Comments on “Structuring for Leverage” by Joe Mason

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* Any views expressed represent those of the author only and not necessarily those of the Federal Reserve Bank of New York or the Federal Reserve System.
Credit assets have traditionally been illiquid
  – Try trading a single mortgage, or credit card receivable

Securitization helped “liquify” these assets
  – Bundle, slice and sell

Need to solve significant information problems to get this done
  – How is an investor to efficiently evaluate a tranche of an ABS?
  – Can’t re-underwrite every credit in the pool
  – Credit rating agencies help address this information friction
Questioning the magic . . .

- When it works, very efficient way of allocating credit risk / capital

- Growth of securitization paralleled growth of repo markets
  - Efficient financing mechanism

- But what if market participants feel the need to re-underwrite every credit asset in an ABS/MBS?
  - Mis-assessment of risk
  - Mis-valuation

- Machine can grind to a halt
Mason: Structuring for Leverage

- Lucid, clear explanation of some of the riskier structured products: CPDO, SIV, and ARS
- New security vs. old securities in new clothes
- Embedded leverage
- Liquidity and credit risk
- Diversification, concentration, correlation
- Flexibility vs. hard wiring ("brain dead")
Illiquidity in interbank funding markets

Source: Bloomberg, FRBNY
Illiquidity in interbank funding markets

Source: Bloomberg, FRBNY
Problems addressed by new lending facilities

- **TAF**: illiquid term markets and the stigma that accompanies discount window borrowing.
- **TSLF**: illiquid functioning in repo funding markets—illustrated by abnormal rates and high haircuts.
- **PDCF**: the lack of market-based back-stop credit in repo markets.
What can you pledge at the TSLF & PDCF?

- TSLF: OMO collateral plus investment grade securities: private label RMBS, CMBS, Agency CMOs, ABS such as CDOs, CLOs, corporates, munis, MBS (R and C), ABS
  - So long as it can be priced by the clearing banks

- PDCF: above plus sub-investment grade securities plus equities

- Importantly, previously repo-able securitized instruments are no longer “stuck” on firms’ balance sheets
  - Facilities designed as liquidity vehicles
High overnight agency and MBS spreads to Treasury

Overnight Repo Spreads

Source: Bloomberg
High overnight agency and MBS spreads to Treasury

Overnight Repo Spreads

All other lines indicate TSLF Auction Dates

Source: Bloomberg
Abnormally low overnight Treasury repo rates

Overnight Repo Rates

Source: Bloomberg

TSLF program announced
Collateral schedule for first TSLF
1st TSLF
2nd TSLF
3rd TSLF
4th TSLF
5th TSLF
6th TSLF

Treasury
Agency
Agency MBS
Abnormally low overnight Treasury repo rates

Overnight Repo Rates

Source: Bloomberg

All other lines indicate TSLF Auction Dates

TSLF program announced
Collateral Schedule for first TSLF announced

Source: Bloomberg

Treasury GC  Agency  Agency MBS
Yet more facilities…..

- **Swap lines**: illiquid money markets that became segmented across countries and time zones
  - BoE, ECB, and SNB will conduct tenders of U.S. dollar funding at 7-day, 28-day, and 84-day maturities at fixed interest rates for full allotment. Funds will be provided at a fixed interest rate, set in advance of each operation.

- **Commercial Paper Funding Facility**: illiquid functioning in short-term commercial paper funding markets.
  - Under the CPFF, the FRBNY will finance the purchase of unsecured and asset-backed commercial paper from eligible issuers through its primary dealers. The CPFF will finance only highly rated, U.S. dollar-denominated, three-month commercial paper
Thank You!

http://nyfedeeconomists.org/schuermann/
Illiquid repo markets

The TSLF addresses the illiquid functioning in various repo financing markets, including abnormal rates, wide bid-ask spreads, and large and increasing haircuts on collateral.

The TSLF
- adds Treasuries to dealers’ portfolios, reducing their scarcity in the repo market.
- reduces the roll-over risk for dealers in their financing of the alternative assets used as collateral.
- format assists in setting the right price for the Treasuries lent.
- avoids any reserve management problems.
Risk and subprime mortgages

- During the recent subprime boom, everyone was betting on continued home price appreciation (HPA)

- Subprime mortgages have shown up under every rock – e.g. in most structured credit products like CDOs

- Effectively everyone has been long (and levered to) 1 risk factor: HPA
  - If it goes down, everything goes down
Bank Write Downs
billions; through September 29, 2008

Total: $591 bn
(and counting…)
Total Capital Raise: $434bn

Source: Bloomberg
1. **Predatory lending**: Subprime borrowers can be financially unsophisticated – either unaware of all options available or unable to make the best choice between options.

2. **Mortgage fraud**: The originator, who sells a pool of mortgages to the arranger, has an information advantage over the arranger regarding quality of the borrower. An originator, collaborating with the borrower, may misrepresent the information on the application.

3. **Adverse selection**: The arranger has more information about the quality of the mortgage loans – so, the arranger can choose to securitize the bad loans and retain the good ones.

4. **Moral hazard**: In order to maintain the value of the underlying asset (the house), the mortgagor has to pay insurance and maintain the property. In, or approaching delinquency, there is little incentive to do this.

5. **Moral hazard**: Given that the servicer’s income increases the longer the loan is serviced, keeping the loan on its books for as long as possible is preferred – therefore, it has a preference to modify the terms of a delinquent loan to delay foreclosure.

6. **Principal-agent**: While the investor provides funding for the mortgage-backed security, the asset manager conducts the due diligence on the investments and finds the best price for the trades – the asset manager may not take sufficient effort on behalf of the investor.

7. **Model error**: The rating agencies are paid by the arranger and not investors for their opinion. Their rating relies on models, which are susceptible to errors.

Source: Ashcraft and Schuermann (2007): “Understanding the Securitization of Subprime Mortgage Credit”