Modelling bank asset quality and profitability – An empirical assessment

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Summary

The paper presents an empirical study on the macro and microeconomic determinants of loan quality and profitability for a panel of banks active in India, i.e. in a country where the state has a relevant role in financial intermediation through the ownership of financial institutions and by promoting programs aimed to direct bank credit flows to "priority sectors", such as agriculture and small businesses. The author focuses on the performance of loans granted to such "priority sectors" and on the role played by rural bank branches. Outcomes are compared for public and private banks. The panel includes banks reporting data to the Indian's central bank and covers the period 1997 - 2009. The time-span is chosen in order to observe bank outcomes after the wave of financial liberalization and to insulate the results from the effects of the recent global financial crisis.
The main finding of the paper is that quality of bank assets is independent of "priority sectors" lending and of agricultural credit extended by rural bank branches. From this result, which contrasts the pre-existing evidence, the author derives the implication that policies aimed to allocate bank credit to "priority sectors" or to promote the development of bank branches in rural areas should not be hindered by policymakers and bank managers.

General Assessment

While in principle the depth of the available data-set could represent a strength of the paper, there are studies in the literature already addressing the issue of loan performance and bank profitability in emerging countries and, specifically, in India (even if the issue of loan performance has been investigated in a different context and not "*per se*"). Therefore, the value added to the field seems to be limited. Moreover, results do not seem to be supported by convincing empirical analysis. Due to these reasons and, more generally, to the areas of concern which are highlighted below, the paper is not recommended for publication.

There are areas of concern in the paper that I am going to address in the following order. (1) There seem to be important contradictory findings leading to misinterpretation; (2) interpretation of results in terms of causality is difficult due to relevant identification issues; (3) the author does not consider several studies carried out recently on these topics and consequently does not try to explain what drives the differences between the paper's outcomes and the existing literature - especially with regard to the performance of agricultural credit.

Specifically, the conclusions reported in the abstract on the independence between quality of bank loans and lending by rural branches (RUSUBRA) are apparently at odds with all the results presented by the author on this account. The coefficients estimated for RUSUBRA are always significantly positive in the loan quality regressions (see Tables 5a-5b and 7). Moreover, as banks more involved in priority sector lending are presumed to be endowed with a more diffused network of rural branches, the terms PSC (priority sector) and RUSUBRA are likely to entail a similar informative content. Hence, there is the suspect that the "priority sector" variable could turn out to affect positively loan performance, once RUSUBRA is taken out of the regressions. Therefore, (a) the apparent contradiction between the abstract and the empirical findings should be clarified, and (b) the effects played by priority sector lending on loan quality should be also tested in regressions which exclude the bank rural branches term.

More generally, the empirical model does not allow for time persistence in the data, which is likely to shape the development over time of the outstanding amounts included in the loan quality (independent) variable and the covariates, and to bias the estimates if not properly accounted for. A dynamic panel data specification, allowing for lagged terms and estimated consistently using the Arellano and Bond (1991)'s GMM method, should be adopted to study the macroeconomic and bank-specific determinants of loan quality, as in Louizis, Vouldis and Metaxas (2012).

The author should include in the literature some recent papers on similar issues, comment the results which are at odds with previous works and explain which are the drivers of the differences in empirical findings. Among others, see Cole (2009) on the performance of agricultural credit in India; see Louizis, Vouldis and Metaxas (2012) and Klein (2013) on the macroeconomic and bank-specific determinants of loan quality; see Beck, Jakubik and Piloiu (2013) for macroeconomic determinants of loan quality across a large group of countries. The discussion on ownership of banks in India should mention Gormley (2010), Sanyal and Shankar (2011) and Bhaumik and Piesse (2008). Banerjee Cole an Duflo (2004) should be considered for a background on the Indian banking industry.

Other issues:

- The description of the dataset used for the empirical analysis is vague (page 16). The author should clarify the coverage of the sample with respect to the universe of banks operating in India; furthermore, a clearer set of references should be provided with regard to the sources of information.

- To evaluate the different role played by macroeconomic and bank-specific factors on the development of asset quality and profitability, these two distinct types of determinants should be analyzed sequentially, as in Louizis, Vouldis and Metaxas (2012). In particular, a baseline model should include only macroeconomic indicators; further, the bank-specific variables, which are the focus of the paper, should be added to verify whether they contribute to the explanatory power of the model.