**Repos**

How do Bond Dealers finance their positions?

Repo = Repurchase agreement = RP

Repo – initiating party wants to borrow funds (sell and repurchase)

Reverse Repo – initiating party wants to obtain collateral

General – any collateral (treasuries) will do

Special – specific collateral desired – rate is lower

Quotes are posted as with bid and ask

Quotes are posted for different maturities

Collateral = security used

Haircut = Margin = Difference between market value of collateral and funds delivered to seller

Example:

A Bond Dealer initiates a repo and sells T-bonds to a Money Market Fund with a forward contract to repurchase them from the Money Market Fund in 2 days at a higher price

The haircut protects The Money Market Fund (buyer/lender) because if the value of the T-bonds fall while the fund has them, the Bond Dealer might refuse to buy them back.

Since repo rate is short-term lending, and the yield curve is usually upward sloping, the interest earned on the security is usually > the interest paid on the repo, so the Bond Dealer has a positive carry.

Bond Dealers can make money three ways with a Repo:

1. Spread
2. Price appreciation (can lose money if price depreciates)
3. Carry (can lose money if there is a negative carry)

Example:

Issue Date of bond: 9/15/2007

First Coupon Paid on 3/15/2008

Bond Matures on 9/15/2010

Coupon Rate on bond = 5.00%

Clean Bid Price of Bond is 102.70

YTM based on this price is 3.7422%

3-day Repo Rate = 2.00%

6/10/08 (Settlement Date)

Bond Dealer buys bond and delivers it to MM Fund

MM Fund takes bond as collateral and lends cash at repo rate

T-bond price is 102.70 + 1.18 accrued interest = 103.88

MM Fund takes haircut of 50 basis points of market value = .52

Amount borrowed is 103.36

6/13/08 (Settlement Date)

Bond Dealer takes back T-Bond and sells it for 102.65 + accrued interest of 1.22 = 103.87

Bond Dealer pays MM Fund the 103.36 borrowed plus 2% interest for 3 days

 103.36 (1 + [.02 (3/360)]) = 103.38

Note that since a repo is a money market instrument, we use the actual number of days, but 360 days/year.

Note that the interest the Bond Dealer paid for the repo was:

103.38 – 103.36 = .02

And the interest the Bond Dealer earned on the bond for three days was:

1.22 – 1.18 = .04

In an open-end repo, the date of the repurchase is not set at the time of the initial purchase. Either party can choose to close out the deal at any time. The repo rate will be the overnight rate (each day) with the interest compounding daily.