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Prudential regulation, national differences and banking stability

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What role does prudential regulation play in the prevention of banking crises? Before the financial crisis there were important national differences in the implementation of the EU framework for capital regulation. This article suggests that these differences had important implications for the resilience of banks during the crisis and that, generally, banks that were subject to less stringent prudential regulation before the crisis were more likely to require some form of public support when the crisis came.

Banking regulation and supervision are designed to increase the resilience of credit institutions and to support the stability of the financial system overall. In the years following the financial crisis that started in 2008, an important academic and policy debate has emerged on the role played by prudential regulation in the prevention of banking crises. In particular, the debate has focused on whether the prudential framework, including both the regulatory setting and the supervisory enforcement[2] – or rather its leniency – was instrumental in spurring the crisis and whether a more stringent prudential framework could have prevented or reduced the episodes of bank distress recorded during the crisis.

A recent study by Maddaloni and Scopelliti (2019) addresses this question by investigating the resilience of EU banks that were subject to different national prudential frameworks in the run-up to the crisis. A key contribution of the study is that it proposes a new indicator of prudential regulation at the country level, which is based on the national implementation of EU directives for capital requirements. Previous studies have instead relied on indicators developed for global comparisons, which may not be able to fully capture the granularity of national differences among countries with a high degree of regulatory harmonisation, as is the case for the EU Member States.[3]

Differences in the pre-crisis prudential regulation across EU countries

The EU framework for prudential regulation before the crisis was based on some key principles defined at the EU level via directives, but implemented at the country level through the transposition of these directives into acts of national law. In the case of capital requirements, for instance, the national implementation of the Capital Requirements Directive (CRD)[4] allowed for a number of *national options and discretions* that provided a relevant source of variation in prudential regulation across EU Member States. Within the common framework enshrined in the CRD, national authorities could take advantage of 152 national options and discretions, which enabled them to enforce capital adequacy requirements with varying degrees of stringency.

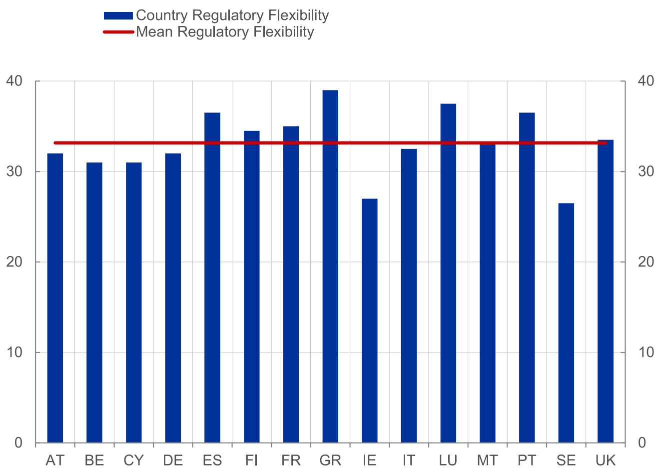
Maddaloni and Scopelliti (2019) use the information about the exercise of these options and discretions by national authorities to build indicators of the effectiveness of the prudential framework in EU Member States ahead of the global financial crisis. Depending on the type of options and discretions, two separate indicators are constructed, measuring *regulatory flexibility* and *supervisory discretion*. Regulatory flexibility refers to the provision of a more favourable regulatory treatment for all banks located in a given country. Supervisory discretion denotes the power of supervisory authorities to authorise – on a case-by-case basis – a more favourable treatment for specific credit institutions[5].

To give some examples, regulatory flexibility allowed national authorities to set a more lenient definition of loan default in terms of number of days past due (implying potential forbearance on non-performing loans), or to apply a lower risk weight for short-term interbank exposures (reducing regulatory costs for interbank loan supply). These rules would apply to all banks subject to the supervision of national authorities. Furthermore, supervisory discretion allowed national supervisors – based on a case-by-case assessment – for example, to set a 0% risk weight for banks' exposures guaranteed by the governments, and to apply a more favourable credit risk treatment to banks' exposures to public sector entities (potentially increasing the nexus between banks and sovereigns, or public sector institutions). Chart 1 displays the country values for the two indicators and the corresponding averages, showing some heterogeneity across EU Member States.

