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Economic Modelling

journal homepage: www.elsevier.com/locate/ecmod

The bank lending channel of unconventional monetary policy: The impact of the VLTROs on credit supply in Spain[☆]

Miguel García-Posada^{*}, Marcos Marchetti

Banco de España, Spain

ARTICLE INFO

Article history:

Received 20 November 2015

Received in revised form 17 April 2016

Accepted 4 May 2016

Available online xxxx

JEL classification:

E52

E58

G21

Keywords:

Unconventional monetary policy

VLTRO

Credit supply

Bank lending channel

ABSTRACT

We assess the impact on the credit supply to non-financial corporations of the two very long term refinancing operations (VLTROs) conducted by the Eurosystem in December 2011 and February 2012 for the case of Spain. To do so we use bank–firm level information from a sample of more than one million lending relationships during two years. Our methodology tackles three main identification challenges: (i) how to disentangle credit supply from demand; (ii) the non-random assignment of firms to banks; (iii) the endogeneity of the VLTRO bids, as banks with more deteriorated funding conditions were more likely both to ask for a large amount of funds and to restrain credit supply. Our findings suggest that the VLTROs had a positive moderate-sized effect on the supply of bank credit to firms. We also find that the effect was greater for illiquid banks and that it was driven by credit to SMEs, as there was no impact on loans to large firms. By contrast, strong firm–bank relationships were less sensitive to the positive liquidity shock caused by the VLTROs, which is consistent with the studies that find that relationship lending is a more stable source of credit than transaction lending. Finally, the VLTROs had no impact on either the degree of loan collateralisation or the probability of making loans to new borrowers, while they decreased the probability of renewing old ones, which suggests that those funds were not used for loan “evergreening”.

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1. Introduction

The intensification of the European sovereign debt crisis in the second half of 2011 hampered euro area banks' access to market based-funding, both in the bond and monetary markets, especially in Greece, Portugal, Ireland, Italy and Spain. In those countries, bank CDS soared in parallel with the spreads of their sovereign bonds against the corresponding German figures (Fig. 1), while their stock prices plummeted. Euro area banks mainly relied on the funds provided by the Eurosystem to sustain their liquidity position and their funding and deleveraging pressures raised the risk of disruptions in the credit supply to the non-financial private sector.

Against this backdrop, the ECB Governing Council decided to implement additional non-standard policy measures on 8 December 2011, which aimed to forestall a further contraction of credit through the

mitigation of liquidity and funding risks. The agreed package of measures included two very long term refinancing operations (VLTROs) with a maturity of three years and the option of early repayment after one year, carried out as fixed rate tender procedures with full allotment.¹ The interest rates of those operations were set much lower than those borne by banks in wholesale markets at the time.² The first VLTRO, conducted on 21 December 2011, provided €489 billion to 523 banks.³ The second one took place on 29 February 2012 and allotted €530 billion to 800 credit institutions. Adding up the two, the total net refinancing amounted to more than €500 billion. The total liquidity injection was massive: it increased the size of the Eurosystem's balance sheet by more than a fifth and accounted for 80% of the monetary

[☆] We are especially grateful to Jorge Martínez for his precious guidance and suggestions. We also thank two anonymous referees, the editor, Roberto Blanco, Christian Castro, Ángel Estrada, Gabriel Jiménez, Oscar Jordá, Aitor Lacuesta, Carmen Martínez-Carrascal, Juan F. Rubio-Ramírez, Carlos Thomas, seminar participants at Banco de España, Banca d'Italia and Banque de France and participants at the XXIII Finance Forum and at the IV Meeting on International Economics for their comments. The views expressed herein are those of the authors and should not be attributed to the Banco de España or the Eurosystem.

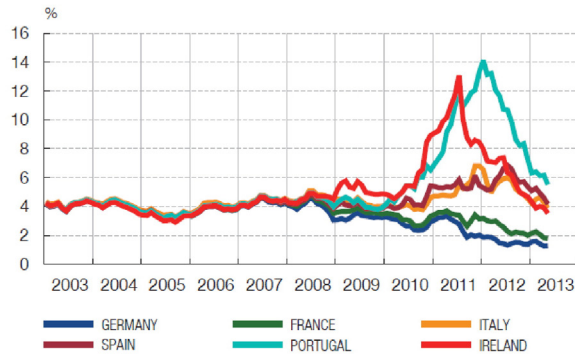
^{*} Corresponding author at: Banco de España, Alcalá 48, 28014 Madrid, Spain.

E-mail addresses: miguel.garcia-posada@bde.es (M. García-Posada), marcos.marchetti@bde.es (M. Marchetti).

¹ The VLTROs were the most important measure of a larger policy package that also comprised the reduction of the compulsory reserve ratio (from 2% to 1%) and the increase in collateral availability. The latter was achieved by reducing the rating threshold for certain asset-backed securities and by allowing national central banks to accept as collateral additional performing credit claims (i.e., bank loans) that satisfied specific eligibility criteria.

² The rate was fixed at the average rate of the main refinancing operations over the life of the respective operation. Interest had to be paid when the respective operation matured.

³ This amount included €45.7 billion transferred from the 12-month LTRO allotted in October.

TREASURY FINANCING
10-YEAR INTEREST RATE

Source: Banco de España (2013).

