RATELAB

MERRILL LYNCH US RATES STRATEGY

Value Concepts from the ML Trading Desk

The "Positive Carry" Hedge (2)

Our Best Recommendation

Our last RateLab detailed how the Twisting and Flexing of both the Rate Curve and the Volatility Surface have created opportunities. Specifically, the "Humping" of the Yield Curve has caused Long-dated Forward Rates on Long-tails to invert to the Spot Rate despite a very steep intermediate Yield Curve (Sw2yr vs. Sw10yr). Additionally, the Volatility Surface is hugely inverted with 1 year expiries trading 70% above 10 year expiries (1yr-10yr vs. 10yr-10yr).

We also noted that the bid::offer might be wide. As such, we have modified our analysis to locate pockets of liquidity to minimize transaction costs and pay a lower "skew premium". The table below represents all mid-market Rates, Vols, and Prices. Expect to pay 10bp over mid-market for any of these prices.

1 Expiry	2 ATM Vol	3 OTM Vol	4 Fwd Rate	5 Strike Yield	6 Put Price	7 Strike Yield	8 Put Price
5yr	108	105	4.82%	6.58%	*202bp*	6.00%	*297bp*
7yr	96	94	4.63%	6.38%	*210bp*	6.00%	*265bp*
10yr	82	82	4.33%	6.08%	*198bp*	6.00%	*209bp*

Notes:
Spot = 4.33%
Mid-Market Levels

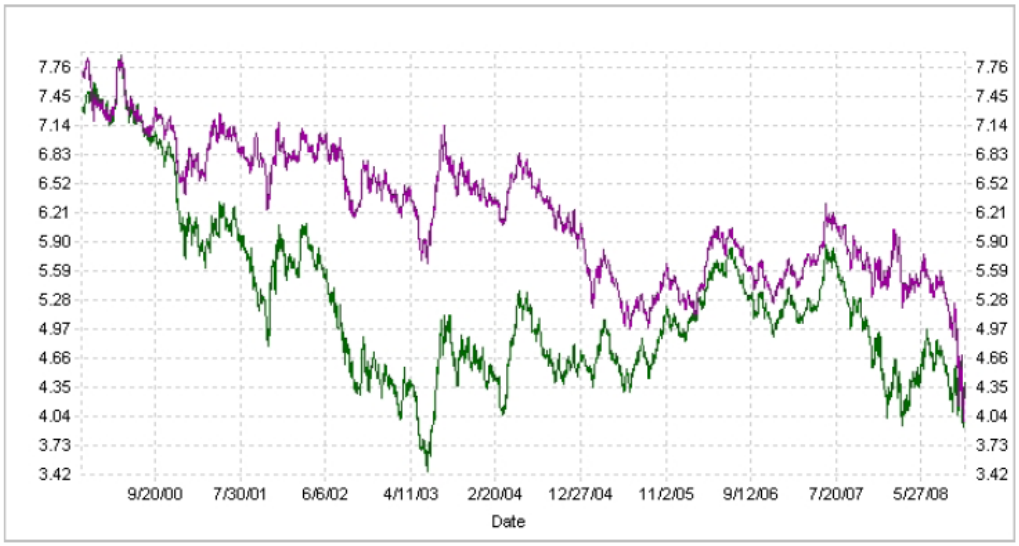
Our Recommended Trade:

Buy 10yr into 10yr Payer Swaption +175bps OTM; Strike = 6.08% @ 208bps;
Nvol = 84bps; +175bp from Spot Sw10yr

Why we love this Trade:

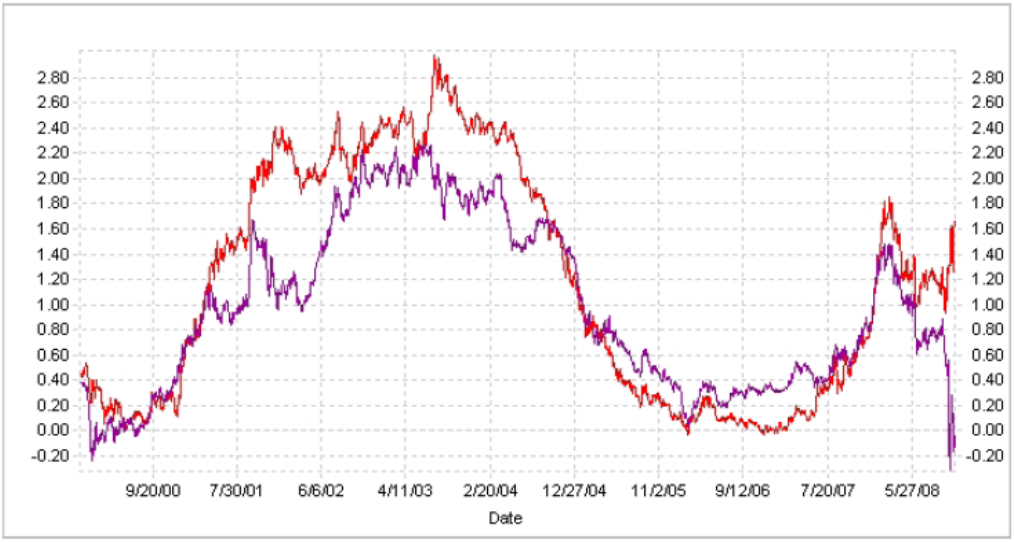
1) The ONLY answer to the Financial mess is Inflation. See past RateLabs for a detailed discussion of this topic.
2) Inflation will lead to much higher Long-term rates. Presently, as shown by –the green line- the 10yr Swap rate is at 4.33%, near the lows.
3) The 10 year Forward Sw10yr rate is "flat" to the Spot rate. This can be seen in the first chart by comparing –the purple line- versus –the green line-. Alternatively, a more direct comparison can be seen in the second chart.