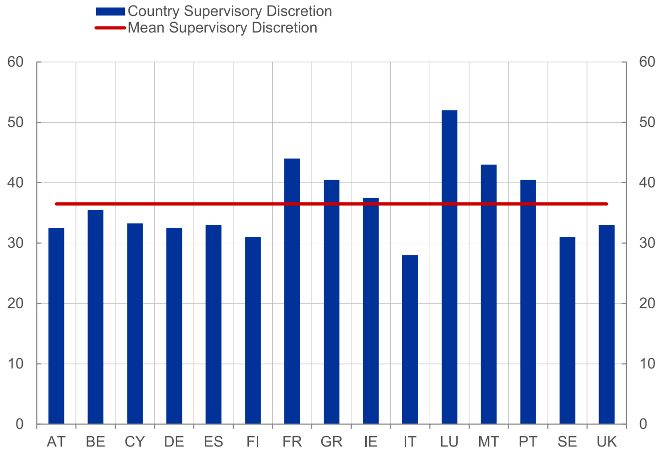
The indicators are then used to investigate whether different regulatory regimes can explain, at least partly, the probabilities that banks required some form of public support to deal with the distress arising from the financial crisis. The analysis considers measures of public support, such as capital injections, guarantees on bank liabilities, and liquidity facilities, as implemented by national public authorities and subject to the approval of the European Commission.

Chart 1: The indicators of prudential regulation across EU Member States

1.A Regulatory flexibility



1.B Supervisory discretion



Notes: The above charts display – for the 15 EU Member States in the analysed sample – the values of the indicators of regulatory flexibility (Chart 1.A) and supervisory discretion (Chart 1.B), as well as the corresponding averages across countries. The indicators are computed based on the exercise – by national authorities – of the options and discretions set in the CRD. Provided that national options and discretions generally imply more lenient regulatory treatment, the exercise of an option by national authorities increases the value of the indicator. In particular, higher values of the indicators reflect a more permissive treatment for all credit institutions (regulatory flexibility) or for some of them following a case-by-case supervisory assessment (supervisory discretion).

Prudential regulation stringency and banks' resilience to crisis

Overall, the analysis suggests that banks subject to less stringent national prudential regulation before the crisis were more likely to require public support during the period 2008-10. The result holds for indicators of supervisory discretion and of regulatory flexibility, suggesting that differences in both domains in the implementation of the CRD were important for bank resilience.

But why did banks that were subject to less stringent prudential regulation exhibit a higher probability of needing public support during the crisis? To address this question, the second step of the analysis investigates the channels through which a more lenient prudential framework may have led to greater financial vulnerability. Given that prudential requirements directly affected the capital position of banks, the analysis focuses on other characteristics of bank balance sheets that were often mentioned as potential sources of risk that erupted during the crisis. In particular, the study investigates how banks' (a) fraction of non-interest income over total revenues (involvement in non-lending activities), (b) amount of loans over total assets (extent of credit provision), and (c) liquidity buffers in relation to deposits and short-term liabilities (availability of liquid assets to counteract liability outflows) were related to the prudential framework and how they affected banks' likelihood of receiving public support.

A high fraction of bank income resulting from non-lending activities has been often mentioned as a negative signal, i.e. a sign that banks venture away from the core business into risky activities. Indeed, the study finds that the share of non-interest income that is explained by a less-stringent regulatory framework – measured both by supervisory discretion and regulatory flexibility – significantly increases the probability of having received some form of public support (in particular recapitalisation).

