



Heightened bank capital requirements and bank credit in a crisis: the case of the 2011 EBA Capital Exercise in the euro area

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The European Banking Authority (EBA) decided in October 2011 to launch a “Capital Exercise”, which sought to improve the resilience of large European banking groups to the euro area sovereign debt crisis by increasing their required capital ratios. The authors investigate the lending behaviour of euro area banks over the course of this forced recapitalisation program. Their findings are that banks in banking groups that had to increase their capital ratios had, on average, a lower level of lending growth. The results of their investigations provide a useful benchmark for the new European Single Supervisory Mechanism, as the decisions it will have to take may include higher capital requirements and new regulatory capital weights imposed on sovereign debt holdings.

The European Banking Authority (EBA), the institution charged with setting harmonised supervisory standards for banks in EU Member States, announced on 26 October 2011 that large European banking groups would have to meet a higher regulatory capital ratio by June 2012. This announcement was made in the context of the ongoing euro area sovereign debt crisis and was intended to reassure financial market participants of the ability of European banks to withstand a further deterioration in this crisis, as well as other potential credit shocks. The announcement came as some surprise to financial markets and policy makers, not least as the EBA had some months earlier drawn largely benign conclusions from Stress Tests of the same group of banks.¹

The decision by the EBA to increase the required capital ratio came at a time when commentators were already concerned that the sovereign debt crisis was putting pressure on bank balance sheets and diminishing their ability to provide lending to the real economy, potentially aggravating recessions in several euro area countries.

In this context, the EBA was criticised for what many saw as a procyclical tightening of capital requirements that could reinforce the pressures on banks to reduce credit supply, potentially contributing to a euro area “credit crunch”.

In this issue of *Rue de la Banque*, we investigate whether this initiative by the EBA did indeed contribute to a slowdown in bank lending during 2011-2012.² More specifically, we investigate whether banks that were obliged to increase their capital ratios had a lower level of lending growth than banks that did not face this constraint. We establish that this was indeed the case.

¹ Note that for the Capital Exercise, the EBA used a sub-sample of the population of banking groups participating in the July-2011 EU-wide Stress Tests. Importantly, however, none of the eight banking groups which failed the tests were included in the following Capital Exercise.

² This letter summarizes the results presented in Mésonnier and Monks (2015). Interested readers are invited to look at the full article for more details.

Furthermore, we find that the exercise had an impact on credit supply at an aggregate country level, indicating that the exercise had a procyclical macroeconomic effect. It is important to underline, however, the stressed capital market and funding conditions faced by banks at this time. These factors possibly accentuated the asset disposal effect of the Capital Exercise and limited the ability of healthy banks to substitute for a reduction in lending supply by capital-constrained competitors.

The EBA Capital Exercise

The Capital Exercise obliged large European banking groups to increase Core Tier 1 capital ratios to 9%. Banks also had to build up “a temporary capital buffer against sovereign debt exposure”, which made them hold capital against the market value (and not the book value) of these holdings. These measures represented a large increase in the capital requirements faced by banks. For example, following the publication of results of the EU-Wide Stress Tests (announced in July 2011), the EBA had urged capital strengthening for banks with a Core Tier 1 ratio falling below 5% under the most adverse scenario defined for the Tests.

Bank also had a relatively short period in which to meet the stricter requirement, with the communication of bank-by-bank capital shortfalls announced on 8 December 2011, leaving just seven months for banks to adjust their capital ratios before the conclusion of the exercise in June 2012.³

In its communication, the EBA consistently put an emphasis on the necessity for banks to reach the higher capital ratio by relying on capital raising (numerator of the ratio), as opposed to reduction in risk-weighted assets (denominator of the ratio) such as contraction in lending. Banks were obliged to submit capital-raising plans, which could be rejected by the EBA and national supervisors if they relied too heavily on asset reduction. In its assessment of these plans, issued on 9 February 2012, the EBA stated that the measures to be undertaken by banks were not “viewed as having a negative impact on lending to the real economy”. In its final report on the exercise, published on 3 October 2012, the EBA stated that the capital raising had “not led directly to a significant reduction of lending to the real economy”.

Data and results

Assessing the impact of events such as the EBA’s Capital Exercise on bank lending growth requires an

access to comparable bank balance sheet data across countries. Our analysis is made possible by the existence of unique balance sheet data for some 250 euro area individual banks. This dataset has been assembled by the Eurosystem with the aim of facilitating analysis of bank lending and funding behaviour over the course of the financial market crisis. We also use data released by the EBA as part of the Capital Exercise. These data provided information on banking groups’ capital levels and whether they were identified as having a capital shortfall (requiring them to undertake capital-raising measures) or a capital surplus (meaning that no action was required).

Our analysis begins with a mapping of our two data sources. In doing so, we match individual banks (Eurosystem data) to banking groups (EBA data). We assign the capital shortfall / surplus of the banking group to each bank within that group in order to test whether the size of this shortfall had an impact on banks’ lending growth during the period of the Capital Exercise. We therefore have two groupings of banks in our sample:

- banks in banking groups with a capital surplus (58 banks); and
- banks in banking groups with a capital shortfall (66 banks).

