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A Commentary by Harley Bassman:

THE CONVEXITY MAVEN

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Value Concepts from the Credit Suisse Trading Desk
April 12, 2012

Hedging the "End of the World"

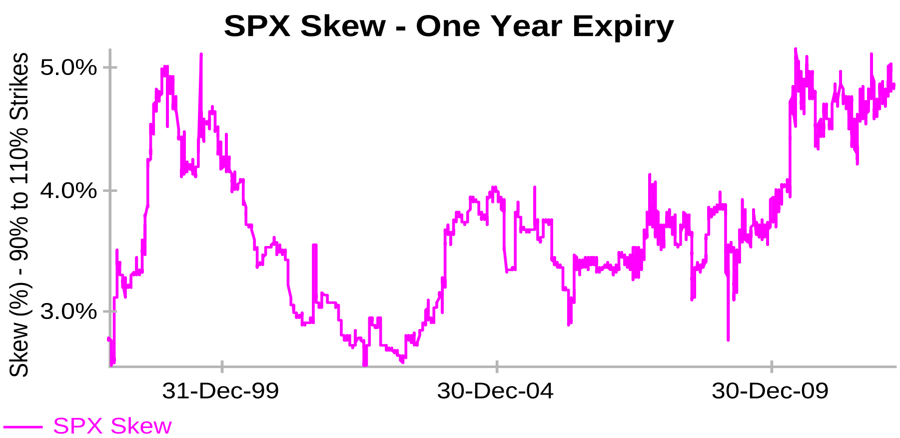
A distant time ago, a well-known insurance company placed kiosks near airport departure gates that allowed travelers to purchase single flight life insurance policies. One would quickly scratch out your name, the flight number and a specified beneficiary on the face of a postcard size envelope, shove a few dollars inside, and drop it into the metal box just before you boarded (with no security and a paper ticket). While certainly an interesting (and inexpensive) lottery style bet, I never played this game since I was not quite sure for which outcome I would be rooting. Thus the source for the key observation about the purchase of certain insurance-type products: "You don't win when you die."

For those of you who have only recently read “Liar’s Poker” by Michael Lewis, this is the source of one of the better lines said to the chirping new associate, “….here are a few bucks to buy some insurance on yourself in my name, I’m feeling lucky today!”

But enough reminiscing, the focus of this Commentary is to help direct you towards what may be the most interesting “tail hedge” available, an especially timely topic as it dovetails so nicely with the Mayan prediction for the “World to End” this December. To prepare the concept, let’s review the current landscape.

As detailed in many past Commentaries, the FED is employing the heavy hand of Financial Repression (see Reinhart and Rogoff for details) to dull the impact of the de-levering of the nation’s private sector balance sheet. The combination of ZIRP, QE(x) and Operation Twist has created negative Real Interest Rates along almost the entire Yield Curve. The end game is to fabricate a massive Asset Substitution from safe Treasuries and MBS bonds into the Credit and Equity sectors that will eventually lead to an increase in Monetary Velocity. This pick-up in Velocity will expand nominal GDP, via rising inflation, and thus reduce the (real) value of both private and public sector debt.

As measured by Credit Spreads and Equity prices, the FED has clearly succeeded in their efforts. But almost every sentient investor has some concerns as to how this “party” will end once the FED ultimately releases its grip. Can the FED engineer a “soft landing” where they do not lose control of Inflation? Can they raise Rates in a manner that does not exceed Forwards? Ultimately, can they thread the needle to maneuver between a Japan style lost decade and a Weimar hyperinflation?

