THE PORTUGUESE EXPERIENCE

MACROPRUDENTIAL MORTGAGE MEASURES

APRIL 27, 2022

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Conference at the Central Bank of Ireland | Macroprudential mortgage measures: lessons on design, implementation and effectiveness

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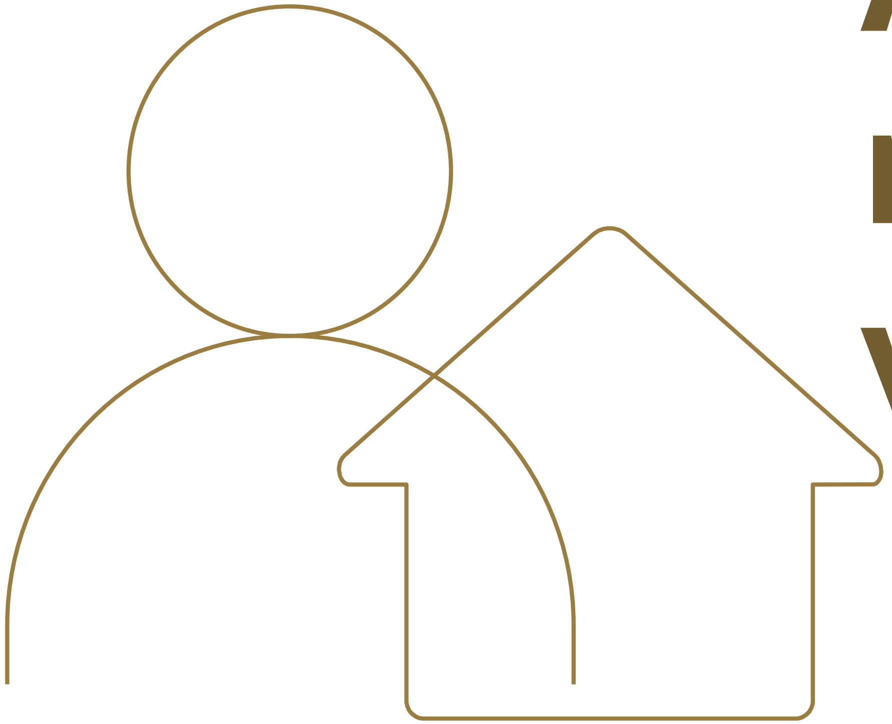
EUROSYSTEM

AGENDA

- ASSESSMENT OF RISKS AND VULNERABILITIES
- OBJECTIVES, DESIGN AND CALIBRATION
- COMMUNICATION, GOVERNANCE, ACCOUNTABILITY
- MONITORING
- POLICY ADJUSTMENTS
- IMPACT ASSESSMENT

The policy cycle



Assessment of risks and vulnerabilities

ASSESSMENT OF RISKS AND VULNERABILITIES

July 2018 Banco de Portugal launched a borrower-based macroprudential measure to new mortgage and consumer loans to address:

POTENTIAL FOR EXCESSIVE RISK TAKING

- Low interest rates environment
- Recovery in economic activity
- High real estate price growth, but stock of mortgage credit still declining, and only around 50% of RRE transactions financed with domestic credit

EASING OF LENDING STANDARDS

- Some deterioration in lending standards (e.g. maturity, LTV)
- Significant decline in average spreads of new mortgage lending
- Increased competition among institutions

