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# Macroprudential Policies Beyond Banking: The Case of Borrower-Based Measures

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IN-DEPTH ANALYSIS
Requested by the ECON committee

# Macroprudential Policy beyond Banking

## The Case of Borrower-Based Measures

*Supporting EU Banking Union scrutiny*

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Economic Governance and EMU scrutiny Unit (EGOV)
Directorate-General for Internal Policies
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# Macroprudential Policy beyond Banking

## The Case of Borrower-Based Measures

**Abstract**

The argument for applying borrower-based measures (BBMs) to non-banks to make these institutions more resilient is weaker than in the case of banks, as non-bank failures create fewer negative externalities. At the same time, the implications of extending the scope of BBMs to non-banks for income and wealth distributions may be more negative, as this would leave younger and poorer households with no options to obtain housing finance. Therefore, it is not obvious that countries that apply BBMs to banks should be required to apply them to non-banks as well.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| **BBM** | Borrower-Based Measure |
| **BR** | Binding Regulatiion |
| **CRD** | Capital Requirements Directive |
| **CRR** | Capital Requirements Regulation |
| **DSTI** | Debt Service to Income |
| **DTI** | Debt to Income |
| **EBA** | European Banking Authority |
| **ECB** | European Central Bank |
| **ESCB** | European System of Central Banks |
| **ESRB** | European Systemic Risk Board |
| **EU** | European Union |
| **G-SII** | Globally Systemically Important Institution |
| **LTI** | Loan to Income |
| **LTV** | Loan to Value |
| **MCD** | Mortgage Credit Directive |
| **MMF** | Money Market Fund |
| **ND** | National Directive |
| **R** | Recommendation |

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# EXECUTIVE SUMMARY

Macroprudential policies aim to limit systemic risks in the financial sector, in part by smoothing excessive credit cycles that could lead to systemic crises. Some macroprudential policy instruments are bank-based, with the main aim of ensuring that banks hold sufficient buffers. In addition, there are borrower-based measures (BBMs) that impose maximum leverage or minimum income standards on borrowers, especially in the case of real estate finance. Main BBMs are restrictions on the ratios of loan to value, debt service to income, debt to income, or loan to income. At present, BBMs are part of national legislation.

As part of its review of the macroprudential framework in the EU as mandated by the Capital Requirements Regulation, the European Commission issued a call for advice to the European Banking Authority, the European Central Bank, and the European Systemic Risk Board (ESRB) in 2021. One of the questions was whether there are any missing tools in the current macroprudential framework. In response to this call for advice, the ESRB formulated a proposal for including BBMs in EU legislation in 2022. The ESRB specifically proposes that BBMs, if activated, apply to banks and non-banks. This paper reviews the merits of including in EU legislation that BBMs need to cover banks as well as non-banks.

While BBMs applied to bank customers may make these institutions more resilient, a main disadvantage of BBMs is that they potentially limit access by younger and poorer households to mortgage loans, which could have negative implications for the long-run distributions of income and wealth. In principle, a similar trade-off exists when policymakers consider imposing BBMs on the customers of non-bank providers of mortgages. Many non-banks are also leveraged financial institutions, which implies that BBMs can make these institutions more resilient during economic downturns as well.

However, the argument for applying BBMs to non-banks to make these institutions more resilient is weaker than in the case of banks, as non-banks do not take household deposits or operate the payments system, suggesting that their failure creates fewer negative externalities. At the same time, the implications of extending the scope of BBMs to non-banks for income and wealth distributions may be more negative, as this would leave affected younger and poorer households with no options to obtain housing finance from any domestic financial institution. For these reasons, it is not obvious that countries that apply BBMs to banks should also be required to apply them to non-banks.

# 1. INTRODUCTION

Macroprudential policies aim to limit systemic risks in the financial sector, in part by smoothing excessive credit cycles that could lead to a systemic crisis. Some macroprudential policy instruments are bank-based, mainly aiming to ensure that banks hold sufficient buffers.[1] Bank-based macroprudential policy tools are part of European Union (EU) capital requirements (the Capital Requirements Regulation (CRR) and the Capital Requirements Directive (CDR)). In addition, there are borrower-based measures (BBMs) that impose maximum leverage or minimum income standards on borrowers, especially in the case of mortgages. Specifically, BBMs can restrict the ratios of loan to value (LTV), debt service to income (DSTI), debt to income (DTI), or loan to income (LTI). BBMs are set by national legislation.

