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Bank reactions after capital shortfalls

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The 2007-9 financial crisis and the ensuing euro area sovereign debt crisis entailed substantial pressures on banks capital positions. A key policy concern in this regard has been the extent to which such capital pressures would induce banks to deleverage and to depress loan growth in the process, which eventually could have severe macroeconomic implications. Against this background, in this paper we empirically examine whether large European banks target specific capital ratios and how they react in terms of asset and liability adjustments to deviations from those targets. In particular, we provide insights into how banks adjust their balance sheets when they are faced with capital shortfalls and during crisis periods.

The paper examines the following research questions: (i) Do banks have an internal, optimal capital ratio? (ii) How do banks react to a deviation from their optimal capital level? (iii) Does this reaction differ during crisis situations? (iv) Are banks' reactions to capital target deviations symmetric depending on whether they are above (or far above) or below (or far below) their target?

Using quarterly data for a sample of large European banks between 2004Q1 and 2011Q3, using a panel econometric framework, and in line with previous studies, we first provide evidence for capital optimization whereby banks are found to target specific capital levels. Our contribution to the literature mainly pertains to the second part of our study where we show that there are notable asymmetries in banks reactions to deviations from optimal capital levels. Banks prefer to reshuffle risk-weighted assets or increase asset holdings when being above their optimal Tier 1 ratio, whereas they rather try to increase equity levels or reshuffle risk-weighted assets without changing asset holdings when being below target.

At the same time, focusing instead on a simple (non-risk weighted) leverage ratio target, we find evidence of deleveraging and lower loan growth for undercapitalized banks during the recent financial crisis, whereas in the pre-crisis periods banks primarily react to deviations from their optimal target by adjusting equity levels (we control for the substantial government capital injections that occurred during the crisis period). The finding of a significant deleveraging impact, in part affecting also the loan book, when banks are undercapitalised, is worth keeping in mind when setting new capital requirements. Such concerns were also behind the decision by the Basel Committee to only introduce the new Basel III-based capital requirements in a gradual fashion spanning a transition period of several years.

From a policy perspective these results point to the risk of bank balance sheet deleveraging and loan contraction when the banking sector is undercapitalised, which in turn might have negative repercussions on real economic activity. Our findings also confirm that banks behave differently during crisis times than during ”normal” periods and that especially deleveraging actions due to capital shortfalls might be amplified in periods of crisis where banks leeway to adjust their balance sheets, raising new capital in particular, is more limited. This finding is consistent with the extraordinary monetary policy and government support measures provided to the banking sector in recent years; measures which arguably have contributed to limit the negative repercussions of the shocks to bank capital that have occurred during the financial crisis and the euro area sovereign debt crisis. Furthermore, our findings highlight the importance of taking into account potential asymmetries when analyzing banks reactions to deviations from optimal capital levels and can help in understanding how banks react to a sudden shortfall in bank capital levels and should also help inform decisions of raising bank capital requirements.

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