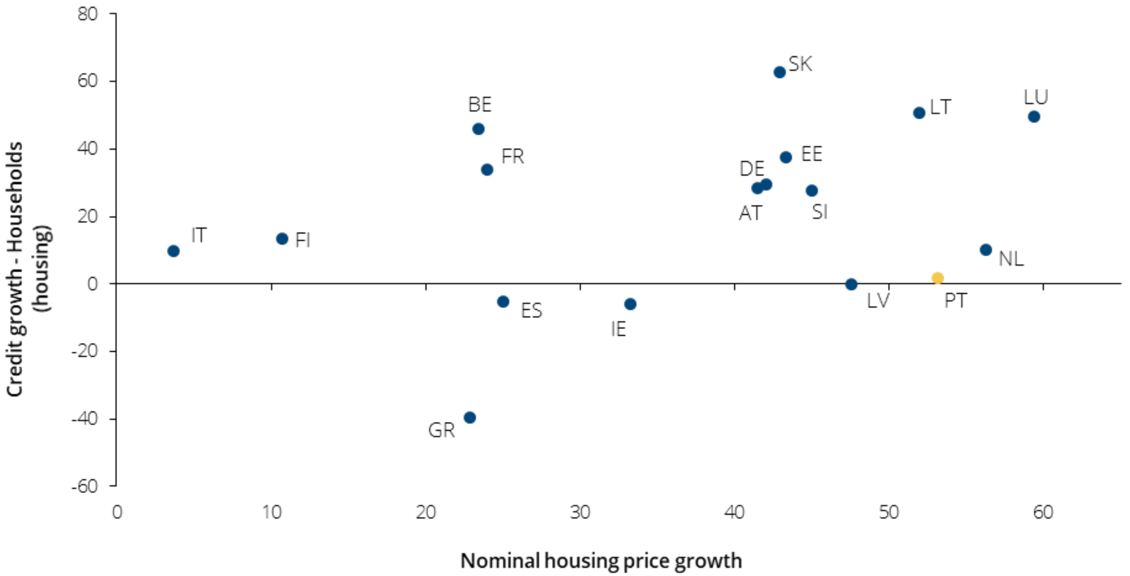
HOUSEHOLDS HIGH INDEBTEDNESS RATIO AND LOW SAVING RATE

- Household indebtedness ratio in Portugal above euro area average, although declining
- Decline in household saving rate to record lows

ASSESSMENT OF RISKS AND VULNERABILITIES

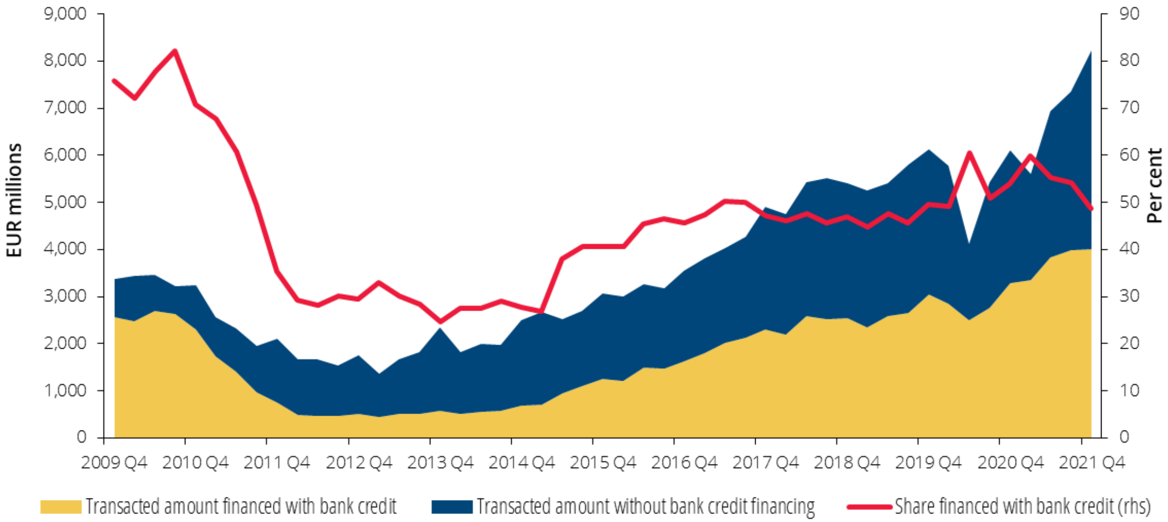
- At the time, evidence suggested that domestic credit was not the key driver for the increase in residential real estate prices. The share of residential real estate transactions financed with domestic bank credit has remained stable at around 50%.