As part of its review of the macroprudential framework in the EU as mandated by the CRR, the European Commission (2021a) issued a call for advice to the EBA, the ECB and the ESRB. One of the questions was whether any tools needed to be added to the current macroprudential framework. In response to this call for advice, the ESRB (2022b, pp. 16-21) has proposed including a minimum set of BBMs and key related concepts in EU legislation. The ESRB specifically proposes that BBMs, if activated, apply to banks, including EU branches, as well as to non-banks. This paper reviews the merits of the ESRB's proposal to enact in EU legislation that BBMs, if activated, should apply to both banks and non-banks.

While BBMs applied to bank customers may make these institutions more resilient, a main disadvantage of BBMs is that they may limit access by younger and poorer households to mortgage loans, which could lower their homeownership rate. As evidence of this, using data for 15 OECD countries from the mid-1980s to 2004 Andrews and Sánchez (2011) find that the trend towards more relaxed LTV constraints increased homeownership especially among younger and relatively poor households. In other research, homeowners have been shown to accumulate more wealth compared to tenants (see, for instance, Wind and Dewilde, 2019). Strict BBMs thus potentially lead to less equal distributions of income and wealth in the long run. Consistent with this, using data from 69 countries during 2000-2013 Frost and Van Stralen (2018) find that LTV and DTI restrictions have a positive association with income inequality.[2] Similarly, Georgescu and Martin (2021) find that BBMs increase wealth inequality based on a simulation model that uses data for households in four eurozone countries. As applied to bank customers, BBMs thus appear to present policymakers with a trade-off between additional banking sector stability and continued access to bank mortgage finance for younger and poorer households, which furthers economic equality.

In principle, a similar trade-off exists when policymakers consider imposing BBMs on the customers of non-bank providers of mortgage credit. Many non-banks are also leveraged financial institutions, which implies that BBMs can make these institutions more resilient during economic downturns as well. However, the argument for applying BBMs to non-banks to make these institutions more resilient is weaker than in the case of banks, as non-banks do not take household deposits and do not operate the payments system, which suggests that their failure creates fewer negative externalities. At the same time, the implications of extending the scope of BBMs to non-banks for the distribution of income and wealth may be more harmful, as this would leave poorer households with no options to obtain housing finance from a domestic financial institution. For these reasons, there appears to be no obvious case to require that BBMs, if implemented, cover non-banks as well.

[1] The Globally Systemically Important Institutions (G-SII) buffer, for instance, applies to very large banks that can make a greater contribution to a financial crisis.

[2] BBMs can have opposing effects on the distribution of wealth. BBMs could reduce the number of poorer households that are highly leveraged when house prices fall, which positively affects the distribution of wealth. Similarly, BBMs could reduce the probability of a financial crisis, which potentially hurts poorer households more as they may suffer more from higher unemployment. In contrast, reduced access to mortgages of poorer households restricts their ability to acquire real estate, with negative implications on the subsequent distribution of wealth. The evidence suggests that the latter effect dominates.

In the remainder, section 2 provides information on the composition and sizes of the bank and non-bank financial sectors in the EU. Section 3 provides an overview of the application of restrictions on LTV, DSTI, and DTI/LTI and their scope in individual EU member states. Currently, EU countries vary considerably in the scope of their BBMs, with some countries applying them only to credit institutions and others imposing them on all financial institutions. Section 4 discusses some prior literature on the effects of BBMs on the volume of credit, a main affected economic variable. Section 5 discusses the pros and cons of any prospective EU legislation that would mandate that BBMs, if activated, cover banks as well as non-banks. Section 6 concludes.

## 2. THE BANK AND NON-BANK FINANCIAL SECTORS

The financial sector consists of a variety of financial institutions that can be divided into a banking sector and a non-banking sector. The banking sector can be taken to be financial institutions that meet the ECB's definition of monetary financial institutions, net of money market funds (MMFs).[3] The banking sector then comprises central banks, credit institutions, financial intermediaries other than credit institutions, and electronic money institutions. Credit institutions are businesses that take deposits or other repayable funds from the public and grant credits for their own account (according to article 4 of the CRR); credit institutions, while only being part of the used definition of the banking sector, are commonly referred to as banks. Financial intermediaries other than credit institutions receive deposits and/or close substitutes for deposits from institutional units and grant loans and/or make investments in securities on their own account. Electronic money institutions are principally engaged in financial intermediation in the form of issuing electronic money.

The non-banking sector comprises (i) insurance companies, (ii) pension funds, (iii) investment funds, and (iv) other financial institutions (not included in monetary financial institutions). As shown in Table 1, investment funds include a variety of investment vehicles, including money market funds, equity funds, hedge funds, and real estate funds. At the same time, other financial institutions are other financial intermediaries including financial corporations engaged in lending, financial auxiliaries, captive financial institutions, and money lenders. The table provides short descriptions of these various non-bank financial institutions.

