

Discussion of

Bond Convenience Curves and Funding Costs

by Juuso Nissinen and Markus Sihvonon

Florian Wicknig¹

¹Deutsche Bundesbank

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Disclaimer: The views expressed in this paper are those of the author only and do not necessarily reflect the views of the Deutsche Bundesbank.

This Paper

Motivation

- Collateral is an essential part of financial markets.
- For equally risky assets, those that have higher collateral benefits trade at a smaller yield: convenience yield.

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Research Question

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Approach

- Theoretical model with risk-averse arbitrageurs that face funding risk.
- Empirical analysis of euro area liquidity operations.

Theory

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- Excess funding cost of periphery bonds depends on arbitrageurs' holdings X_t^*

$$\Lambda_t = \lambda \cdot \int_0^T X_t^*(\tau) d\tau$$

- Investors' demand for periphery bonds Z_t^* is uncertain.

$$Z_t^* = -\theta^*(\tau)\beta_t \quad \text{with } \beta_t \text{ as demand shock}$$

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- Market clearing $0 = Z_t^*(\tau) + X_t^*(\tau) \Rightarrow$ Future funding cost are uncertain.
- Inconvenience yield

$$icy_t(\tau) \approx \frac{1}{\tau} \mathbb{E}_t \int_t^{t+\tau} \Lambda_s ds + \text{Funding risk}$$

■ Implications

1. Inconvenience curve is upwards sloping.
2. Impact of asset purchases or collateral policy changes are more pronounced on the long end.

Discussion: Theory

Discounting

- Arbitrageurs discount with the risk-free rate. How does it affect the inconvenience yield?
- Calibration of parameters related to the risk-free rate is missing.

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Excess Funding Cost

- Depends on amount of bonds to be financed and *constant* default probability:

$$\Lambda_t = \lambda \cdot \int_0^T X_t^*(\tau) d\tau .$$

- Essential ingredient: changes of the integral via X_t^* add the funding risk.
- Is this true for *central bank credit operations*? Irrespective of the borrowed sum, the rate paid on liquidity stays the same.
⇒ Are excess funding cost really responsive to this part of lending?

Empirical Analysis

Identify and assess the relevance of inconvenience yields

- Regress yield or inconvenience yield of Italian bonds on indicator for maturity-related haircut changes.
 - Statistically significant negative impact on yields and, of similar magnitude, on inconvenience yield.
 - Inconvenience cost is an important driver of policy impact on yields!

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 - Share of inconvenience yield on average 50%.
 - Intuitively: strongest for collateral framework change.

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Maturity-related impact of purchase programs

- Focus on announcement effects of PSPP and PEPP: impact on short and long end of inconvenience curve.
 - Longer inconvenience yields fall by more as implied by theoretical results.

Discussion: Empirical Analysis

- Yields in the model are driven by credit risk and the inconvenience yield.
- Differences in the liquidity of the bonds? Inconvenience yield and liquidity are surely quite correlated.
⇒ Control for bond liquidity in regressions like in Jiang et al. ([2022](#)).

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- The inconvenience yield is a driver of yield changes, in particular for longer maturities.
- Yet, regressions of inconvenience yield on haircut indicator interacted with maturity buckets do not clearly display this model implication.
- Robustness of empirical analysis
 - Analysis only for Italy. Extend to other countries in your sample?
 - Matching of German and Italian bonds to derive inconvenience yield is not always perfect. What if you restrict sample to perfect matches?
 - Restrict decomposition of announcement effects to changes of collateral framework related to sovereign bonds. Why not all types of changes?

Minor Comments

- The motivation focuses on secured lending but, from my point of view, could be even broader. Whenever only a subset of bond is eligible, convenience benefits will arise.

WELL-WRITTEN AND INTERESTING PAPER!

THANK YOU!

References I

Jiang, Zhengyang, Hanno Lustig, GSB Stanford, Stijn Van Nieuwerburgh, and Mindy Z Xiaolan (2022). Bond Convenience Yields in the Eurozone Currency Union.