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Rules and discretion(s) in prudential regulation and supervision: evidence from EU banks in the run-up to the crisis

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Abstract

Prior to the financial crisis, prudential regulation in the EU was implemented non-uniformly across countries, as options and discretions allowed national authorities to apply a more favorable regulatory treatment. We exploit the national implementation of the CRD and derive a country measure of *regulatory flexibility* (for all banks in a country) and of *supervisory discretion* (on a case-by-case basis). Overall, we find that banks established in countries with a less stringent prudential framework were more likely to require public support during the crisis. We instrument some characteristics of bank balance sheets with these prudential indicators to investigate how they affect bank resilience. The share of non-interest income explained by the prudential environment is always associated with an increase in the likelihood of financial distress during the crisis. Prudential frameworks also explain banks' liquidity buffers even in absence of a specific liquidity regulation, which points to possible spillovers across regulatory instruments.

JEL Classification: G01; G21; G28

Keywords: Prudential Regulation and Supervision; European Banking; Cross-country Heterogeneities; Rules versus Discretion; Banking Union

Non-technical summary

Regulations and supervision for the banking sector are designed to increase the resilience of the financial institutions involved and overall support the stability of the financial system. With the occurrence of the financial crisis in 2008 and in the following years an important academic and policy debate has developed on the role played by prudential regulation in the prevention of banking crises. In particular, the debate focused around the question whether the prudential framework – or rather the laxness of it - was instrumental in spurring the crisis and whether a more stringent prudential framework could have avoided or reduced the intensity of the recent banking crises in advanced economies.

We construct cross-country indicators of the effectiveness of the prudential framework for banks in the EU ahead of the global financial crisis. We provide two separate indicators to measure *regulatory flexibility* and *supervisory discretion*. Regulatory flexibility refers to the possibility for national authorities to establish a more favourable regulatory treatment for all banks in a given country. Supervisory discretion denotes the power of supervisory authorities to authorize – on a case-by-case basis – a more favourable treatment for specific credit institutions, for example individual waivers from standard capital requirements. We use these indicators to investigate whether banks established in different EU countries and subject to distinct regulatory frameworks had a different probability to be in distress as a consequence of the financial crisis.

We show that banks established in countries with less stringent prudential regulation (for both regulatory flexibility and supervisory discretion) were more likely to require public support during the global financial crisis. Thus the results suggest that differences in both domains in the implementation of the Capital Requirements Directives (CRD) were important for bank resilience. We analyze the potential reasons for that and investigate the channels through which a laxer prudential framework could have led to higher financial vulnerability of credit institutions over the crisis.

"Excessive" lending and the reliance on non-lending activities as a source of income for banks were mentioned as sources of risk that may have surfaced during the financial crisis. The share of non-interest income explained by a less stringent regulatory framework – measured both by supervisory discretion and regulatory flexibility – is indeed associated with public support received by banks during the crisis. At the same time, we do not find strong evidence that the prudential framework might have spurred larger lending provision hindering the stability of banks.

The Basel II framework did not include explicit liquidity requirement. However, we document that, in countries where banks were subject to more supervisory discretion, banks had larger buffers of liquid assets and tended to have larger exposures to government bonds. Relatedly, we show that lower liquidity buffers explained by a more flexible regulatory framework are

negatively associated with bank resilience, therefore pointing to spillovers across regulatory instruments.

When looking at the composition of the liquid assets portfolio, we show that holdings of sovereign securities associated with a laxer prudential environment are positively associated to a higher probability of bailout presumably due to the increase in risk associated with the sovereign-bank nexus.

1 Introduction

In the aftermath of the global financial crisis and of the European sovereign debt crisis, an important academic and policy debate has developed on the role of prudential regulation in the prevention of banking crises. In particular, the debate focused around the question whether the prudential framework was instrumental in spurring the crisis and if a more stringent prudential framework could have contributed to avoid or reduce the intensity of the recent banking crises in advanced economies.

A potential challenge for an empirical study on this issue is that a bank-level cross-country analysis would require two major elements: a sample of national banks with ex-ante comparable features in the pre-crisis period; a relevant source of variation in prudential regulation across jurisdictions before the crisis, with potential implications on risk-taking incentives for banks subject to different prudential regimes.

The EU framework for prudential regulation provides a good setting for an empirical analysis on this topic. The EU prudential regime before the crisis was based on some key principles defined at the EU level, but implemented at the country level through national acts of transposition. In particular, the *national options and discretions* – allowed by the EU directives and left to the exercise of national legislators and supervisors – provided a source of variation in prudential regulation across EU countries for the determination of capital requirements. We exploit the heterogeneous implementation of national options and discretions pre-crisis - following the adoption of the Capital Requirements Directives (CRD) - in order to analyze the crisis resilience of banks subject to different national regimes.

Within the prudential framework defined by the Capital Requirements Directives, implementing the Basel II accord, national authorities had the opportunity to apply the capital adequacy requirements with different degrees of stringency, exploiting the regulatory flexibility and the supervisory discretion allowed by 152 options and discretions. Using this information we construct novel indicators of flexibility and discretion in prudential regulation. We exploit country-level information on the CRD implementation in national systems and we classify the national options and discretions in two main categories: whether they enable national regulators to establish a more favorable treatment for all banks (*regulatory flexibility*), or whether they assign to national supervisors the prerogative to waive some regulatory requirements for specific banks based on a case-by-case assessment (*supervisory discretion*). We use these indicators to investigate whether banks established in different countries and subject to distinct regulatory frameworks had a different probability to be in distress as a consequence of the financial crisis.

Our analysis yields a series of interesting results. We find that credit institutions established in countries with less stringent prudential regulation were more likely to require public support during the recent financial crisis. A 1-point increase in the overall indicator,

corresponding to the exercise of a national option on a specific legal provision and implying the application of a more favorable regulatory treatment for banks, is associated with a 0.44 percentage point increase in the probability of a bank established in that country to require public support during the crisis. This result is broadly confirmed across various measures of government intervention, i.e. recapitalizations, credit guarantee schemes, liquidity provision.

We also explore the potential trade-off between *rules* and *discretion* in the design of prudential regulation: general rules define the regulatory treatment for all banks in a given country, without requiring a previous supervisory assessment, while supervisory discretions assign to the supervisor the power to authorize specific banks to apply a more permissive treatment, on the basis of a case-by-case examination. When using these indicators the results of the estimation suggest that differences in both domains in the implementation of the CRD affected bank resilience.

Next, we analyze the potential reasons why banks subject to less stringent pre-crisis prudential regulation have higher probability of requiring public support during the crisis. We investigate the channels through which a laxer prudential framework could have led to higher financial vulnerability of credit institutions over the crisis. We focus on some determinants which have been highlighted in the aftermath of the crisis as potential sources of risk for the stability of financial intermediaries: "excessive" lending, the reliance on non-lending activities as a source of income for banks and the inadequacy of liquidity buffers. We document that in countries characterized by higher supervisory discretion, banks held more liquid assets – mainly government bonds- and provided less loans as a percentage of total assets. Regulatory flexibility was instead reflected in somewhat higher income provided by non-interest rate activity and in lower liquidity buffers.

We find limited evidence that a more lenient prudential framework might have spurred larger lending provision hindering the stability of banks. On the one hand, bank lending in countries with more regulatory flexibility is indeed associated with a higher likelihood of having received all types of support during the crisis. This result is consistent with other studies showing that lending standards may be softened more in an environment of less stringent capital requirements (see Maddaloni and Peydró, 2011 and 2013). On the other hand, lending activity explained by higher supervisory discretion is generally associated with a lower probability of having received some kind of support. The economic significance of the effects in the case of regulatory flexibility is higher than for supervisory discretion.

We also explore the composition of bank revenues, and in particular the fraction of bank income arising from non-interest activities and potentially associated to the prudential framework. Indeed, we find evidence that a larger reliance on non-interest income sources – related to both higher regulatory flexibility and supervisory discretion - increased the probability

of a bailout and in particular of recapitalization (see also recent evidence by Xu, Hu and Das, 2019).

The regulatory framework defined by the CRD established provisions for the definition of capital requirements and the perimeter of activities. No explicit regulations involved bank liquidity. Nevertheless, some possible spill-overs between capital regulation and bank liquidity behaviour could be envisaged (see among others Admati et al., 2013). First, we document that in countries with more regulatory flexibility, banks have been holding lower levels of liquidity buffers, differently from countries with higher supervisory discretion. A formal analysis linking liquidity buffers with the prudential framework points to the presence of spillovers across regulatory instruments since banks with lower liquidity buffers explained by a more flexible regulatory framework – which established only capital requirements - were more likely to receive public support.

Although the regulatory treatment in the Basel accord establishes that the exposures to government bonds are not subject to risk-weighted capital for credit risk, the experience of the euro area sovereign crisis in 2010-2012 shows that this exposure has represented for some EU countries an important source of risk. We document that, in countries where financial institutions were subject to more supervisory discretion, banks tended to have larger exposures to government bonds[4]. We analyse whether these large holdings of government securities may have resulted in higher risk taken by the banks, even before the full realisation of the euro area sovereign crisis. Indeed, we show that holdings of sovereign securities associated with a laxer prudential environment, measured by both supervisory discretion and flexible regulation, are positively associated to a higher probability of bailout. Our results support the existence of a strong sovereign-bank nexus especially in countries where supervisors retain a high level of discretion and/or prudential rules are more flexible (see Laeven, 2017 for a discussion) with a detrimental effect on financial stability even ahead of the full realization of the Eurozone sovereign crisis.

This work contributes to the empirical literature on how banking regulation and supervision affect various aspects of banking system performance, such as stability, efficiency and loan provision. Previous studies have examined the effect of prudential regulation on bank risk-taking, both in the domestic and in foreign markets, and found mixed results on the effectiveness of capital regulation in promoting the stability of national banking systems (see for example Barth, Caprio and Levine, 2004; Apanard, 2009; Laeven and Levine, 2009; Altunbas, Manganelli and Marques-Ibanez, 2017; Beltratti and Stulz, 2012; Ongena, Popov and Udell, 2013). However, they generally use indicators of capital regulation which are developed for global comparisons. When these indicators are used to compare countries with a good level of

[4] Before the crisis, government securities were generally considered – independently from the issuer country – as the safest type of liquid assets.

harmonisation in the regulatory environment, as it is the case for the countries in the EU, not enough heterogeneity may be present. Our key contribution is to provide new indicators of prudential regulation at the country level, which are based on the national implementation of EU directives for capital requirements. Using these indicators, we then study whether the options and discretions in the implementation of Basel II could have influenced banks' risk-taking differently in relation to different measures of risk taken in banks' balance sheets.

Our analysis also contributes to the policy debate which brought to the establishment of the Banking Union. The creation of the Banking Union was undertaken by the EU to address the significant concerns, due to the crisis experience, that the regulatory flexibility and supervisory discretion allowed at the national level in the pre-existing EU prudential framework could have produced negative implications for financial stability. Following the banking crisis in the EU, academics and policy-makers have argued that the heterogeneity in the national implementation of regulatory and supervisory standards might have spurred differences in the risk-taking of credit institutions across EU countries before the crisis. Overall this resulted in negative spillovers on public finances as national governments intervened in support of distressed financial institutions, thus contributing to the intensification of a vicious sovereign-bank nexus. Our results provide some support to this argument. However, it also underlines that different sources of risk may interact in different ways with national options and provisions.

The rest of the paper proceeds as follows. Section 2 illustrates the framework for bank regulation in the EU and section 3 presents the construction of the indicator for prudential regulation in the EU. Sections 4 and 5 describe respectively the methodological setup and the data. Section 6 discusses the results, and Section 7 presents the conclusions.

2 Bank Regulation in the EU

The discussion in the EU concerning the Banking Union and the establishment of the Single Supervisory Mechanism (SSM) has focused, among various aspects, on the importance of a level-playing field in banking regulation. This is necessary to make sure that the SSM can treat similar situations in a homogeneous way, but it may not be sufficient to ensure the financial stability of national banking systems.

On the one hand, a level-playing field limits the possibility that, in the presence of different legislations applicable to banks in distinct countries, a single European Supervisor in charge of enforcing the application of prudential rules may have to judge similar cases in different way[5], with potentially negative implications for the effectiveness of the Single Supervision. On the other hand, the level-playing field – in order to improve the soundness of

[5] This issue has been stressed by policy-makers and supervisors also in public speeches and engagements. See for instance Lautenschläger (2016).

the system - has to be established on the ground of high and rigorous standards for prudential regulation.

The empirical analysis presented in this paper suggests that a common framework allowing for multiple options and discretions may be exploited by national authorities to significantly reduce the stringency of the prudential regime, with potentially undesirable effects on bank risk-taking and crisis resilience.

In order to illustrate the features of this institutional setting, we summarize the main steps in the developments of EU banking regulation. The case for an effective harmonization in bank regulation across EU countries was firstly promoted in the late 1990s and early 2000s, in order to ensure the full implementation of the Single Market for Financial Services. At that time, the key economic rationale for a level-playing field in bank regulation in the EU was to establish homogeneous competitive conditions for credit institutions established in different countries. In absence of a common regulatory framework, differences in the regulatory burden across national legislations may have induced potential distortions to competition. In turn, this could incentivize national legislators to relax prudential requirements for national banks to improve their competitive positions among the credit institutions in the EU Single Market. For this reason, some degree of harmonization was needed in order to avoid a "race to the bottom", as a potentially inefficient outcome (in terms of social welfare) of this game among national legislators.

In 2000, the EU adopted a single Banking Directive (Dir. 12/2000) to replace and coordinate the existing directives and to improve the consistency of the regulatory framework for the activities of credit institutions in the EU. The Banking Directive was based on the principles of the Basel I agreement (established in 1988 and integrated in 1996 with the amendment for market risk).

Then, the adoption of the Basel II accord in 2004 prompted an implementation process in the EU through two directives: a recast of the Banking Directive (Dir. 48/2006) and the Capital Adequacy Directive (Dir. 49/2006). The national acts of implementation were adopted by Member States in the course of 2006, but in general – given the long process of negotiation for the new accord – banks had started to adjust their business models well in advance of the formal implementation. The national options and discretions provided in the Capital Requirements Directives (CRD) were designed to take into account some pre-existing country differences in the structure and the business models of national banking systems and therefore in national legislations: consequently, the exercise of the specific options and discretions by national authorities reflected also the previously different approaches to prudential regulation and supervision across EU countries. The underlying rationale for the introduction of the national options and discretions in the EU prudential framework was also to allow safer banks to benefit more from a lenient treatment by increasing their risk-taking opportunities.

The occurrence of the global financial crisis in 2008 put into question the effectiveness of this regulatory framework and the existence of national options and discretions. First, the framework could have been inadequate to discipline the prudential conduct of banking groups with significant cross-border activities[6]. Also, given that credit institutions in distinct countries were subject to – at least partially - different regulatory frameworks for capital requirements, it was argued that national differences in prudential regulation could have played some role in the risk-taking of banks of different nationalities.

For these reasons, when the Basel Committee adopted the new Basel III accord in 2011, the European Commission proposed to implement the new prudential requirements in the EU through a Single Rulebook, in order to establish a uniform regulatory framework across EU countries. Then the new legislative package finally adopted by the EU included a regulation, directly applicable in all countries (Reg. 575/2013) and a directive, still subject to national implementation (Dir. 36/2013). The CRD 4/CRR package is a key step for the Single Rulebook, in coordination with the Regulatory Technical Standards of the European Banking Authority (EBA). However, it still contains a relevant amount of national options and discretions.

The Single Rulebook was originally designed to ensure consistency in prudential regulation across EU countries, in a context where the key tasks for prudential supervision were still assigned to national authorities. Then, the need for a further integration in the banking sector policies, and in particular for a consistent application and enforcement of the Single Rulebook, led the European Council in June 2012 to take the decision to launch the Banking Union, based ideally on three main pillars, the Single Supervision, the Single Resolution (both already in force) and the European Deposit Insurance Scheme (the latter still to be established). In this framework, the Single Rule-Book provided the necessary common regulatory ground for the Single Supervision and Resolution Mechanisms[7].

3 A Novel Indicator for Prudential Regulation in the EU

In order to investigate the potential implications of laxer prudential regulation on bank risk and on crisis resilience, we focus on the regulatory framework established through the Capital Requirements Directives in the pre-crisis period (from 2005 to 2007) and we construct country indicators of regulatory flexibility and supervisory discretion in prudential regulation.

[6] In some cases, for a few banking groups, the amount of cross-border assets could be as large as the size of domestic assets.

[7] The ECB, in its capacity as the competent authority for significant institutions in the context of the SSM, has undertaken an initiative with regard to the options and discretions available to the supervisory authorities. See the Regulation and the Guide of the ECB on the exercise of options and discretions for significant institutions in Union Law (March 2016). More recently, also in relation to less significant institutions subject to the direct supervision of national competent authorities, the ECB has conducted extensive work on harmonising national options and discretions, with the publication of a Guideline and a Recommendation for national competent authorities (April 2017).

All EU Member States adopted the Basel I and then the Basel II standards through the implementation of EU directives [in particular Dir. 48/2006 and Dir. 49/2006 for Basel II]. However, the directives allowed for several options and national discretions, which de facto created important cross-country differences in the implementation of standards.

The European Banking Authority (EBA) provides accurate information on these issues, following up on a request of the EU Commission. The EBA reports[8] which countries adopted such discretions in the CRD framework and how they exerted them. It also provides a qualitative assessment, based on a survey across Members States and the industry, of the impact of each national option and discretion on the level-playing field and the capital requirements of credit institutions. We build an indicator of prudential regulation based on the EBA report. Whenever necessary we integrate with information drawn from the directives.

Given the large number of national options and discretions (152 as identified by the EBA), as well as the different impact of such options on capital requirements and regulatory burden, we construct a quantitative index capturing the degree of flexibility and discretion in prudential regulation in each country. The ability to exercise an option as defined in the CRD generally implies a more lenient regulatory treatment. We construct the indicator such that the exercise of a regulatory option in a given country translates in positive values of the indicator. Thus, a higher value of the indicator reflects a more permissive treatment for all credit institutions or for some of them (depending on the option being subject to supervisory approval or not).

We calculate an Overall Indicator of prudential regulation and two sub-indicators of Regulatory Flexibility and Supervisory Discretion. This distinction is related to the classification of the *national options and discretions* in two main categories, depending on whether the exercise of the option implied a more favourable regulatory treatment for all credit institutions in one country or only for individual banks assessed on a case-by-case basis, following an ad hoc supervisory decision. Therefore the Regulatory Flexibility indicator refers to general options and discretions that – if exerted by the Member State - allowed for a more flexible banking regulation for all banks established in that country, as they relaxed the prudential requirements[9] or reduce some regulatory burden in terms of disclosure.[10] The Supervisory Discretion indicator is built on the case-by-case options and discretions which attribute specific powers to the competent supervisory authorities, such that they are entitled to authorize the application of a more favorable regulatory regime for specific credit institutions.