BANK 5-YEAR CDS PREMIUMS

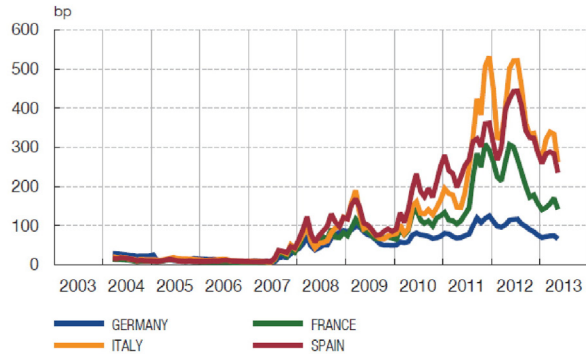


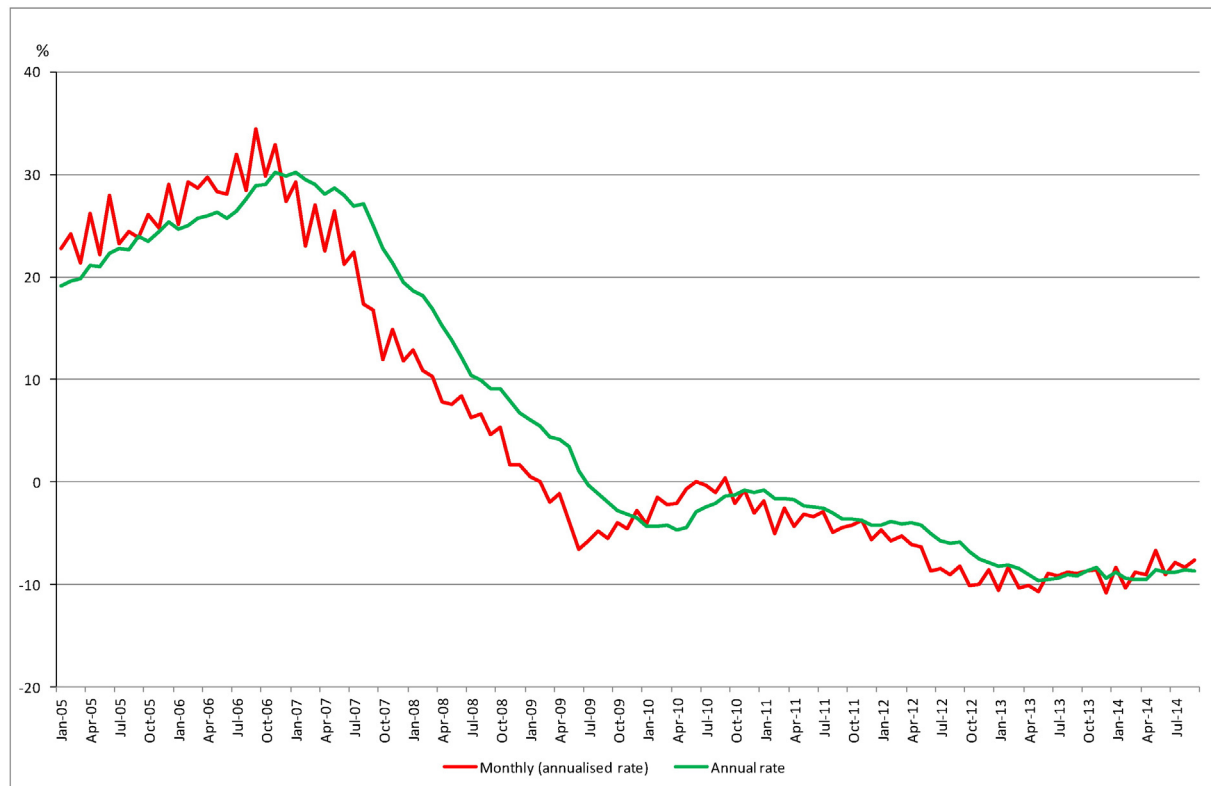
Fig. 1. Financing conditions in euro area countries. Source: Banco de España (2013).

base in the euro area, 20% of the total bank credit to euro area firms and almost 11% of the area's GDP (Andrade et al., 2015).

All the above figures imply that the VLTROs can be best regarded as a large positive liquidity shock to euro-area banks. But, since lending to the non-financial private sector kept declining—as shown for the case of Spanish firms in Fig. 2—serious doubts about its effectiveness were raised, leading to some authors to argue that banks had instead used the funds for large purchases of sovereign bonds and carry-trade strategies (Acharya and Steffen, 2015). Nevertheless, the extremely weak macroeconomic conditions prevailing in that period—which reduced credit demand and increased credit risk—and the liquidity and funding risks experienced by banks—which

constrained credit supply—lead us to consider the following research question: would have lending declined more if the VLTROs hadn't taken place?

To address those questions we use bank-firm level information from a sample of more than one million lending relationships drawn from the Credit Register of Banco de España. The case of Spain is particularly useful to evaluate the effectiveness of the VLTROs through the bank lending channel because it was at the epicentre of the European sovereign debt crisis, its banking system was severely hit by the financial market tensions prevailing at that time, it is one of the largest economies in the euro area and its firms largely rely on bank financing.



Source: Banco de España. The pink area corresponds to the period between December 2011–February 2012 when the two VLTROs took place.

Fig. 2. Credit growth to non-financial corporations (Spain). Source: Banco de España. The pink area corresponds to the period between December 2011–February 2012 when the two VLTROs took place.

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