Discussion of "The Impact of Maturity Financing Choices..." by Vladimir Sokolov

Diego García
UNC at Chapel Hill

First International Moscow Finance Conference
November 19th, 2011

Some definitions

- Repo transactions: borrowing using bonds as collateral.
  - As much speculation as hedging.
- "Specialness" of bonds.
  - Bonds in "high demand," with respect to general collateral (GC) bonds, will carry a convenience yield, thus depressing repo rates (Duffie, 1996).
- Repo rate at date t for term n, $r_t^{(n)}$. Overnight rates r_t^1.
- Two key time series in the paper: the slope of the repo term structure, $r_t^{(n)} - r_t^1$, and excess returns for repo rates $rx_t^{(n)}$.

$$rx_t^{(n)} = r_t^{(n)} - \frac{1}{n}\sum_{t=0}^{n} r_t^1 \qquad (1)$$

The hypothesis

- Primary dealer's net financing in the repo market is a short position in bonds.
- Differences in the overnight (O/N) repo and term repo financing.
- Figure A2 – two variables are negatively correlated, i.e. dealers seem to be choosing to either short overnight repos or they short term repos.
- Conjecture: growth of the ratio of dealers' net financing in overnight versus term, $\Delta \frac{\text{Net O/N financing}}{\text{Net term financing}}$, will affect repo rates.
  - H1: $\Delta \frac{\text{Net O/N financing}}{\text{Net term financing}}$ is positively related to repo excess returns.
  - H2: $\Delta \frac{\text{Net O/N financing}}{\text{Net term financing}}$ is positively related with the slope in the repo market term–structure.

The results

The paper has three tables:

- Table one reports uni–variate regressions of $rx_t^{(n)}$ and $r_t^{(n)} - r_t^1$ on $\Delta \frac{\text{Net O/N financing}}{\text{Net term financing}}$.
  - Predictive power for $rx_t^{(n)}$, but not for $r_t^{(n)} - r_t^1$.
- Table two shows results are robust to the inclusion of other factors.
  - Cochrane–Piazzezi barely loads, change in fed fund future prices predict upcoming increase in overnight rates, MOVE index predicts slope of repo term structure, bid–to–cover ratios from Treasuries.
- Table three shows that the predictability on repo rates does **not** carry over to other money market rates (i.e. suggests collateral channel).
  - LIBOR rates, bank deposit rates, commercial paper AA rates.

Big picture (outside repos)

Market prices affected by "non–cash flow" variables.

- The classic "Demand curves for stocks slope down" (Shleifer, 1986).
- In stock market, supply of shares can also make stocks "special."
- In exchange rate markets, dealers inventories are important.
- In bond market, the availability of the right collateral seems to be key.

Remark: not clear to me what the expectations hypothesis has to do with the paper.

What's sexy, and what's not, about bond markets

- For those of us that have worked in equities, bond markets are rather boring.
  - Low volatility, low rates, no "Mad Money."
- But I know this is stupid – fixed–income markets, and repos in particular, dwarf equity markets in size.

What's sexy, and what's not, about bond markets

- For those of us that have worked in equities, bond markets are rather boring.
  - Low volatility, low rates, no "Mad Money."
- But I know this is stupid – fixed–income markets, and repos in particular, dwarf equity markets in size.
- Paper nonetheless lacks a sense of the size of the effects.
  - If SD of repo is 1.6, SD of $\Delta \frac{\text{Net O/N financing}}{\text{Net term financing}}$ is 0.32, coefficient is 0.1 then ...
  - a 1–SD shock to relative financing moves repo rates by 0.03, or 2% of 1–SD of repos?
  - Small by equity–market standards, but perhaps big?

On the results themselves

- Paper finds that $\Delta \frac{\text{Net O/N financing}}{\text{Net term financing}}$
  - predicts $rx_t^{(n)} = r_t^{(n)} - \frac{1}{n}\sum_{t=0}^{n} r_t^1$;
  - but not $r_t^{(n)} - r_t^1$.
- This is interesting, and somewhat unexpected in my mind (from "demand curves slope down" arguments).
  - I would have expected to see an effect at date t.
- Results suggest predictability stems from *future* O/N rates.
  - Can this help you differentiate some theories?

Small comments

- I cringe with Newey–West standard errors – use White/OLS for comfort.
  - Little–known–fact: Newey–West will correct for autocorrelated residuals (hardly ever a problem with stocks), *and* it will also induce a finite–sample bias (NW thinks it is "too smart").
  - This finite–sample bias can actually be rather large.
- Is it $\frac{1}{n}\sum_{t=0}^{n} r_t^1$ or $\frac{1}{n}\sum_{t=0}^{n-1} r_t^1$?
- "To reject the alternative hypothesis" is hard to do. We reject null hypothesis, and the point estimates may suggest alternative hypothesis that are better than others.

Small comments II

- Some measures were hard to figure what the units were: basis points, annualized daily rates (how)?
  - Institutional details/conventions in these markets not well known in academia.
- The dynamics of dealers' financing in overnight versus term segments are negatively correlated using "eyeball econometrics." But what is their correlation?
- Other minor margin comments....