[8] The "Technical advice to the European Commission on options and discretions" was adopted in 2008 by the Committee of European Banking Supervisors, which was actually succeeded by the European Banking Authority on 1 January 2011. See CEBS (2008)

[9] For instance through some discretion in the implementation of accounting rules for own funds or item deductions, as well as in the application of the standardized or of the internal rating approaches.

[10] For example through some discretion in the disclosure framework for consolidated entities in banking groups

The Overall Indicator is constructed as the sum of the two sub-components for Regulatory Flexibility and Supervisory Discretion.

Some examples of national options and discretions classified as regulatory flexibility and supervisory discretion may provide an idea about the prerogatives of national authorities and the potential impact of these options on banks' incentives for risk-taking. For instance, regulatory flexibility allowed national authorities to set the definition of loan default in the IRB approach on credit risk, within a range between 90 and 180 days past due. A more lenient definition for the banks located in a certain country could have raised forbearance incentives with respect to non-performing loans. Also, Member States could take advantage of the regulatory flexibility to apply a lower risk weight to short-term interbank exposures, for credit risk in the standardized approach; by reducing the regulatory costs for interbank loan supply, this could have encouraged the provision of interbank lending but also the reliance of banks on this short-term funding source.

On the other hand, supervisory discretion allowed national supervisors – based on a case-by-case assessment - to provide a more favourable treatment in various areas, including those relevant for the sovereign-bank nexus. For instance, subject to discretion of national supervisory authorities, the 0% risk weight treatment for EU sovereign bond exposures could be extended also to banks' exposures guaranteed by the Governments; this might have incentivized banks to increase those exposures which could benefit from sovereign guarantees. Also, national competent authorities could decide – on a case-by-case basis - to apply lower risk weights to the exposures to public sector entities; this may have raised incentives to provide loans to public sector entities, particularly if guaranteed by the government. Moreover, for the determination of the position risk in the trading book, including market risk, subject to the discretion of the national authorities, a 0% weighting could be assigned to debt securities issued by governments and some credit institutions, provided that these securities were denominated and funded in domestic currency.

More generally, the CRD framework considered in this paper contained options and discretions related to various relevant areas: the capital treatment of participations in insurance companies; the counterparty credit risk for derivatives contracts cleared with central counterparties; the credit risk for the lending exposures secured by residential or commercial real estate; the list of the entities eligible for the provision of unfunded credit protection; the specific risk requirements for trading book items; the trading book treatment of the underwriting of debt and equity instruments. Most of these options and discretions allow for a more favourable regulatory treatment. However, this doesn't mean necessarily that the bank behaviour allowed by these options implies overall higher risk. For example, one of the rationales for the differentiation in terms of regulatory treatment is to reflect different bank business models.

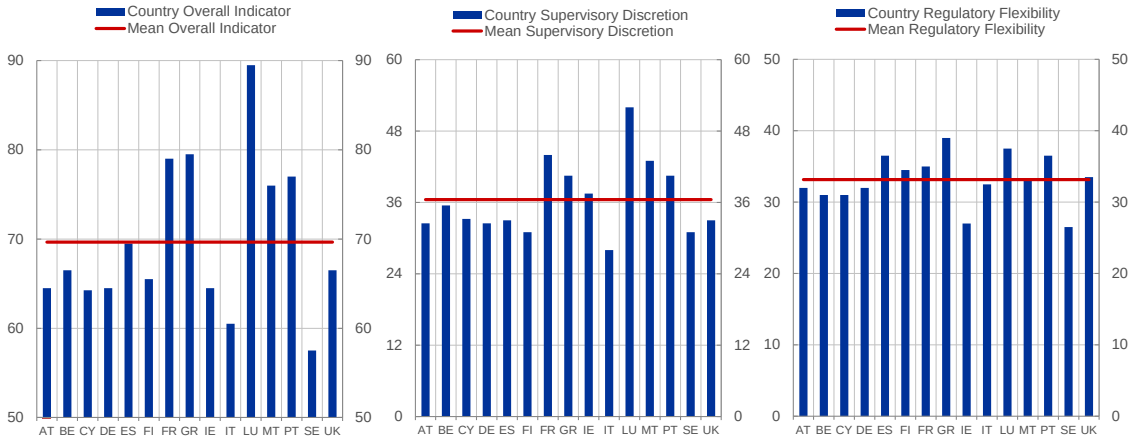
Based on the large set of national options and discretions, the indicators built for this analysis address different aspects of the prudential framework set in Basel II and in the CRD framework. We consider nine categories related to the implementation of the directive:

1. Definition of own funds
2. Scope of application
3. Counterparty risk
4. Standardised approach
5. IRB approach
6. Credit risk mitigation
7. Operational risk
8. Qualifying holdings
9. Trading book

For each of these categories we examined all the options that were allowed, inputting 1 for an option that indeed would increase regulatory flexibility or supervisory discretion and 0 otherwise. Moreover, acknowledging that not all the options had the same possible impact, we weight the input by 0.5 or 1, depending on the importance, as highlighted in the EBA report[11].

Figure 1 displays the values of the overall indicator of Prudential Regulation and of the two sub-indicators of Supervisory Discretion and Regulatory Flexibility for the 15 EU countries in our sample.

Figure 1 The Indicator of Prudential Regulation across EU Countries



Note. The charts display – for 15 EU Member States in our sample – the values of the overall indicator of prudential regulation (left-hand) and of the indicators of supervisory discretion (middle) and regulatory flexibility (right-hand), 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 Capital Requirements Directives.

[11] See Annex A for details on the individual options and discretions. Specific details about the exercise of options and discretions are not available for the Netherlands and Denmark.

4 Empirical Specification

Given the significant differences in the stringency of the pre-crisis banking regulation across EU countries, we investigate the relationship between the degree of flexibility and discretion in the pre-existing national prudential regimes and the probability of a bank to be in distress during the crisis period.

Based on the above described indicators of prudential regulation and supervision, and controlling for bank-specific characteristics and country-specific factors, we examine whether pre-existing cross-country heterogeneities in banking regulation may explain, in isolation or in combination with other factors, differences in the stability of credit institutions located in distinct countries during the crisis period.

The main hypothesis to be tested in our baseline specification is whether banks established in countries with a less stringent prudential framework were more likely to receive public support measures during the financial crisis.

For this purpose, we estimate a probit model for the probability of receiving a government bail-out as in equation (1):

$$(1) \quad P\left(Support_{i,j,Crisis}\right) = \Lambda(\boldsymbol{x}'\boldsymbol{\beta})$$

$$where\ (\boldsymbol{x}'\boldsymbol{\beta}) = \alpha + \beta\ Regul_j + \gamma\ \ BankControls_{ijt} + \delta\ \ MacroControls_{jt} + \ \varepsilon_{ijt}$$

where *i* denotes the bank, *j* identifies the country, *Crisis* refers to the period between Feb 2008[12] and December 2010 and *t* indicates averages calculated over the years from 2005 to 2007, which is the relevant time period for the design and the implementation of the CRD framework.

The dependent variable is a dummy equal to 1 in case public support for a bank has taken place and 0 otherwise. We consider either a dummy for any type of public support, or dummies related to particular measures of financial assistance (recapitalisations, guarantees on bank liabilities or access to liquidity facilities)[13]. We control for bank balance sheet variables (bank size as the log of total assets and the return on equity) and for country-specific macro variables (GDP growth rate, inflation rate, short-term policy rate, long-term interest rates). This is our baseline specification. We estimate the model using the overall prudential indicator and the two sub indicators to explore the roles of different dimensions of the prudential environment.

4.1 Rules versus Discretion in Prudential Regulation

The national options and discretions in the EU banking legislation generally allowed for a more lenient regulatory treatment for banks. However, this more lenient regime could be

[12] The first public banking intervention was the nationalization of Northern Rock by the UK Government.
[13] For an analysis of the causes of bank recapitalizations and nationalizations in the UK, see Rose and Wieladek (2012).

established either through general legal provisions applicable to all institutions or through ad hoc supervisory discretions to be authorised for specific banks on a case-by-case basis.

We investigate the financial stability implications of these two different approaches to micro-prudential regulation. For this purpose, we take advantage of the peculiar construction of our indicator, which includes the two sub-components of regulatory flexibility and supervisory discretion. We estimate the model in (1) by using either regulatory flexibility or supervisory discretion as key explanatory variables for the laxness of the prudential framework and we estimate the probit equations for all types of public support.

Both regulatory flexibility and supervisory discretion measure the provision of a more favourable regime to banks for prudential requirements, however this applies to different sets of banks depending on the type of option (to all banks vs. specific banks on a case-by-case basis). Different theoretical arguments can be recalled to assess the pros and cons of these two approaches and the implications for the stability of the banking sector.

On the one hand, a mechanism design argument would suggest that the application of a more favourable treatment for specific institutions based on a case-by-case assessment by the supervisory authority could limit potential risk-taking incentives. Under regulatory flexibility, all banks benefit from a more permissive treatment, without being subject to a supervisory decision: so credit institutions might not have an incentive to internalise possible consequences from excessive risk-taking, as they would not bear the negative consequences from that – at least not in terms of prudential requirements. Under supervisory discretion, instead, banks can take advantage of a less stringent regime only after an ad hoc supervisory decision: in such cases, banks may have stronger incentives to undertake a more prudent conduct, in order to fulfil the conditions required by the supervisory authority for the approval of a more favourable regulatory treatment.

On the other hand, a *regulatory capture* argument could lead to an opposite outcome, and be supportive of general rules for all institutions to enhance financial stability. If supervisory authorities are potentially subject to regulatory capture, the provision of supervisory discretion to be exercised on a case-by-case basis could lead to various lobbying attempts by individual credit institutions to obtain ad hoc waivers from the implementation of some onerous requirements. In this case, it is not obvious that a more lenient treatment would be applied only to the institutions in sounder financial conditions. Actually, this set-up could lead to more risk-taking either from more vulnerable institutions or from banks able to devote substantial resources and efforts to lobbying activity.

4.2 Prudential Regulation and Banks' Balance Sheet Management

In the second part of the analysis we explore the potential channels through which a less stringent prudential framework could have led to financial distress of credit institutions and to greater need of government support during the crisis period. We focus on some balance sheet variables potentially related to bank risk taking: the ratio of total lending over total assets, the fraction of bank income not related to interest-earning activities, the ratio of liquid assets over deposits and short-term liabilities. These measures are all linked to different sources of risk that banks may have undertaken in their balance sheet management.

Financial distress may have realized because banks engaged in *excessive* lending, or were overly dependent on income from less traditional sources, like holdings of exotic and derivatives assets. Banks may have also been in need of liquidity assistance because of low liquidity buffers. We also monitor the ratio of total assets held in sovereign securities. The investment in government bonds was not subject to risk weights under the regulation directives. However, we are interested in understanding whether national differences in the prudential framework could have had also some implications for the sovereign debt exposures of banks in distinct countries. This seems particularly relevant especially in light of the euro area sovereign crisis which brought stress to financial institutions more heavily exposed to sovereign bonds and peaked in 2011.

4.3 Prudential Regulation, Bank Balance Sheets and Realised Risks

To investigate how prudential regulation may be associated to the risk taken through these different channels, we estimate a probit model with instrumental variable as below:

$$(2)\quad P\left(Support_{i,j,\ Crisis}\right) = \Phi(\boldsymbol{x'\beta})$$

$$where\ (\boldsymbol{x'\beta}) = \alpha_2 + \beta_2\ BalanceSheet_{ijt} + \gamma_2\ BankControls_{ijt} + \delta_2\ MacroControls_{jt} + \varepsilon_{ijt}$$

The model comprises a reduced form equation for the balance sheets variables in which respectively the loans to assets ratio, the non-interest income ratio, the liquid assets ratio or the government securities ratio are dependent variables and they are regressed on the regulatory indicators as:

$$(3)\ BalanceSheet_{i,\ j,\ t} = \alpha_1 + \beta_1\ Regul_j + \gamma_1 Bank\ Controls_{i,\ j,\ t} + \delta_1\ MacroControls_{j,\ t} + u_{i,\ j,\ t}$$

This estimation allows us to assess the increase in the probability to have received government support due to the identified risk channels, as we consider only the part of the balance sheet measures that is explained by the regulatory framework.

It has to be acknowledged that the national options and discretions implemented as part of the CRD may reflect, at least in part, a pre-existing situation which was then enshrined in the approved prudential environment. Therefore, our framework may not allow for a clear identification of a causality relationship between the prudential environment and changes in the risk taken by banks ahead of the financial crisis. At the same time, we can assess whether the prudential environment was conducive to a lower risk allocation by effectively curbing risk-taking in some domain. We address these points with some descriptive analysis in Section 6.2.

In addition, we can also shed some light on regulatory spillovers. The CRD provided a regulatory framework for the definition of capital requirements. Basel 2 regulation did not discuss the use of other regulatory instruments and in particular of liquidity requirements. Therefore, the observed liquid assets ratios and the sovereign holdings may be considered somewhat exogenous to the implementation of the regulation. The presence of a significant relationship between holdings of liquid assets and the prudential environment can therefore be interpreted as resulting from regulatory spillovers.

5 Data

We combine four sources of information: a) bank-level measures of public support during the crisis (mainly based on the EU Commission archive); b) bank balance sheet variables (from Bankscope); c) country-level indicators of prudential regulation (as presented in section 3); d) country-level macro variables.

Given the extensive policy response to the banking crisis through various forms of public support, we consider the measures of financial assistance implemented by EU Governments for banks[14]: capital injections, guarantees on bank liabilities, asset protection schemes and liquidity facilities (see also Stolz and Wedow, 2010).

Although these measures were enacted by national governments, EU law required the approval by the EU Commission of state aid measures, to ensure homogeneity of criteria in the public support of the financial sector across EU countries and in order to avoid potential distortions to competition in the Single Market. Thus, the conditions required to authorise the provision of financial assistance to credit institutions in distress were set consistently across EU countries. This allows comparing measures of public support implemented in different countries and to consider them jointly as episodes of bank distress.

[14] See Laeven and Valencia (2012) for a cross-country analysis of banking crises in a global sample.

We collect the information on bank support measures from the decisions of the European Commission (integrated with ad-hoc research using public national sources) on the approval of state aid to the financial sector and we classify the various forms of support received by each bank. We restrict our analysis to the measures of crisis support implemented by EU countries from the beginning of 2008 to December 2010, in order to concentrate on the episodes of bank distress which can reasonably be linked to risk-taking conducts adopted by banks in the pre-crisis period[15].

Table 1 presents summary statistics of such measures for the banks included in our sample. We focus our analysis on banks established in 17 EU countries (EU15, Cyprus and Malta) with a minimum value of assets of €5 bn, based on the balance sheet data for the period 2000-2008 as available from Bankscope[16], for a total number of 696 institutions.

The table shows that among the various forms of support, recapitalisations were the most common measures, immediately followed by credit guarantees: indeed, on average, 12.64% of the banks in our sample received capital injections, while 7.76% of the institutions benefited from credit guarantees. Importantly, these banks held a larger share of the total bank assets in our sample, 44.85% and 18.30% respectively. Asset relief schemes and liquidity facilities were relatively less common: the percentage of banks receiving such measures was equal to, respectively, 3.16% and 2.01% of the overall sample.

[15] We aim to exclude the episodes of bank distress which were determined later on, as a consequence of the peak of the euro area sovereign crisis, the double dip recession affecting various EU countries, and the increase of non-performing loans for several credit institutions.
[16] To limit the reduction of the sample size, we have considered banks reaching that minimum for at least one year in the considered period.

Table 1 Measures of Public Support to Banks by Country and Type

	RECAPITALISATIONS			GUARANTEES			ASSET RELIEF			LIQUIDITY SUPP.			ANY SUPPORT			ALL BANKS
COUNTRY	No. Inst.	Perc. Inst.	Perc. Assets	No. Inst.	Perc. Inst.	Perc. Assets	No. Inst.	Perc. Inst.	Perc. Assets	No. Inst.	Perc. Inst.	Perc. Assets	No. Inst.	Perc. Inst.	Perc. Assets	No. Inst.
AUSTRIA	6	16.22%	46.32%	6	16.22%	43.67%	3	8.11%	7.88%	0	0.00%	0.00%	7	18.92%	47.53%	37
BELGIUM	3	18.75%	83.65%	2	12.50%	65.00%	3	18.75%	83.65%	0	0.00%	0.00%	3	18.75%	83.65%	16
CYPRUS	0	0.00%	0.00%	5	62.50%	73.00%	0	0.00%	0.00%	0	0.00%	0.00%	5	62.50%	73.00%	8
GERMANY	9	5.49%	29.98%	8	4.88%	22.23%	6	3.66%	19.85%	0	0.00%	0.00%	11	6.71%	30.41%	164
DENMARK	0	0.00%	0.00%	8	66.67%	80.05%	0	0.00%	0.00%	0	0.00%	0.00%	8	66.67%	80.05%	12
GREECE	8	72.73%	86.26%	6	54.55%	81.20%	0	0.00%	0.00%	7	63.64%	84.79%	8	72.73%	86.26%	11
SPAIN	29	30.53%	20.34%	0	0.00%	0.00%	2	2.11%	1.16%	2	2.11%	1.16%	29	30.53%	20.34%	95
FINLAND	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	6
FRANCE	11	20.37%	83.57%	1	1.85%	4.93%	1	1.85%	4.93%	0	0.00%	0.00%	11	20.37%	83.57%	54
IRELAND	5	23.81%	50.77%	1	4.76%	9.95%	5	23.81%	50.77%	0	0.00%	0.00%	5	23.81%	50.77%	21
ITALY	4	4.60%	13.71%	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	4	4.60%	13.71%	87
LUXEMBOURG	1	1.96%	5.99%	1	1.96%	0.58%	0	0.00%	0.00%	1	1.96%	0.28%	3	5.88%	6.85%	51
MALTA	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	0	0.00%	0.00%	2
NETHERLANDS	6	18.18%	57.51%	7	21.21%	58.83%	1	3.03%	33.06%	1	3.03%	4.57%	9	27.27%	59.04%	33
PORTUGAL	0	0.00%	0.00%	5	29.41%	69.13%	0	0.00%	0.00%	1	5.88%	1.84%	5	29.41%	69.13%	17
SWEDEN	1	9.09%	40.87%	2	18.18%	16.38%	0	0.00%	0.00%	0	0.00%	0.00%	3	27.27%	57.24%	11
UNITED KINGDOM	5	7.04%	41.63%	2	2.82%	1.81%	1	1.41%	27.11%	2	2.82%	1.81%	5	7.04%	41.63%	71
ALL SAMPLE	88	12.64%	44.85%	54	7.76%	18.30%	22	3.16%	18.03%	14	2.01%	1.66%	116	16.67%	47.96%	696

Source: European Commission and authors' calculations

6 Results

6.1 Empirical Results: Baseline Specification

Table 2 reports the marginal effects of the variables in the probit estimation for the baseline specification of model (1)[17]. It reports the estimated marginal effects where we use the three prudential regulation indicators as explanatory variables and we control for bank characteristics and macro-factors.