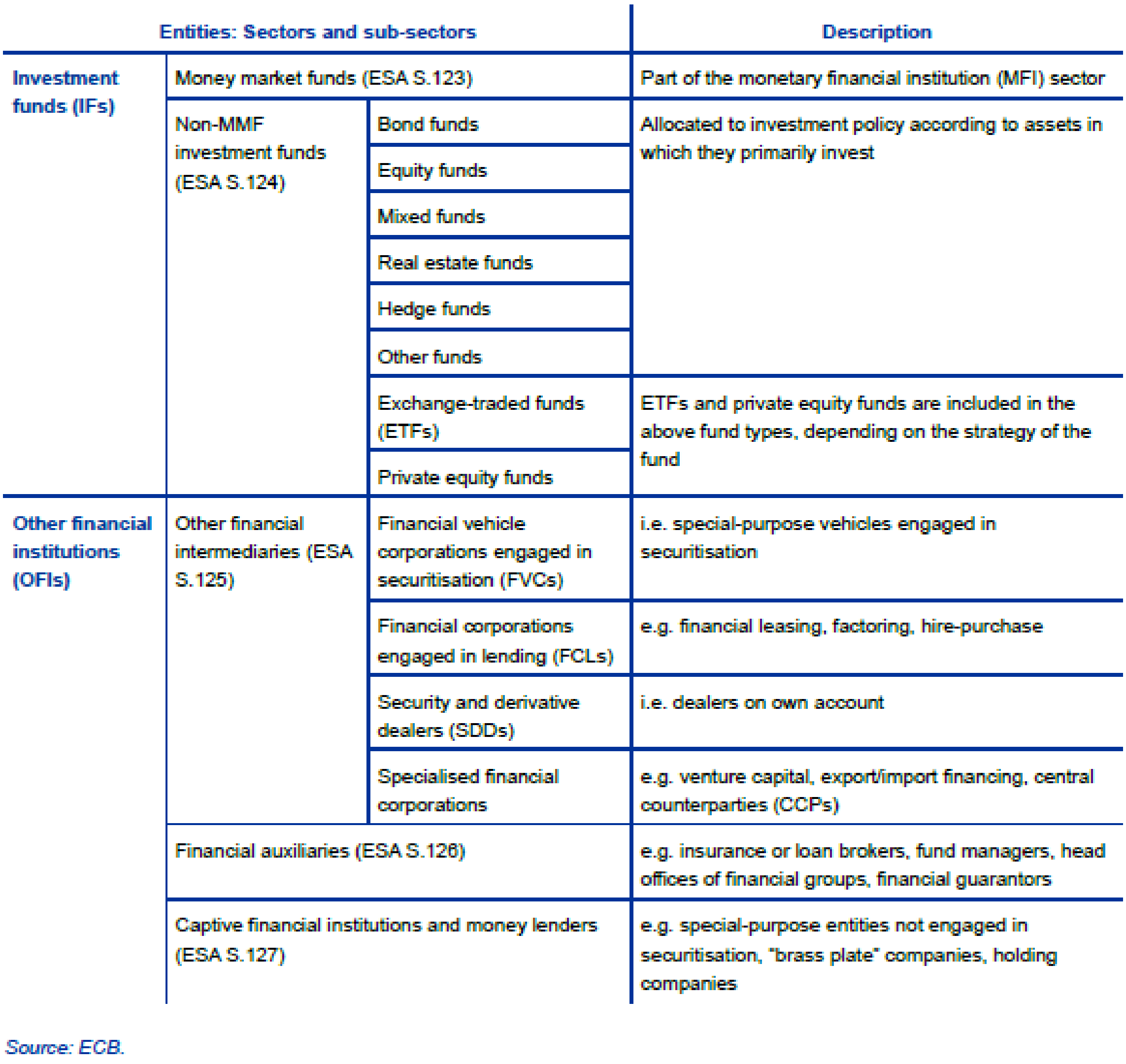
As seen in Figure 1, the size of the entire EU financial sector, including the banking and non-banking segments, exceeded Euro 100 trillion in 2021.[4] Between 2016 and 2021, the shares of the banking sector except central banks and of other financial institutions in the total EU financial sector materially decreased, the shares of central banks and non-MMF investment funds in the entire EU financial sector significantly increased, and the combined share of insurance companies and pension funds remained very similar.