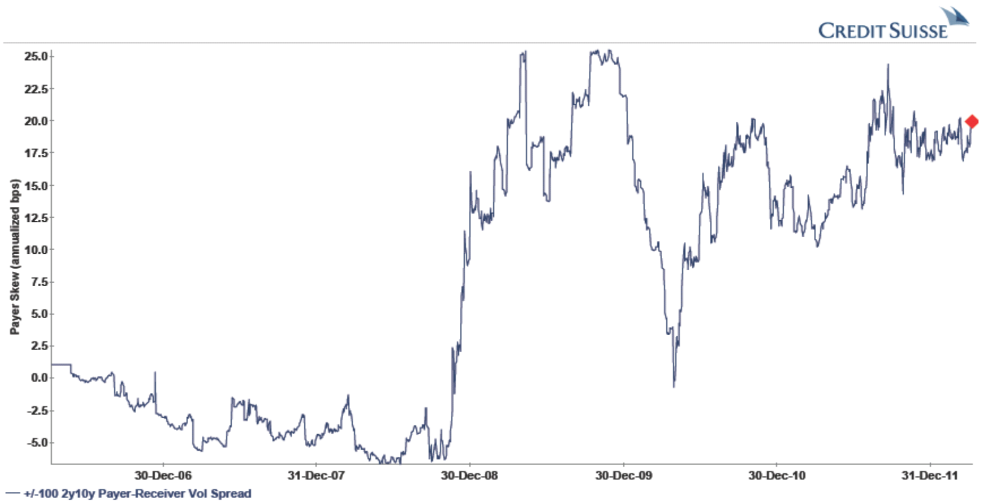


Source: Credit Suisse Locus

Many in the markets have their doubts, as measured by the “skew” of both Equity put options and Interest Rate payer swaptions. Above, the –pink line- is the skew of +/- 10% out-of-the-money one-year expiry options on the S&P 500.

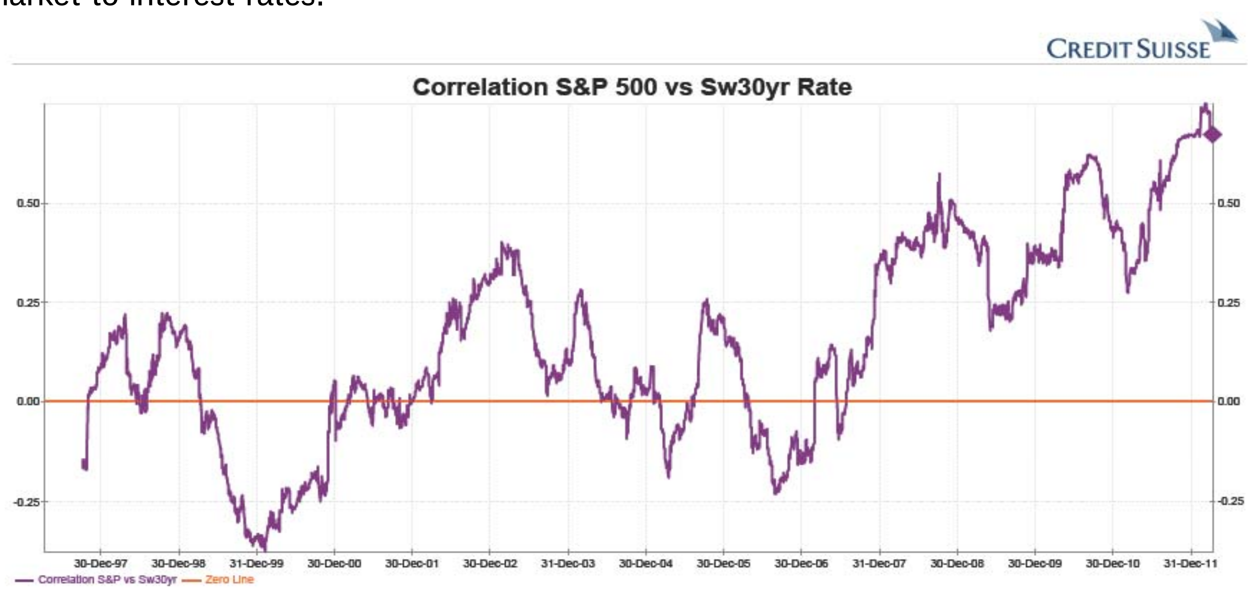
Notice how this popular measure of risk is reaching decade highs, similar to those reached towards the end of the Dot-Com boom.

With respect to Interest Rates, below, the –blue line- is the skew of two-year into ten year swaptions with their strikes separated +/- 100bps from the Forward. Once again, the spread is nearing the all-time wides.



Clearly there will be no bargains to be found in Vanilla OTM put/payer options as the extreme skews have already priced in much of the risk.

This is why one must not become easily distracted by focusing solely upon how FED policy bends the "White's and Red's" and instead think more broadly about how nearly three and one half years of Financial Repression has impacted other diverse markets. Specifically, let's examine the Correlation of the broad equity market to interest rates.



For purposes of this discussion, let's mark the start date of Financial Repression as September 2008, when the markets were dislocated by the events surrounding Lehman, Merrill Lynch and AIG. In the chart on the previous page, the –purple line- is the rolling six month Correlation between the daily price change of the S&P 500 Index (by percentage) and the 30-year Swap Rate (by basis point).

For the eleven years preceding the start of Financial Repression, there were periods of both slightly positive and negative correlation with a full term average correlation of +1.5%. However, post-September 2008, there has been an ever-rising positive correlation between Stocks and Bonds peaking recently at nearly +75%. During this entire period, the average correlation has been about +45%.