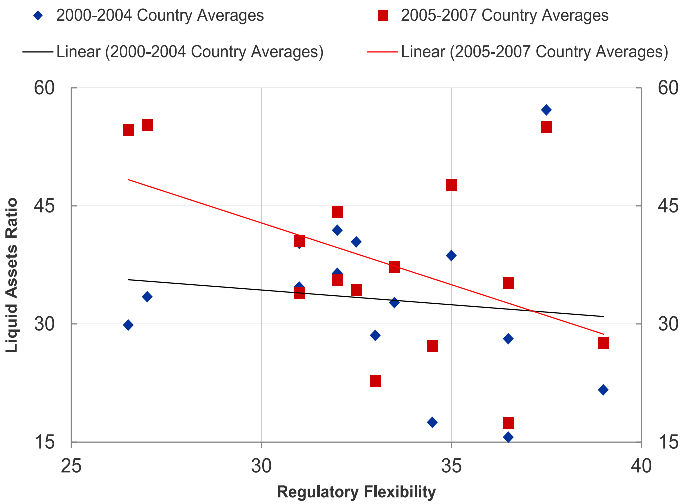
When looking at credit provision, there is instead limited evidence that a more lenient prudential framework is correlated with larger lending provision hindering the stability of banks; in fact, the effects depend significantly on the design of the prudential framework. On the one hand, bank lending in countries with a more flexible regulatory environment is indeed associated with a greater likelihood of having received recapitalisation, public guarantees or liquidity support during the crisis. On the other hand, in countries where supervisors had more discretionary powers, banks may have been prevented from engaging in risky lending[6], since credit provision explained by supervisory discretion is associated with a lower probability of having received public support.

The Basel II framework did not include explicit liquidity requirements; however, the analysis documents the existence of regulatory spillovers, as banks subject to different regulatory frameworks tended to have different levels of liquidity buffers. Chart 2 illustrates this point for supervisory discretion and regulatory flexibility indicators. In countries with more supervisory discretion, banks tended to have larger buffers of liquid assets, mainly in the form of government bonds. Conversely, banks located in countries with higher regulatory flexibility tended to have lower liquidity buffers.

Chart 2: Prudential framework and liquid assets

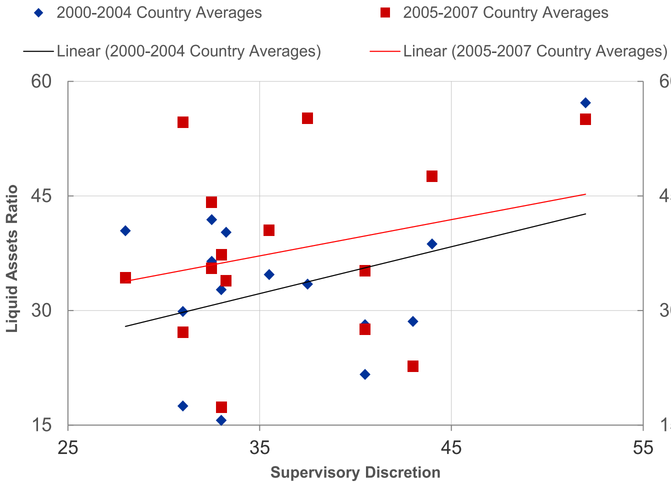
2.A Regulatory flexibility and liquid assets

(liquid assets as % of total deposits and short-term borrowing)



2.B Supervisory discretion and liquid assets

(liquid assets as % of total deposits and short-term borrowing)



Notes: The charts show the scatter plots – at the country level – of the liquid assets ratio and the prudential indicator value (regulatory flexibility in Chart 2.A and supervisory discretion in Chart 2.B). The liquid assets ratio (in percentages, on the y-axis) is computed as the ratio of liquid assets to total deposits and short-term borrowing. The blue dots refer to the country-level averages over the period 2000-04, so they give a snapshot of the pre-existing situation before the implementation of Basel II. The red dots plot the country-level averages calculated over the period 2005-07 and refer to the period of the implementation of the CRD.

When linking explicitly liquidity buffers with the prudential framework, the analysis suggests that lower liquidity buffers explained by a more flexible regulatory framework are indeed associated with a higher probability of having received some form of public support (banks in weaker liquidity positions were less able to withstand the crisis shocks), which points to spillovers across regulatory instruments. At the same time, though, also the composition of these liquidity buffers matters, since when liquid assets take the form of sovereign debt holdings explained by the prudential framework, the impact on banks' resilience is negative, presumably due to the increase in the sovereign-bank nexus and the associated risk.

