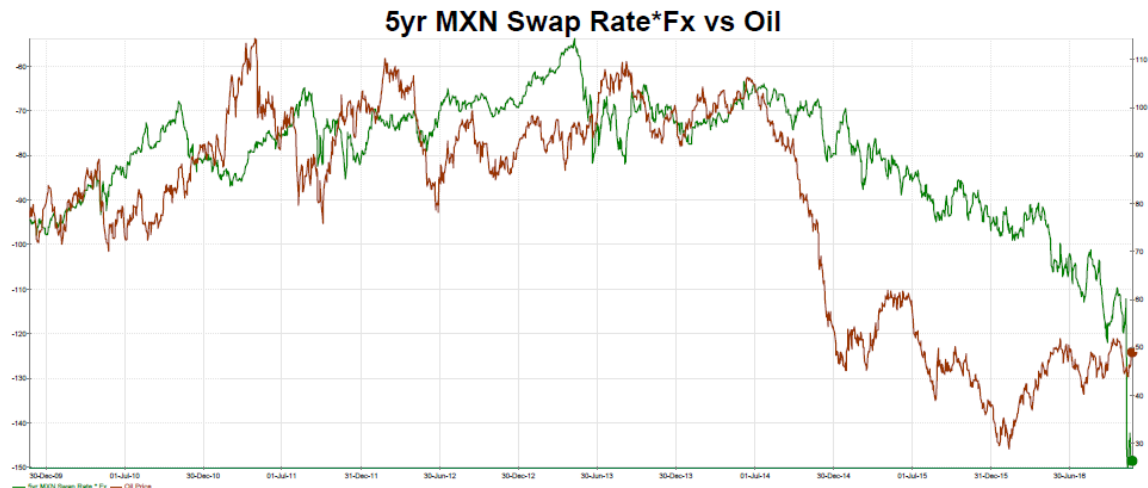
Buy 5yr MXN local currency bonds:

As much as jingoistic xenophobia can be a fine platform for a political campaign, it is fundamentally bad public policy, especially when it concerns our third largest trading partner (and second largest export destination). Not to make too fine a point, but our exports to Mexico mark at 87% of our total exports the entire European Union. Layer this small detail on top of the fact that the flow of Mexican immigration has been a net negative since 2009 and it is not too difficult to foresee that the promise of a 2000 mile wall and a torn up treaty may quietly morph into a playground fence and some swapping of off-setting tariffs.

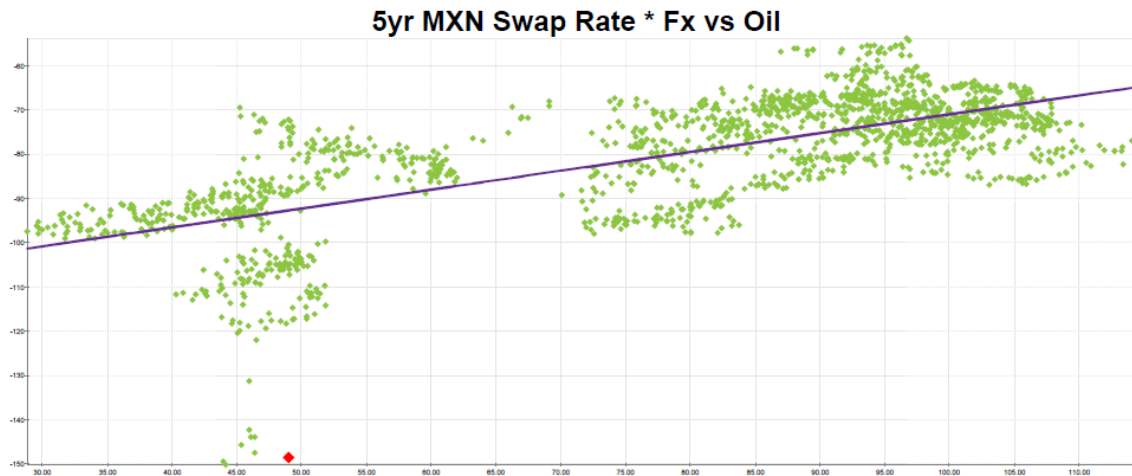
Admittedly, a President-elect Trump is a wild card (pun fully intended), but it sure seems like the market has priced in a full measure of cushion. Since Mr. Trump secured the nomination in early May, the MXN currency has depreciated 17% from 17.5 to 20.5; moreover the local five-year swap rate spread to the matched maturity USD rate has widened 150bps to 550bps. This is a width not visited since the peak of the GFC.