Green - Spot Sw10yr rate
Purple - 10yr Forward Sw10yr rate



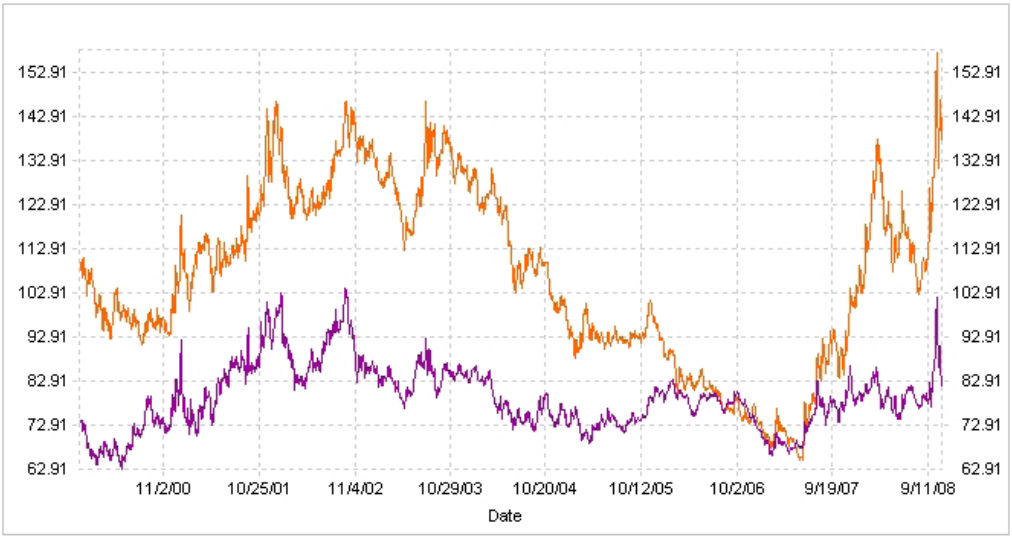
4) In this second chart, -the purple line- is the net spread of the Forward Rate versus the Spot rate. This spread has approached zero before, but ONLY when the Spot Curve, as measured by Sw10 rate minus Sw2 rate –the red line- is also near zero. You can see that a flat Forward spread is totally anomalous with a steep Spot spread. In fact, this second chart is a great description of how the hedging of Digital Inversion Notes, detailed in "RateLab – Another Fine Mess" has totally ripped the curve apart.

Red - Spot Sw10yr minus Sw2yr
Purple - 10yr Forward Sw10yr minus Spot Sw10yr



5) The greatest exposure in this trade is Vega, or the risk that Implied Volatility declines. With short-dated options, as measure by the Implied Normal Volatility of 1yr into 10yr -orange line- , near its all time high, this might be a concern. However, the –purple line- which is the Nvol of 10yr into 10yr shows that this part of the Volatility surface is only about 4% above its long-term average, greatly reducing the Vega risk.

Orange - Implied Nvol 1yr - 10yr
Purple - Implied Nvol 10yr - 10yr



6) Referring to the table above, notice that because of the steep inversion in the Volatility surface, an equally OTM payer swaption with a 5yr expiry costs about the same (202bps) as the 10yr expiry (198bp). Now one might argue that you are absorbing Vega risk here, but as shown previously, we are buying long-dated volatility near the average, NOT a rich level.
7) Also referring to the table above, because the 10yr Forward rate is 50bps LOWER than the 5yr Forward rate, a 10yr fixed-strike option (6% in this example) actually costs 88bps less (209bps vs. 297bps) than a 5yr option.

How do you Profit ?

A) Obviously, much higher rates happening sooner rather than later is how this trade becomes most profitable.
B) More realistically, a re-steepening of the Sw30yr (actually the Sw20yr) to the Sw10yr will drive Forward rates much higher very quickly. However, even this is NOT a requirement. If the curve remains inverted, then the "roll up" to higher short-term rates will create a profit via the delta.
C) "Belly" Implied Volatility (3yr to 5yr expiries) stabilizes near the long-term mean of 100Nvol. In fact, only a 94Nvol for the 7yr expiry (versus an 84Nvol purchase of the 10yr expiry) is required to leave the premium paid unchanged over three years, and that is WITHOUT any rate roll up. (see table above)

Final Comments

Initial feedback from some investors has focused on the fact that the 10yr into 10yr swaption ALWAYS looks cheap and carries well versus other options. However, this trade is NOT a relative value "box trade". Nor is it a simple "buy volatility" Vega trade. It is a positively levered (long convexity) method to short the long-end of the market. Usually it is costly to "short the market" at the highs. This is because the curve is often quite steep so either you must pay a heavy premium in theta or endure excessive negative carry. The inversion of long rates to intermediate rates has created a flat rate surface near the record lows in spot rates. This trade is carries positively on both Rate and Volatility vectors. Moreover, since it is a simple vanilla option, the relatively small fee is all that is at risk. This is an ultra powerful hedge against inflation. We strongly recommend that you seriously consider it.

ML US Rates Strategy
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