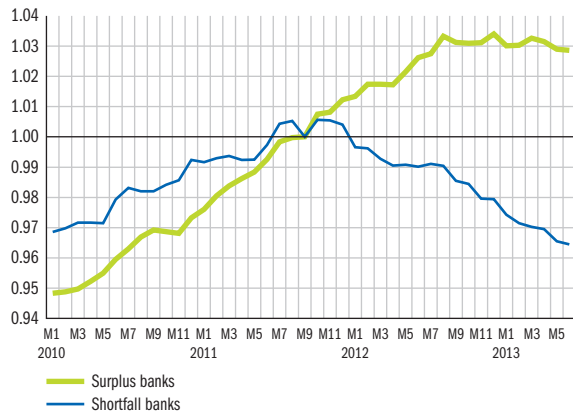
Chart 1 shows the evolution of total outstanding loans for each grouping over the period covering January 2010 to June 2013 (indexed to 1 in September 2011, just before the announcement of the Capital Exercise). This shows that the two groupings exhibited broadly similar behaviour in the period leading up to the exercise. In contrast, there is a sharp divergence coincident with the announcement of the exercise, with banks in “shortfall” banking groups contracting their outstanding lending (on aggregate) and banks in “surplus” banking groups continuing to expand. We investigate this relationship more formally using cross-sectional regressions of banks’ credit growth on groups’ capital shortfalls over the nine-month period of the Capital Exercise (from September 2011 to June 2012).

The results of this regression analysis support the hypothesis that banks in “shortfall” groups tended to have lower lending growth over the course of the Capital Exercise. We find that a bank with a shortfall-to-RWA ratio of 1% had annualised lending growth that was, on average, 1.2% lower than banks in “surplus” groups, although we control for the level of activity in the country

³ Overall, 27 banking groups were identified as having a total shortfall of EUR 76 billion.

C1 Total loans outstanding

(september 2011= 1.00)



Sources: EBA, ECB; authors' calculations.

where the bank is located as well as for a set of standard bank-level characteristics which are likely to have an impact on credit supply.⁴

These results prove to be robust to a number of tests. Notably, we repeat our regressions on the 9-month period immediately prior to the Capital Exercise and find no statistically significant relationship. This shows that deleveraging on the part of banks in “shortfall” groups was coincident with the Capital Exercise and supports the hypothesis of a causal relationship.

In addition to the bank-level analysis, we also investigate whether the Capital Exercise had an impact on lending growth at a national level. We find that lending growth in euro area Member States did indeed depend on the aggregate size of the capital shortfall for the country's banking sector. These results indicate that the exercise had a procyclical macroeconomic impact.

Comparison with other studies

Our analysis contributes to a growing literature on the relationship between bank capital and lending supply.⁵ Both the theoretical and empirical literature in this area suggest that a bank experiencing a shock increasing its capital constraint will react in the short term by reducing credit supply, and this, all the more than the overall economic situation is depressed. If the requirement is expressed in terms of a ratio of risk-weighted assets, banks will have an incentive to shift assets from those with a high risk weight (e.g., corporate loans) to those with lower weights (like sovereign bonds).

Our results confirm this relationship, with banks that were required to increase their Core Tier 1 capital ratios reducing their lending growth relative to other banks. However, our results are at the lower end of the range of estimates in the literature. For example, Aiyar, Calomiris and Wieladek (2014) estimate that a capital shortfall of 1% leads to a contraction in lending growth between 6% and 9% for UK banks.

We believe that two factors may have put downward pressure on our estimates:

- As previously mentioned, the EBA and national regulators put pressure on banks to avoid a contraction in credit lending in order to meet higher capital requirements. For example, regulators could reject the capital-raising plans proposed by banks. This likely limited the ability of banks to reduce loan supply.

- The ECB launched a number of emergency measures during this period, notably two 3-year liquidity providing operations. While such operations did not directly ease the capital constraint faced by banks, it led to a general improvement in financial market sentiment, thus easing banks' access to capital markets and reducing their need to increase capital ratios through asset disposals.

Conclusions

The results of our analysis indicate that the EBA's 2011-2012 Capital Exercise contributed to a slowdown in lending growth for banks that were obliged to increase their capital ratios. Furthermore, we show that this slowdown in credit growth was also seen at the macro level. However, we find that the magnitude of the reduction in credit growth is at the lower end of other estimates in the existing literature, suggesting that the EBA and national supervisors were to some degree successful in limiting the impact on the real economy.

⁴ We notably control for the size of the bank (its total assets), the ratio of liquid assets to assets, the ratio of customers' deposits to assets, the ratio of loans to the non-financial sector to assets, the ratio of sovereign bond holdings to assets, and, if the bank is located in a country under financial stress (i.e. one of the GIIPS), the ratio of domestic sovereign bond holdings to assets. In a robustness check, we also include a dummy variable for banks that nearly failed the EBA's Stress Tests of July 2011, as such banks may have preemptively adjusted their leverage, which could then bias our estimate of the effect of the Recapitalisation Exercise of October 2011.

⁵ See Hanson, Kashyap and Stein (2010) for a recent survey of empirical evidence on the short-run capital-lending relationship.

These results have implications for future changes to bank capital requirement, particularly in the context of the Single Supervision Mechanism (SSM). However, some caution is necessary in applying our results to other scenarios. We investigate an episode during which banks had to increase capital ratios within a very short period and in an environment of financial market stress. It is not clear that banks' behaviour would follow the same course in less stressed times, when they would have better access to capital markets. Furthermore, our results point to a slowdown in lending growth in the short-term, as banks adjust their balance sheets to meet the higher capital requirement under funding constraints, but do not suggest any permanent slowdown. Finally, healthier banks would probably be better able to substitute for any reduction in credit supply by capital-constrained banks in more normal times, therefore limiting the macro impact of the measure.

Overall, our results confirm the concern of many commentators at the time of the Capital Exercise, i.e. that this exercise was badly timed and had a procyclical impact on credit supply. Our results also point to the potential benefits of allowing for a gradual implementation of stricter bank regulations, thus allowing banks to achieve higher capital ratios through retained earnings. Indeed, this is already the case for the adjustments to capital ratios implemented through the Basel agreements.

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