BBMs apply to newly originated mortgages and hence BBMs are only relevant for financial institutions that extend mortgage credit in the primary market, which excludes, for instance, central banks. Among non-bank financial institutions, insurance companies and other financial institutions, for instance, can be engaged in mortgage provision. At present, countries determine the scope of their BBMs through national legislation. As discussed in the next section, all EU countries with BBMs apply these to credit institutions, while several countries extend to scope of their BBMs to some or all other types of financial institutions that provide mortgage credit.

[3] The definitions of the various monetary financial institution are given at https://www.ecb.europa.eu/stats/financial_corporations/list_of_financial_institutions/html/index.en.html#mfi.

[4] The Financial Stability Board (2022, p. 7) reports that for a group of 21 non-euro countries plus the euro area the total size of the financial sector stood at USD trillion 486.6 at the end of 2021. The share of the banking sector consisting of central banks, banks, and public financial institutions was 50.8%, while the share of non-bank financial institutions was 49.2%.

**Table 1**: Classification of investment funds and other financial institutions

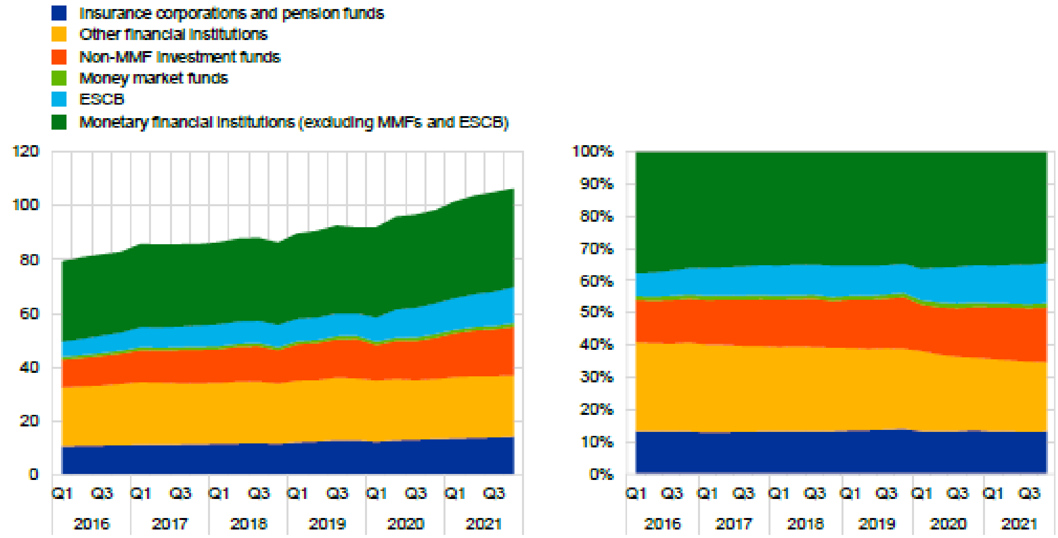


| Entities: Sectors and sub-sectors | | | Description |
|---|---|---|---|
| **Investment funds (IFs)** | Money market funds (ESA S.123) | | Part of the monetary financial institution (MFI) sector |
| | Non-MMF investment funds (ESA S.124) | Bond funds | Allocated to investment policy according to assets in which they primarily invest |
| | | Equity funds | |
| | | Mixed funds | |
| | | Real estate funds | |
| | | Hedge funds | |
| | | Other funds | |
| | | Exchange-traded funds (ETFs) | ETFs and private equity funds are included in the above fund types, depending on the strategy of the fund |
| | | Private equity funds | |
| **Other financial institutions (OFIs)** | Other financial intermediaries (ESA S.125) | Financial vehicle corporations engaged in securitisation (FVCs) | i.e. special-purpose vehicles engaged in securitisation |
| | | Financial corporations engaged in lending (FCLs) | e.g. financial leasing, factoring, hire-purchase |
| | | Security and derivative dealers (SDDs) | i.e. dealers on own account |
| | | Specialised financial corporations | e.g. venture capital, export/import financing, central counterparties (CCPs) |
| | Financial auxiliaries (ESA S.126) | | e.g. insurance or loan brokers, fund managers, head offices of financial groups, financial guarantors |
| | Captive financial institutions and money lenders (ESA S.127) | | e.g. special-purpose entities not engaged in securitisation, "brass plate" companies, holding companies |

*Source: ECB.*

Source of Table: ESRB (2022c, p. 62)

**Figure 1**: The EU financial sector



*Sources: ECB and ESRB calculations.*

Left panel: EUR trillion. Right panel: percentages. The European System of Central Banks (ESCB) includes non-euro area central banks. Source of Table: ESRB (2022c, p. 64)

# 3. BORROWER-BASED MEASURES IN THE EU

In its review of the macroprudential policy in the EU in 2020, the ESRB (2021, Annex 2) provides detailed information on BBMs in the form of restrictions on LTV, DSTI, and DTI/LTI for residential real estate loans that were active or decided before the end of 2020 in individual European countries. The reported information includes the types of borrowers the restrictions apply to, and their stringency and scope in terms of the covered financial institutions. Table A1 in the Annex copies information from this ESRB publication on the scope of restrictions on LTV, DSTI, and DTI or LTI for individual EU countries.