Greater detail on the fundamentals can be found elsewhere; here I will summarize that the two drivers of value for MXN local currency bonds are the price of oil and the current account, both which have moved adversely over the past few years. I am fond of saying: "No bad bonds, just bad prices." And so I will suggest that a 7.05% rate with a 20.50 currency mostly compensates for these headwinds and should produce a fine return if held to maturity.

To better appreciate how local MXN rates have repriced since the US elections, the **-romaine line-** is the (inverted) product of the interest rate and currency while the **-almond line-** is the price of oil. The extreme cheapening of both rate and currency has the familiar EM look of a negative feedback loop, similar to last year's ricochet path of the BRL.



Another manner to view this same data is the regression scatter plot, shown as the **-cucumber dots-** and the **-heather line-** versus the current **-carnelian dot-** valuation.



Asset price re-orientations rarely stop at fair, in fact, they often don't even pause at slightly cheap; so the twin adjustments to cooler oil prices and hotter politics will likely keep pressure on local MXN assets. Notwithstanding the above, PIMCO has a multi-factor "fair value" framework of 16.8 for the MXN, and a 2017 projection for oil in the mid-\$50s. As per the current account, that story requires more space than available here, but what is nearly certain is that it will adjust with a lag to the new local currency + rate levels, and ultimately I believe it will return to balance by the force of the "invisible hand".

USD 10yr into 20yr payer swaption:

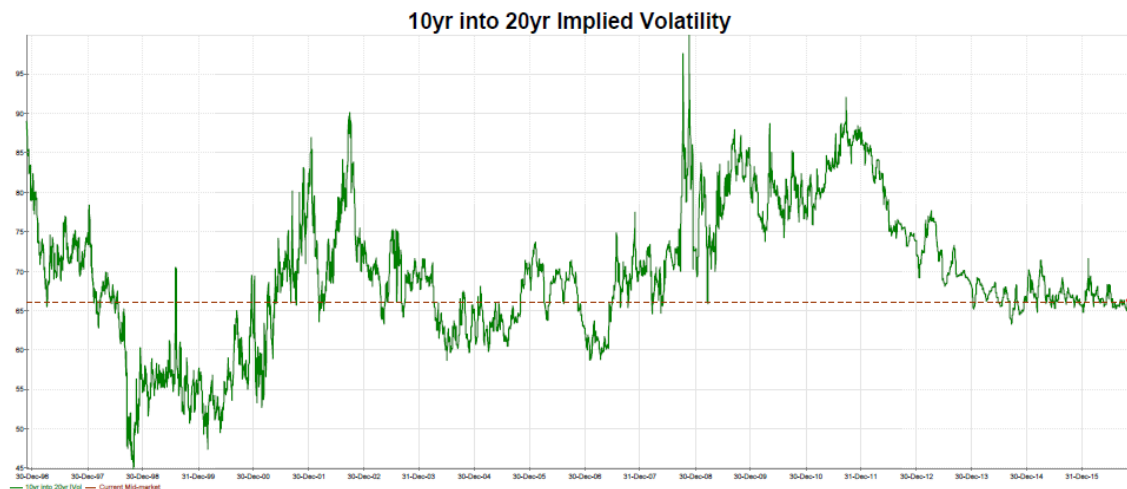
Observing that the US housing market was in an unsustainable bubble was not terribly difficult, in fact, nearly every sentient mortgage financier was well aware. The problem was that while this bubble revealed itself in late-2003, it did not burst until mid-2007. Many marque speculators shorted the sub-prime market in 2004 only to be stopped out by the negative carry in 2005. Ironically, John Paulson's genius was that he was not an MBS specialist; consequently he did not recognize the bubble until 2006, thus sparing himself the hedge cost.