In general, banks established in countries with a less stringent prudential framework display higher probability of being in distress during the crisis, as evidenced by the provision of some form of government support: for example (see column 1), a 1-point increase in the overall indicator (implying a more lenient prudential environment) is associated with a 0.44 percentage point increase in the probability of crisis support (the average probability of support is equal to 16% for the estimation sample[18]). To put things in perspective, if we consider the cross-country distribution of the indicator, we find that the variation in the indicator value from the minimum to the maximum (22 points) would correspond to an increase in the probability of support of 9.68 percentage points.

This result is broadly confirmed when we consider the distinct categories of support measures, like recapitalisations, credit guarantees and liquidity facilities although the estimated effects are not always statistical significant. The overall result is confirmed when estimating the model using the two indicators of regulatory flexibility and supervisory discretion, in order to investigate the implications of different approaches to prudential regulation for the stability of financial intermediaries. The marginal effect of the regulatory flexibility indicator is generally greater, but not statistically significant for all the specifications.[19] A 1-point increase in regulatory flexibility is related to a 1.26 p.p. increase in the probability of receive support, while the increase in probability is 0.49 p.p. for supervisory discretion.

What are the insights from these first results? And, in particular, what are the channels through which the existing prudential framework may have influenced the ex-post probability of receiving public support? These first results would suggest that both dimensions of regulatory flexibility and supervisory discretions affect the financial stability of the banks.

[17] The results discussed in this section arise from the estimation of a probit model, which excludes observations for Luxembourg, Netherlands and Denmark. Luxembourg is excluded for its peculiarities (a financial hub with a very favorable regulatory framework but with many subsidiaries of foreign institutions, which usually have received financial support from the Governments of their own countries of establishment). Denmark and Netherlands are not included because of missing information for the prudential regulation indicator. The full set of estimated point coefficients and marginal effects are presented in the Annex B.

[18] In this case we report the average values of the probability of public support or of specific crisis measures for the estimation sample, and exclude Luxembourg, Netherlands and Denmark.

[19] The literature on rules and discretion in prudential policy is still relatively limited. For example, Walther and White (2015), and Agur and Sharma (2013) analyze this topic in the perspective, respectively, of banking resolution and macro-prudential policy. These issues have been discussed also, using a qualitative approach, by some recent studies in the fields of political science and public policy

In the following sections we will try to shed some light on these effects and identify the channels of transmission that are possibly conducive to more risk-taking.

Table 2. Baseline Probit Specification: Average Marginal Effects

VARIABLES	(1) SUPP	(2) RECAP	(3) GUAR	(4) LIQSUPP
Overall Indicator	0.00442**	0.00162	0.00334**	0.00301
	(0.00223)	(0.00215)	(0.00148)	(0.00246)
Supervisory Discretion	0.00498*	0.00174	0.00450**	0.00353
	(0.00284)	(0.00275)	(0.00188)	(0.00276)
Regulatory Flexibility	0.0126*	0.00573	0.00549	0.0194
	(0.00692)	(0.00692)	(0.00482)	(0.0200)
Bank Controls	YES	YES	YES	YES
Macro Controls	YES	YES	YES	YES
Observations	546	546	546	546

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

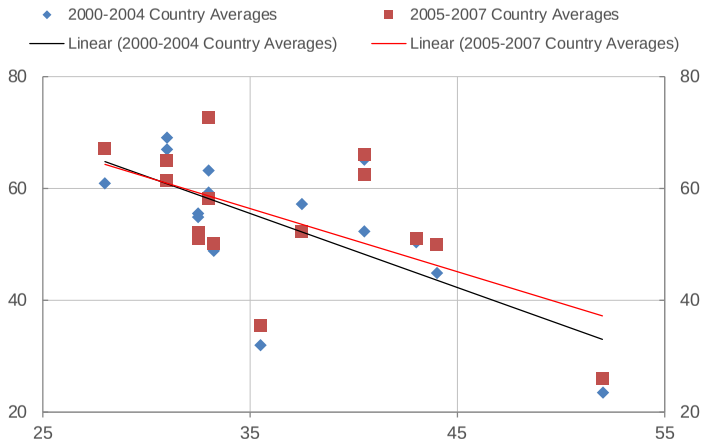
6.2 Empirical Results: Prudential Regulation and Banks' Balance Sheet Management

In the baseline specification we have included bank controls (size and return on equity) to control for banks' characteristics. In the following we examine more in detail the role of some bank-specific balance sheet characteristics, which are potentially related to bank risk-taking. In particular, we focus on three aspects, which have been highlighted in the aftermath of the crisis as potential sources of concern for the stability of financial intermediaries: excessive lending, the reliance on non-lending activities as source of income for banks and the inadequacy of liquidity buffers. Related to the last factor, we also analyse the relation between the prudential framework and the exposures to sovereign risk as measured by government bonds holdings.

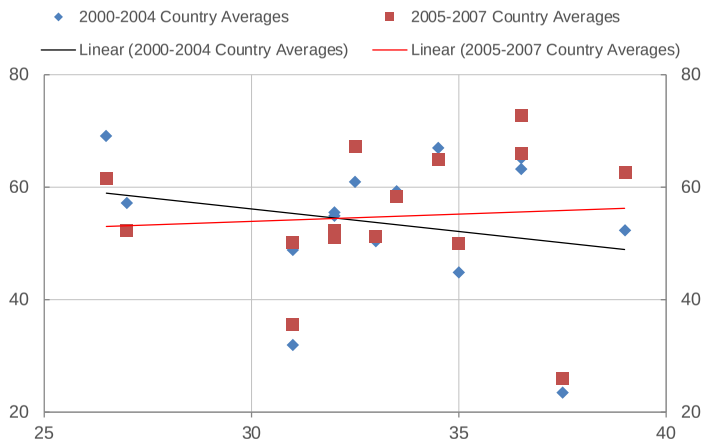
To shed some light on this issue, first we document how these balance sheet variables were related to the prudential indicators, both before and after the implementation of the CRD. Figure 2 shows scatter plots of the balance sheet variables and the value of the prudential indicators (the supervisory discretion indicator and the regulatory flexibility indicator). The blue dots refer to the measures averaged over the period (2000-2004), therefore they give a snapshot of the pre-existing situation before the implementation of Basel 2 reform. The red dots plot the averages calculated over the period (2005-2007) and refer to the period of the implementation of the CRD.

Figure 2: Regulatory framework and balance sheet composition

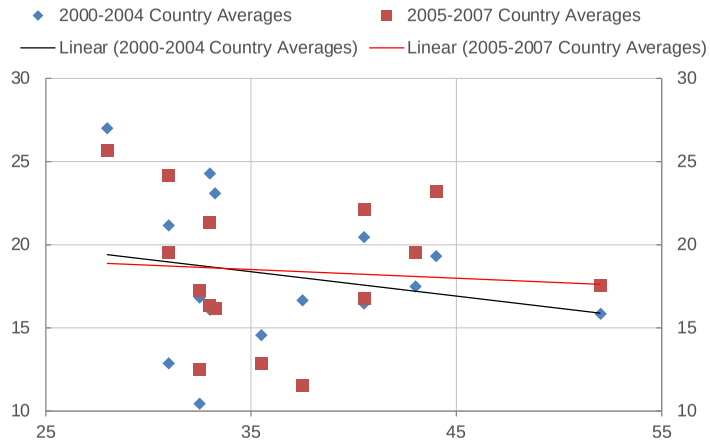
Panel A. Supervisory discretion and loans *(as % of total assets)*



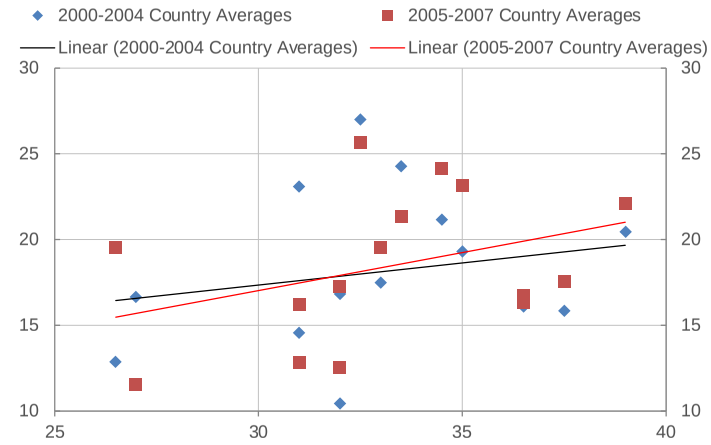
Regulatory flexibility and loans *(as % of total assets)*



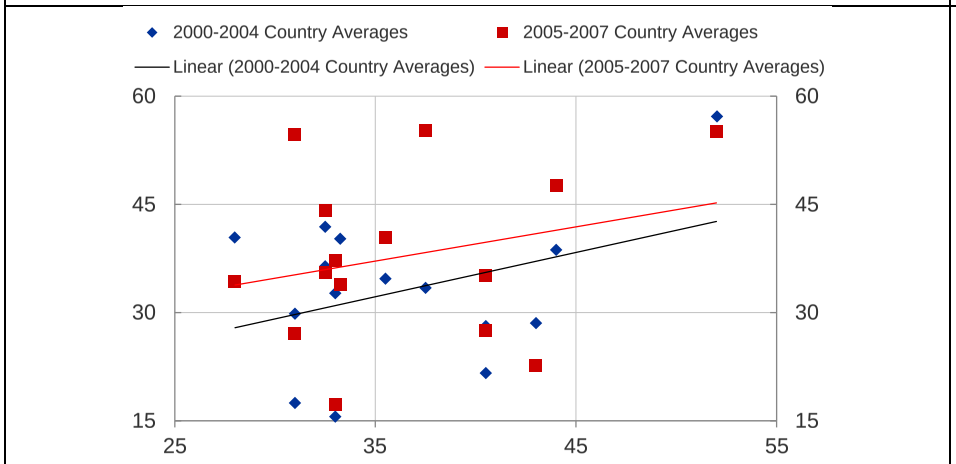
Panel B. Supervisory discretion and non-interest income *(as % of total revenues)*



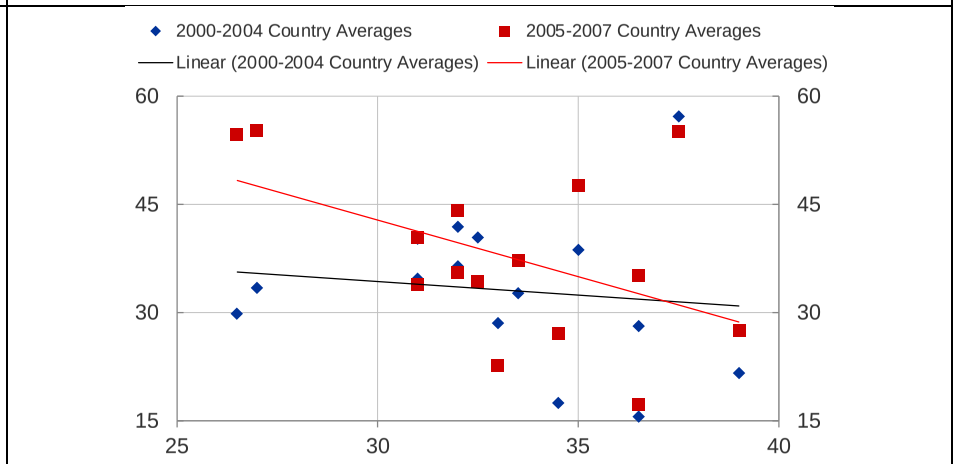
Regulatory flexibility and non-interest income *(as % of total revenues)*



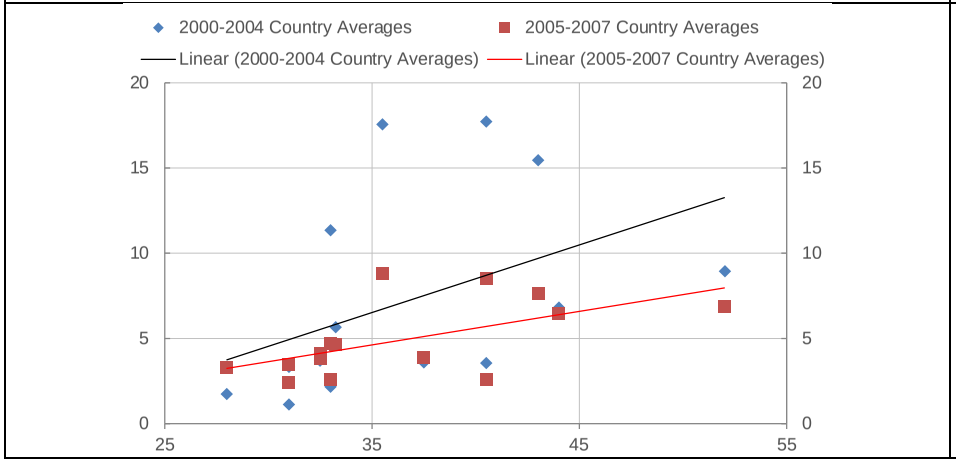
Panel C. Supervisory discretion and liquid assets *(% of deposits & short-term borr.)*



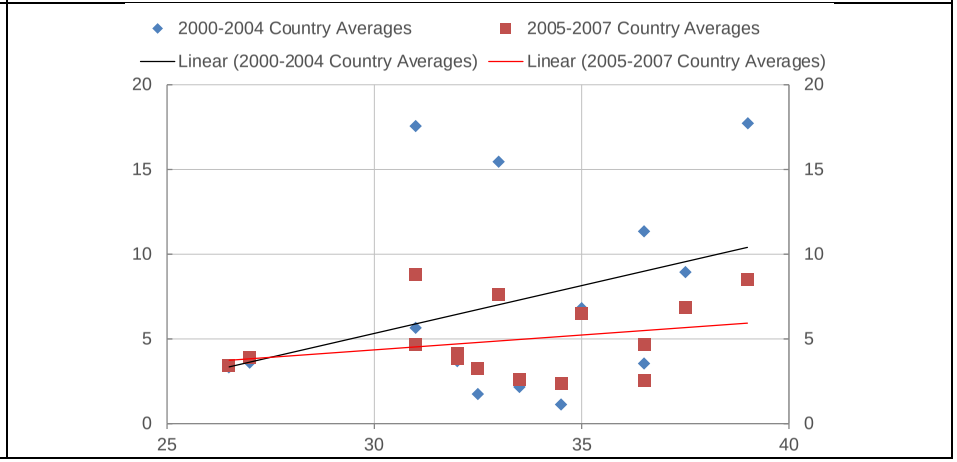
Regulatory flexibility and liquid assets *(% of deposits and short-term borrowing)*



Panel D. Supervisory discretion and sovereign holdings *(% of total assets)*



Regulatory flexibility and sovereign holdings *(% of total assets)*



Note. The charts show the scatter plots – at the country level – of the balance sheet variables and of the prudential indicator values (supervisory discretion on LHS and regulatory flexibility on RHS). 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 Capital Requirements Directives.

Panel A reports the plots related to total loans. Loans as percentage of total assets in the banks' balance sheets are negatively related to the indicator of supervisory discretion. In countries where supervisors can exercise discretionary powers to allow more lenient regulation, banks have on average a smaller lending portfolio as fraction of their balance sheets. This correlation remained at similar level also during the years preceding the financial crisis, notwithstanding an increase of total loans for the countries with higher supervisory discretion. The correlation with the indicator of regulatory flexibility is overall much lower. At the same time, it can be discerned that between 2005 and 2007, countries with higher regulatory flexibility increased relatively more the fraction of total loans, suggesting a possible role of regulation in fostering loan growth.

Panel B shows the same plots for the values of non-interest income as percentage of total revenues. In this case the correlation is stronger with the regulatory flexibility indicator. Banks located in countries with more flexible regulation tend to have a larger fraction of their income arising from non-interest business. Interestingly, on average, this positive relationship marginally increased for the banks in our sample during the 2005-2007 period. The relation with the supervisory discretion indicator goes in the opposite direction, although its slope somewhat decreased in the 2005-2007 period.

Panel C and D plot the indicators with the liquid assets ratio (the ratio of liquid assets to total deposits and short-term liabilities) and the government securities ratio (the ratio of government securities to total assets). The plots suggest a positive relationship between supervisory discretion and holdings of liquid assets and sovereign bonds. In countries with more supervisory discretion, banks hold on average more sovereign bonds. This is consistent with a narrative of moral suasion on the side of government (and possibly national supervisors), which may have encouraged domestic banks to invest in sovereign domestic bonds (see Ongena et al., 2019 for example). In the years preceding the global financial crisis, on average banks decreased the amount of sovereign holdings while retaining other liquid assets compared to the previous years (2000-2004), see Panel D. Conversely banks located in countries with higher regulatory flexibility tended to have lower liquidity buffers.

6.3 Empirical Results: Prudential Regulation, Banks' Balance Sheets and Realised Risks

To formally investigate the relationship between the balance sheet variables linked to risk-taking and the prudential environment we estimate a probit model with an IV specification as in (2). The marginal effects related to each measure of risk-taking are reported in Table 3. The complete set of results, including the coefficients of the reduced form equation, is reported in Annex C, Tables from C.1 to C.12. In the following sections we assess the results of each balance sheet channel individually.

Table 3: MLE IV Probit – Marginal Effects

VARIABLES	(1) Overall support	(2) Recapitalisation	(3) Guarantees	(4) Liquidity support
Loans/Assets|Indicator	-0.0104***	-0.00933***	-0.00760**	0.0112***
	(0.00201)	(0.00250)	(0.00343)	(0.00347)
Loans/Assets|SupDiscr	-0.00843***	-0.00748***	-0.00631**	0.00836
	(0.00220)	(0.00261)	(0.00291)	(0.00913)
Loans/Assets|FlexReg	0.0144***	0.0142***	0.0143***	0.0143***
	(0.000334)	(0.000943)	(0.000324)	(0.000695)
Non_Int_Inc|Indicator	0.0184***	0.0161***	0.0115	-0.0158
	(0.00403)	(0.00498)	(0.00797)	(0.0156)
Non_Int_Inc |SupDisc	0.0238***	0.0182***	0.0152	-0.0234***
	(0.000154)	(0.00627)	(0.0104)	(0.00538)
Non_Int_Inc |FlexReg	0.0117**	0.00995*	0.00333	-0.0141
	(0.00500)	(0.00568)	(0.00667)	(0.0184)
Liquid_Assets|Indicator	0.00939***	0.00938***	-0.00966***	-0.0101***
	(8.05e-05)	(0.000195)	(0.000275)	(0.000547)
Liquid_Assets|Sup_Disc	0.00768***	0.00672***	0.00703	-0.00898***
	(0.00185)	(0.00188)	(0.00446)	(0.00240)
Liquid_Assets|Flex_Reg	-0.00982***	-0.00945***	-0.00969***	-0.0102***
	(0.000479)	(0.00154)	(0.000272)	(0.00182)
SovSecurities|Indicator	0.0519***	0.0464***	0.0616***	0.0513
	(0.00735)	(0.00921)	(0.00255)	(0.174)
SovSecurities|Sup_Disc	0.0497***	0.0447***	0.0613***	0.0510
	(0.00752)	(0.00911)	(0.00280)	(0.343)
SovSecurities|Flex_Reg	0.0597***	0.0553***	0.0623***	0.0580***
	(0.00491)	(0.0102)	(0.00219)	(0.0110)
BANK CONTROLS	YES	YES	YES	YES
MACRO CONTROLS	YES	YES	YES	YES

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

6.3.1 Bank Lending

When analyzing credit provision, we find limited evidence that a more lenient prudential framework is correlated with higher lending provision hindering the stability of banks. Indeed the effects depend significantly on the design of the prudential framework, as the estimated marginal effects for the two indicators go in different directions. Lending explained by the supervisory discretion indicator is associated with lower likelihood to have received support during the crisis. The marginal effects are statistically significant for all types of crisis support except for liquidity facilities. At the same time, lending explained by a more flexible regulatory environment increases the probability to have received support during the crisis for all types of support. These results suggest that in countries where supervisors had more discretionary powers banks may have been prevented somewhat from engaging in risky lending.

