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A state space approach to measuring the impact of sovereign and credit risk on interest rate convergence in the euro area[☆]

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ABSTRACT

This paper employs a time-varying parameter state space model to explore the impact of the crisis on bank retail rates in the euro area. We show that σ-convergence in interest rates has been adversely affected by the crisis and quantify the role of sovereign and credit risk as two alternative explanations for the increase in financial fragmentation. A key finding is that the heterogeneity in sovereign risk across member states accounts for a sizable part of the increase in the cross-sectional dispersion of various lending and deposit rates. In contrast, the impact of the increased heterogeneity in credit risk on bank retail rates is negligible. Our results suggest that efforts to reduce sovereign tensions – as exemplified by the ECB's OMT program - may help to reduce financial fragmentation.

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1. Introduction

Since the start of the credit crisis, in many countries monetary policy has been relaxed by reducing policy rates to a level close to the lower zero bound. In addition, central banks have resorted to non-traditional policy actions aimed at stimulating the economy. In spite of these efforts, doubts have remained about the effectiveness of monetary policy to reduce the borrowing costs of households and firms (Blot and Labondance, 2011; Aristei and Gallo, 2014). These concerns are greatest in the euro area, which in addition to the recession and the fragility of a comparatively large banking sector also has to cope with the fragility of the monetary union itself (de Grauwe and Ji, 2013). These fragilities have culminated in a process of financial fragmentation, resulting in an increased heterogeneity in bank lending conditions across the euro area (Illes and Lombardi, 2013).

Prior to the crisis, various structural factors impeded a complete convergence of bank retail rates and a uniform pass-through of market to retail rates in the euro area. These include differences in the level of competition in the banking sector, the availability of market-based funding, product heterogeneity and institutional factors related to fiscal and regulatory frameworks (Cottarelli and Kourelis, 1994; Güntner, 2011). For these reasons, European financial integration in retail banking has always lagged behind the integration of financial markets and wholesale banking. Most studies conclude that significant barriers to integration in retail banking have remained following monetary unification (Casu and Girardone, 2010). This poses a problem for the effective conduct of monetary policy by the ECB, as differences in interest rate pass-through render both the speed and strength of monetary policy transmission heterogeneous across member states.

The existing heterogeneity in monetary transmission has been exacerbated by the adverse turn in the economy since 2008, which led to increased economic uncertainty, a breakdown in money market liquidity, and doubts about the soundness of euro area financial institutions and their sovereigns. More specifically, two additional factors affecting the heterogeneity in bank retail rates have since come to the fore. First, as cyclical developments started to diverge across the union, banks located in countries experiencing harsher economic conditions may have required a higher compensation for increased credit risk. A priori, one would expect this factor to primarily affect lending rates, not deposit rates. However, an effect of credit risk on deposit rates could arise if a deteriorating loan portfolio would hurt depositor confidence. Second, the twin factors of sovereign and banking risk, jointly dubbed the sovereign-bank doom loop, may also have affected retail rates. Changes in the yields on government bonds influence retail rates through arbitrage relations or due to their status as a benchmark asset. The weakness of some sovereigns has also raised doubts regarding the sovereign's ability to support domestic banks and about the soundness of banks with a high sovereign exposure. Both concerns have contributed to safe-haven flows to fiscally strong core countries. As a result, in distressed countries government bond spreads widened, liquidity dried up and the cost of bank funding, if available at all, increased. Sovereign and banking risk thus have put the process of financial integration in reverse, leading to financial fragmentation as borrowers retreated behind national borders (Pisani-Ferry, 2013). This unmaking of financial integration has influenced the ability of financial institutions to attract and retain deposit funding and may thus have manifested itself in diverging deposit rates.

At the height of the crisis the integrity of the euro area itself was put in doubt, as indicated by the peak score of 73 for the survey-based Euro Breakup Index in July 2012. In the ultimate scenario of a euro break-up, exchange rate risk would be reintroduced in the pricing of bank loans and deposits. This redenomination risk has been an important consideration for the ECB to introduce the instrument of Outright Monetary Transactions (OMT), aimed at restoring the singleness of monetary policy by conditionally purchasing short-dated governments bonds of euro area members. ECB president Draghi (2012) provides the following justification of the OMT program:

> "The euro area has experienced a very severe fragmentation in its financial markets. In recent months, we have seen highly divergent borrowing costs for the real economy in different parts of the euro area. In our analysis, these differences were larger than justified by individual credit risk. They reflected, to a considerable extent, unfounded fears about the future of the euro area."

The ECB's arguments have met with criticism. First, the ECB's wish to restore the normal transmission of monetary policy seems difficult to reconcile with the conditional nature of the OMT