

## research note

### **Basis Trade using IRR and Volatility**

#### *A Way to Trade the Basis*

- By tracking the Implied Repo Rate (IRR) from Bloomberg and storing it in excel, the following note will show a way to trade the basis.
- You'll notice that the IRR moves in a range. When it moves out of that range it usually tends to move back into the range.
- Example
  - IRR is trading in a range from 2.20 to 2.85
  - the IRR closes above 2.85 @ 2.97
  - I'm looking for the IRR to move back into the range
  - that means IRR down, Basis up
  - there are no auctions or big econ releases coming out
  - so, my tendency for the day is to be a buyer of the basis.
    - take the high and low from the day before, 7-2pm
    - if the Basis moves anywhere near the low I'm buying it
  - If the Basis is up at the high's trying to break out, I'll wait to see if it comes back down a bit before I buy. Usually I'll wait until about 8 am CDT.
  - if the basis breaks through its low and stays there for 10-15 minutes, I'm out on a stop

- Another indicator I'm watching is the Put/Call volatility indicators from the basis commodity I'm trading. For instance, if I'm trading 10y basis I'll keep track of the Put and Call volatility measures. (You can get them off of Bloomberg).

- Example
  - Rule: Don't take the trade if it's a day after a big move, like we had on unemployment, Friday August 5, 2005.
  - The graph below shows what I'm tracking in excel and how I track it, heading by heading.

Date	Day	Imp Repo	Tele-rate Basis	REPO: Good Trade (G) B Trade (B)	If Imp Repo <2 or? , then Sell Basis the next day	TY Call Vol	TY Put Vol	DoD Diff Call Vola	DoD Diff Put Vola	Bias TY following day	Volatility: Good trade (G) Bad trade (B)
21-Jul	Thu	2.55	2.59			5.39	5.39	0.26	0.25		
22-Jul	Fri	2.06	2.79		2.06	5.09	5.16	(0.30)	(0.23)	Sell	

- I'm seeing if by combining the Repo and the Volatility I can get 2 signals going in my favor
- On Monday morning I would have had the data from the graph above. By analyzing the data I see that the IRR closed less than 2.20 which is a signal to me that the IRR has fallen very low. I would expect to see the IRR move higher today (Monday). So my biased is to be a seller in the basis.
- The other indicator I'm looking at is the TY Call and Put Vol (volatility). Note the 'DoD' (Day over Day) change column for both Call and Put. It's telling me to sell.
  - Here's why:
  - I'm interested in the DoD change. Looking and 21-July, I see that the Call Vol closed at a .26 difference than the day before and the Put vol closed at a .25 difference from the day before. Now look at 22- Jul DoD difference. The Call Vol closed (0.30) from the day before and the Put vol (0.23). *The Put vol fell less than the Call vol from the DoD change. That tells me that there is more interest in selling than buying.*
  - Now I have 2 signals going my way.
    - Sell the basis
    - Sell TY (ZN)
  - The Results: the basis traded lower the next day. At 7:20 the basis was 2.77, fell to 2.72 by 8am, rallied to 2.78 by 9:40 and broke the rest of the day to 2.68.

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25-Jul	Mon	2.52	2.68	G		5.28	5.38	0.19	0.22		G

I'll warn you though. These indicators are taken from a Daily perspective. The numbers for any given day are produced after the market closes; 4pm CDT for futures and 4:35 pm CDT for cash. So, after you come up with your bias, you must look at what happened over night. *Did we already do what you predicted?* If we did, then, don't take the trade