



Risk Modeling Bulletin Issue 25

OTR/Futures Basis Trade Mar 10 2010

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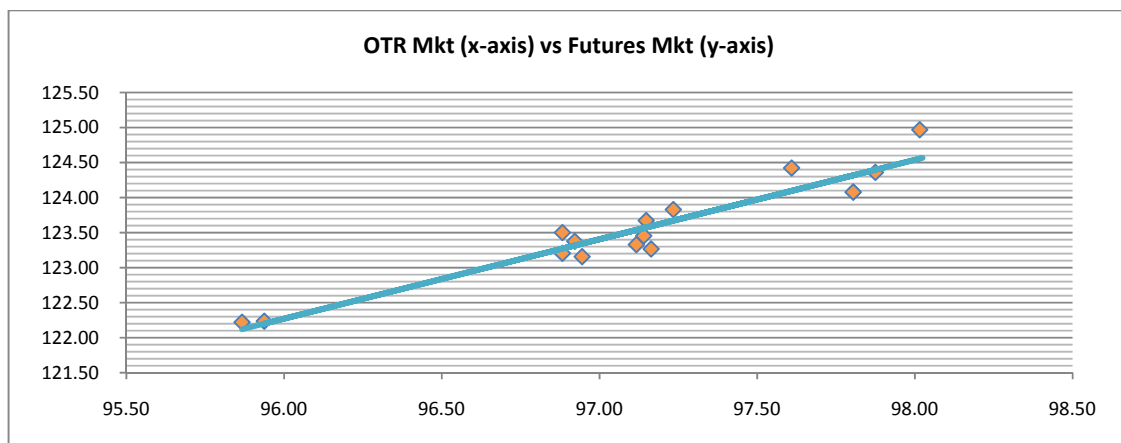
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This issue focuses on OTR/Futures intraday basis trade, How to determinate the trade signal?

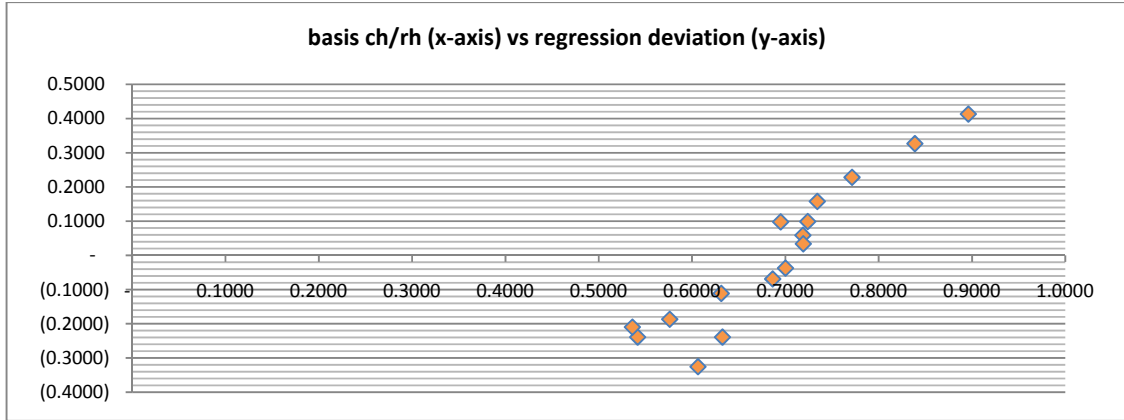
OTR/Futures Basis Trade (Interday)

The basis trade is to long the 30yr OTR and short Ultra 10Mar futures from Jan 20th to Feb 10th.