Cumulative change in house prices and in the stock of housing loans in euro area countries | Per cent



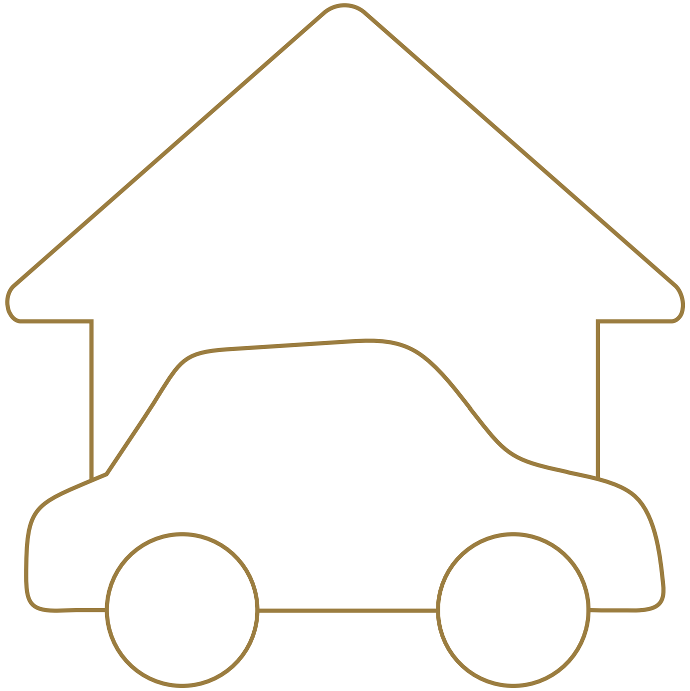
Source: European Central Bank and OECD. | Notes: Cumulative change between 2016Q4 and 2021Q3. Cyprus and Malta were excluded from the sample due to missing data.

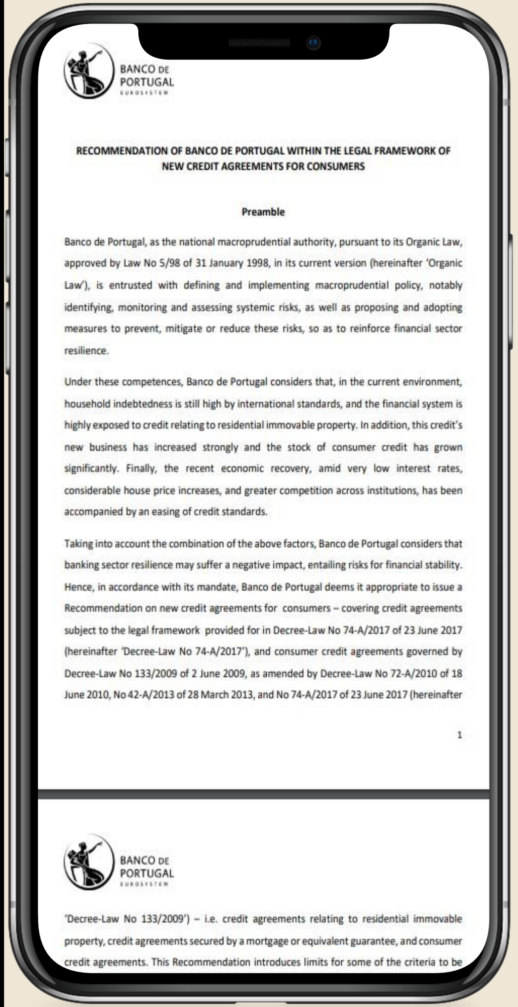
Transactions in dwellings versus new housing loans



Sources: Banco de Portugal and Statistics Portugal.

Objectives, design and calibration





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RECOMMENDATION OF BANCO DE PORTUGAL WITHIN THE LEGAL FRAMEWORK OF NEW CREDIT AGREEMENTS FOR CONSUMERS

Preamble

Banco de Portugal, as the national macroprudential authority, pursuant to its Organic Law, approved by Law No 5/98 of 31 January 1998, in its current version (hereinafter 'Organic Law'), is entrusted with defining and implementing macroprudential policy, notably identifying, monitoring and assessing systemic risks, as well as proposing and adopting measures to prevent, mitigate or reduce these risks, so as to reinforce financial sector resilience.