The economic significance of the marginal effects suggests that a flexible regulatory environment may have fostered risky lending more than the positive impact that can be related to more powerful supervisors. As already mentioned, in our framework we cannot assess how much the prudential framework is a result of pre-existing conditions. However, we note that in countries with a more flexible regulation, i.e. more favorable risk-weights, bank lending increased relatively more than in other countries.

6.3.2 Non-Interest Bank Income

The holdings of exotic financial assets and the excessive reliance on non-interest income have been blamed as powerful sources of risk taken by banks that eventually unraveled during the financial crisis. One could argue, however, that more diversified portfolios of activities can help in reducing banks' risk. On the one hand, banks with a more diversified income structure may be able to better respond to financial shocks, especially if these are focused on some specific types of assets, such as non-performing loans with high expected losses. On the other hand, if a large fraction of the bank income results from riskier activities, or if a bank expands excessively its trading book, higher non-interest income reflects an increase in bank risk overall. These two effects may play a different role depending on the level of the non-interest income ratio. Their compositional outcome could then display some potential non-linearity.

The results of the estimation of the IV probit model as reported in Table 3 support the argument that the reliance on non-interest income explained by a less stringent prudential framework points to overall higher bank risk. Banks with a larger share of non-interest income associated to the prudential frameworks have higher probability of having received public support, in particular recapitalization measures. Marginal effects are statistically and economically significant, with a higher marginal effect of non-interest income associated to supervisory discretion.

6.3.3 Bank Liquidity

Next, we explore the relationship between the provision of a more permissive prudential regime and the liquidity position of banks. We investigate whether the pre-crisis liquid assets position of banks, as explained by the prudential framework incentives, could explain the cross-bank variation in the probability to receive support during the crisis. For this purpose, we consider the ratio of liquid assets to deposits and short-term liabilities. This variable indicates how large is the buffer of liquid assets of a bank with respect to its short-term liabilities: a higher value indicates a stronger liquidity position of the institution. It is important to point out that the prudential regulation that we are considering – the implementation of CRD – imposed only solvency requirements (i.e. capital) and did not explicitly include liquidity regulations. Some (mainly theoretical) studies have highlighted that capital regulation may have some implications on bank liquidity, i.e. capital requirements may be a substitute for liquidity requirements (Rochet and Vives, 2004; Admati et al., 2013).

The estimation of the marginal effects from our probit estimation suggests again a different relationship in prudential frameworks in which supervisors have high discretionary powers or high regulatory flexibility. Greater liquidity buffers related to regulatory flexibility were significantly associated to lower probability of having received crisis support (see negative marginal effect for Liquid_Assets/Flex_Reg). This result is consistent with the argument of regulatory spillovers among regulations. A more flexible regulatory environment might have spurred lower liquidity buffers and indeed increase liquidity risk, even if liquidity requirements were not directly specified in the CRD. When considering liquidity buffers associated to supervisory discretion, the marginal effect is positive and significant. This somewhat counterintuitive result may indeed be related to the composition of the liquid assets and in particular the holdings of sovereign bonds with their associated risk. We address this issue in the last step of our analysis.

6.3.4 Bank Holdings of Sovereign Bonds

Finally we consider the role of bank exposures to government securities. The European sovereign debt crisis has shown that sovereign exposures may result – in some cases – in risky investments for banks. Nevertheless, EU prudential requirements for capital adequacy assign a 0% risk weight – under the Standardised Approach - to the investments in government securities issued by EU member states, independently from the issuer credit ratings and from the bond credit risk. This potentially incentivises the purchase and holdings of sovereign bonds by banks, also exacerbating home bias – despite that those regulations do not differentiate between euro area sovereigns of different countries.

Our empirical analysis focuses on the public support provided to banks from 2008 to 2010. Therefore, we study the implications of the pre-crisis sovereign exposures on the bank distress recorded during the early stage of the financial crisis, i.e. before the peak of the euro area sovereign

crisis in the summer of 2011. The average marginal effects reported in Table 3 show that sovereign holdings explained by the prudential environment increase the probability of having received public support during the crisis across most of the specifications and regulatory indicators.[20] The marginal effect is comparable for supervisory discretion and regulatory flexibility. Overall these results point to a strong detrimental effect of the sovereign-bank nexus on the stability of banks even before the Eurozone sovereign crisis erupted in full force.

In fact, the evidence presented in some recent papers (Ongena, Popov and Van Horen, 2019; De Marco and Macchiavelli, 2016) suggests that national authorities in the EU (including potentially supervisory authorities) could have exerted some indirect or direct influence on domestic banks, to encourage the purchase and the holding of national sovereign bonds. Also, the theoretical findings in Crosignani (2017) support the argument that governments might prefer undercapitalised domestic banks during crises, because they would act as buyers of last resort for home public debt. Provided that recapitalisation measures are implemented by governments, but the assessment to verify the potential undercapitalisation of banks is usually conducted by supervisory authorities, our evidence related to supervisory discretion could suggest that supervisory authorities with a large discretionary power may have been instrumental in fostering public support for banks with large holdings of sovereign bonds.

This would provide additional support to the case for a Banking Union with a Single Supervision, in order to break the vicious loop between banks and sovereigns. Further research to validate this argument could be developed by looking at the composition – by country of issuer – of banks' exposures to sovereign debt, and to distinguish between domestic and foreign public debt. Unfortunately these data are not available for the time series and the sample of banks in our sample.

7 Conclusions

This paper analyses the implications of national differences in the prudential framework across EU countries ahead of the financial crisis on the stability of financial intermediaries during the crisis period. We construct quantitative indicators of regulatory flexibility and supervisory discretion, based on the exercise of national options and discretions in the implementation of the CRD. We collect the measures of public support implemented by EU Governments during the period 2008-2010 and classify the various forms of financial assistance (recapitalisations, credit guarantees, and liquidity provision).

Overall, the analysis suggests that banks established in countries with less stringent national prudential regulation before the crisis were more likely to require government support during the

[20] It should be recalled that we are using the ratio of sovereign assets over total assets, therefore this variable is correlated with the liquidity ratio in the previous estimation, which is calculated as liquid assets over the sum of deposits and short-term liabilities.

period 2008-2010. The results broadly hold for the indicators of both supervisory discretion and regulatory flexibility, suggesting that the *micro-prudential stance* of national authorities had relevant implications for the management of bank balance sheets and for the risk-taking incentives of credit institutions.

The share of bank income arising from non-interest business explained by a less stringent regulatory framework is associated to higher probability to have received public support during the crisis. This result provides some evidence that the prudential framework might have favored banks to venture away from their core business into risky activities.

We find only limited evidence that a more lenient regulatory environment might have spurred "excessive" lending negatively affecting the stability of banks.

The Basel 2 framework did not include liquidity requirements. Our study documents the existence of some regulatory spillovers, since lower liquidity buffers explained by more flexible regulatory frameworks – which established only capital requirements - increase the probability of banks to have been in financial distress. At the same time, our study suggests that the composition of liquid assets is important. When more liquid assets take the form of sovereign debt, the related increase in the sovereign-bank nexus seems overall to have a detrimental impact on banks' resilience.

Overall, our results show that a prudential environment in which important options and discretions are maintained at the national level is at best not conducive to a better allocation of risk – which was the main rational for maintaining these options – and may actually foster risk-taking. This supports the ongoing efforts aimed at establishing a level-playing field in banking regulation and supervision across EU countries. The introduction of a Single Rule-Book, intended to minimize the differences in prudential regulation across EU countries, provides a relevant contribution to reduce the heterogeneities in the risk-taking of credit institutions, by realigning the regulatory incentives on the basis of a common prudential framework.

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Annex A

The Indicators of Prudential Regulation

1. The Construction of the Indicators

This data appendix describes the steps followed for the construction of the indicators of prudential regulation used in the empirical analysis: the overall indicator and its subcomponents of supervisory discretion and regulatory flexibility.

We base the construction of our indicators on the national options and discretions available to national authorities in the regulatory framework of the Capital Requirements Directives: namely the Directive 2006/48 (Taking up and pursuit of the business of credit institutions), and the Directive 2006/49 (Capital adequacy of investment firms and credit institutions), which implemented the Basel II agreement in the European Union.

We identify the national options and discretions and their impact on the regulatory burden of the concerned banks based on the technical assessment provided in May 2008 by the Committee of European Banking Supervisors (CEBS), now succeeded by the European Banking Authority (EBA). The legal provisions covered in the technical advice were 152, including also the transitional provisions established to regulate the smooth shift to the Basel II prudential framework and then subject to expiration after a pre-defined period of time. Since we are interested in the regulatory provisions that can potentially affect the risk-taking incentives of banks in a structural way, we have excluded the transitional provisions from our consideration and focused only on the permanent provisions which characterise the new regime.

Therefore we focus on 87 provisions, for which we have accurate information about the way national authorities exercised the options. The relevant provisions are organised in nine categories in relation to the regulated field: definition of own funds; scope of application; counterparty risk; standardised approach; IRB approach; credit risk mitigation; operational risk; qualifying holdings; trading book. We present a table (Table A1 to A10) for each of these regulated fields and compute the indicators in each table before aggregating the results across fields.

The options and discretions are also classified in two categories, depending on whether they enable national regulators to establish a more favourable treatment for all banks (regulatory flexibility, indicated as REG in the tables), or whether they assign to national supervisors the prerogative to waive some regulatory requirements for specific banks based on a case-by-case assessment (supervisory discretion, reported as SUP in the tables). The overall indicator is computed as the sum of the two sub-indicators of supervisory discretion and regulatory flexibility.

The national options and discretions may have different effects on the regulatory burden of the concerned banks: in general the exercise of an option implies a more favourable regulatory treatment, although in very few cases it may also determine a more restrictive treatment. Therefore the indicators are constructed in a way such that a higher (positive) value indicates a more lenient treatment. In few cases we assign different weights to the options, following the assessment provided by the CEBS (now EBA).

The CEBS technical advice evaluated to what extent each option could affect the level-playing field across jurisdictions and therefore whether the divergences in the option exercise could have any business impact. This qualitative assessment was conducted based on the results of a survey conducted across supervisory authorities and industry participants about the regulatory importance of these options and the change in capital burden or disclosure requirements implied by their exercise. The CEBS summarised the results of this survey in its assessment about the options. Based on that, we assign a weight equal to: 0.5 if the option was reported to have no or limited regulatory importance and no or minor business impact; 1 if the option was considered to be important for the regulatory treatment and to have business impact. In very limited cases, we attribute a weight equal to 1.5 if the option was assessed as very important for the regulatory treatment, as it could endanger the level-playing field across jurisdictions, and was evaluated as having significant business impact. On the other hand, in the limited cases where the national option provided the possibility to apply a more stringent treatment, we assign a (negative) weight equal to -0.5.

The CEBS technical advice provided also information on which national authorities exercised the national options and discretions and how they implemented them in case of multiple choices. We use such information for 15 countries: Austria (AT), Belgium (BE), Cyprus (CY), Germany (DE), Spain (ES), Finland (FI), France (FR), Greece (GR), Ireland (IE), Italy (IT), Luxembourg (LU), Malta (MT), Portugal (PT), Sweden (SE), and United Kingdom (UK). No responses were available for Denmark and Netherlands. In order to ensure some degree of homogeneity across national banking systems, also due to the previous process of harmonisation across EU countries for Single Market purposes, we don't include the Eastern European countries which joined the EU in 2004 and 2007.

Based on the indications about the option exercise by national authorities, and on the weights for the options as described above, we compute the value of the indicator for each field of banking regulation. The results of this computation per each field are presented in the tables A.1 to A.9.

In each table, we report the relevant legislative provision, a short indication of the content of the national option, the type of option (REG or SUP), as well as the weight assigned depending on the impact on the regulatory burden of banks. Then we sum the points obtained for the sub-indicators (supervisory discretion and regulatory flexibility) and for the overall indicator.

Finally, we aggregate the results obtained for all the regulatory fields in order to obtain the final indicators. In doing so, we also take into account the relative importance of the various fields of regulation when computing the aggregate (weighted) indicators. Given that we are interested in the options and discretions that have important effects on the capital requirements for banks established in different countries, we attach particular importance to the Pillar 1 provisions in the following fields: the definition of own funds; the standardised and the IRB approaches for credit risk; the counterparty risk in derivatives; the market risk for the trading book. Therefore, when aggregating the results across fields, we assign a weight equal to 2 to the indicator values for these regulatory fields and a weight equal to 1 for the remaining regulatory fields.

Table A.10 presents the aggregate (weighted) results for the sub-components of supervisory discretion and regulatory flexibility and for the overall indicator. In the empirical analysis, we use the aggregate (weighted) values for the indicators of prudential regulation.

2. Main Examples of National Options and Discretions

National options and discretions address some important issues in bank regulation, which are widely considered in the policy debate as the regulatory treatment may contribute to shape banks' incentives for their balance sheet management. A review of some of these options is then useful to highlight the importance of the regulatory differences which could be determined by the potentially heterogeneous exercise of these provisions.

Importantly, while some of these options have been either removed or transformed in the design of the Single Rulebook, some of them are still present in the current regulatory framework. In fact, the initiative undertaken by the ECB as the competent authority for euro area significant banks – for some options in the current CRR – highlights the need to reduce the regulatory differences which may hamper the level-playing field for euro area banks.

The CRD framework considered in this paper contains some national options and discretions related to various relevant areas: the capital treatment of participations in insurance companies; the counterparty credit risk for derivatives contracts cleared with central counterparties; 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 IRB approach; the list of the entities eligible for the provision of unfunded credit protection; the capital treatment of the exposures to public sector entities; the specific risk requirements for trading book items; the trading book treatment of the underwriting of debt and equity instruments. Most of the national options and discretions discussed below allow for a more favourable regulatory treatment.

A key area of capital regulation concerns **the definition and the computation of banks' own funds**, as the CRD disciplines both the eligible components and the items to be deducted. In general, the CRD requires the deduction of the participations in insurance companies; however, it also contains two NODs allowing Member States – respectively - to permit the use of alternative methodologies for determining the capital adequacy at the conglomerate level (Art. 59, Dir.48/2006; see Table A.1), and to decide not to deduct certain participations from solo-level own funds (Art. 59, Dir.48/2006; see Table A.1). The exercise of these national discretions avoids a reduction in the amount of own funds which otherwise would concern the banking groups with these participations. Therefore, EU countries with a significant diffusion of the bancassurance model, i.e. financial conglomerates providing both banking and insurance services, are particularly interested in exploiting this source of regulatory flexibility, to minimise the capital burden for their domestic banking groups with this business model.

Another key area of capital regulation regards the **determination of the risk-weighted amount of bank exposures**, in relation to the various types of risk. Consistently with the Basel II approach, aimed at increasing the risk sensitiveness of capital regulation, the CRD contains a detailed **treatment of credit risk** for different exposure types, like interbank loans, residential and commercial mortgages, exposures to public sector entities.

Given the significant reliance of credit institutions on interbank lending before the crisis, some options set in the standardized approach may explain potential regulatory incentives regarding the supply of **interbank loans**. The CRD assigns to Member States the option to choose which method (rating of the institution or of the central government) should be applied to compute the risk-weighted amount for exposures to institutions (for maturities above 3 months) (Article 80.3 and Annex VI, Part 1, Point 24, Dir.48/2006; see Table A.4). Given that in general bank credit ratings have as an upper

floor the sovereign credit rating, the choice of the central government method (as selected by most Member States) implies a reduction of the risk weight for the exposures to banks having a lower credit rating than the sovereign. Most importantly, this choice means that the exposures to all banks in a given country are subject to the same risk weight, without differentiation across them in terms of creditworthiness. In addition, the CRD allows Member States to apply a more permissive treatment, in the form of a 20% risk weight, to all short-term interbank exposures with a residual maturity of 3 months or less and funded in the national currency (Annex VI, Part 1, Point 37, Dir.48/2006; see Table A.4). The more favourable treatment allowed by these national discretions could have encouraged the provision of interbank lending to all banks in the countries where national authorities had decided to exploit this regulatory opportunity.

The lending boom observed in some countries before the crisis raises also the question whether the regulatory framework set the proper incentives for an adequate risk assessment for **loans to the private sector (households and corporates).** Some national options and discretions allow for a more favourable treatment to be applied to certain **past due exposures or items with higher risk**. Under the standardized approach, subject to the exercise of a national discretion, banks can assign a lower risk weight (50% instead of 100%) to past due residential mortgages provided that the value adjustments are at least 20% of the gross exposure (Annex VI, Part 1, Point 64, Dir.48/2006; see Table A.4). Also, under the IRB approach, **the definition of loan default with regard to the number of days past due** is left to a decision of national competent authorities, which can determine this time threshold in a range between 90 and 180 days (Annex VII, Part 4, Point 48, first and second sentence, Dir.48/2006; see Table A.5): since the characterization of a loan default is relevant for the computation of the expected loss and then of the risk weight under the IRB approach, the exercise of this national discretion may lead to lower capital requirements on past due exposures. In the above two cases, the provision of a more lenient treatment for past due exposures could have encouraged some forbearance behaviour by banks, with potential implications on their risk-taking. Also, independently from the past due status of a loan, for the items belonging to regulatory high-risk categories (like investments in venture capital and private equity), Member States may allow for the assignment of lower risk weights, 100% or 50% (instead of 150%), provided that value adjustments are respectively at least 20% or 50% of the gross exposure (Annex VI, Part 1, Point 67, Dir.48/2006; see Table A.4). In these cases, the national discretions of the CRD framework – by reducing the capital burden - may have contributed to the risk taken by banks in their lending activity.

The regulatory framework, while setting the risk weights for the credit risk of bank exposures, disciplines the use of some techniques for **credit risk mitigation, via funded or unfunded protection**. Some national discretions allow Member States to broaden the scope for this credit risk mitigation. In general, **residential and commercial real estate may be eligible for funded credit protection** if the risk of the borrower does not depend upon the performance of the underlying property. However, the CRD allows national authorities to waive this requirement, if they have evidence that the relevant market is well developed and long established with sufficiently low loss rates (Annex VIII, Part 1, Point 16, first sentence, and Point 17, Dir.48/2006; see Table A.6). The wider possibility to use real estate collateral as funded credit protection, by reducing the corresponding capital requirements for these exposures, could have encouraged the provision of residential and commercial mortgages. Moreover, national discretions may also allow Member States to expand the **set of financial institutions which are eligible providers of unfunded credit protection**, in addition to the ones defined by the CRD framework (Annex VIII, Part 1, Point 28 (Dir.48/2006; see Table A.6).