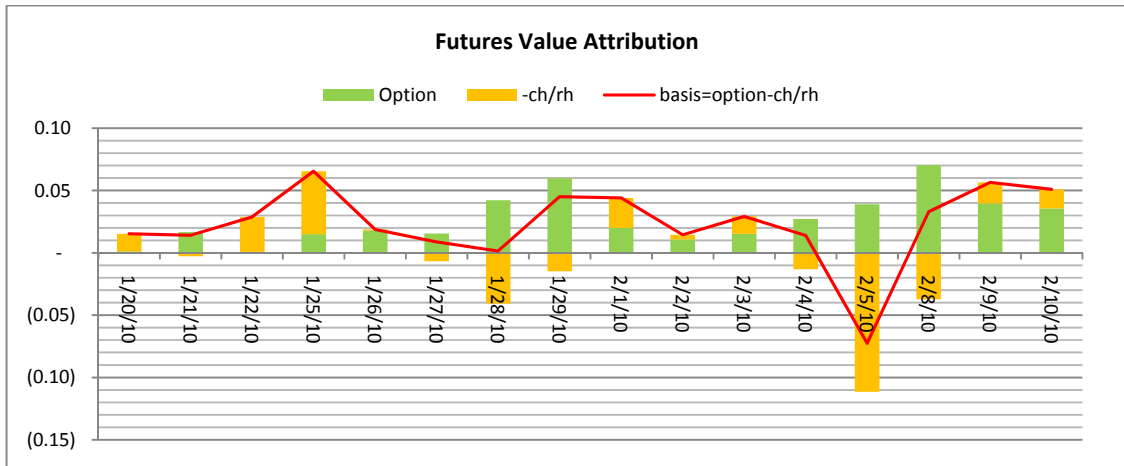
Determine the hedge ratio. There are two ways to determine the hedge ratio. One is regressing the Ultra market prices against the 30 OTR market prices. The results are given below. The other is determining the ratio of the futures DV01 to that of the OTR DV01. The two results are close.



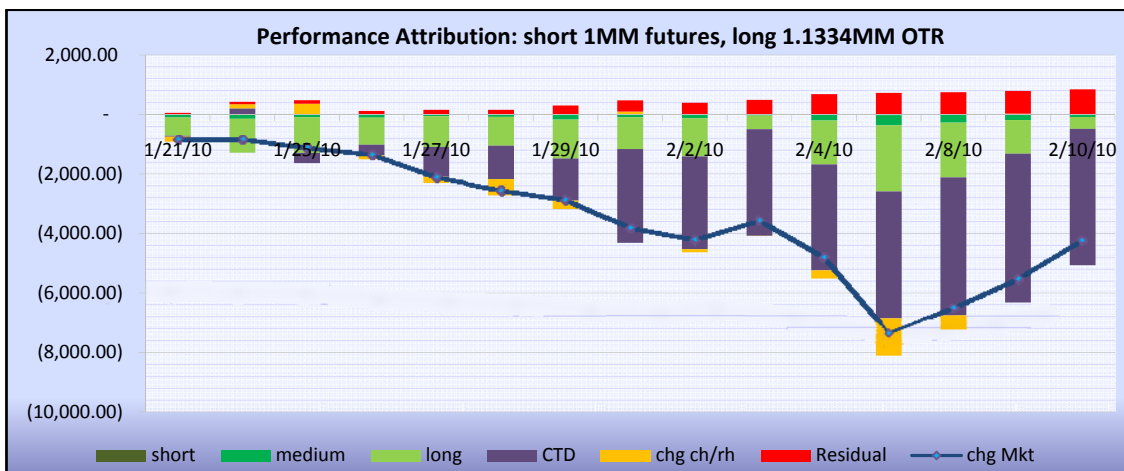
Deviations from the regression line versus the cheap/rich of the basis trade, see below, shows that they are related, but not quite.



There are two sources of the difference. One is that the delivery option keeps changing from one day to another day as can be observed by value attribution; another is the non-parallel yield curve movements. The figure below depicts the value attribution.



The performance attribution of the basis trade using the empirical hedge shows that the change in the cheap/rich of the CTD is an important driver of the P/L of the trade. The P/L is the blue line. The residuals (not explained by the model) are negligible.



Conclusion

The analysis shows that the futures/OTR basis trade methodology that can be applied to all the contracts.

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