Under these competences, Banco de Portugal considers that, in the current environment, household indebtedness is still high by international standards, and the financial system is highly exposed to credit relating to residential immovable property. In addition, this credit's new business has increased strongly and the stock of consumer credit has grown significantly. Finally, the recent economic recovery, amid very low interest rates, considerable house price increases, and greater competition across institutions, has been accompanied by an easing of credit standards.

Taking into account the combination of the above factors, Banco de Portugal considers that banking sector resilience may suffer a negative impact, entailing risks for financial stability. Hence, in accordance with its mandate, Banco de Portugal deems it appropriate to issue a Recommendation on new credit agreements for consumers – covering credit agreements subject to the legal framework provided for in Decree-Law No 74-A/2017 of 23 June 2017 (hereinafter 'Decree-Law No 74-A/2017'), and consumer credit agreements governed by Decree-Law No 133/2009 of 2 June 2009, as amended by Decree-Law No 72-A/2010 of 18 June 2010, No 42-A/2013 of 28 March 2013, and No 74-A/2017 of 23 June 2017 (hereinafter

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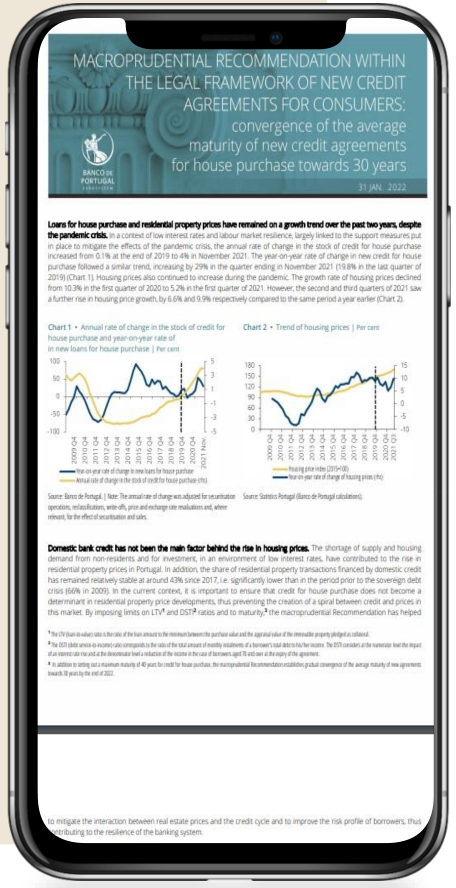
'Decree-Law No 133/2009') – i.e. credit agreements relating to residential immovable property, credit agreements secured by a mortgage or equivalent guarantee, and consumer credit agreements. This Recommendation introduces limits for some of the criteria to be



OBJECTIVES

- Adoption by the Portuguese financial system of **prudent credit standards**, so as to promote the system's and borrowers' resilience, improving their ability to absorb adverse shocks.
- By defining prudent credit standards, this measure also helps to promote **borrowers' access to sustainable financing**, mitigating the risk of default.

The actions were of a **preventive nature** at an early stage of systemic risk build up.

DESIGN AND CALIBRATION

The design and calibration took into account:

- The need to act on new loans to higher risk borrowers.
- A possible rise in interest rates, given the prevalence of floating rate mortgage credit.
- The likely reduction in the borrower's income at the time of retirement.
- The need to reduce NPLs in bank' balance sheets.
- Cross-country experiences and assessment of both current and forward looking lending standards practices by Portuguese institutions.
- Both theoretical and empirical modelling approaches to evaluate the ex-ante impact of the measure and inform calibration levels of instruments, which also benefited from micro-data analysis.

Combination of LTV limits, DSTI limits, maturity limits, and regular payments requirement to increase the effectiveness of the measure

- Limits to the LTV ratio may become less restrictive in a context of rising housing prices, which is why they are combined with DSTI limits, which in turn are combined with limits to maturity. Limits to the DSTI ratio act as automatic stabilizers. A limit to maturity makes it possible to prevent limits to the DSTI ratio from being circumvented.