The CRD framework provides also some national options and discretions on credit risk which may be relevant for the sovereign-bank nexus from various points of view, like **the provision of sovereign guarantees, the use of sovereign bonds as repo collateral or the exposures to public sector entities**. As a general rule, under the standardized approach, all exposures to sovereign bonds issued by EU governments and denominated in the domestic currency are subject to a zero risk weight. Supervisory authorities, subject to a case-by-case assessment, may extend this regulatory treatment to exposures guaranteed by the central government where the guarantee is denominated in the domestic currency of the borrower (Annex VIII, Part 3, Point 89, Dir.48/2006; see Table A.6). This may incentivize banks to increase those exposures which can benefit from sovereign guarantees. Moreover, the use of sovereign bonds as underlying assets in repo operations may justify a more favourable treatment for the purpose of funded credit protection. While in general, under the financial collateral comprehensive method, the value of the collateral has to be adjusted in relation to the asset volatility, competent authorities may allow credit institutions to apply a 0% volatility adjustment if sovereign bonds are used as collateral and this allows also for a mutual recognition clause from other competent authorities (Annex VIII, Part 3, Point 59, Dir.48/2006).

The exercise of supervisory discretion may also explain the provision of a more favourable treatment for the exposures to public sector entities. In general, these exposures would be assigned a 100% risk weight: however, competent authorities may decide – on a case-by-case basis - to treat them as exposures to credit institutions, with a consequent reduction of the applied risk weight (Annex VI, Part 1, Point 14, Dir.48/2006; see Table A.4). In addition, if the public sector entity benefits from a guarantee of the central government, competent authorities may decide – always on a case-by-case basis – to treat these exposures as exposures to central government, i.e. with a zero risk weight (Annex VI, Part 1, Point 15, Dir.48/2006; see Table A.4). These discretions may raise incentives in favour of the provision of bank lending to public sector entities, particularly if guaranteed by the government.

A field subject to significant discussion after the crisis was also the **treatment of the counterparty credit risk and the market risk for derivatives instruments**. Before the crisis, only some derivatives contracts were cleared with central counterparties: in that context, the CRD allowed for the provision of different regulatory treatments, also potentially to incentivize central clearing given the lower risk of cleared transactions. Competent authorities were allowed to identify the credit risk exposures to central counterparties, as resulting from derivatives, repos or securities lending transactions, to which a 0% risk weight could be attributed (Annex III, Part 2, Point 6, Dir. 48/2006; see Table A.3). Also, based on the regulation of the position risk in the trading book, competent authorities could allow the capital requirement for an OTC derivative cleared by a central counterparty to be equal to the margin required by the clearing house (Annex I, Point 4, second subparagraph, second sentence, Dir. 49/2006; see Table A.9).

Finally, various national options and discretions concerned the **treatment of the market risk in the trading book**, with potential related incentives for the holdings and the trading of debt and equity instruments as well as for the underwriting of these securities. The discipline of the position risk includes both a specific-risk component (which is issuer-specific) and a general-risk component (which relates to broad market conditions), both for debt and for equity. For the calculation of capital requirements on debt securities against specific risk, a 0% weighting may, subject to the discretion of the national authorities, be assigned to debt securities issued by certain entities, including governments and credit institutions, where these securities are denominated and funded in domestic currency (Article 19.1, Dir. 49/2006; see Table A.9). Moreover, for covered bonds included in the

trading book, Member States may set a reduced specific risk requirement, with reductions similar to those applied in the banking book under the standardized approach (Article 19.2, Dir. 2006/49; see Table A.9). For equity instruments, the competent authorities may allow the capital requirement against specific risk to be 2% rather than 4% for the portfolios of highly liquid equity instruments held by a credit institution, subject to some concentration limits. The discipline of the position risk in the trading book includes also a national discretion regarding the underwriting of debt or equity securities, which may contribute to reduce the net positions particularly for those banks acting as bookrunners. The competent authorities may allow an institution to calculate the net positions by deducting the underwriting positions, which are subscribed or sub‑underwritten by third parties on the basis of formal agreements (Annex I, Point 41 Dir. 49/2006; see Table A.9). This provision, by reducing the net positions, implies also a decrease in the capital requirements for the market risk, therefore potentially encouraging the underwriting activity of investment banks.

Table A.1

OWN FUNDS – PILLAR 1

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 27.2 Dir. 2006/49	Consolidated own funds of institutions	SUP	1	0	1	1	0	1	0	0		1	1	1	1	1	1	0
Article 57 (second last paragraph)	Inclusion of interim profits	REG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Article 58	Waiver on certain deductions	SUP	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5
Article 59	Alternatives to deductions	REG	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1
Article 60	Deductions for stand-alone requirements purposes	REG	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	0
Articles 61, 63.1	Composition of own funds of credit institutions	REG	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Article 63.2	Securities of indeterminate duration as own funds items	REG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Article 63.3	Excess value adjustments and provisions as own funds items	REG	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Article 64.3	Fixed-term cumulative preferential shares and subordinated loan capital as own funds items	REG	1	1	1	1	0.5	1	1	1	1	1	1	1	1	1	1	1
Article 14 Dir. 2006/49	Excess of subordinated capital	SUP	1	0	1		0	1	0	0		1	1	1	1	1	1	0
Supervisory Discretion				**0**	**2.5**	**1.5**	**1.5**	**1.5**	**0.5**	**1.5**	**0.5**	**2.5**	**2.5**	**2.5**	**1.5**	**2**	**2.5**	**1.5**
Regulatory Flexibility				**5.5**	**6.5**	**5.5**	**6**	**6.5**	**5.5**	**6.5**	**6.5**	**6.5**	**5.5**	**6.5**	**5.5**	**6.5**	**6.5**	**5.5**
Overall Indicator				5.5	9	7	7.5	8	6	8	7	9	8	9	7	8.5	9	7
Overall Weighted Indicator				**11**	**18**	**14**	**15**	**16**	**12**	**16**	**14**	**18**	**16**	**18**	**14**	**17**	**18**	**14**

Note. The definition of own funds (i.e. the instruments which can be considered for the computation of regulatory capital) assumes a crucial importance for capital regulation, as it determines the numerator of the risk-weighted capital ratio. For this reason, we assign to the national options and discretions included in this category a double weight in defining their contribution to the overall weighted indicator.

Table A.2

SCOPE OF APPLICATION

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 69.1	Individual waiver for subsidiaries	REG	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0	0.5	0	0.5	0.5	0.5
Article 69.3	Individual waiver for parent credit institutions	REG	1	0	0	0	1	1	0	1	1	0	0	1	0	0	1	0
Article 70	Solo consolidation	SUP	1	0	1	1	1	1	0	0	1	1	0	1	0	0	1	1
Article 72.3	Exemption from Pillar III	SUP	0.5	0	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0	0.5	0.5
Article 73.1	Exemption from consolidation	SUP	1	0.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Supervisory Discretion				0	0.5	0.5	1.5	1.5	0.5	1.5	1.5	0	0	1.5	0	0.5	1.5	0.5
Regulatory Flexibility				0.5	2.5	2	2.5	2.5	1.5	1.5	2.5	2.5	1	2.5	1.5	1	2.5	2.5
Overall Indicator				0.5	3	2.5	4	4	2	3	4	2.5	1	4	1.5	1.5	4	3
Overall Weighted Indicator				**0.5**	**3**	**2.5**	**4**	**4**	**2**	**3**	**4**	**2.5**	**1**	**4**	**1.5**	**1.5**	**4**	**3**

Table A.3

COUNTERPARTY RISK IN DERIVATIVES AND OTHER EXPOSURES – PILLAR 1

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Annex III, Part 2, Point 6	0% risk weight for other credit risk exposures determined by the competent authorities outstanding with a central counterparty	SUP	1	0	0	1	0	1	1	1	0	0	1	1	1	1	0	1
Annex III, Part 3	Alternative template for the calculation of potential future value in certain cases	SUP	0.5	0	0	0	0	0.5	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0.5
Annex III, Part 6, Point 7	Higher value of coefficient Alpha (multiplier to calculate the exposure value of certain contracts)	SUP	-0.5	0	0	-0.5			-0.5		0	0	-0.5	0	0	0	-0.5	-0.5
Annex III, Part 6, Point 12	Internal determination of the value of coefficient Alpha (multiplier to calculate the exposure value of certain contracts)	SUP	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
Annex III, Part 7c (ii)	Calculation (separate/aggregate) of 'net-to-gross ratio'	REG	0.5	0.5	0	0.5	0		0.5	0.5		0	0.5	0.5	0.5	0.5	0	0
Supervisory Discretion				**1**	**1**	**0.5**	**1**	**2.5**	**2**	**2.5**	**1**	**1**	**2**	**2.5**	**2.5**	**2**	**1**	**2**
Regulatory Flexibility				**0.5**	**0**	**0.5**	**0**	**0**	**0.5**	**0.5**	**0**	**0**	**0.5**	**0.5**	**0.5**	**0.5**	**0**	**0**
Overall Indicator				1.5	1	1	1	2.5	2.5	3	1	1	2.5	3	3	2.5	1	2
Overall Weighted Indicator				**3**	**2**	**2**	**2**	**5**	**5**	**6**	**2**	**2**	**5**	**6**	**6**	**5**	**2**	**4**

Note. The Pillar 1 provisions for counterparty risk in credit derivatives and other exposures assume a crucial importance for capital regulation. For this reason, we assign to the national options and discretions included in this category a double weight in defining their contribution to the overall weighted indicator.

Table A.4

STANDARDISED APPROACH – PILLAR 1

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 80.3 & Annex VI, Part 1, Point 24	Risk-weighting exposures to credit institutions	REG	1	1	0	1	1	1	1	1	0	0	1	1	0	1	1	1
Article 80.7	Exemption of intra-group exposures from risk-weighted exposures	SUP	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Article 80.8	Treatment of exposures to a counter-party which is member of the same institutional protection scheme.	SUP	0.5	0.5	0	0	0.5	0.5	0.5	0	0	0	0.5	0.5	0	0	0.5	0
Article 83.2	Permission to use unsolicited ratings	SUP	1	0.5	1	1	1	1	1	1	1	0.5	1	1	1	1	1	1
Annex VI, Part 1, Point 5	Recognition of a third country's treatment of central government and central bank exposures	REG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Annex VI, Part 1, Point 11	Recognition of a third country's treatment of regional governments and local authorities	REG	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5
Annex VI, Part 1, Point 14	Treatment of public sector entities as institutions	SUP	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5
Annex VI, Part 1, Point 15	Treatment of exposures to public sector entities guaranteed by central governments	SUP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Annex VI, Part 1, Point 17	Recognition of a third country's treatment of public sector entities	REG	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5
Annex VI, Part 1, Point 37	Treatment of short term exposures to EU institutions in their national currency	REG	1.5	1.5	0	1.5	1.5	1.5	1.5	1.5	1.5	0	1.5	1.5	1.5	0	0	1.5

Annex VI, Part 1, Point 40	Treatment of exposures in the form of minimum reserves held by an intermediary credit institution.	REG	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0	0.5	0	0.5	0.5	0	0.5
Annex VI, Part 1, Point 63	Risk-weighting past due exposures secured by non eligible collateral	SUP	0.5	0.5	0	0	0	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0
Annex VI, Part 1, Point 64	Risk-weighting of past due exposures secured by mortgages on residential property	SUP	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0	1.5	1.5	1.5	0	0	1.5
Annex VI, Part 1, Point 66	Risk-weighting items belonging to regulatory high risk categories	REG	-0.5	-0.5	-0.5	-0.5	0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0	-0.5	0	0	-0.5
Annex VI, Part 1, Point 67	Regulatory high risk categories - lower risk weight due to value adjustments	REG	1.5	1.5	1.5	1.5	0	0.75	0	1.5	1.5	1.5	0	0	1.5	0	0	1.5
Annex VI, Part 1, Point 68(e)	Loans secured by commercial real estate as collateral for covered bonds	REG	1	0	0	1	0	1	1	0	1	0	1	1	0	0	0	1
Annex VI, Part 1, Point 85	Risk-weighting institutions specialising in the inter-bank and public debt market	REG	0.5	0	0	0	0	0.5	1	0	0	0	0	0.5	0	0	0	0
Annex VI, Part 3, Point 17	Exceptions to the non-use of domestic currency ratings for foreign-currency exposures	REG	0.5	0	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Supervisory Discretion				**5**	**3.5**	**4.5**	**5**	**5**	**5**	**4.5**	**5**	**2.5**	**5.5**	**5.5**	**5**	**3**	**2**	**4.5**
Regulatory Flexibility				**6**	**4**	**7.5**	**4.5**	**7.25**	**7**	**6.5**	**6.5**	**3.5**	**6**	**6.5**	**5.5**	**4**	**1.5**	**7.5**
Overall Indicator				11	7.5	12	9.5	12.25	12	11	11.5	6	11.5	12	10.5	7	3.5	12
Overall Weighted Indicator				**22**	**15**	**24**	**19**	**24.5**	**24**	**22**	**23**	**12**	**23**	**24**	**21**	**14**	**7**	**24**

Note. The provisions regarding the standardised approach (i.e. the baseline to determine the risk weights for banks' exposures) assumes a crucial importance for capital regulation, as it determines the denominator of the risk-weighted capital ratio. For this reason, we assign to the national options and discretions included in this category a double weight in defining their contribution to the overall weighted indicator.

Table A.5

IRB APPROACH - PILLAR 1

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 84.2 (second subparagraph)	Requirements for IRB standards for parent and EU subsidiaries altogether	SUP	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1
Annex VII, Part 1, Point 6 (second subparagraph)	Lower rate for specialized lending	SUP	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5
Annex VII, Part 1, Point 18	Treatment of ancillary banking services	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0	0.5	0.5	0.5	0	1	0.5
Annex VII, Part 2, Points 5 and 7 & Annex VIII, Part 1, Point 26	Possibility to extend the list of unfunded protection providers for the purposes of recognition of unfunded credit protection in PD	REG	0.5	0	0.5	0	0.5	0	0.5	0	0.5	0	0	0.5	0.5	0.5	0	0.5
Annex VII, Part 2, Point 12	Alternatives for the calculation of maturity	REG	-0.5	0	-0.5	-0.5	0	0	0	0	-0.5	-0.5	0	-0.5	-0.5	0	0	0
Annex VII, Part 2, Point 14	Alternatives for the calculation of maturity	REG	-0.5	0	-0.5	-0.5	-0.5	0	-0.5	-0.5	-0.5	-0.5	0	-0.5	-0.5	-0.5	0	-0.5
Annex VII, Part 2, Point 15	Maturity for EU-firms (< EUR 500 million)	REG	0.5	0.5	0	0	0.5	0	0	0	0.5	0	0	0	0.5	0.5	0	0
Annex VII, Part 2, Point 15 (last sentence)	Maturity for EU-firms investing primarily in real estate (< EUR 1,000 million)	REG	0.5	0.5	0	0	0.5	0	0	0	0	0	0	0	0.5	0.5	0	0
Annex VII, Part 2, Point 20 & Annex VIII, Part 1, Point 26	Possibility to extend the list of unfunded protection providers for the purposes of calculation of dilution risk	REG	0.5	0	0.5	0	0.5	0.5	0.5	0	0.5	0	0	0.5	0.5	0	0	0.5
Annex VII, Part 4, Point 48 (first and second	Definition of default for retail exposures	REG	0 if 90 and 1 if 180	0	0	0	0	0	0	0	0	0	1	0	0.5	0	0.5	0.5

sentence)																		
Annex VII, Part 4, Point 48 (first and second sentence)	Definition of default for PSE exposures	REG	0 if 90 and 0.5 if 180	0	0	0	0	0	0	0.5	0.5	0	0.5	0	0.5	0.5	0.5	0.5
Supervisory Discretion				**2**	**2**	**2**	**0.5**	**2**	**2**	**1.5**	**2**	**1.5**	**1**	**2**	**2**	**1.5**	**3**	**2**
Regulatory Flexibility				**1**	**0**	**-1**	**1.5**	**0.5**	**0.5**	**0**	**1**	**-1**	**1.5**	**0**	**2**	**1.5**	**1**	**1.5**
Overall Indicator				3	2	1	2	2.5	2.5	1.5	3	0.5	2.5	2	4	3	4	3.5
Overall Weighted Indicator				**6**	**4**	**2**	**4**	**5**	**5**	**3**	**6**	**1**	**5**	**4**	**8**	**6**	**8**	**7**

Note. The provisions regarding the Internal Rating Based approach (used to determine the risk weights for the exposures of large banks) assumes a crucial importance for capital regulation, as it determines the denominator of the risk-weighted capital ratio. For this reason, we assign to the national options and discretions included in this category a double weight in defining their contribution to the overall weighted indicator.