Restrictions on LTV are the most prevalent, and they were in place in 20 EU countries. In 13 of these countries, the LTV restriction is legally binding, while in the remaining 7 countries, it is a recommendation. The 7 EU countries without an LTV restriction at all are Bulgaria, Croatia, France, Germany, Greece, Italy, and Spain. This suggests that a major part of the EU mortgage market is not covered by LTV constraints.

Four countries, Cyprus, Estonia, Finland, and Sweden, limit the scope of the LTV restriction to credit institutions, i.e., banks in a narrow sense. Cyprus, in particular, limits the scope to credit institutions authorised and operating in Cyprus, while Estonia, Finland, and Sweden more broadly also apply the LTV restriction to the branches of foreign credit institutions. Ireland extends the scope to all regulated financial service providers, which includes some but not all non-banks. Other countries, particularly Belgium, the Czech Republic, Hungary, Latvia, Lithuania, Luxembourg, Malta, and the Netherlands, more broadly apply the LTV restriction to all providers of housing credit.

A more limited number of 14 countries impose a restriction on DSTI. Of these, 13 countries have restrictions on both LTV and DSTI. These 13 countries tend to apply their LTV and DSTI restrictions to similar sets of financial institutions. Specifically, Cyprus and Estonia have LTV and DSTI restrictions that apply only to credit institutions. At the same time, co-existing LTV and DSTI restrictions tend to be jointly binding or only recommendations. Overall, Table A1 shows that there is considerable variation in the implementation and scope of BBMs across EU member states, which could reflect varying assessments of their merits as well as different financial sector structures.

# 4. EVIDENCE ON THE EFFECTS OF MACROPRUDENTIAL POLICY ON CREDIT PROVISION

While the primary purpose of macroprudential policy is to further financial stability, it does so in main part by affecting credit provision. Recently, Araujo et al. (2020) have estimated the average effects of BBMs, and macroprudential policy more broadly, on the volume of credit using information available in prior econometric studies.[5] Looking at individual BBMs, they find substantial negative effects of LTV and DSTI tightenings, of any kind, on credit provision.[6]

Some papers in the literature have investigated the effects of macroprudential policy on credit at the macroeconomic level, while other studies have considered credit at the micro level, i.e., the bank or the firm level. Separately considering studies on macro and micro measures of credit, Araujo et al. (2020) find that a tightening of a housing-related macroprudential tool, such as a BBM, on average reduces credit more at the micro level than at the macro level.[7] As indicated by the authors, the smaller reduction of credit at the macro level could imply that macroprudential measures induce additional cross-border or non-bank credit that is not accounted for in the micro studies. Several studies in the literature have specifically considered whether housing tools bring about such spillovers (through cross-border lending) and leakages (through non-bank lending). Summarising these studies, Araujo et al. (2020) find that housing tool tightenings tend to create some leakages and spillovers, thereby explaining part of the gap between the impacts of housing tools on credit at the macro and micro levels.[8] Overall, the study by Araujo et al. (2020) suggests that housing tools such as BBMs reduce total credit, but can lead to additional cross-border and non-bank lending.

[5] These estimated average effects result from conducting a meta-study which is a methodology for summarizing the estimated effects in a large set of prior econometric studies.

[6] The authors consider changes in credit measured as standard deviations of credit, which controls for a different variability of credit across different studies. They find that LTV and DSTI tightenings on average reduce the volume of credit by 0.065 and 0.063 standard deviations, respectively.

[7] Specifically, a tightening of a housing-related macroprudential tool reduces credit at the micro and macro levels by 0.192 ad 0.039 standard deviations, respectively. Housing tools include housing sector specific measures such as LTV ratios, DSTI ratios, loan restrictions, and other sector-specific capital requirements, loan loss provisions, and taxes and levies.

[8] Estimated spillovers and leakages on average amount to 0.005 standard deviations of credit.

