Monetary Stimulus and Bank Lending

by Chakraborty, Goldstein, and MacKinlay

Discussion by Christopher Palmer
MIT Sloan

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Stylized QE chain reaction

1. Central bank purchases of long-duration assets X bids up prices for those assets
2. Capital (including banks) looks at depressed yields in market for X and pulls out in favor of other long-duration assets with higher yields
   - (“portfolio-rebalancing channel”)
3. All long-duration assets experience lower yields
4. Movement along credit demand curve leads to more borrowing by firms, households, etc.
5. Increased borrowing leads to higher investment and consumption
6. Leads to higher incomes, higher consumption

Bank-lending channel

- QE intuition is that central bank just has to intervene on long end of yield curve
- Bank-lending channel: banks (among others) will increase lending for a variety of reasons
  - Capital flows to highest return projects
  - Authors highlight capital gains channel, origination channel
- Recent QE papers trying to figure out mechanisms behind QE effects

This paper's findings

1. QE MBS purchases increased mortgage origination…
2. …which partially crowded out C&I lending…
3. …which led to *lower* investment by firms

- Ample evidence on #1 (RD 2017, DKP 2016, BFHV 16)
- #2 is new, impt, and disagrees with incumbent work
- #3 consistent with other work on disruptions in credit (e.g., Chodorow-Reich, 2014)

I. Different strokes

- Rodnyansky and Darmouni (RFS 2017) find that C&I lending *increased* through bank-lending channel
- Authors attribute this to specification differences
- CGM specification

$$Y_{bt} = \alpha_b + \gamma_t + \beta_1 Treat_{bt-1} + \beta_2 Treat_{bt-1} \cdot MBSPurch_{t-1} + X'_{bt-1}\delta + \varepsilon_{bt}$$

- RD specification

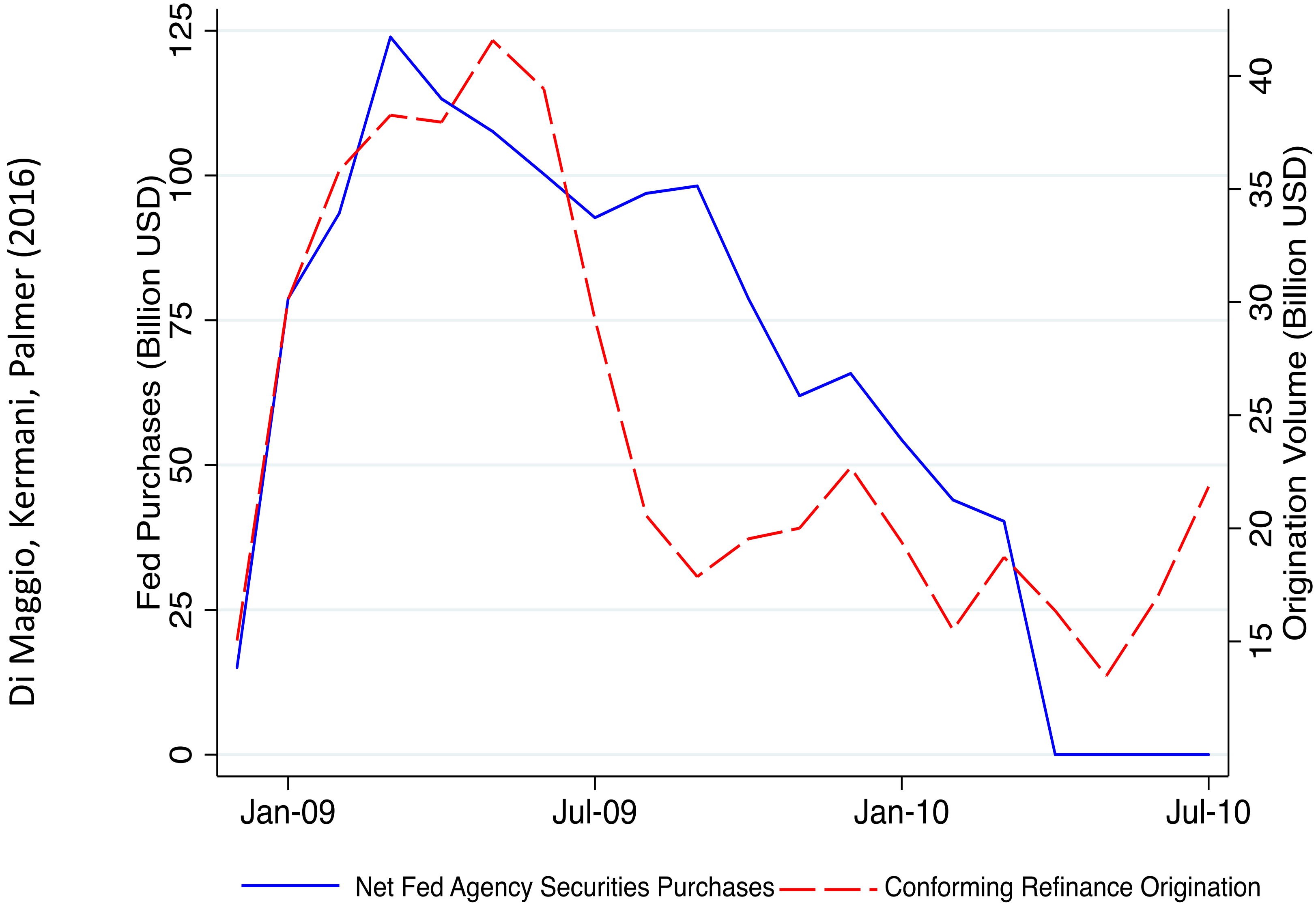
$$Y_{bt} = \alpha_b + \beta_1 QE_t^j + \beta_2 Treat_b \cdot QE_t^j + X'_{bt}(\delta_1 + \delta_2 QE_t^j) + \varepsilon_{bt}$$