Banco de Portugal made clear that this measure was not meant to replace mandatory assessment of borrower's creditworthiness by financial institutions.

DESIGN AND CALIBRATION

Non-binding legal instrument

- Recommendation follows the **"comply-or-explain" principle**. The choice for a non-binding legal instrument took into account the need to gather experience with the implementation and potential impact of a complex and at the time innovative macroprudential measure.
- Financial institutions have generally complied with the Recommendation.

Flexibility and proportionality

- **Some credit agreements are excluded from the scope** of the Recommendation to give greater flexibility to the design of credit agreements:
    - Credit intended to prevent or address arrears situations.
    - Overdraft facility and other credit with no defined repayment schedule: credit cards, credit lines;
    - Credit agreements for a total amount equal to or lower than the equivalent to tenfold the guaranteed monthly minimum wage (around €6,400)
- 5% of the new credit can be granted to borrowers with a stressed DSTI ratio above 60%.

Avoiding circumvention and promoting level playing field

- This macroprudential measure is applicable to **new mortgage and consumer loans,** from July 1 2018 onwards, to **all credit institutions and financial companies** having their head office or branches in the Portuguese territory, authorized to grant these types of credit in Portugal.

SUMMARY OF THE RECOMMENDATION

LTV limits, calculated using the minimum between the purchase value and the appraisal value

- Up to 90% for new loans for own and permanent residence;
- Up to 80% for other purposes;
- Up to 100% for property held by credit institutions.

Stressed DSTI limits*, calculated using disposable income and applying shocks to interest rate and income

- 50% or less, with the following exceptions:
  - Up to 10% of the amount of new loans may have a DSTI ratio of up to 60% (this limit was 20%, for loans granted before April 1, 2020);
  - Up to 5%: no DSTI limit.

Regular payment requirement

- New credit agreements should have regular principal and interest payments.

Housing maturity limits:

- Maximum maturity:
  - 40 years for borrowers aged 30 or under;
  - 37 years for borrowers aged over 30 and up to and including 35 (this limit is 40 years for new loans granted before April 1, 2022);
  - 35 years for borrowers aged over 35 (this limit is 40 years for new loans granted before April 1, 2022).
- Average maturity of new credit agreements should gradually converge to 30 years until the end of 2022.

Consumer credit maturity limits:

- Maximum maturity of 7 years for new personal loans (this limit was 10 years for loans granted before April 1, 2020);
- Maximum maturity of 10 years for new car loans and personal loans for healthcare, education or renewable energy.

Notes: * The DSTI (debt service-to-income) ratio is the ratio of the total amount of monthly instalments of a borrower’s total debt to his/her monthly income less taxes and compulsory social security contributions. The calculation of the DSTI ratio should assume that the instalments of the new credit agreement are constant and consider the impact of an interest rate rise according to maturity in the case of variable and mixed interest rate agreements (3 p.p. for loans with a maturity above 10 years) and a reduction of the income (-20%) in the case of a borrower aged 70 and over at the planned expiry of the agreement, except if at the time of the creditworthiness assessment the borrower is already retired.

EVOLUTION OF THE RECOMMENDATION

2018
FEB

MEASURE IS ANNOUNCED

Recommendation announced in February 2018, with effect from July 1, 2018 onwards.

2020
JAN

AMENDMENT

Reduction in the maximum maturity of new personal credit and reduction from 20% to 10% in the amount of credit allowed with a DSTI between 50% and 60%, with effect from
April 1, 2020 onwards.

2020
APR

AMENDMENT

Temporary exceptions to the regular payments requirements and DSTI given the COVID-19 pandemic.
It was in effect from April 2020 to September 2020.

2022
JAN

AMENDMENT

Adjustment to the maximum maturity limits for mortgage loans. Announced in January 2022, with effect from April 1, 2022 onwards.