# 5. SHOULD BORROWER-BASED MEASURES BE APPLIED TO THE NON-BANK SECTOR?

Macroprudential policies aim to limit systemwide risks in the financial sector, and to smooth excessive credit cycles that could trigger systemic crisis.[9] High mortgage lending standards imposed by BBMs could mitigate the deterioration of a bank's mortgage portfolio during an economic downturn, thereby reducing bank risk and stabilising bank credit. At the same time, BBMs potentially slow down credit growth based on overly optimistic assumptions during economic expansions, thereby decreasing the potential for economies to enter boom-bust cycles of economic activity and house prices.

A disadvantage of BBMs as applied to banks is that they potentially restrict access to bank mortgage finance, and hence home ownership, for poorer households, which could have negative consequences for the long-run distributions of income and wealth. While some poorer households may be better off if they are denied access to mortgage credit, this is not generally the case, and thus it is difficult to justify stringent BBMs primarily on the grounds of consumer protection. Instead, BBMs appear to present policymakers with a trade-off between additional financial sector stability and continued access to mortgage finance for pertinent subprime borrowers.

In principle, this trade-off also exists when policymakers consider applying BBMs to the mortgage customers of non-bank financial institutions. Non-banks frequently are leveraged financial institutions, which implies that BBMs can have the effect of stabilizing these institutions during economic downturns as well, thereby enabling them to continue to provide credit, for instance, to banks.[10] Furthermore, non-bank stability could prevent fire sales of non-bank assets, which could have negative effects on banks. Despite these benefits of increased non-bank resilience, the rationale for applying BBMs to non-banks to promote financial stability is weaker than in the case of bank, as non-banks do not take household deposits and do not operate the payments system, which implies that their failures entail fewer negative externalities to the overall economy.

As in the case of banks, BBMs applied to non-banks reduce the access to mortgage finance for poorer households. If banks are already subject to BBMs, the cost of extending BBM coverage to non-banks in this regard is especially high, as the wide application of BBMs leaves poorer households with no options to obtain a mortgage from any domestic financial institution, amplifying any negative implications of BBMs for the long-run distributions of income and wealth. As discussed in Section 4, there is evidence that housing-related macroprudential tools such as BBMs lead to additional cross-border and non-bank lending, but this type of arbitrage by households could well be welfare-improving rather than welfare-reducing.

More positively, the application of BBMs to domestic non-banks eliminates arbitrage by banks that acquire non-conforming mortgages originated by such non-banks, either by purchase from unrelated non-banks or by the origination of such mortgages through a non-bank subsidiary.[11] The latter type of arbitrage by banks, however, could be countered by extending the application of BBMs only to non-banks that are bank subsidiaries, which would leave subprime borrowers with the option to acquire mortgages from other non-banks.

The mainstreaming of BBMs across the financial sector serves to level the playing field in the mortgage market regarding BBMs. However, banks and non-banks have distinct functions in the economy, which

[9] See, for instance, Freixas et al. (2015, p. 259).

[10] The Financial Stability Board (2022, pp. 23-29) provides data on the direct interconnectedness among financial sectors at the end of 2021.

[11] More generally, arbitrage in the form of the origination of non-conforming mortgages through non-banks can occur if a financial group owns both a bank and a non-bank. However, concerns about bank stability are especially relevant if the bank owns the pertinent non-bank as a subsidiary.

explains why banks generally tend to be subject to stricter regulation and supervision than non-banks, as is currently the case in the area of BBMs in some countries. More regulation and supervision for banks compared to non-banks of any type creates burdens for banks, but banks are compensated for this, for instance, by preferential access to borrowing from the central bank.

In practice, countries with BBMs that cover banks as well as non-banks maintain the same BBM stringencies for the various types of financial institutions. Thus, in practice countries jointly choose the scope of the BBM and its quantitative calibration.[12] In their policy choices, countries may perceive a trade-off between BBM scope and stringency. In particular, a country that applies a BBM only to banks could choose to impose a rather stringent BBM to foster bank stability, in the knowledge that any negative consequences for the access to finance of poorer households are limited, as such households can still turn to non-banks. In contrast, a country with a broadly applied BBM cannot set it to be exceedingly stringent, as in this instance mortgage applicants that are turned away by banks can no longer turn to non-banks. A priori, it is not clear which of these two policy scenarios generates higher bank stability. Thus, requiring countries to extend the scope of their BBMs to non-banks could well cause these BBMs to become rather lenient, resulting in lower bank stability.