Conclusions and policy implications

The European banking union was partly undertaken to address the concerns, arising from the crisis experience, that national differences in the implementation of the EU prudential framework might have fostered risk accumulation ahead of the financial crisis. The results of the analysis reported in this article provide some support to this argument. Moreover, the analysis also suggests that these national differences had important implications for bank behaviour.

Furthermore, the analysis on supervisory discretion and regulatory flexibility sheds some light on the incentives related to different designs of the prudential framework, i.e. whether it is based more on general rules for all banks or on a case-by-case assessment by supervisory authorities. The study suggests that both dimensions are important in providing an effective mechanism to influence the structure of banks' incentives.

The single rulebook still contains a relevant number of national options and discretions. To deal with the level-playing field issues resulting from different national rules, the European Central Bank has conducted extensive work on harmonising national options and discretions within the euro area, first with the publication of a regulation and a guide regarding significant institutions (March 2016), and then with the publication of a guideline and a recommendation concerning less significant institutions (April 2017)[7]. These initiatives can contribute to the stability of national banking systems, by realigning the regulatory incentives on the basis of a common prudential framework.

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[1] Disclaimer: The article was written by Angela Maddaloni (Adviser, Directorate General Research, Financial Research Division, European Central Bank) and Alessandro Scopelliti (Economist, Directorate General Monetary Policy, Monetary Analysis Division, European Central Bank, and Research Fellow, University of Zurich). The authors gratefully acknowledge the comments of Carlo Altavilla, Markus Behn, Paul Dudenhefer, Alberto Martin, Zoë Sprokel, Michael Wedow and Thomas Vlassopoulos. The views expressed here are those of the authors and do not necessarily represent the views of the European Central Bank and the Eurosystem.

[2] A prudential framework encompasses both the regulatory setting and the supervisory enforcement, which require financial firms to control their risk-taking and to hold adequate capital (and now also liquidity), with the purpose of ensuring the resilience of individual institutions and the stability of the financial system.

[3] See, for example, Barth, Caprio and Levine, 2004; Laeven and Levine, 2009; Altunbas, Manganelli and Marques-Ibanez, 2011; Beltratti and Stulz, 2012; Ongena, Popov and Udell, 2013.

[4] The Capital Requirements Directive (CRD, namely Directive 2006/48/EC and Directive 2006/49/EC), implementing the Basel II accord in EU legislation, contained some national options and discretions in various relevant areas: the capital treatment of participations in insurance companies; the credit risk for the exposures to other banks in the interbank market or for the lending exposures secured by residential or commercial real estate; the definition of past due exposures in the loan portfolio for the purpose of the Internal Ratings-based approach; the capital treatment of the exposures to public sector entities; the trading book treatment of the underwriting of debt and equity instruments. As of 2013, the CRD has been replaced by the single rulebook, based on the so-called CRD IV/CRR package, including Directive 2013/36/EU and Regulation (EU) No 575/2013, adopted to implement the Basel III accord in the EU.

[5] The information on the exercise of options and discretions by national authorities are based on the stock-taking exercise conducted at the end of 2007 by the Committee of European Banking Supervisors (now the European Banking Authority).

[6] Although supervisory discretion generally implies a more favourable treatment for the authorised banks, the requirement of a case-by-case assessment by the supervisor may provide a mechanism design aligning banks’ incentives with the goals of the supervisory authority. Individual banks may be induced to undertake a more prudent behaviour, or a balance sheet approach consistent with supervisory expectations, in order to obtain a positive evaluation by the supervisory authority.

[7] For significant institutions, see the ECB Guide on options and discretions available in Union law (Consolidated version published in November 2016), and the Regulation (EU) 2016/445 of the European Central Bank of 14 March 2016 on the exercise of options and discretions available in the Union law (ECB/2016/4). For less significant institutions, see the Guideline (EU) 2017/697 of the European Central Bank of 4 April 2017 on the exercise of options and discretions available in the Union law by national competent authorities in relation to less significant institutions (ECB/2017/9), and the Recommendation (2017/C 120/02) of the European Central Bank of 4 April 2017 on common specifications for the exercise of options and discretions available in the Union law by national competent authorities in relation to less significant institutions (ECB/2017/10).