Table A.6

CREDIT RISK MITIGATION - PILLAR 1

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Annex VIII, Part 1, Point 16 (first sentence)	Residential real estate property waiver	REG	0.5	0.5	0.5	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0	0	0	0.5
Annex VIII, Part 1, Point 17	Commercial real estate property waiver	REG	0.5	0.5	0.5	0	0.5	0	0	0.5	0.5	0	0	0.5	0	0	0	0
Annex VIII, Part 1, Point 20	Amounts receivable as eligible collateral	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5
Annex VIII, Part 1, Point 21	Other physical collateral	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5
Annex VIII, Part 1, Point 28	Eligible protection providers	REG	1	1	1	0	0	1	0	1	1	0	1	1	0	1	0	0
Annex VIII, Part 2, Point 9a (ii)	Minimum requirements for the recognition of receivables as collateral	REG	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0	0.5
Annex VIII, Part 3, Point 43	Own estimates of volatility adjustments (categories of security)	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Annex VIII, Part 3, Point 72	Reduced LGDs for leasing transactions	SUP	0.5	0.5	0.5	0.5	0.5	0	0	0.5	0	0	0.5	0.5	0.5	0.5	0.5	0
Annex VIII, Part 3, Point 73	Alternative treatment for real estate collateral (50% risk-weight)	SUP	0.5	0.5	0.5	0	0.5	0	0	0.5	0	0	0	0.5	0	0	0.5	0
Annex VIII, Part 3, Point 89	Sovereign guarantees	SUP	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1
Supervisory Discretion				**3.5**	**3.5**	**3**	**2.5**	**2.5**	**2.5**	**3.5**	**2.5**	**2.5**	**2**	**3.5**	**3**	**3**	**2.5**	**2.5**
Regulatory Flexibility				**2.5**	**2.5**	**0.5**	**1.5**	**1.5**	**1**	**2.5**	**2.5**	**0.5**	**1.5**	**2**	**0.5**	**1.5**	**0**	**1**
Overall Indicator				6	6	3.5	4	4	3.5	6	5	3	3.5	5.5	3.5	4.5	2.5	3.5
Overall Weighted Indicator				**6**	**6**	**3.5**	**4**	**4**	**3.5**	**6**	**5**	**3**	**3.5**	**5.5**	**3.5**	**4.5**	**2.5**	**3.5**

Table A.7

OPERATIONAL RISK

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 102.4 & Annex X, Part 4, Points 1 and 2	Combination of approaches	SUP	0.5	0.5	0.5	0.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Article 104.3	Alternative Standardised Approach	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0	0	0.5	0.5	0	0.5	0.5
Article 105.4	Qualifying criteria for AMA within the same group	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Annex X, Part 2, Points 3 and 5	Alternative Standardised Approach	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0	0	0.5	0.5	0	0.5	0.5
Supervisory Discretion				**2**	**2**	**1.75**	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**2**	**2**	**1**	**2**	**2**
Regulatory Flexibility				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Overall Indicator				2	2	1.75	2	2	2	1	2	1	1	2	2	1	2	2
Overall Weighted Indicator				**2**	**2**	**1.75**	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**2**	**2**	**1**	**2**	**2**

Table A.8

QUALIFYING HOLDINGS OUTSIDE THE FINANCIAL SECTOR

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 122.1	Special treatment for insurance undertakings	REG	1	1	1	0.5	1	1	1	1	1	1	1	1	0	1	1	1
Article 122.2	Alternative - deduction	REG	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1
Supervisory Discretion				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regulatory Flexibility				2	2	1.5	2	2	2	2	2	2	1	1	1	2	2	2
Overall Indicator				2	2	1.5	2	2	2	2	2	2	1	1	1	2	2	2
Overall Weighted Indicator				**2**	**2**	**1.5**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**2**	**2**	**2**

Table A.9

TRADING BOOK

ARTICLE	DENOMINATION	TYPE	WEIGHT	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
Article 19.1 Dir. 2006/49	0% weighting of certain debt securities	REG	1	0	1	1	0	1	1	1	1	1	0	1	1	1	1	0
Article 19.2 Dir. 2006/49	Specific risk requirement for covered bonds	REG	1	0	0	0	1	1	1	0	1	1	1	1	1	1	1	0
Article 19.3 Dir. 2006/49 and Annex I, point 52	Third country CIU	SUP	0.5	0.5	0	0.5	0	0.5	0.5	0	0.25	0.5	0	0.5	0.5	0.5	0.5	0
Article 26 Dir. 2006/49	Offsetting trading positions	SUP	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0
Annex I, Point 2 Dir. 2006/49	Netting of convertible and offsetting positions in the underlying instrument	REG	0.5	0.5	0	0.5	0	0	0	0.5	0.5	0.5	0	0.5	0	0.5	0	0.5
Annex I, Point 4 (second subparagraph, first sentence) Dir. 2006/49	Capital requirement for an exchange-traded future	SUP	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0
Annex I, Point 4 (second subparagraph, second sentence) Dir. 2006/49	Capital requirement for OTC derivative cleared by a clearing house	SUP	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0
Annex I, Point 5 (second subparagraph) Dir. 2006/49	Prescription of specific methodologies for the calculation of delta	REG	-0.5	0	-0.5	0	0	-0.5	-0.5	-0.5	0	-0.5	0	0	-0.5	0	0	-0.5
Annex I, Point 5 (third subparagraph) Dir. 2006/49	Capital requirement for exchange-traded written options and OTC options cleared by a clearing house	SUP	0.5	0	0	0	0	0	0	1	0.5	1	0	1	0.5	1	0.5	0
Annex I, Point 5 (third subparagraph)	Capital requirement for exchange-traded bought options and OTC bought	SUP	0.5	0	1	0.5	1	0	0	1	0.5	1	0	1	0.5	1	0.5	0.5

Dir. 2006/49	options cleared by a clearing house																	
Annex I, Point 14 Dir. 2006/49	Specific risk charge for a non-qualifying issuer	REG	-0.5	0	1	-0.5	0	-0.5	0	0	-0.5	0	0	0	0	1	0	-0.5
Annex I, Point 35 (first sentence) Dir. 2006/49	Reduced specific risk requirement for certain equity portfolios	SUP	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1
Annex I, Point 35 (last sentence) Dir. 2006/49	Alternative maximum weight of an individual position in an institution's equity portfolio	SUP	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5
Annex I, Point 41 Dir. 2006/49	Special procedure for calculation of capital requirements for underwriting of debt and equity instruments	SUP	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5	0.5	0.5
Annex III, Point 2.1 (last sentence) Dir. 2006/49	Discretional use of net present value for determining the open position in currencies or gold	SUP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5		0.5
Annex III, Point 3.1 Dir. 2006/49	Lower capital requirements for closely correlated currencies	SUP	0.5	0.5	0.5	0	0.5	0	0	0.5	0.5	0.5	0	0.5	0.5	0.5		0
Annex III, Point 3.2 (first subparagraph) Dir. 2006/49	Alternative calculation of capital requirements for positions in foreign currencies subject to a legally binding intergovernmental agreement	SUP	0.5	0	0.5	0	0	0	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5		0
Annex III, Point 3.2 (second subparagraph) Dir. 2006/49	Capital requirement for matched positions in EMU-currencies	SUP	0.5	0.5	0.5	0	0	0	0	0.5	0.5	0.5	0	0.5	0	0		0
Annex IV, Point 7 Dir. 2006/49	Definition of 'positions in the same commodity'	SUP	0.5	0.5	0.5	0.5	0.25	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5		0.5

Annex IV, Point 8 Dir. 2006/49	Capital requirement for exchange-traded commodities OTC commodity derivatives cleared by a clearing house	SUP	0.5	0	0	0	0	0	0	0.5	0.5	0.5	0	0.5	0.5	0.5		0
Annex IV, Point 10 (first subparagraph) Dir. 2006/49	Prescription of specific methodologies for the calculation of delta for derivatives on commodities	SUP	-0.5	0	-0.5	0	0	-0.5	-0.5	-0.5	0	-0.5	0	0	-0.5	0		0
Annex IV, Point 10 (three last subparagraphs) Dir. 2006/49	Capital requirement for exchange-traded options and OTC options cleared by a clearing house	SUP	0.5	0	0.25	0.5	0	0	0	0.5	0.5	0.5	0	0.5	0.5	0.5		0.5
Supervisory Discretion				5.5	5.75	5.5	5.25	2.5	3.5	9	8.75	9.5	1.5	10	8	9.5	4	4
Regulatory Flexibility				0.5	1.5	1	1	1	1.5	1	2	2	1	2.5	1.5	3.5	2	-0.5
Overall Indicator				6	7.25	6.5	6.25	3.5	5	10	10.75	11.5	2.5	12.5	9.5	13	6	3.5
Overall Weighted Indicator				**12**	**14.5**	**13**	**12.5**	**7**	**10**	**20**	**21.5**	**23**	**5**	**25**	**19**	**26**	**12**	**7**

Note. The provisions regarding the trading book (setting the risk weights for the exposures included in the trading book) assumes a crucial importance for capital regulation, as it determines the denominator of the risk-weighted capital ratio. For this reason, we assign to the national options and discretions included in this category a double weight in defining their contribution to the overall weighted indicator.

Table A.10

AGGREGATE (WEIGHTED) INDICATORS

CATEGORY	INDICATOR	AT	BE	CY	DE	ES	FI	FR	GR	IE	IT	LU	MT	PT	SE	UK
OWN FUNDS	**Supervisory Discretion**	0	5	3	3	3	1	3	1	5	5	5	3	4	5	3
	Regulatory Flexibility	11	13	11	12	13	11	13	13	13	11	13	11	13	13	11
	Overall Indicator	11	18	14	15	16	12	16	14	18	16	18	14	17	18	14
SCOPE OF APPLICATION	**Supervisory Discretion**	0	0.5	0.5	1.5	1.5	0.5	1.5	1.5	0	0	1.5	0	0.5	1.5	0.5
	Regulatory Flexibility	0.5	2.5	2	2.5	2.5	1.5	1.5	2.5	2.5	1	2.5	1.5	1	2.5	2.5
	Overall Indicator	0.5	3	2.5	4	4	2	3	4	2.5	1	4	1.5	1.5	4	3
COUNTERPARTY RISK	**Supervisory Discretion**	2	2	1	2	5	4	5	2	2	4	5	5	4	2	4
	Regulatory Flexibility	1	0	1	0	0	1	1	0	0	1	1	1	1	0	0
	Overall Indicator	3	2	2	2	5	5	6	2	2	5	6	6	5	2	4
STANDARDISED APPROACH	**Supervisory Discretion**	10	7	9	10	10	10	9	10	5	11	11	10	6	4	9
	Regulatory Flexibility	12	8	15	9	14.5	14	13	13	7	12	13	11	8	3	15
	Overall Indicator	22	15	24	19	24.5	24	22	23	12	23	24	21	14	7	24
INTERNAL RATING BASED APPROACH	**Supervisory Discretion**	4	4	4	1	4	4	3	4	3	2	4	4	3	6	4
	Regulatory Flexibility	2	0	-2	3	1	1	0	2	-2	3	0	4	3	2	3
	Overall Indicator	6	4	2	4	5	5	3	6	1	5	4	8	6	8	7
CREDIT RISK MITIGATION	**Supervisory Discretion**	3.5	3.5	3	2.5	2.5	2.5	3.5	2.5	2.5	2	3.5	3	3	2.5	2.5
	Regulatory Flexibility	2.5	2.5	0.5	1.5	1.5	1	2.5	2.5	0.5	1.5	2	0.5	1.5	0	1
	Overall Indicator	6	6	3.5	4	4	3.5	6	5	3	3.5	5.5	3.5	4.5	2.5	3.5
OPERATIONAL RISK	**Supervisory Discretion**	2	2	1.75	2	2	2	1	2	1	1	2	2	1	2	2
	Regulatory Flexibility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Overall Indicator	2	2	1.75	2	2	2	1	2	1	1	2	2	1	2	2
QUALIFYING HOLDINGS	**Supervisory Discretion**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Regulatory Flexibility	2	2	1.5	2	2	2	2	2	2	1	1	1	2	2	2
	Overall Indicator	2	2	1.5	2	2	2	2	2	2	1	1	1	2	2	2
TRADING BOOK	**Supervisory Discretion**	11	11.5	11	10.5	5	7	18	17.5	19	3	20	16	19	8	8
	Regulatory Flexibility	1	3	2	2	2	3	2	4	4	2	5	3	7	4	-1
	Overall Indicator	12	14.5	13	12.5	7	10	20	21.5	23	5	25	19	26	12	7
Supervisory Discretion		**32.5**	**35.5**	**33.25**	**32.5**	**33**	**31**	**44**	**40.5**	**37.5**	**28**	**52**	**43**	**40.5**	**31**	**33**
Regulatory Flexibility		**32**	**31**	**31**	**32**	**36.5**	**34.5**	**35**	**39**	**27**	**32.5**	**37.5**	**33**	**36.5**	**26.5**	**33.5**
Overall Indicator		**64.5**	**66.5**	**64.25**	**64.5**	**69.5**	**65.5**	**79**	**79.5**	**64.5**	**60.5**	**89.5**	**76**	**77**	**57.5**	**66.5**

ANNEX B: Cross-Section Baseline Probit Regressions (2005-2007)

Table B.1 - Probit Baseline Specification with Overall Indicator

VARIABLES	(1) SUPP	(2) SUPP	(3) RECAP	(4) RECAP	(5) GUAR	(6) GUAR	(7) LIQSUPP	(8) LIQSUPP
	Coeff	AME	Coeff	AME	Coeff	AME	Coeff	AME
PRUDENTIAL FRAMEWORK								
Overall Indicator	0.0242**	0.00442**	0.00985	0.00162	0.0340**	0.00334**	0.0962	0.00301
	(0.0123)	(0.00223)	(0.0131)	(0.00215)	(0.0151)	(0.00148)	(0.0781)	(0.00246)
BANK CONTROLS								
Size	0.467***	0.0855***	0.482***	0.0790***	0.363***	0.0356***	0.152	0.00475
	(0.0545)	(0.00803)	(0.0571)	(0.00776)	(0.0644)	(0.00646)	(0.118)	(0.00380)
RoAE	-0.0153*	-0.00279**	-0.00398	-0.000652	-0.0128*	-0.00125*	0.0115	0.000359
	(0.00782)	(0.00142)	(0.00796)	(0.00131)	(0.00747)	(0.000734)	(0.0189)	(0.000594)
MACRO CONTROLS								
GDP Growth Rate	0.217***	0.0397***	0.0619	0.0102	0.131*	0.0129*	-1.607	-0.0503
	(0.0685)	(0.0122)	(0.0771)	(0.0126)	(0.0795)	(0.00780)	(6.376)	(0.200)
Inflation Rate	0.236	0.0432	0.768***	0.126***	-0.355	-0.0348	6.500	0.204
	(0.206)	(0.0377)	(0.239)	(0.0383)	(0.244)	(0.0238)	(20.69)	(0.648)
Long-Term Rate	3.501***	0.641***	2.191***	0.359***	3.748***	0.367***	-4.294	-0.134
	(0.587)	(0.0971)	(0.637)	(0.101)	(0.709)	(0.0711)	(37.70)	(1.181)
Short-Term Rate	-1.606***	-0.294***	-1.054***	-0.173***	-1.555***	-0.152***	3.339	0.105
	(0.267)	(0.0444)	(0.286)	(0.0455)	(0.316)	(0.0317)	(17.49)	(0.548)
Observations	546	546	546	546	546	546	546	546

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table B.2 - Probit Baseline Specification with Supervisory Discretion

VARIABLES	(1) SUPP	(2) SUPP	(3) RECAP	(4) RECAP	(5) GUAR	(6) GUAR	(7) LIQSUPP	(8) LIQSUPP
	Coeff	AME	Coeff	AME	Coeff	AME	Coeff	AME
PRUDENTIAL FRAMEWORK								
Supervisory Discretion	0.0272*	0.00498*	0.0106	0.00174	0.0461**	0.00450**	0.113	0.00353
	(0.0156)	(0.00284)	(0.0168)	(0.00275)	(0.0193)	(0.00188)	(0.0874)	(0.00276)
BANK CONTROLS								
Size	0.465***	0.0853***	0.481***	0.0790***	0.361***	0.0352***	0.152	0.00474
	(0.0543)	(0.00803)	(0.0570)	(0.00775)	(0.0644)	(0.00645)	(0.118)	(0.00380)
RoAE	-0.0152*	-0.00279*	-0.00396	-0.000649	-0.0130*	-0.00127*	0.0115	0.000359
	(0.00783)	(0.00142)	(0.00796)	(0.00131)	(0.00752)	(0.000736)	(0.0188)	(0.000594)
MACRO CONTROLS								
GDP Growth Rate	0.195***	0.0357***	0.0524	0.00861	0.0978	0.00955	-1.700	-0.0532
	(0.0708)	(0.0128)	(0.0804)	(0.0132)	(0.0810)	(0.00792)	(5.977)	(0.187)
Inflation Rate	0.367*	0.0674*	0.825***	0.135***	-0.196	-0.0192	7.056	0.221
	(0.209)	(0.0380)	(0.244)	(0.0389)	(0.238)	(0.0232)	(19.23)	(0.603)
Long-Term Rate	3.462***	0.635***	2.165***	0.355***	3.806***	0.372***	-4.336	-0.136
	(0.591)	(0.0984)	(0.644)	(0.103)	(0.709)	(0.0707)	(35.69)	(1.117)
Short-Term Rate	-1.572***	-0.288***	-1.037***	-0.170***	-1.545***	-0.151***	3.414	0.107
	(0.264)	(0.0440)	(0.283)	(0.0451)	(0.314)	(0.0314)	(16.53)	(0.517)
Observations	546	546	546	546	546	546	546	546

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table B.3 - Probit Baseline Specification with Regulatory Flexibility

VARIABLES	(1) SUPP	(2) SUPP	(3) RECAP	(4) RECAP	(5) GUAR	(6) GUAR	(7) LIQSUPP	(8) LIQSUPP
	Coeff	AME	Coeff	AME	Coeff	AME	Coeff	AME
PRUDENTIAL FRAMEWORK								
Regulatory Flexibility	0.0689*	0.0126*	0.0349	0.00573	0.0548	0.00549	0.620	0.0194
	(0.0381)	(0.00692)	(0.0423)	(0.00692)	(0.0482)	(0.00482)	(0.634)	(0.0200)
BANK CONTROLS								
Size	0.467***	0.0857***	0.482***	0.0790***	0.368***	0.0368***	0.152	0.00477
	(0.0541)	(0.00801)	(0.0571)	(0.00778)	(0.0643)	(0.00658)	(0.118)	(0.00382)
RoAE	-0.0143*	-0.00261*	-0.00361	-0.000592	-0.0118	-0.00118	0.0115	0.000359
	(0.00758)	(0.00138)	(0.00803)	(0.00132)	(0.00731)	(0.000734)	(0.0189)	(0.000597)
MACRO CONTROLS								
GDP Growth Rate	0.276***	0.0507***	0.0957	0.0157	0.169**	0.0169**	-1.616	-0.0507
	(0.0722)	(0.0127)	(0.0832)	(0.0136)	(0.0834)	(0.00836)	(8.312)	(0.261)
Inflation Rate	-0.0318	-0.00583	0.604*	0.0989*	-0.435	-0.0436	5.149	0.161
	(0.266)	(0.0488)	(0.322)	(0.0525)	(0.310)	(0.0309)	(28.27)	(0.886)
Long-Term Rate	3.229***	0.592***	2.109***	0.346***	3.523***	0.353***	-7.128	-0.223
	(0.543)	(0.0903)	(0.590)	(0.0937)	(0.727)	(0.0743)	(46.49)	(1.457)
Short-Term Rate	-1.554***	-0.285***	-1.053***	-0.173***	-1.512***	-0.151***	4.363	0.137
	(0.260)	(0.0435)	(0.281)	(0.0447)	(0.322)	(0.0330)	(21.83)	(0.684)
Observations	546	546	546	546	546	546	546	546

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

ANNEX C: Cross-Section MLE IV Probit Regressions (2005-2007)

Table C.1 - MLE IVProbit for Loans Assets Ratio (Overall Indicator)