Overall, the case for requiring that national authorities extend the scope of their BBMs to all non-banks is rather weak, as poorer households would be progressively excluded from housing finance and as financial stability could even be lower. It would be better to leave national authorities with discretion as to the non-banks that they wish to be covered, in which case they could selectively apply BBMs to, say, non-banks that are highly leveraged and interconnected with the banking system or that are subsidiaries of banks. The absence of an obvious case for the universal application of BBMs could explain that at present countries vary widely in the scope of their BBMs (see Table A1), possibly reflecting different assessments of the pros and cons of applying BBMs to non-banks and different financial sector structures.[13]

As part of its review of the macroprudential framework in the EU as mandated by the CRR, the European Commission (2021a) addressed a call for advice to the EBA, the ECB and the ESRB.[14] One of the questions was whether there are any missing tools in the current macroprudential framework. Specifically, the Commission asked how the macroprudential framework could support and ensure a more comparable and effective use of borrower-based measures across Member States to target potentially unsustainable borrowing by households and non-financial corporates.

In response to this call for advice, the ESRB (2022b, pp. 16-21) has formulated a proposal for including BBMs in EU legislation.[15] The purpose would be to make a minimum but sufficient set of BBMs for

[12] The quantitative calibration of, say, an LTV restriction could be a single number if a single LTV restriction applies to all households, or multiple numbers if the LTV restriction varies with household or dwelling characteristics. A country could, say, choose a more lenient LTV restriction for first-time buyers or a more stringent restriction for a dwelling subject to climate-related risk (the ECB and ESRB (2022) suggest that BBMs could be chosen to reflect this type of risk). Any such more complex calibration alters the effects of the LTV restriction on financial stability and on access to housing finance. However, even if the LTV regime is made more complex, it remains the case that extending it to non-banks progressively reduces access to mortgage credit for pertinent households, while possibly yielding smaller additional benefits in terms of financial stability.

[13] In addition, national variation in BBMs could reflect perceived variation in lending practices in the absence of any BBMs and varying mandates of national macroprudential authorities.

[14] The European Commission (2021b) also conducted a targeted consultation on improving the EU's macroprudential framework for the banking sector. In its summary of the responses, the European Commission (2022, p. 5) states that 'There is a broad support for the introduction of borrower-based measures (BBMs) in the macroprudential toolkit, but with a high degree of flexibility for Member States, who should remain fully responsible for the use of these instruments', and 'Some respondents also argued that the scope of borrower-based measures should be extended to non-bank lenders'.

[15] See also ESRB (2022a, pp. 31-39). In its response, the ECB (2022, p.21) proposes introducing into the CRR a data collection requirement for a minimum set of lending standard indicators, including the LTV, DSTI, and DTI, for monitoring purposes to enhance the comparability of risk assessments in the residential real estate sector and the prudential policy stance on BBMs across EU jurisdictions.

residential real estate loans available in all countries. This minimum set would include restrictions on DTI, DSTI, and LTV and limits that apply to maturity and amortisation requirements. EU legislation would aim to describe the general principles and concepts of BBMs, leaving the details of the definitions to the Member States. According to the ESRB, decisions on the activation and release of BBMs should remain solely in the hands of national authorities. Notably, the ESRB proposes that the scope of BBMs includes all banks and non-banks, thus eliminating the current national discretion regarding their scope.

In its response to the call for advice, the EBA (2022a, p. 25) states that a minimum set of EU-wide activity-based rules for lending may be developed based on a minimum harmonisation of the main elements of already widely applied activity-based instruments such as macroprudential BBMs for new residential real estate financing, which suggests a general application of BBMs to banks and non-banks. More specifically, in its opinion on the European Commission request for technical advice on issues related to the Mortgage Credit Directive (MCD), the EBA (2022b, p. 5) states that the MCD, which covers all providers of mortgage credit, should be amended to include financial stability considerations, beyond what is mentioned in recital (3), for example through the inclusion of borrower-based measures.

The EBA (2022b, p. 19) mentions that regulatory arbitrage may arise if BBMs are only applied to credit institutions. Specifically, according to the EBA (2022a, p. 25) BBMs if only applied to banks could lead to regulatory arbitrage whereby banks buy up loans to households issued by non-banks. The application of BBMs to domestic non-banks, however, may not be enough to eliminate this type of arbitrage, as banks would still be able to acquire any type of mortgage from mortgage providers that are located abroad. As discussed, the application of BBMs to non-banks could also eliminate arbitrage by younger and poorer households that seek mortgage credit from non-banks that are not subject to BBMs, with potentially negative implications for economic equality. This disadvantage of the universal application of BBMs should be weighed in the decision of whether BBMs are applied to non-banks as well, and it suggests that the application of BBMs to non-banks should not be made mandatory in EU legislation.