Communication
Governance
Accountability

COMMUNICATION, ACCOUNTABILITY, GOVERNANCE

Communication (when the measure was introduced and every time there is an amendment)

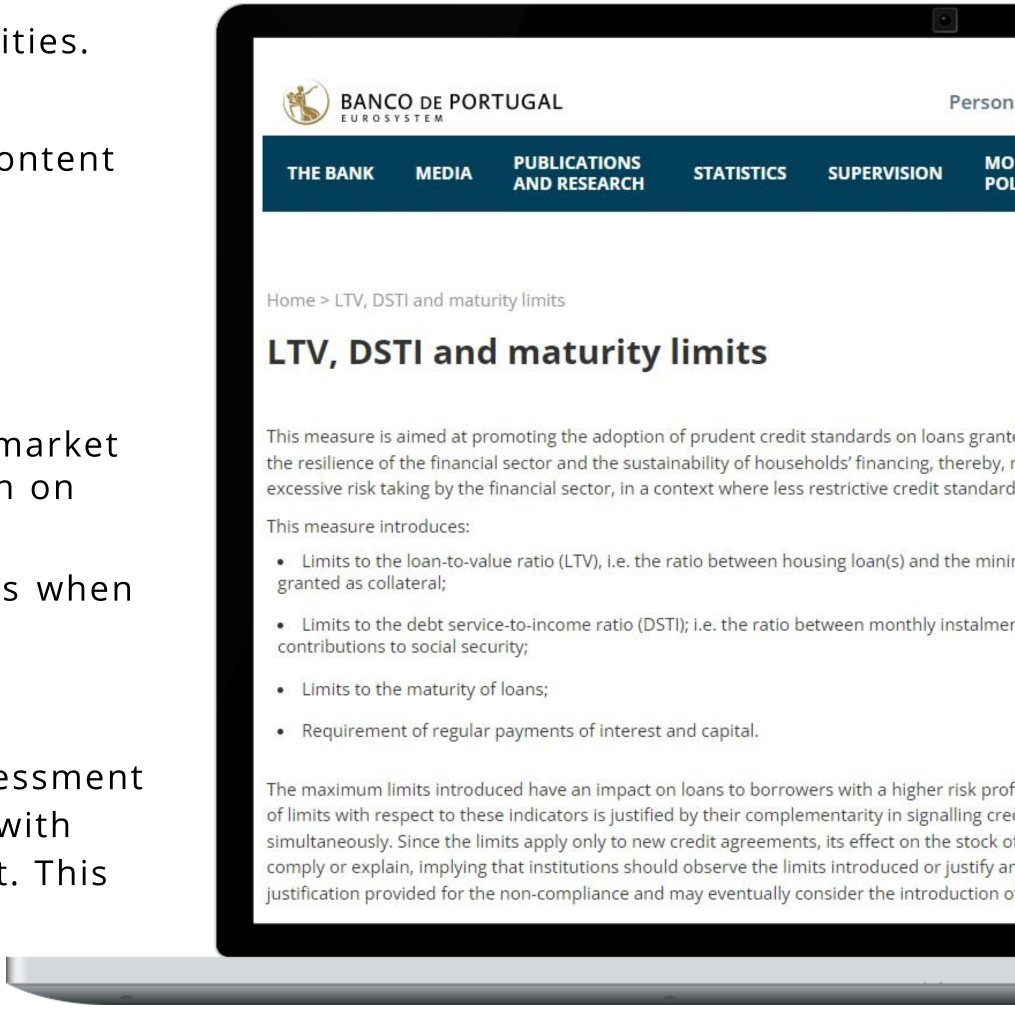
- Targeted consultation with several institutions, associations and authorities.
- Dedicated webpage.
- Media outreach through press conferences, television interviews, and content creation, including a video disseminated via social media and a podcast episode.

Accountability

- 4 progress reports published so far and presented to the media.
- Monitoring is based on the monthly reporting by 13 institutions with a market share of more than 95% of new credit to households and on information on borrower / contract level through the Central Credit Register.
- Telcos / bilateral meetings with authorities, associations and institutions when needed.