VARIABLES	(1) SUPP	(2) LoansAssets	(3) SUPP	(4) RECAP	(5) LoansAssets	(6) RECAP	(7) GUAR	(8) LoansAssets	(9) GUAR	(10) LIQSUPP	(11) LoansAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Loans Assets Ratio	-0.0401***		-0.0104***	-0.0376***		-0.00933***	-0.0361***		-0.00760**	0.0505***		0.0112***
	(0.00575)		(0.00201)	(0.00723)		(0.00250)	(0.00939)		(0.00343)	(0.00453)		(0.00347)
BANK CONTROLS												
Size	0.155	-1.277**	0.0403*	0.188*	-1.375**	0.0467**	0.166	-1.392**	0.0349**	0.116*	-1.678***	0.0258**
	(0.0966)	(0.642)	(0.0229)	(0.105)	(0.644)	(0.0223)	(0.106)	(0.653)	(0.0161)	(0.0696)	(0.649)	(0.0109)
RoAE	-0.00670	0.0293	-0.00174	-0.000598	0.0318	-0.000149	-0.00626	0.0322	-0.00132	0.00304	0.0346	0.000673
	(0.00628)	(0.0903)	(0.00159)	(0.00562)	(0.0902)	(0.00139)	(0.00623)	(0.0902)	(0.00122)	(0.00846)	(0.0901)	(0.00179)
MACRO CONTROLS												
GDP Growth Rate	0.123*	-0.141	0.0319*	0.0675	-0.144	0.0168	0.0799	-0.145	0.0168	-1.222	-0.193	-0.271
	(0.0734)	(0.894)	(0.0177)	(0.0628)	(0.893)	(0.0150)	(0.0682)	(0.893)	(0.0129)	(1.239)	(0.892)	(0.190)
Short-Term Rate	-0.762***	-6.180*	-0.198***	-0.392*	-6.118*	-0.0975*	-1.083***	-6.114*	-0.228***	2.748	-6.332*	0.608
	(0.256)	(3.542)	(0.0596)	(0.236)	(3.533)	(0.0587)	(0.365)	(3.532)	(0.0494)	(2.667)	(3.534)	(0.415)
Inflation Rate	0.507***	12.03***	0.132***	0.730***	12.11***	0.181***	0.240	12.11***	0.0507	3.787	11.84***	0.838
	(0.149)	(2.788)	(0.0401)	(0.180)	(2.774)	(0.0415)	(0.218)	(2.772)	(0.0530)	(4.330)	(2.781)	(0.691)
Long-Term Rate	1.717***	18.41**	0.447***	0.712	18.43**	0.177	2.712***	18.45**	0.572***	-5.141	19.55**	-1.138
	(0.562)	(9.119)	(0.135)	(0.616)	(9.099)	(0.157)	(0.846)	(9.098)	(0.116)	(4.894)	(9.123)	(0.787)
INSTRUMENTS												
Overall Indicator		-0.484***			-0.493***			-0.492***			-0.360*	
		(0.184)			(0.170)			(0.169)			(0.197)	
Equity Assets Ratio		-0.0469			-0.0896			-0.0967			-0.208**	
		(0.0836)			(0.0864)			(0.0966)			(0.0874)	
Observations	493	493	493	493	493	493	493	493	493	493	493	493

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.2 - MLE IVProbit for Loans Assets Ratio (Supervisory Discretion)

VARIABLES	(1) SUPP	(2) LoansAssets	(3) SUPP	(4) RECAP	(5) LoansAssets	(6) RECAP	(7) GUAR	(8) LoansAssets	(9) GUAR	(10) LIQSUPP	(11) LoansAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Loans Assets Ratio	-0.0342***		-0.00843***	-0.0321***		-0.00748***	-0.0324***		-0.00631**	0.0514***		0.00836
	(0.00704)		(0.00220)	(0.00830)		(0.00261)	(0.00902)		(0.00291)	(0.00740)		(0.00913)
BANK CONTROLS												
Size	0.238***	-1.292**	0.0587***	0.257***	-1.362**	0.0598***	0.201**	-1.350**	0.0392***	0.151	-1.575**	0.0246*
	(0.0893)	(0.641)	(0.0184)	(0.0970)	(0.642)	(0.0170)	(0.0910)	(0.645)	(0.0116)	(0.128)	(0.649)	(0.0143)
RoAE	-0.00949	0.0395	-0.00234	-0.00102	0.0408	-0.000238	-0.00731	0.0406	-0.00143	0.00460	0.0429	0.000749
	(0.00695)	(0.0896)	(0.00166)	(0.00618)	(0.0895)	(0.00144)	(0.00631)	(0.0895)	(0.00116)	(0.0123)	(0.0894)	(0.00188)
MACRO CONTROLS												
GDP Growth Rate	0.166**	0.440	0.0408***	0.0765	0.428	0.0178	0.0919	0.431	0.0179	-2.223	0.340	-0.362***
	(0.0707)	(0.903)	(0.0157)	(0.0678)	(0.902)	(0.0152)	(0.0680)	(0.902)	(0.0122)	(2.276)	(0.906)	(0.135)
Short-Term Rate	-0.889***	-5.783*	-0.219***	-0.372	-5.772*	-0.0865	-1.164***	-5.772*	-0.227***	4.718	-5.863*	0.767*
	(0.258)	(3.504)	(0.0564)	(0.268)	(3.501)	(0.0627)	(0.328)	(3.501)	(0.0466)	(4.895)	(3.501)	(0.393)
Inflation Rate	0.502***	9.522***	0.124***	0.803***	9.568***	0.187***	0.178	9.560***	0.0346	7.247	9.786***	1.179***
	(0.166)	(2.711)	(0.0429)	(0.194)	(2.710)	(0.0449)	(0.218)	(2.710)	(0.0465)	(8.081)	(2.714)	(0.418)
Long-Term Rate	1.909***	16.09*	0.470***	0.552	16.21*	0.128	2.888***	16.18*	0.563***	-8.538	16.99*	-1.389
	(0.581)	(9.077)	(0.133)	(0.695)	(9.072)	(0.165)	(0.762)	(9.073)	(0.113)	(8.913)	(9.098)	(0.873)
INSTRUMENTS												
Supervisory Discretion		-0.882***			-0.873***			-0.875***			-0.776***	
		(0.223)			(0.221)			(0.221)			(0.243)	
Equity Assets Ratio		-0.0858			-0.115			-0.110			-0.198**	
		(0.0857)			(0.0864)			(0.0908)			(0.0911)	
Observations	493	493	493	493	493	493	493	493	493	493	493	493

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.3 - MLE IVProbit for Loans Assets Ratio (Regulatory Flexibility)

VARIABLES	(1) SUPP	(2) LoansAssets	(3) SUPP	(4) RECAP	(5) LoansAssets	(6) RECAP	(7) GUAR	(8) LoansAssets	(9) GUAR	(10) LIQSUPP	(11) LoansAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Loans Assets Ratio	0.0484***		0.0144***	0.0479***		0.0142***	0.0485***		0.0143***	0.0486***		0.0143***
	(0.00171)		(0.000334)	(0.00267)		(0.000943)	(0.00157)		(0.000324)	(0.00180)		(0.000695)
BANK CONTROLS												
Size	0.157**	-1.773***	0.0465**	0.210**	-1.758***	0.0622**	0.0971***	-1.743***	0.0286***	0.0884***	-1.740***	0.0261**
	(0.0628)	(0.651)	(0.0189)	(0.0994)	(0.649)	(0.0280)	(0.0343)	(0.654)	(0.0102)	(0.0341)	(0.653)	(0.0101)
RoAE	-0.00360	0.0251	-0.00107	-0.00148	0.0243	-0.000440	-0.00156	0.0252	-0.000459	0.000305	0.0236	9.00e-05
	(0.00482)	(0.0902)	(0.00143)	(0.00485)	(0.0902)	(0.00144)	(0.00436)	(0.0904)	(0.00128)	(0.00478)	(0.0902)	(0.00141)
MACRO CONTROLS												
GDP Growth Rate	0.0615	-0.0654	0.0183	0.0587	0.0487	0.0174	0.0178	-0.237	0.00525	-0.0829	0.102	-0.0245
	(0.0545)	(0.906)	(0.0162)	(0.0565)	(0.925)	(0.0164)	(0.0431)	(0.895)	(0.0127)	(0.791)	(0.938)	(0.232)
Short-Term Rate	0.143	-7.470**	0.0424	0.235	-7.618**	0.0695	0.263	-7.265**	0.0774	0.556	-7.691**	0.164
	(0.217)	(3.517)	(0.0645)	(0.206)	(3.524)	(0.0617)	(0.175)	(3.517)	(0.0514)	(2.341)	(3.531)	(0.684)
Inflation Rate	-0.481***	9.089***	-0.143***	-0.336*	8.207**	-0.0996	-0.518***	10.41***	-0.152***	-0.108	7.798**	-0.0318
	(0.136)	(2.954)	(0.0401)	(0.202)	(3.283)	(0.0615)	(0.132)	(2.733)	(0.0389)	(2.604)	(3.503)	(0.770)
Long-Term Rate	-0.668	22.12**	-0.199	-0.999**	22.17**	-0.296**	-0.858*	21.99**	-0.253*	-1.316	22.19**	-0.388
	(0.505)	(9.058)	(0.150)	(0.490)	(9.056)	(0.146)	(0.445)	(9.066)	(0.131)	(5.075)	(9.055)	(1.481)
INSTRUMENTS												
Regulatory Flexibility		0.390			0.594			0.0766			0.688	
		(0.281)			(0.436)			(0.0572)			(0.517)	
Equity Assets Ratio		-0.218**			-0.211**			-0.206**			-0.204**	
		(0.0894)			(0.0877)			(0.0927)			(0.0924)	
Observations	493	493	493	493	493	493	493	493	493	493	493	493

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.4 - MLE IVProbit for Non-Interest Income Ratio (Overall Indicator)

VARIABLES	(1) SUPP	(2) NonIntInc	(3) SUPP	(4) RECAP	(5) NonIntInc	(6) RECAP	(7) GUAR	(8) NonIntInc	(9) GUAR	(10) LIQSUPP	(11) NonIntInc	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Non-Interest Income Ratio	0.0670***		0.0184***	0.0627***		0.0161***	0.0487**		0.0115	-0.0852***		-0.0158
	(0.00997)		(0.00403)	(0.0125)		(0.00498)	(0.0213)		(0.00797)	(0.00991)		(0.0156)
BANK CONTROLS												
Size	0.207**	-0.452	0.0568***	0.240**	-0.381	0.0617***	0.227**	-0.368	0.0536***	0.0353	-0.149	0.00656
	(0.0931)	(0.379)	(0.0214)	(0.0990)	(0.385)	(0.0187)	(0.102)	(0.391)	(0.0121)	(0.119)	(0.388)	(0.0164)
RoAE	-0.0245***	0.270***	-0.00675***	-0.0181***	0.265***	-0.00465**	-0.0218***	0.264***	-0.00517**	0.0283**	0.254***	0.00525
	(0.00475)	(0.0499)	(0.00138)	(0.00658)	(0.0499)	(0.00201)	(0.00520)	(0.0500)	(0.00209)	(0.0126)	(0.0496)	(0.00429)
MACRO CONTROLS												
GDP Growth Rate	0.165**	-0.866	0.0454***	0.124**	-0.856	0.0319**	0.110*	-0.854	0.0260*	-1.336	-0.791	-0.248*
	(0.0690)	(0.541)	(0.0165)	(0.0574)	(0.541)	(0.0137)	(0.0572)	(0.541)	(0.0136)	(1.977)	(0.541)	(0.139)
Short-Term Rate	0.00760	-6.295***	0.00209	0.257	-6.369***	0.0661	-0.432	-6.377***	-0.102	1.880	-6.269***	0.349
	(0.323)	(2.160)	(0.0890)	(0.256)	(2.151)	(0.0700)	(0.548)	(2.150)	(0.106)	(3.993)	(2.149)	(0.437)
Inflation Rate	0.0731	-0.497	0.0201	0.295	-0.571	0.0760	-0.0692	-0.578	-0.0164	4.588	-0.414	0.853*
	(0.153)	(1.699)	(0.0416)	(0.225)	(1.686)	(0.0520)	(0.165)	(1.685)	(0.0392)	(7.151)	(1.688)	(0.515)
Long-Term Rate	-0.863	24.22***	-0.237	-1.518**	24.31***	-0.390**	0.447	24.31***	0.106	-1.912	23.69***	-0.355
	(0.758)	(5.563)	(0.223)	(0.619)	(5.542)	(0.182)	(1.424)	(5.540)	(0.312)	(6.912)	(5.550)	(0.990)
INSTRUMENTS												
Overall Indicator		0.238**			0.250**			0.250**			0.157	
		(0.114)			(0.0995)			(0.0980)			(0.120)	
Equity Assets Ratio		0.0271			0.0511			0.0551			0.119**	
		(0.0447)			(0.0486)			(0.0532)			(0.0479)	
Observations	499	499	499	499	499	499	499	499	499	499	499	499

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.5 - MLE IVProbit for Non-Interest Income Ratio (Supervisory Discretion)

VARIABLES	(1) SUPP	(2) NonIntInc	(3) SUPP	(4) RECAP	(5) NonIntInc	(6) RECAP	(7) GUAR	(8) NonIntInc	(9) GUAR	(10) LIQSUPP	(11) NonIntInc	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Non-Interest Income Ratio	0.0784***		0.0238***	0.0676***		0.0182***	0.0581**		0.0152	-0.0809***		-0.0234***
	(0.000645)		(0.000154)	(0.0140)		(0.00627)	(0.0250)		(0.0104)	(0.00537)		(0.00538)
BANK CONTROLS												
Size	0.0396	-0.484	0.0120	0.201	-0.420	0.0541*	0.182	-0.419	0.0477**	-0.000228	-0.122	-6.60e-05
	(0.0748)	(0.954)	(0.0227)	(0.132)	(0.394)	(0.0280)	(0.135)	(0.407)	(0.0236)	(0.0417)	(0.388)	(0.0121)
RoAE	-0.0219***	0.278***	-0.00663***	-0.0193***	0.269***	-0.00519**	-0.0224***	0.269***	-0.00587***	0.0231***	0.256***	0.00668***
	(0.00414)	(0.0527)	(0.00126)	(0.00636)	(0.0505)	(0.00223)	(0.00474)	(0.0510)	(0.00221)	(0.00640)	(0.0499)	(0.00157)
MACRO CONTROLS												
GDP Growth Rate	0.0645***	-0.813	0.0196***	0.105*	-0.971*	0.0283**	0.0965*	-0.972*	0.0252*	-0.368	-0.763	-0.107
	(0.000588)	(0)	(0.000149)	(0.0580)	(0.549)	(0.0139)	(0.0556)	(0.549)	(0.0131)	(0.728)	(0.554)	(0.182)
Short-Term Rate	0.439***	-5.659***	0.133***	0.306	-6.112***	0.0822	-0.209	-6.113***	-0.0547	0.0798	-5.922***	0.0231
	(0.122)	(1.553)	(0.0371)	(0.257)	(2.162)	(0.0766)	(0.695)	(2.165)	(0.168)	(1.428)	(2.152)	(0.407)
Inflation Rate	-0.0186***	0.255	-0.00564***	0.259	0.470	0.0697	-0.0521	0.469	-0.0136	1.139	0.0763	0.330
	(0.000796)	(0)	(0.000239)	(0.272)	(1.663)	(0.0650)	(0.153)	(1.663)	(0.0400)	(2.562)	(1.665)	(0.652)
Long-Term Rate	-1.762***	22.59***	-0.534***	-1.603***	24.01***	-0.431**	-0.125	24.01***	-0.0327	0.989	22.77***	0.286
	(0.396)	(5.036)	(0.120)	(0.595)	(5.588)	(0.196)	(1.798)	(5.592)	(0.479)	(2.465)	(5.588)	(0.787)
INSTRUMENTS												
Supervisory Discretion		0.00271***			0.221			0.221			0.0233	
		(0.000841)			(0.136)			(0.139)			(0.152)	
Equity Assets Ratio		-0.00110			0.0358			0.0361			0.117**	
		(0.00122)			(0.0585)			(0.0684)			(0.0493)	
Observations	499	499	499	499	499	499	499	499	499	499	499	499

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.6 - MLE IVProbit for Non-Interest Income Ratio (Regulatory Flexibility)

VARIABLES	(1) SUPP	(2) NonIntInc	(3) SUPP	(4) RECAP	(5) NonIntInc	(6) RECAP	(7) GUAR	(8) NonIntInc	(9) GUAR	(10) LIQSUPP	(11) NonIntInc	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Non-Interest Income Ratio	0.0483***		0.0117**	0.0449**		0.00995*	0.0211		0.00333	-0.0860***		-0.0141
	(0.0157)		(0.00500)	(0.0185)		(0.00568)	(0.0317)		(0.00667)	(0.00975)		(0.0184)
BANK CONTROLS												
Size	0.326***	-0.258	0.0791***	0.340***	-0.218	0.0753***	0.326***	-0.209	0.0513***	0.0501	-0.113	0.00824
	(0.0879)	(0.386)	(0.0134)	(0.0955)	(0.386)	(0.0105)	(0.108)	(0.389)	(0.0137)	(0.144)	(0.385)	(0.0147)
RoAE	-0.0232***	0.263***	-0.00562***	-0.0127	0.260***	-0.00281	-0.0187***	0.260***	-0.00294	0.0293**	0.254***	0.00482
	(0.00604)	(0.0494)	(0.00170)	(0.00920)	(0.0494)	(0.00230)	(0.00724)	(0.0495)	(0.00235)	(0.0126)	(0.0493)	(0.00543)
MACRO CONTROLS												
GDP Growth Rate	0.232***	-0.218	0.0563***	0.154**	-0.222	0.0340**	0.120*	-0.224	0.0189	-1.539	-0.273	-0.253**
	(0.0675)	(0.559)	(0.0134)	(0.0648)	(0.559)	(0.0143)	(0.0685)	(0.559)	(0.0141)	(2.243)	(0.562)	(0.114)
Short-Term Rate	-0.428	-6.548***	-0.104	0.0500	-6.557***	0.0111	-1.021	-6.558***	-0.161***	2.273	-6.528***	0.374
	(0.371)	(2.130)	(0.0814)	(0.321)	(2.128)	(0.0721)	(0.638)	(2.128)	(0.0441)	(4.616)	(2.128)	(0.383)
Inflation Rate	0.136	-4.321**	0.0329	0.420*	-4.247**	0.0930**	-0.0559	-4.224**	-0.00881	5.383	-3.751*	0.885**
	(0.171)	(2.064)	(0.0403)	(0.239)	(2.061)	(0.0446)	(0.197)	(2.067)	(0.0314)	(8.140)	(2.130)	(0.381)
Long-Term Rate	0.165	23.05***	0.0400	-1.059	23.05***	-0.235	2.015	23.05***	0.317**	-2.542	23.00***	-0.418
	(0.910)	(5.462)	(0.217)	(0.800)	(5.459)	(0.200)	(1.709)	(5.459)	(0.133)	(8.082)	(5.457)	(0.921)
INSTRUMENTS												
Regulatory Flexibility		1.054***			1.032***			1.025***			0.901***	
		(0.292)			(0.292)			(0.296)			(0.323)	
Equity Assets Ratio		0.0737			0.0868*			0.0896*			0.120**	
		(0.0484)			(0.0485)			(0.0511)			(0.0479)	
Observations	499	499	499	499	499	499	499	499	499	499	499	499

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.7 - MLE IVProbit for Liquid Assets Ratio (Overall Indicator)

