DISCUSSION OF
“SELF-FULFILLING RUNS: EVIDENCE FROM
THE U.S. LIFE INSURANCE INDUSTRY”

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Motivation

1. Are life insurers vulnerable to runs during systemic crises?

   - Traditional view: life insurer liabilities (life insurance contracts and annuities) are long-term so not subject to runs.

   - FSOC designation of MetLife as SIFI: *If MetLife were to experience material financial distress, MetLife may not be able to roll over its fixed-maturity funding agreement-backed securities, extend its funding agreement-backed securities with embedded put options, or maintain its securities lending transactions in connection with its funding agreement-backed securities programs, which could force MetLife to liquidate assets, including illiquid assets, if the organization’s liquid assets were insufficient to meet this unexpected demand.*

2. How can we separately identify self-fulfilling runs from runs on fundamentally unsound institutions?
Paper:

1 Dynamic model of runs à la He and Xiong (RFS 2012).
2 Constructs unique data set of extendable funding arrangements issued by life insurers.
3 Uses contractual details to identify role of complementarities in redemption.
4 Concludes withdrawal from funding arrangements in 2007-08 had strong self-fulfilling component.

Discussion:

1 Review run logic and contractual details.
2 Identification strategy and results.
3 Interpretation of results and big picture.
IDENTIFYING SELF-FULFILLING RUNS

- You have unique special accounts at bank A and bank B which allow you and only you to withdraw on Sundays. You cannot make it to either bank during the week.

- Bank A and bank B have same balance sheet and same clients, but:
  - Bank A: other depositors can withdraw during the coming week.
  - Bank B: closed for withdrawals during the coming week.

- Large scale withdrawals possible at bank A but not bank B before next Sunday ⇒ withdraw more from bank A than bank B today.
XFABN

Convert to note due 7/6/2012
Convert to note due 8/6/2012
Convert to note due 6/6/2017

Period to first election
Withdraw
Extend
Withdraw
Withdraw
Extend

6/14/2011 Issue date (MetLife $800m issue)
7/6/2011 First election
8/6/2011 Second election
6/6/2016 Final election
7/6/2017 Final maturity

Election date ($300m)
Election date ($2.0b)
Election date ($500m)
Election date ($1.6b)

Other XFABNs by MetLife
Empirical specification

- Proxy expected with actual withdrawals and instrument with share withdrawable:

  2nd stage: \( \text{Withdrawals}_{j,t} = \beta \text{Withdrawals}_{j,t+1} + \gamma' X_{j,t} + \varepsilon_{j,t} \)

  1st stage: \( \text{Withdrawals}_{j,t+1} = \Pi_1 \text{Share withdrawable}_{j,t+1} + \Pi_2' X_{j,t} \).

- Identifying assumption: Share withdrawable orthogonal to:
  1. Insurer characteristics (i.e. balance sheet health).
  2. Characteristics of investors (i.e. liquidity preferences).

- Paper careful and lots of robustness:
  - Share withdrawable measured as of 3 months ahead or June 2007.
  - Insurer FE in main regression and week FE in robustness.
  - Control for days between election in robustness.
### Main Result and Alternative Standard Errors

<table>
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<th>Standard error construction:</th>
<th>Point estimate</th>
<th>Second stage SE</th>
<th>Second stage p-value</th>
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<td>0.396</td>
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<tr>
<td>Cluster by insurer and week</td>
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<tr>
<td>Wild t block bootstrap by insurer</td>
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- Interpret: 10 p.p. (1 s.d.) increase in expected XFABN converted prior to next election raises probability of redemption by 21.2 p.p. (0.91 s.d.).
**Possible concern**

- Suppose some insurers increased XFABN issuance more than others during boom and marketed to particular MMFs.

- Those MMFs were first to convert during the bust, perhaps because they also bought ABCP and needed to reduce average maturity.

- Important source of variation in instrument is fraction of XFABN which have reached final non-redeemable maturation period. This share is smaller for insurers with lots of recently-issued XFABN.

- Result is positive correlation between withdrawals and fraction withdrawable before next election even absent complementarities.

- Not solved by insurer fixed effect, but restricting to higher frequency variation (e.g. quarter X insurer FE) would help.
INTERPRETATION?

Run logic:

- Redemptions
  - Immediate liquidation of many assets
  - Institution can’t meet all redemption requests
  - Optimal to redeem as early as possible.

Example (not in paper’s sample): in 1999, General American Life Insurance Company had balance sheet of $14 billion and obligations of $6.8 billion in securities redeemable with 7 days notice. Following downgrade, run forced sale of General American to MetLife.

XFABN?

- Immediate liquidation? 1 year a lot of time to sell securities.
- Many assets? Small part of liabilities and covered by liquid assets.
IMMEDIATE LIQUIDATION?

Figure 4: Run on Extendible FABN

Time to obtain liquidity

XFABN “withdrawal” $\Rightarrow$ spinoff security with maturity $\subseteq [10 \text{ months}, 2.75 \text{ years}].$
Many assets?

- XFABN $\approx 20\%$ of FABS. NOT bankruptcy remote like ABCP.
FOMC transcripts in 2007H2 contain zero mention of a run on life insurers.
Run on life insurers?

Source: Chodorow-Reich, Ghent, and Haddad (2016).
Equity falls less than net assets during crisis.
CONCLUSION

- Impressive data collection effort and novel research design.
  - Maybe restrict to high frequency variation: quarter X insurer FE.

- Interpretation of the results?
  - Clearly large scale withdrawals from this market.
  - But not obvious why anticipated future withdrawals in XFABN market should affect XFABN withdrawal decision today.
  - Would like more institutional detail on how these withdrawals square with standard ingredients of a run.