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Credit rationing for Portuguese SMEs ☆

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ABSTRACT

This study examines the importance of credit demand and credit supply-related factors in explaining the evolution of credit granted to Portuguese SMEs. The results suggest that the interest rate is a strong driver of SMEs' demand for bank loans, as well as their internal financing capacity. On the other hand, credit supply mostly depends on the firms' ability to generate cash-flows and reimburse their debt, and on the amount of collateral. The model was estimated for the period between 2010 and 2012. The results suggest that a considerable fraction of Portuguese SMEs were affected by credit rationing in this period.

1. Introduction

In the years that preceded the recent crisis, the Portuguese non-financial corporations accumulated high levels of debt, with the ratio between the non-financial corporate sector debt and GDP registering values higher than 130%[1] in 2008. This evolution of credit was induced by favorable financing conditions and optimistic expectations of productivity growth that did not materialize, highlighting the need for an adjustment process. The global financial crisis and the subsequent sovereign debt crisis led to an

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[1] This value refers to the ratio between the non-financial corporate sector debt and GDP in consolidated terms and according to ESA 1995.

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adjustment process characterized by a significant contraction of the economic activity and worse prospects of economic agents. Furthermore, this adjustment involved a bank lending channel with the Portuguese banks being severely affected by international financing restrictions and stronger capital requirements. In this context, the adjustment process comprised a simultaneous contraction in the demand and supply of credit. According to the Bank Lending Survey (BLS), the observed credit evolution during the economic and financial crisis was a result of increased restrictiveness in credit standards and conditions applied on loans as well as of decreased loan demand by firms. Nevertheless, it is a difficult task to rigorously evaluate the relative contribution of each dimension.[2]

The availability of microeconomic datasets with a maximum level of granularity has been crucial for the development of new approaches to the identification of credit rationing of non-financial corporations. Antunes and Martinho (2012) used data for the period between the first quarter of 1995 and the first quarter of 2012 and estimated a model to explain the evolution of credit granted by Portuguese banks to non-financial corporations, and examine the eventual presence of credit restrictions. Even though this analysis does not allow to unequivocally identify the relative contribution of credit demand and credit supply to explain the evolution of credit, the results suggest that the access to credit by Portuguese firms became more difficult after 2009 and that credit restrictions were particularly relevant for firms seeking credit for the first time. Farinha and Félix (2014) considered an econometric methodology similar to that in Rottmann and Wollmershäuser (2013) and estimated a two-step model to evaluate the importance of credit demand and credit supply factors in explaining the evolution of credit in the period between the first quarter of 1997 and the second quarter of 2013. The results suggest that after controlling for firm idiosyncratic characteristics, the evolution of credit is largely explained by banks liquidity and solvency conditions. The fact that banks react in a significant way to changes in their liquidity structure and to stricter minimum capital requirements, with banks with less access to funding and smaller capital buffers granting less credit to firms, evidences the presence of a bank lending channel through which banks can affect firms financing conditions (assuming that at least a fraction of firms does not have easy access to alternative sources of financing).[3] Nevertheless, this analysis is only indicative of the presence of credit restrictions in the Portuguese economy.

The disequilibrium models originally developed to evaluate the presence of credit rationing at the macroeconomic level (see, for example, Laffont and Garcia, 1977), have been used more recently in the empirical literature to identify credit restrictions based on microeconomic data. These models assume that the credit market may be in disequilibrium and, therefore, the observed interest rate does not ensure that credit demand is equal to credit supply. Ogawa and Suzuki (2000), Atanasova and Wilson (2004), Shikimi (2005) and Carbo-Valverde et al. (2009) estimated disequilibrium models to identify the presence of credit rationing in the economy. More recently, Kremp and Sevestre (2013) considered this methodology to analyze the determinants of credit demand and credit supply for French small and medium-sized enterprises (SMEs) and found that, even though banks adopted tighter standards in credit approval, French firms were not significantly affected by credit rationing, even after 2008.

In this study we aim to assess the importance of credit demand and credit supply-related factors in explaining the evolution of credit granted to Portuguese SMEs and evaluate whether this evolution stems from a more restrictive credit policy in the period between 2010 and 2012. We restrict our sample to SMEs since they are expected to rely more on bank loans and to have less access to external sources of financing, namely financing by non-resident banks. Therefore, it is expected that SMEs are potentially the most affected by credit restrictions. For that purpose, we consider a methodology that allows to simultaneously estimate credit supply and credit demand functions, assuming that the credit market may be in disequilibrium, as modeled in Kremp and Sevestre (2013).

[2] An analysis of this topic using the BLS data can be found in the Box 1.2.1 "Decomposing credit growth on the basis of the Bank Lending Survey", published in the Financial Stability Report of Banco de Portugal, November 2013. The authors construct indices based on the qualitative answers of bank officials on developments in the credit market and include these indices as explanatory variables in a model to explain credit growth.

[3] This result contributes to the discussion on the bank lending channel and bank capital channel (see Adelino and Ferreira (2014) for a concise resume of this literature).