# 6. CONCLUSION

BBMs applied to bank customers can make these institutions more resilient, but they potentially limit access by younger and poorer households to mortgage loans, which could have negative implications for the long-run distributions of income and wealth. In principle, a similar trade-off exists when policymakers consider imposing BBMs on the mortgage customers of non-banks. Many non-banks are leveraged financial institutions, which implies that BBMs can have the effect of making these institutions more resilient during economic downturns as well.

However, the argument for applying BBMs to non-banks to make these institutions more resilient is weaker than in the case of banks, as non-banks do not take household deposits and do not operate the payments system, which suggests that their failure creates fewer negative externalities. At the same time, the implications of extending the scope of BBMs to non-banks for income and wealth distributions may be more negative, as this would leave poorer households with no options to obtain housing finance from any domestic financial institution. For these reasons, it is not obvious that countries that apply BBMs to banks should be required to apply them to non-banks as well.

Potential questions:

Q1: Are you concerned that a mandated extension of the scope of BBMs such as the LTV restriction to non-banks could unduly restrict access to mortgages for younger and poorer households?

Q2: Do you see it as an option that countries that apply BBMs such as the LTV restriction to banks are required to extend the scope of these BBMs only to the non-bank subsidiaries of banks, rather than to all non-banks?

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# ANNEX

**Table A1:** BBMs for residential real estate finance in the EU

| Country | LTV | | DSTI | | DTI/LTI | |
|---|---|---|---|---|---|---|
| | Scope | Status | Scope | Status | Scope | Status |
| Austria | N/A | R | All credit providers | R | | |
| Belgium | All mortgage lenders | R | | | | |
| Bulgaria | | | | | | |
| Croatia | | | | | | |
| Cyprus | Credit institutions authorised and operating in Cyprus | BR | Credit institutions authorized and operating in Cyprus | BR | | |
| Czech Republic | All credit providers | R | | | | |
| Denmark | Banks and mortgage credit institutions | R | | | Banks and mortgage credit institutions | R |
| Estonia | All credit institutions operating in Estonia, including the branches of foreign credit institutions | BR | All credit institutions operating in Estonia, including the branches of foreign credit institutions | BR | | |
| Finland | All credit institutions operating in Finland, including the branches of foreign credit institutions | BR | | | | |
| France | | | Banks | R | | |
| Germany | | | | | | |
| Greece | | | | | | |
| Hungary | All lenders (both bank and non-bank, including branches) | BR | All credit institutions and non-bank financial companies operating in Hungary | BR | | |
| Ireland | All regulated financial services providers. The regulations apply to housing loans secured on residential property in Ireland | BR | | | All regulated financial services providers. The regulations apply to housing loans secured on residential property in Ireland | BR |
| Italy | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Latvia | All lenders (both bank and non-bank, including branches | BR | All entities supervised by the FCMC | BR | All entities supervised by the FCMC | BR |
| Lithuania | All housing credit providers as long as credit is provided to consumers | BR | All housing credit providers as long as credit is provided to consumers | BR | | |
| Luxembourg | All relevant lenders in Luxembourg | BR | | | | |
| Malta | All lenders granting domestic residential real estate loans | ND | All lenders granting residential real estate loans | ND | | |
| Netherlands | All credit institutions and non-bank financial companies operating in the Netherlands | BR | All credit institutions and non-bank financing companies operating in the Netherlands | BR | | |
| Poland | Banks | R | Banks | R | | |
| Portugal | All credit institutions and financial companies that have head offices or branches in the Portuguese territory | R | All credit institutions and financial companies that have head offices or branches in the Portuguese territory | R | | |
| Romania | Bank and non-bank financial institutions | BR | Bank and non-bank financial institutions | BR | | |
| Slovakia | N/A | BR | All regulated financial service providers in Slovakia | BR | All regulated financial service providers in Slovakia | BR |
| Slovenia | Banks and savings banks, including branches of foreign banks | R | Banks and savings banks, including branches of foreign banks | BR | | |
| Spain | | | | | | |
| Sweden | All credit institutions operating in Sweden, including the branches of foreign credit institutions | BR | | | | |

BR is binding regulation. R is recommendation, ND is national directive, N/A is non-applicable. These measures were active or decided before the end of 2020. Source: Tables A.2.1 and A.2.2. in ESRB (2021)

The argument for applying borrower-based measures (BBMs) to non-banks to make these institutions more resilient is weaker than in the case of banks, as non-bank failures create fewer negative externalities. At the same time, the implications of extending the scope of BBMs to non-banks for income and wealth distributions may be more negative, as this would leave younger and poorer households with no options to obtain housing finance. Therefore, it is not obvious that countries that apply BBMs to banks should be required to apply them to non-banks as well.
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