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A non-standard monetary policy shock: The ECB's 3-year LTROs and the shift in credit supply☆

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We study the macroeconomic effects of the 3-year long-term refinancing operations (LTROs) introduced by the ECB in December 2011 with the aim of reducing the obstacles to credit supply through the mitigation of liquidity and funding risks in the euro area banking system. Therefore, we interpret the measure as a credit supply shock, which is identified both recursively and with sign restriction methods using the euro area Bank Lending Survey (BLS). The size of the shock due to the LTROs is computed using both the April 2012 BLS and the special ad-hoc questions on the LTROs conducted in February 2012. The counterfactual exercises suggest that the 3-year LTROs lifted prospects for real GDP and loan provision to non-financial corporations and increased goods prices over the next two-to-three years, thereby avoiding a major credit crunch.

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1. Introduction

In its efforts to support the liquidity situation of the euro area banks, the European Central Bank (ECB) conducted two long-term refinancing operations (LTROs) in December 2011 and February 2012 with a maturity of 36 months, as fixed rate tender procedures (fixed interest rate) with full allotment (unlimited provision). On 21 December 2011, the ECB allotted EUR 489 billion (USD 644 billion) in three-year loans to 523 banks; on 29 February 2012, the ECB allotted EUR 530 billion (USD 713 billion) in similar loans to 800 lenders. This liquidity provision at 1% interest rate amounted to 10.8% of euro area nominal GDP in 2011, 330% of the weekly main refinancing operations before the crisis started in 2007 and about 400% of the weekly main refinancing operations before the 3-year LTROs.

Fig. 1 shows a positive relationship between banks' refinancing needs over the coming three years and the amount of liquidity received through the first 3-year LTRO relative to the size of the banks. This suggests that medium-term funding considerations have had a significant influence on the bidding behaviour. In addition, Fig. 1 illustrates a clear negative relationship between the residual maturity of the bidders' outstanding debt and the relative size of the bids. The longer the residual maturity, the less banks need to risk turning to the market for funding under unfavourable conditions. This observation also suggests that funding considerations may have played a major role in determining the bidding behaviour. Furthermore, Andrade et al. (2015), who use data on individual firms and banks operating in France, found that better capitalized banks bid on average less, while banks which bid most were those that had to deleverage the most. In addition, they found that the 3-year LTROs had a positive impact on loan supply in France and that the opportunity to swap short-term versus long-term central bank borrowing was instrumental in this transmission.

All in all, through these operations, the Eurosystem aimed at ensuring that banks continued to have access to stable funding with longer maturities. The 3-year LTROs were conducted in the same manner as the main refinancing operations (MROs), which have a maturity of one week. This implies that the 3-year LTROs might have affected the supply of bank loans by reducing the term premium. The liquidity support and the reduction of the term premium suggest that the 3-year LTROs should be interpreted as an expansionary credit supply shock. The aim of this paper is to address the macroeconomic implications of such measure, facilitated by the fact that the ECB key interest rate was not at its zero lower bound (ZLB).

Unconventional policy measures directly target the cost and availability of external finance to banks, households and non-financial corporations, such that the spread between the funding costs and the short-term interest rates declines (Bini Smaghi, 2009; Curdia et al., 2009, 2010; Woodford, 2010).

Rollover needs in the next three years and bidding behavior (y-axis: percentage of long-term debt securities maturing 2012-2014; x-axis: bid amount in the 3-year LTRO as a percentage of total assets)

Residual maturity of outstanding debt and bidding behavior (y-axis: weighted average residual maturity of outstanding longer-term debt securities (years); x-axis: bid amount in the 3-year LTRO as a percentage of total assets)

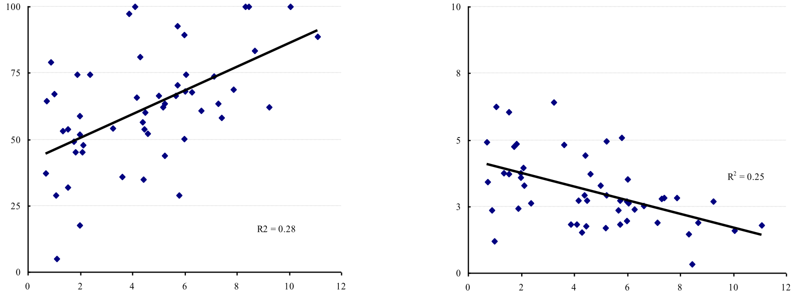

Fig. 1. Medium-term rollover needs, residual maturity of outstanding debt and 3-year LTROs bidding behavior.
Source: ECB Monetary Bulletin, January 2012, pg. 30–31.