VARIABLES	(1) SUPP	(2) LiqAssets	(3) SUPP	(4) RECAP	(5) LiqAssets	(6) RECAP	(7) GUAR	(8) LiqAssets	(9) GUAR	(10) LIQSUPP	(11) LiqAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Liquid Assets Ratio	0.0304***		0.00939***	0.0304***		0.00938***	-0.0308***		-0.00966***	-0.0322***		-0.0101***
	(0.000120)		(8.05e-05)	(0.000147)		(0.000195)	(0.00101)		(0.000275)	(0.00249)		(0.000547)
BANK CONTROLS												
Size	-0.101***	3.345***	-0.0310***	-0.100***	3.343***	-0.0309***	0.129***	3.797***	0.0404***	0.125***	3.809***	0.0392***
	(0.00972)	(0.319)	(0.00288)	(0.0241)	(0.793)	(0.00792)	(0.0360)	(1.045)	(0.0115)	(0.0367)	(1.043)	(0.0112)
RoAE	0.000953	-0.0330	0.000294	0.00100	-0.0333	0.000309	-0.00143	-0.0333	-0.000448	0.000517	-0.0346	0.000162
	(0.00268)	(0.0880)	(0.000828)	(0.00388)	(0.127)	(0.00119)	(0.00457)	(0.149)	(0.00143)	(0.00500)	(0.149)	(0.00157)
MACRO CONTROLS												
GDP Growth Rate	-0.0640***	2.130	-0.0197***	-0.0647	2.142	-0.0200	0.0718*	2.197	0.0225*	-0.0923	2.186	-0.0290
	(0.000337)	(0)	(0.000183)	(0.0481)	(1.579)	(0.0145)	(0.0434)	(1.409)	(0.0136)	(0.291)	(1.409)	(0.0904)
Short-Term Rate	0.0674	-2.342*	0.0208	0.0704	-2.360	0.0217	-0.136	-1.789	-0.0426	0.210	-1.892	0.0659
	(0.0413)	(1.355)	(0.0127)	(0.0701)	(2.300)	(0.0213)	(0.177)	(5.596)	(0.0557)	(0.646)	(5.603)	(0.201)
Inflation Rate	0.572***	-18.78	0.176***	0.575***	-18.82***	0.177***	-0.587***	-18.89***	-0.184***	-0.00145	-19.05***	-0.000454
	(0.00234)	(0)	(0.00152)	(0.207)	(6.808)	(0.0669)	(0.133)	(4.288)	(0.0414)	(0.984)	(4.326)	(0.309)
Long-Term Rate	-0.118***	4.128	-0.0365***	-0.126***	4.156	-0.0388***	0.259	2.258	0.0812	-0.309	2.527	-0.0968
	(0.00226)	(0)	(0.000751)	(0.00323)	(0)	(0.00127)	(0.448)	(14.33)	(0.141)	(1.274)	(14.35)	(0.397)
INSTRUMENTS												
Overall Indicator		0.00486***			0.00528***			-0.0438			0.00676	
		(0.00140)			(0.00172)			(0.0384)			(0.181)	
Equity Assets Ratio		-0.00622*			-0.00449			0.294			0.309	
		(0.00335)			(0.00380)			(0.203)			(0.205)	
Observations	490	490	490	490	490	490	490	490	490	490	490	490

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.8 - MLE IVProbit for Liquid Assets Ratio (Supervisory Discretion)

VARIABLES	(1) SUPP	(2) LiqAssets	(3) SUPP	(4) RECAP	(5) LiqAssets	(6) RECAP	(7) GUAR	(8) LiqAssets	(9) GUAR	(10) LIQSUPP	(11) LiqAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Liquid Assets Ratio	0.0275***		0.00768***	0.0252***		0.00672***	0.0279***		0.00703	-0.0382***		-0.00898***
	(0.00391)		(0.00185)	(0.00453)		(0.00188)	(0.00656)		(0.00446)	(0.0146)		(0.00240)
BANK CONTROLS												
Size	0.0463	3.170***	0.0129	0.0898	3.274***	0.0240	0.0252	3.170***	0.00635	0.166	3.746***	0.0389***
	(0.135)	(1.019)	(0.0363)	(0.119)	(1.020)	(0.0293)	(0.203)	(1.066)	(0.0486)	(0.106)	(1.045)	(0.0118)
RoAE	-0.00413	-0.0465	-0.00115	-0.000340	-0.0493	-9.06e-05	-0.00303	-0.0465	-0.000763	0.00435	-0.0463	0.00102
	(0.00686)	(0.150)	(0.00184)	(0.00526)	(0.149)	(0.00140)	(0.00818)	(0.150)	(0.00182)	(0.0120)	(0.149)	(0.00242)
MACRO CONTROLS												
GDP Growth Rate	0.0257	1.650	0.00717	-0.00841	1.571	-0.00224	-0.0110	1.650	-0.00278	-1.028	1.764	-0.242
	(0.0940)	(1.463)	(0.0256)	(0.0620)	(1.438)	(0.0167)	(0.102)	(1.543)	(0.0266)	(1.738)	(1.450)	(0.273)
Short-Term Rate	-0.231	-3.481	-0.0645	-0.00201	-3.553	-0.000537	-0.370	-3.481	-0.0930	1.967	-2.781	0.462
	(0.329)	(5.636)	(0.0863)	(0.215)	(5.607)	(0.0573)	(0.738)	(5.682)	(0.150)	(3.427)	(5.634)	(0.558)
Inflation Rate	0.586***	-18.02***	0.164***	0.750***	-17.94***	0.200***	0.440	-18.02***	0.111	3.196	-18.38***	0.751
	(0.141)	(4.324)	(0.0439)	(0.172)	(4.302)	(0.0408)	(0.288)	(4.367)	(0.113)	(6.043)	(4.314)	(0.996)
Long-Term Rate	0.397	8.251	0.111	-0.248	8.538	-0.0661	0.896	8.252	0.225	-3.276	5.797	-0.770
	(0.668)	(14.56)	(0.178)	(0.525)	(14.43)	(0.140)	(1.733)	(14.82)	(0.349)	(5.953)	(14.58)	(1.011)
INSTRUMENTS												
Supervisory Discretion		0.602			0.713*			0.602			0.528	
		(0.508)			(0.379)			(0.828)			(0.436)	
Equity Assets Ratio		-0.0431			0.0414			-0.0432			0.335*	
		(0.163)			(0.160)			(0.339)			(0.197)	
Observations	490	490	490	490	490	490	490	490	490	490	490	490

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.9 - MLE IVProbit for Liquid Assets Ratio (Regulatory Flexibility)

VARIABLES	(1) SUPP	(2) LiqAssets	(3) SUPP	(4) RECAP	(5) LiqAssets	(6) RECAP	(7) GUAR	(8) LiqAssets	(9) GUAR	(10) LIQSUPP	(11) LiqAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Liquid Assets Ratio	-0.0310***		-0.00982***	-0.0314***		-0.00945***	-0.0308***		-0.00969***	-0.0325***		-0.0102***
	(0.00138)		(0.000479)	(0.00236)		(0.00154)	(0.00101)		(0.000272)	(0.00259)		(0.00182)
BANK CONTROLS												
Size	0.235**	4.005***	0.0743**	0.314***	3.955***	0.0945***	0.133***	3.866***	0.0418***	0.128***	3.877***	0.0401***
	(0.101)	(1.033)	(0.0306)	(0.119)	(1.032)	(0.0260)	(0.0361)	(1.043)	(0.0116)	(0.0367)	(1.039)	(0.0132)
RoAE	-0.00490	-0.0332	-0.00155	-0.00185	-0.0322	-0.000557	-0.00147	-0.0344	-0.000463	0.000995	-0.0315	0.000312
	(0.00586)	(0.149)	(0.00184)	(0.00557)	(0.148)	(0.00167)	(0.00457)	(0.149)	(0.00144)	(0.00522)	(0.148)	(0.00164)
MACRO CONTROLS												
GDP Growth Rate	0.142*	1.673	0.0450**	0.130**	1.390	0.0390**	0.0724*	2.124	0.0227*	-0.0531	1.251	-0.0166
	(0.0746)	(1.475)	(0.0228)	(0.0607)	(1.482)	(0.0162)	(0.0434)	(1.408)	(0.0136)	(1.474)	(1.472)	(0.459)
Short-Term Rate	-0.357	-1.009	-0.113	-0.197	-0.711	-0.0593	-0.148	-1.731	-0.0465	0.274	-0.624	0.0860
	(0.288)	(5.614)	(0.0898)	(0.224)	(5.602)	(0.0660)	(0.178)	(5.590)	(0.0560)	(4.376)	(5.597)	(1.357)
Inflation Rate	-0.534***	-15.01***	-0.169***	-0.323	-12.84**	-0.0972	-0.587***	-18.52***	-0.184***	-0.0875	-11.77**	-0.0274
	(0.147)	(5.541)	(0.0470)	(0.248)	(5.648)	(0.0829)	(0.133)	(4.301)	(0.0414)	(4.849)	(5.493)	(1.524)
Long-Term Rate	0.619	1.486	0.196	0.0651	1.500	0.0196	0.285	2.244	0.0895	-0.447	1.695	-0.140
	(0.608)	(14.27)	(0.190)	(0.542)	(14.25)	(0.163)	(0.449)	(14.31)	(0.141)	(9.481)	(14.25)	(2.948)
INSTRUMENTS												
Regulatory Flexibility		-0.969			-1.473*			-0.127			-1.713**	
		(0.844)			(0.874)			(0.115)			(0.816)	
Equity Assets Ratio		0.435**			0.399**			0.346*			0.346*	
		(0.184)			(0.186)			(0.204)			(0.202)	
Observations	490	490	490	490	490	490	490	490	490	490	490	490

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.10 - MLE IVProbit for Government Securities Ratio (Overall Indicator)

VARIABLES	(1) SUPP	(2) GovSec	(3) SUPP	(4) RECAP	(5) GovSec	(6) RECAP	(7) GUAR	(8) GovSec	(9) GUAR	(10) LIQSUPP	(11) GovSec	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Government Securities Ratio	0.196***		0.0519***	0.188***		0.0464***	0.208***		0.0616***	0.212***		0.0513
	(0.0135)		(0.00735)	(0.0185)		(0.00921)	(0.00746)		(0.00255)	(0.00864)		(0.174)
BANK CONTROLS												
Size	0.0219	0.592***	0.00580	0.0640	0.602***	0.0158	-0.118***	0.635***	-0.0351***	-0.133***	0.612***	-0.0322
	(0.0887)	(0.170)	(0.0230)	(0.0989)	(0.170)	(0.0228)	(0.0421)	(0.173)	(0.0132)	(0.0374)	(0.171)	(0.110)
RoAE	0.00264	-0.0395*	0.000698	0.00695	-0.0406*	0.00171	0.00727	-0.0372	0.00215	0.0111*	-0.0413*	0.00269
	(0.00607)	(0.0233)	(0.00163)	(0.00576)	(0.0233)	(0.00146)	(0.00495)	(0.0235)	(0.00148)	(0.00652)	(0.0234)	(0.00921)
MACRO CONTROLS												
GDP Growth Rate	0.0946	-0.0443	0.0250	0.0561	-0.0459	0.0138	0.00914	-0.0128	0.00271	-0.216	-0.0454	-0.0523
	(0.0681)	(0.232)	(0.0166)	(0.0605)	(0.232)	(0.0144)	(0.0494)	(0.233)	(0.0146)	(11.16)	(0.232)	(2.528)
Short-Term Rate	-0.0668	-1.800**	-0.0177	0.157	-1.793**	0.0388	0.218	-1.569*	0.0646	1.318	-1.776*	0.320
	(0.278)	(0.914)	(0.0725)	(0.243)	(0.913)	(0.0615)	(0.204)	(0.917)	(0.0612)	(33.07)	(0.914)	(6.934)
Inflation Rate	-0.117	0.411	-0.0310	0.0828	0.344	0.0204	-0.156	0.700	-0.0461	0.848	0.310	0.206
	(0.157)	(0.725)	(0.0417)	(0.199)	(0.725)	(0.0480)	(0.149)	(0.711)	(0.0440)	(36.69)	(0.726)	(8.198)
Long-Term Rate	0.378	2.424	0.100	-0.278	2.399	-0.0686	-0.115	1.797	-0.0339	-2.360	2.347	-0.572
	(0.602)	(2.234)	(0.154)	(0.558)	(2.231)	(0.139)	(0.489)	(2.241)	(0.145)	(71.55)	(2.235)	(15.41)
INSTRUMENTS												
Overall Indicator		0.102**			0.116**			0.0108			0.121**	
		(0.0504)			(0.0488)			(0.0124)			(0.0485)	
Equity Assets Ratio		-0.0606*			-0.0452			-0.0519			-0.0332	
		(0.0337)			(0.0364)			(0.0452)			(0.0445)	
Observations	395	395	395	395	395	395	395	395	395	395	395	395

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.11 - MLE IVProbit for Government Securities Ratio (Supervisory Discretion)

VARIABLES	(1) SUPP	(2) GovSec	(3) SUPP	(4) RECAP	(5) GovSec	(6) RECAP	(7) GUAR	(8) GovSec	(9) GUAR	(10) LIQSUPP	(11) GovSec	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Government Securities Ratio	0.192***		0.0497***	0.185***		0.0447***	0.208***		0.0613***	0.212***		0.0510
	(0.0151)		(0.00752)	(0.0196)		(0.00911)	(0.00748)		(0.00280)	(0.00861)		(0.343)
BANK CONTROLS												
Size	0.0455	0.586***	0.0118	0.0802	0.596***	0.0194	-0.115***	0.629***	-0.0340**	-0.131***	0.604***	-0.0316
	(0.0890)	(0.170)	(0.0221)	(0.0979)	(0.170)	(0.0217)	(0.0434)	(0.173)	(0.0136)	(0.0372)	(0.171)	(0.213)
RoAE	0.00172	-0.0404*	0.000444	0.00672	-0.0414*	0.00163	0.00716	-0.0371	0.00211	0.0111*	-0.0419*	0.00268
	(0.00629)	(0.0233)	(0.00164)	(0.00584)	(0.0233)	(0.00145)	(0.00497)	(0.0234)	(0.00148)	(0.00645)	(0.0233)	(0.0181)
MACRO CONTROLS												
GDP Growth Rate	0.102	-0.128	0.0264*	0.0492	-0.136	0.0119	0.00959	-0.0234	0.00283	-0.214	-0.138	-0.0515
	(0.0673)	(0.237)	(0.0160)	(0.0613)	(0.236)	(0.0145)	(0.0495)	(0.234)	(0.0146)	(22.29)	(0.236)	(5.018)
Short-Term Rate	-0.116	-1.795**	-0.0300	0.157	-1.780*	0.0379	0.208	-1.581*	0.0614	1.399	-1.764*	0.337
	(0.281)	(0.910)	(0.0710)	(0.249)	(0.910)	(0.0617)	(0.207)	(0.917)	(0.0621)	(66.05)	(0.911)	(13.63)
Inflation Rate	-0.0922	0.874	-0.0238	0.139	0.865	0.0337	-0.156	0.757	-0.0461	0.881	0.857	0.212
	(0.161)	(0.709)	(0.0420)	(0.208)	(0.709)	(0.0484)	(0.149)	(0.714)	(0.0438)	(73.30)	(0.709)	(16.22)
Long-Term Rate	0.471	2.630	0.122	-0.292	2.600	-0.0707	-0.0912	1.857	-0.0269	-2.568	2.560	-0.618
	(0.609)	(2.239)	(0.152)	(0.574)	(2.237)	(0.140)	(0.497)	(2.246)	(0.147)	(142.9)	(2.241)	(30.24)
INSTRUMENTS												
Supervisory Discretion		0.148**			0.161***			0.0168			0.165***	
		(0.0635)			(0.0615)			(0.0194)			(0.0614)	
Equity Assets Ratio		-0.0558			-0.0412			-0.0558			-0.0317	
		(0.0347)			(0.0369)			(0.0455)			(0.0445)	
Observations	395	395	395	395	395	395	395	395	395	395	395	395

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table C.12 - MLE IVProbit for Government Securities Ratio (Regulatory Flexibility)

VARIABLES	(1) SUPP	(2) LoansAssets	(3) SUPP	(4) RECAP	(5) LoansAssets	(6) RECAP	(7) GUAR	(8) LoansAssets	(9) GUAR	(10) LIQSUPP	(11) LoansAssets	(12) LIQSUPP
	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME	Coeff	Red. Form	AME
BALANCE SHEET MEAS.												
Government Securities Ratio	0.205***		0.0597***	0.201***		0.0553***	0.208***		0.0623***	0.210***		0.0580***
	(0.00858)		(0.00491)	(0.0141)		(0.0102)	(0.00742)		(0.00219)	(0.00832)		(0.0110)
BANK CONTROLS												
Size	-0.0764	0.642***	-0.0222	-0.0297	0.643***	-0.00818	-0.127***	0.653***	-0.0380***	-0.140***	0.653***	-0.0387***
	(0.0762)	(0.171)	(0.0233)	(0.117)	(0.170)	(0.0333)	(0.0405)	(0.172)	(0.0126)	(0.0369)	(0.171)	(0.0131)
RoAE	0.00602	-0.0375	0.00175	0.00782	-0.0378	0.00215	0.00756	-0.0376	0.00227	0.0103*	-0.0385	0.00283*
	(0.00539)	(0.0234)	(0.00161)	(0.00525)	(0.0234)	(0.00149)	(0.00493)	(0.0235)	(0.00148)	(0.00612)	(0.0235)	(0.00155)
MACRO CONTROLS												
GDP Growth Rate	0.0376	0.0274	0.0109	0.0315	0.0483	0.00868	0.00556	-0.000652	0.00167	-0.0977	0.0664	-0.0269
	(0.0618)	(0.235)	(0.0176)	(0.0586)	(0.238)	(0.0156)	(0.0490)	(0.233)	(0.0147)	(0.432)	(0.241)	(0.115)
Short-Term Rate	0.137	-1.580*	0.0397	0.199	-1.600*	0.0549	0.242	-1.516*	0.0725	0.531	-1.596*	0.146
	(0.251)	(0.918)	(0.0746)	(0.225)	(0.918)	(0.0654)	(0.200)	(0.915)	(0.0606)	(1.209)	(0.918)	(0.314)
Inflation Rate	-0.132	0.411	-0.0385	-0.0266	0.226	-0.00732	-0.148	0.664	-0.0442	0.274	0.0676	0.0757
	(0.149)	(0.768)	(0.0436)	(0.193)	(0.850)	(0.0537)	(0.148)	(0.712)	(0.0444)	(1.461)	(0.901)	(0.390)
Long-Term Rate	0.0165	1.709	0.00480	-0.234	1.699	-0.0644	-0.167	1.628	-0.0499	-0.604	1.632	-0.167
	(0.557)	(2.228)	(0.162)	(0.494)	(2.223)	(0.137)	(0.482)	(2.232)	(0.145)	(2.584)	(2.227)	(0.694)
INSTRUMENTS												
Regulatory Flexibility		0.0753			0.118			0.0124			0.152	
		(0.0796)			(0.117)			(0.0180)			(0.133)	
Equity Assets Ratio		-0.0457			-0.0424			-0.0372			-0.0317	
		(0.0402)			(0.0360)			(0.0449)			(0.0424)	
Observations	395	395	395	395	395	395	395	395	395	395	395	395

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

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