This ramble is a segue to the **-chamoisee line-** of the 10yr-20yr swap rate, now hovering near 2.60%. While this rate is above last summer's average of roughly 2.00%, it is a long way from its taper tantrum peak of 4.70% in 2013. And as much as this rate level can be intellectually supported by demographics, consumption preferences and local inflation, it is mostly a product of coordinated

G-7 Central Bank financial repression, which is a balm and not a cure. So the question is not if, but when rates will rise; as such, one must construct an investment vehicle that is both patient (low carry) and effective (convex).



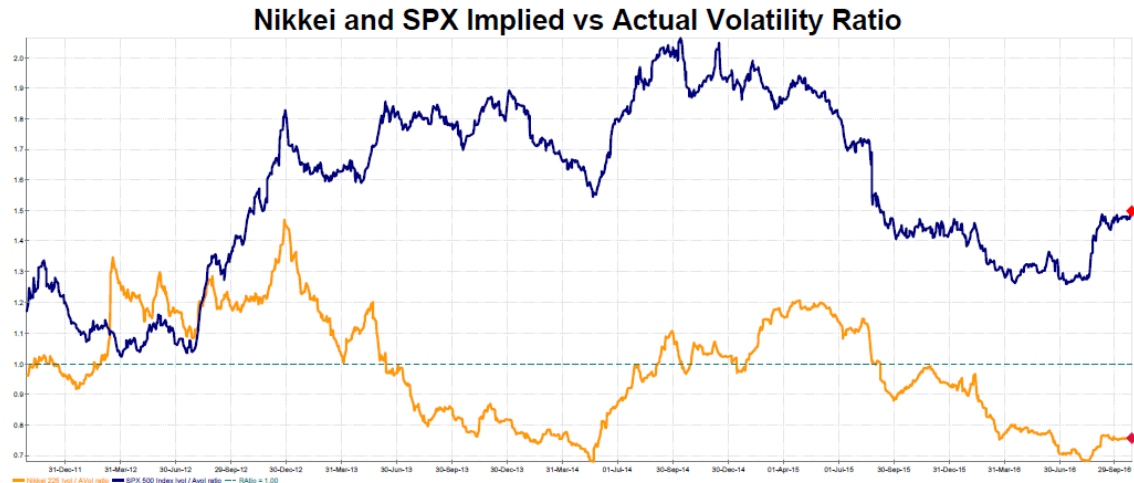
The easy trade is to just short this forward rate, which has the added benefit of being almost costless since the two year carry/roll is effectively zero. However, costless is NOT riskless since rates could revert lower in the short-term and motivate a stop out. The better idea it is to buy a 4.00% strike payer option for about 455bps up front. This construction has the added bonus of buying the **-andriod line-** of long-dated Vega, also near a post-GFC low. This combination of factors creates a convex limited loss hedge for a "risk on" portfolio where a static breakeven (zero carry) requires a mere 4bp increase in the key rate over the year.



Long-dated (5yr to 10yr) NKY 225 options:

The broad theme of this year's stocking stuffers is that market risk (volatility) has been reduced via a coordinated Central Bank policy of financial repression. The local reaction varies depending upon the investment culture of the region. In Japan, exposure to equities is frequently conducted via the issuance of structured notes. Deferring details to a later missive, Japanese structured note issuance has depressed Implied Volatility on the Nikkei Index such that it can be purchased either outright or on spread versus other markets.

With an Implied Volatility of about 20%, not only are five-year straddles on the NKY trading nearly one standard deviation below their five year average, but also well below their Actual Volatility with a recent **–aurum line–** ratio of 78%.



