The Collateral Channel of Unconventional Monetary Policy

G. Ferrero, M. Loberto and M. Miccoli (2017)

Discussion by Boromeus Wanengkirtyo
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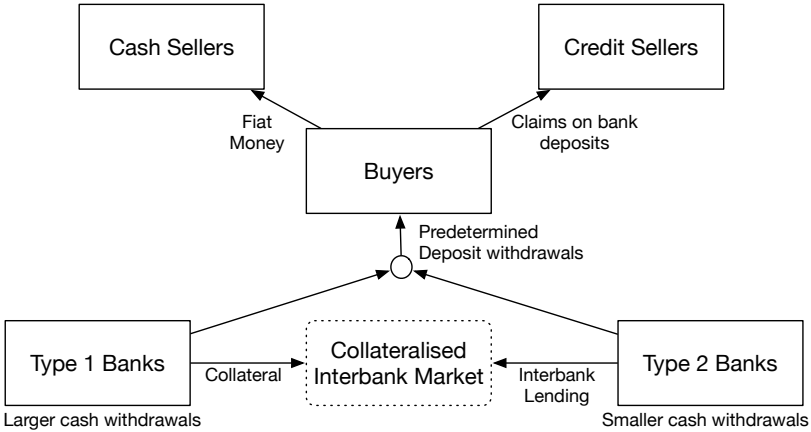
Already at advanced stage:

- Well-executed adaptation of the Williamson (2012 AER) model
- Very direct role of model to guide empirics on Euro-area government bond market
- Additional context: derivatives moving to CCPs + bank liquidity regulations
  - Even more important to understand the role of collateral

Model Overview

Two sub-periods: **decentralised market (DM)**, and then centralised market (CM)



Model Overview

How does (unconventional) monetary policy fit in:

$$\delta_t \equiv \frac{M_t}{M_t + B_t} = \frac{1}{1 + \frac{B_t}{M_t}}$$

Intuition:

- OMO: buy B in exchange for $M \Rightarrow B/M \downarrow$ and $\delta \uparrow$ (more collateral scarcity)
- Haircuts $\downarrow \Rightarrow$ funding raised $\uparrow \Rightarrow$ demand $\uparrow \Rightarrow$ yields $\downarrow$

3 testable predictions:

1. Securities with higher haircuts have higher yields
2. Yields weakly decreasing as collateral scarcity increases (relative liquidity)
3. This decrease is less prominent for securities with higher haircuts

Empirical Methodology and Results

Regress basis $b = (y - r^f) - \textit{CDS premia}$ (opposite definition than in finance lit):

$$b_{c,i,t} = \beta_0 + \ \beta_1 \ \delta_t + \ \beta_2 \ h_{c,i,t} + \ \beta_3 \ \delta_t \times h_{c,i,t} + \mu' \mathbf{X}_{c,i,t} + \varepsilon_{c,i,t}$$

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  - Given monthly data, uses some time-series variation
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- FEs: country, maturity and quarter-year
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- Careful aggregation so timing of MROs do not interfere with δ
- Empirical results supports the three hypotheses

Comment 1: Credit Risk

Fontana and Scheicher (2016 JBF): CDS is more sensitive to country-specific credit risk

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Suggestion: As robustness, replace δ with 'Active Utilisation'

- % of securities in the lending programs currently out on loan
- Adv: much more granular at security level, can add month-year FEs

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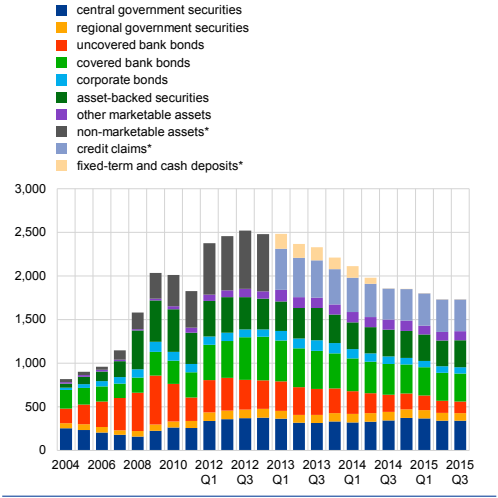
- If banks can substitute away from interbank market, or use other assets as collateral, the liquidity premium induced on sovereigns could be smaller

(EUR billions after valuation and haircuts)



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Notes: Averages of month-end data over each period.

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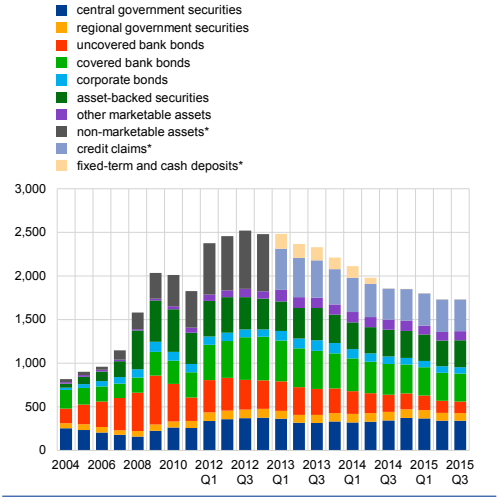

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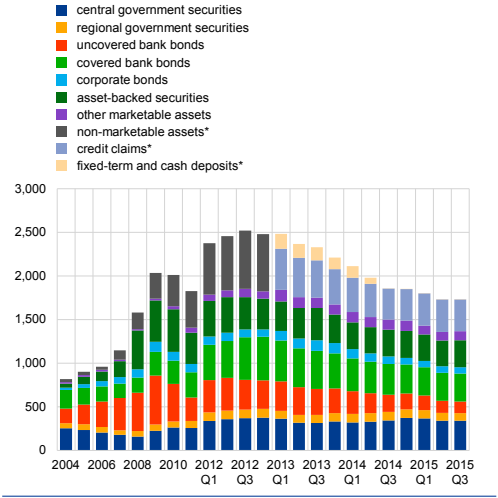

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- LCR: strengthen, NSFR: weaken?

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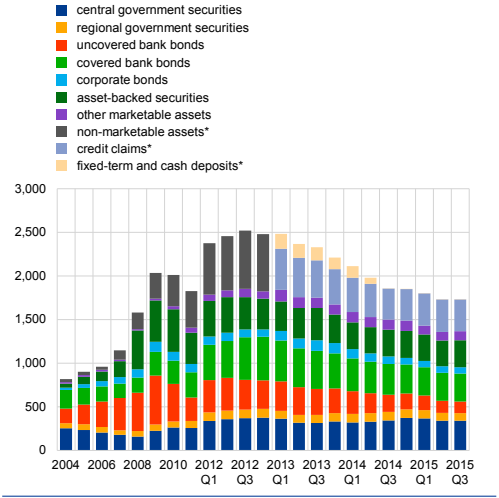

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- High margin securities $\Rightarrow$ need more margin capital $\Rightarrow$ higher required returns
- If credit spread $>$ CDS:
  - Buy bond, funded by repo using the same bonds as collateral
  - The haircut imposed reduces the amount of leverage available
  - Higher haircuts so higher funding costs, less profitable basis trade.
- Bonds with higher margin (higher haircuts) have higher yields
- Empirical test for US corporate bonds

Small Suggestions

- My prior (and at least some others) is that much of bank funding is unsecured. This is not the case, and deserves more than a footnote.
- Use the Arellano-Bond estimator for the lagged basis regression.

Conclusion

My impression:

- Advanced stage
- Interesting paper and timely topic
- Nice theoretical model, and motivates empirical analysis