- Time fixed effects and importance of flows
- Could replicate RD and show exactly where breaks down: 1) replicate 2) time FEs, 3) flows

II. Flow versus stock debate

- Understanding importance of flows is a first-order policy concern
- Gets at channels (signaling vs portfolio-rebalancing)
- Informs LSAP unwinding and optimal design of future LSAPs
- Despite ample variation in flows, identification strategy not clear to study their effects

Strong correlation with flows

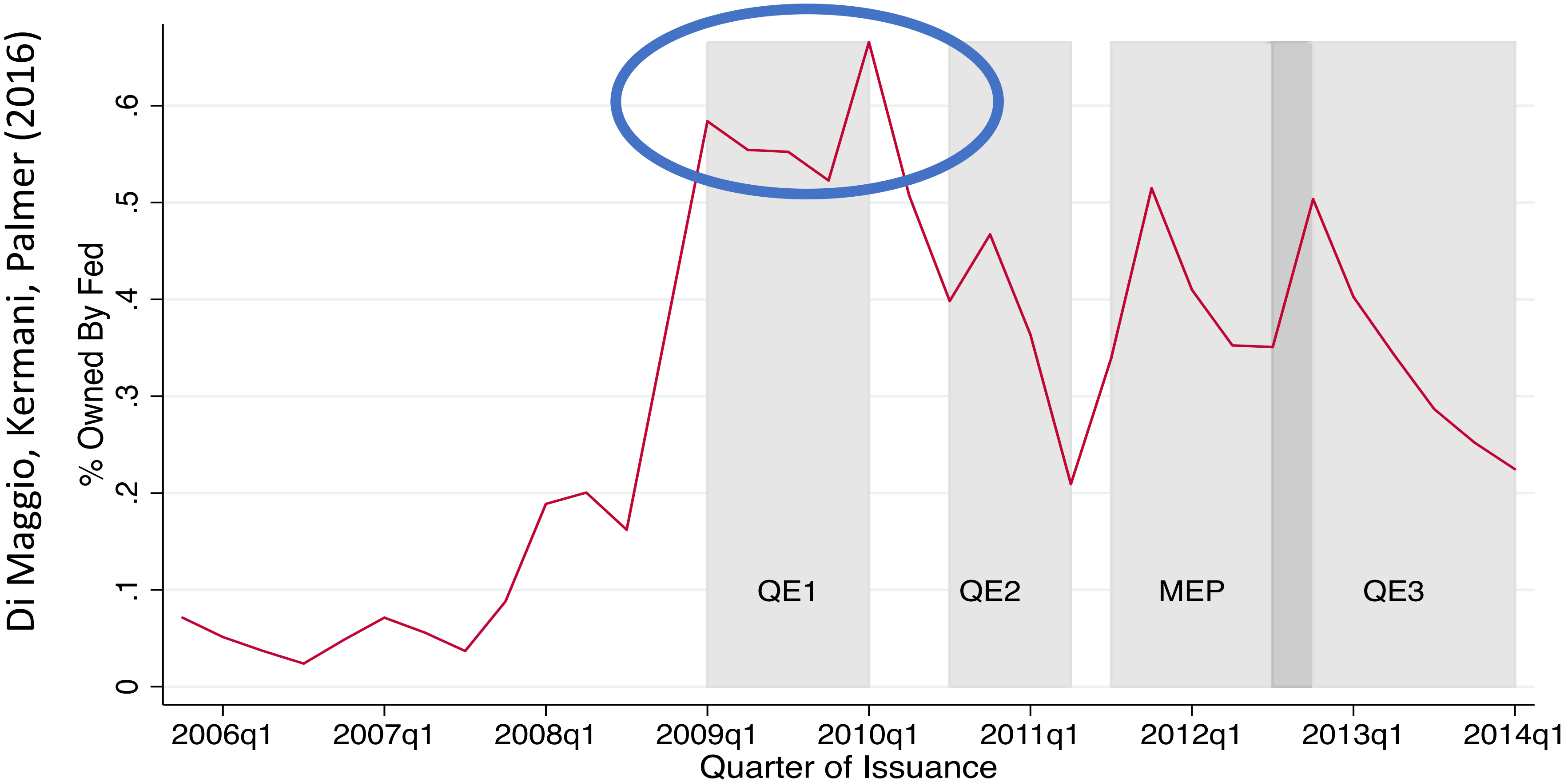


Where do flows come from?

- Details on how Fed OMO was tasked with TBA purchase quotas would help understand potential flow endogeneity
- What if they were told, please buy \$X, but not more than 60% of a given TBA contract?
- Then flows mechanically track origination – reverse causality concern
- Worry that specification is a regression of quantity on some function of quantity?
- (TBA Dollar Rolls also exacerbate reverse causality)

QE1: relatively constant origin. share

Appendix Figure 1. Share of GSE Origination Owned by Federal Reserve by Quarter of Issuance



A “Figure 1” would bolster ID

- Paper’s empirical strategy is essentially diff-in-diff
- Treatment and control banks based on relative exposure to MBS market
- If parallel trends hold when flows=0, could allay concerns about flow endogeneity
- Why not have a figure that shows key outcomes over time for treatment and control?
- Treated firms should track control firms in, e.g. C&I volume, except during periods when flows are highest
- Are flows equally effectual over time? i.e. a given increase in flows during Tapering vs QE1?

III. Capital Gains vs Orig Channel

- Existing work suggests that any capital gains effects happen immediately on announcement, whereas origination quantities more correlated with flows
  - If so, empirical design relying on flows won’t detect any effects through capital gains channel
- Moreover, are capital constraints relevant for originate to distribute?
  - Originating to sell MBS to Fed requires minimal capital – 2 months holding + low risk weight
- Is it the case that mortgage-responding banks are same ones with C&I increase? Chain not necessarily identified by reduced-form specs
- That said, authors careful to caveat ability to distinguish

Conclusion

- "The problem with QE is that it works in **practice**, but it doesn't work in **theory**."
  –Ben Bernanke, 1/16/14
- Bank-lending channel important for **theory** of QE, i.e. mechanisms at play
- And how well does it *really* work in **practice**?
- This paper speaks to both, points out that how effective QE is depends on net effects—can't declare victory after looking at just one market if substitution is negative
- Treatment of flows and contrast with RD could be bolstered.