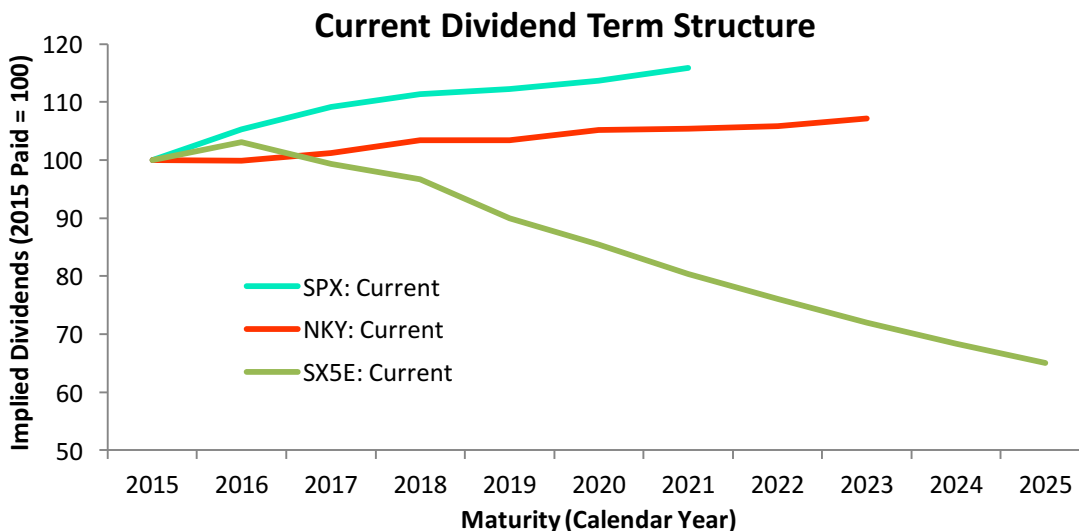
As an outright "risk off" addition to a portfolio, one can appreciate that Japan is the leading edge of the aging Western demographic and that Monetary Policy can only hold back the tides of risk for a limited time.

If paying theta is just a bridge too far, one can execute a relative value swap between NKY and SPX volatility. In contrast to Japan, increased US banking regulation has elevated SPX Implied Volatility such that the **–hd189733 line–** ratio of Implied to Realized volatility is well above parity. Presently one can buy NKY variance vs selling SPX variance at a discount to its realized difference of seven points.

EURO Stoxx (SX5E) Dividend futures:

Exchange traded futures on the expected annual dividends of the major equity indices are a relatively new product; and there is a lot of intellectual support for this risk vector since some valuation models are fully premised upon the discounted value of the dividend stream.

Shown below are the scaled dividend futures for the **malachite line**- S&P 500, the **coquelicot line**- Nikkei, and the **pistachio line**- Euro Stoxx 50. Notice the gently upward slope of the SPX dividend futures, pitched at about 2.0% annually, which is a slight discount to the post-war (WW1, WW2, or Vietnam) historical rise of about 2.5% annually. Similarly, the NKY dividends also tilt upward, although at the slower rate of about 1.0%. What is anomalous is the sharp forward depreciation of almost 4.5% per annum of the SX5E dividends, despite the fact that most Wall Street specialists project an increase.

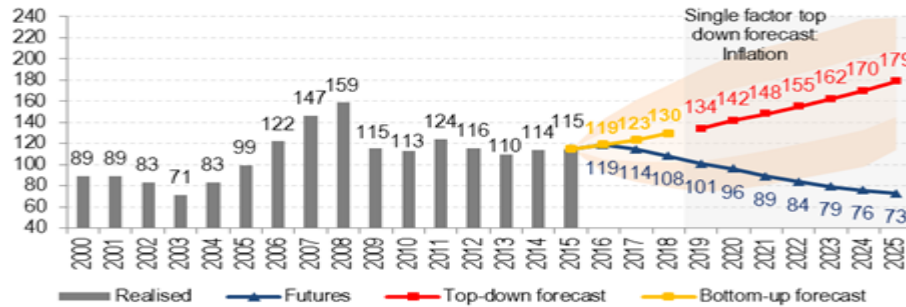


Source: JPMorgan

While the growth potential for the European economy is certainly suspect, the smoking gun to explain the forward dividend depreciation is dealer hedging activity for equity Structured Note issuance. Dissimilar from the US where most equity exposure is gained via direct investment (mutual funds, ETFs, etc.), in Europe, long-maturity structured products are popular. The hedging process is rather straight forward; the issuer needs to purchase the Forward index, so he buys Spot, pays on rate, and shorts the dividends. The rub is that the hedging supply is much greater than the speculative demand, so the futures slope south.