This is where one must reach back to recall that old Statistics class adage: "Is it Causation or Correlation?" Specifically here, is it the case that the broad Equity and Rate vectors are now extremely well correlated or is it simple the result of FED's relentless Financial Repression? Furthermore, is it the case that this recently observed correlation will continue after the FED releases its grip?

We propose to you presently that this correlation is economically spurious and is primarily a function of Financial Repression. That while there are certainly many risk components that overlap between Stocks and Bonds, once the FED lets the private market risk function operate independently, the correlation between these asset classes will return to their historical patterns.

Thus we arrive at a truly interesting opportunity for those of you who not only believe the recent correlation is temporary, but also that markets tend to anticipate the truth slightly before it is revealed.

Frequent readers know that the Implied Volatility used to price an option most closely tracks the Actual Volatility of the underlying risk vector; and so this is the case too with the market for Complex options that rely upon the correlation between two vectors to create a price. Over the past three years, as the Actual Correlation between the S&P 500 and Sw30yr Rate has increased, the price of options based upon the linkage of these two vectors has declined for Equities-down + Rates-up structures.

Specifically, the cost of a put option on the S&P, that only becomes effective (knocks-in) if Interest Rates rise, has become extraordinarily inexpensive. This is because the combination of sinking stocks and rising rates has become extremely rare during our recent experience with Financial Repression.

For example, a vanilla two-year expiry S&P put option, struck 10% below the spot price, might cost about **10.14%** of the principal covered. However, if this payout is linked to the Sw30yr Rate also increasing by at least 150bps from the Forward, the price of this option would be reduced by 83% to about **1.76%**.

A more interesting construction might be this: A vanilla one-year S&P option, struck at the spot price, might cost about **9.28%** of the principal. However, if linked to at least a 150bps rise in the Sw30yr rate, the option price could be reduced by almost 90% for a final cost of about **0.96%**.

Finally, consider a most interesting "leveraged pay-out trade": A one-year S&P put spread, struck between ATM and 20% out-of-the-money, both with a +100bps knock-in on Sw30yr rates, might cost **a bit more than 1 point**. This would be about an 80% discount from a similar vanilla put spread and might potentially produce a payout ratio of greater than 16 to 1. [The table below provides a grid of sample combinations.]

1yr SPX Put

		30y CMS Strike		
		None	**ATMF + 100**	**ATMF + 150**
SPX Put Strike	**ATM**	9.28%	1.76%	0.96%
	5% OTM	7.32%	1.40%	0.78%
	10% OTM	5.75%	1.12%	0.64%
	20% OTM	3.49%	0.74%	0.46%

2yr SPX Put

		30y CMS Strike		
		None	**ATMF + 100**	**ATMF + 150**
SPX Put Strike	**ATM**	14.26%	3.86%	2.46%
	5% OTM	12.06%	3.26%	2.08%
	10% OTM	10.14%	2.74%	1.76%
	20% OTM	7.02%	1.92%	1.25%

Spot and Forward References

SPX Spot:	1,367.20
30y CMS Ref:	2.88%
1y30y ATMF Ref:	3.01%
2y30y ATMF Ref:	3.13%

It is certainly the case that "fighting the FED" tends to be a losing proposition; nonetheless, the FED cannot directly control the Stock market (since they cannot buy equities by Charter). Moreover, unless the FED is ultimately willing to fully monetize the US Government Debt market, it is unclear how firm their grip truly is upon long-term Rates. Certainly they can buy a few hundred billion bonds to sop up most of the new supply, but if the largest holders of long-term Treasury debt lose faith in the FED's ability to maintain the real purchasing power of the US Dollar, I can assure you that Rates will be much higher.

From this vantage, where one is evaluating the ability of the FED to "stick the landing", the notion that a large decline in Equities cannot occur synchronously with a significant increase in long-term Rates seems almost comical. In fact, we would propose that a "tail risk" scenario could ONLY occur simultaneously with a FED that losses control of the situation. As such, the market is completely mispricing linked "double" OTM options.

For those of you looking for the ultimate in "tail risk" leverage, this may be it. While we are not advocating this as a likely outcome, it is certainly the case that reducing the cost of protection for a double event seems ridiculous, especially when the Equity markets are within 10% of the all-time highs, the –green line-, and Rates are scraping near their lows, the –red line-.

I guess we shall find out in eight months if the Mayans are correct about their prediction for the "end of days" on December 12th; but for the price of a few points, at least I can insure that my portfolio survives, even if I do not.

Harley S. Bassman
Credit Suisse US Rates Trading
April 12, 2012

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