The December 2020 contract (DEDZ20) is priced at 99.50; a 19 point discount to the near certain 118.5 value for dividends to be paid for calendar 2016. So one

would earn a 4.5% compounded return if spot dividends remain unchanged. If they rise, the return would be even greater. While the **-ferrum line-** below mimics a rosy Wall Street upward projections, a more conservative analysis implies returns north of 6.25% annually.



Source: BAML Research

An added measure of safety can be found in the **-plumbum bars-** of past realized dividends that have not recorded a level below this cost since 2004.

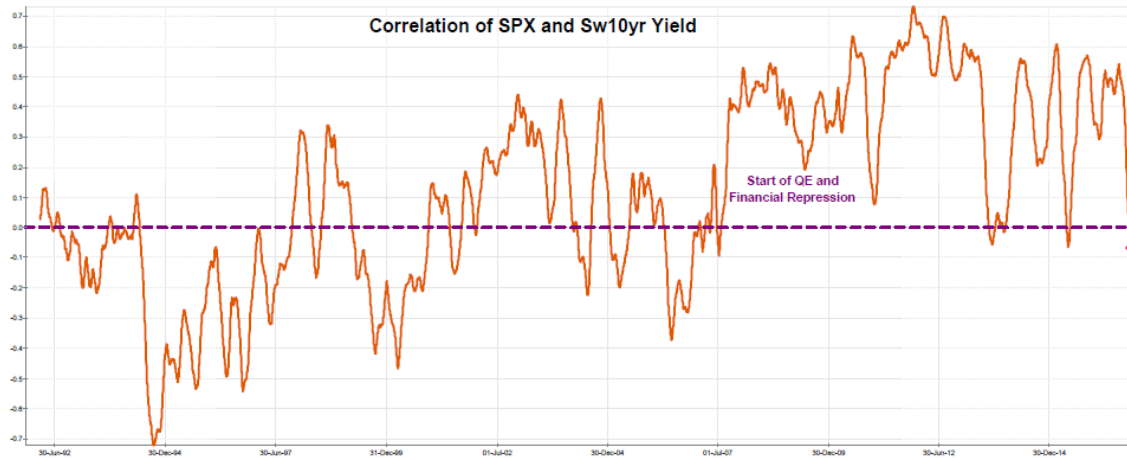
As a caveat, I will note that this ticket is not for the faint of heart. The long-dated dividends have an extremely high beta to the Index. While there is certainly a fundamental reason for dividends to move in concert with the Index, it is greatly exaggerated by the mathematical convexity hedging of the associated Structured Notes. If mark-to-mark volatility is too much of a bother, you can purchase a more near-term contract and still capture much of value added proposition.

Hybrid SPX puts contingent upon USD Rates:

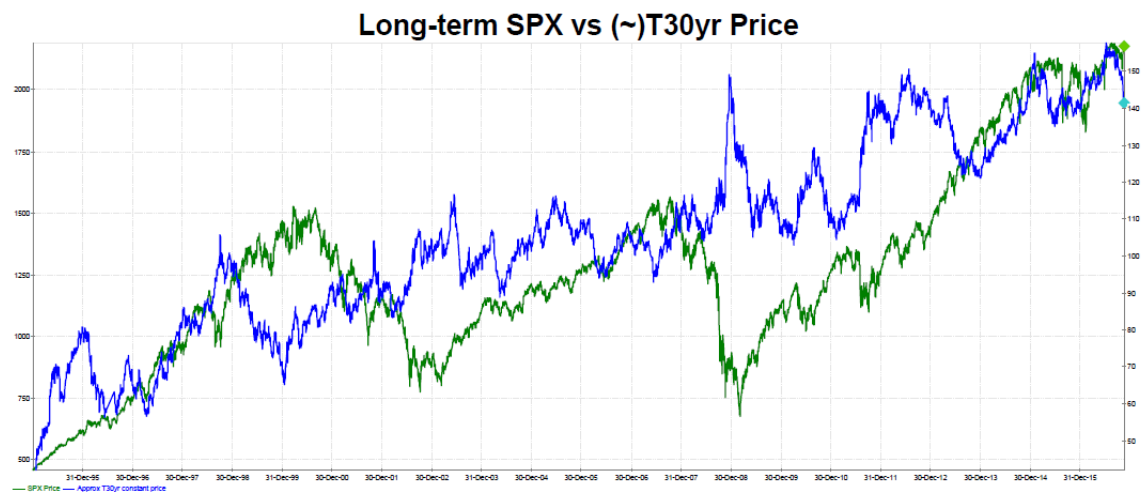
If asset-"A" vibrates up and down two percent a day for a month while asset-"B" climbs higher by one half percent per day.....which is more volatile ?

A derivatives propeller-head will identify "A" as the more volatile while a macro investment manager will note that "B" closed the month 10% higher while "A" is unchanged in price.

Let's now segue to the **-cuprum line-** of local correlation between the SPX and the Sw10yr rate, which has averaged about 40% since the Financial Crisis. The implication is that for seven years daily SPX advances were frequently paired with higher interest rates.



As such, one might expect an SPX ~~–neptune line–~~ high would be accompanied by a depressed ~~–UCLA line–~~ thirty-year bond price, yet after twenty years we find both recently near their forever peaks.



The opportunity here is to ask one of the aforementioned propeller-heads for an offer on a Hybrid SPX put option that is contingent upon the Sw10yr rate rising. Presently such an option can be purchased at a 80% discount to a vanilla option.

Example:

SPX spot = 2185; 1yr Sw10yr = 2.13% (spot) // 2.22% (fwd)

Vanilla SPX option, expiry = 1yr, K = 2075 (5% otm), Px = 5.00% of notional

Hybrid SPX option contingent upon Sw10yr above 2.72%, Px = 1.00%

The SPX is near its all-time high with a CAPE of 26; this valuation is often justified by the 500 year low in interest rates. No matter the observed correlation, when the time is ripe, both stocks and bonds will decline in unison.

Closed-end Fixed Income Funds

I know that closed-end bond funds are neither liquid nor scalable, but if you have year-end cash for a personal account trade, the recent combination of higher long-term rates combined with fears of an overly aggressive FED have drilled the valuations of CEFs to levels not seen in quite a while. Discounts to NAV of 8% to 12% are not uncommon, even for funds offered by marquee managers.

I would recommend a well-diversified portfolio of funds that focus upon: 1) Senior bank loans, 2) Credit, 3) Floater, 4) Mortgage; perhaps two or three of each. Be respectful of both the leverage and effective duration of these funds; as such, I am holding (but not adding to) long maturity Municipal Bond funds, despite the high after-tax yields. Most important, dig into the most recent filings to be sure the UNII balance is neither negative nor declining as this can often presage a dividend cut. Presently, you can construct a portfolio of funds with a pre-tax yield in the mid-8.0%s.

Investment Potpourri

The common thread throughout this year's stocking stuffers is that Financial Repression has reduced (temporarily) Implied Volatility as well as disturbed the mechanical calculation of the forward price. This is why we have relied upon derivatives more than cash instruments to build a model portfolio. We have also used direct option purchases to create a convex profile that has been funded by sourcing indirect theta via embedded options. It should therefore go without saying that we still love MBS as long as CMM vs CMS is near 90bps.

Best wishes for 2017.

Harley S. Bassman
December 2, 2016