Governance

- Banco de Portugal requested institutions to prepare an annual self-assessment report addressing the degree of compliance with the Recommendation with regard to LTV, DSTI, maturity, regular payments of principal and interest. This report needs to be approved by each institution's Executive Board.



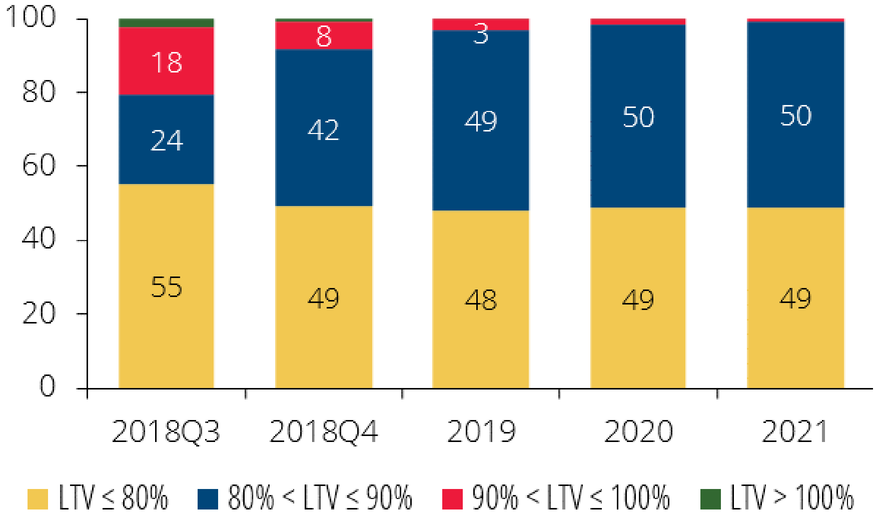
Monitoring

Compliance with the measure

LTV RATIO

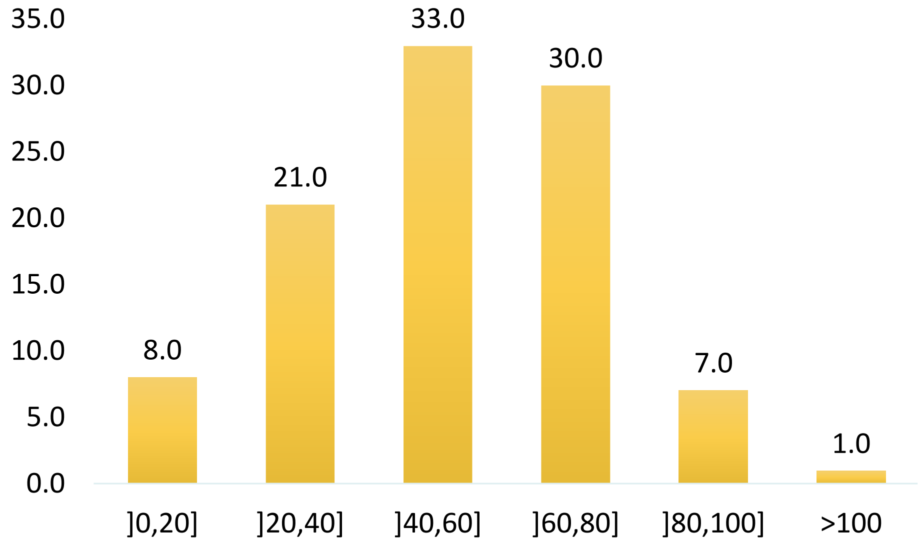
- Overall, there has been broad-based compliance with the measure. In 2021, almost all new loans for house purchase had a **LTV ratio** up to 90%.
- 92% of the stock of mortgages had an LTV ratio equal to or below 80%, with the percentage of loans with an LTV ratio above 100% being negligible (1%).

Distribution of new loans for house purchase by LTV ratio | Per cent



Source: Banco de Portugal. | Note: Based on sample of 9 institutions, representing about 95% of the amount of new loans.

Distribution of housing loans' stock by LTV ratio – December 2021 | Per cent

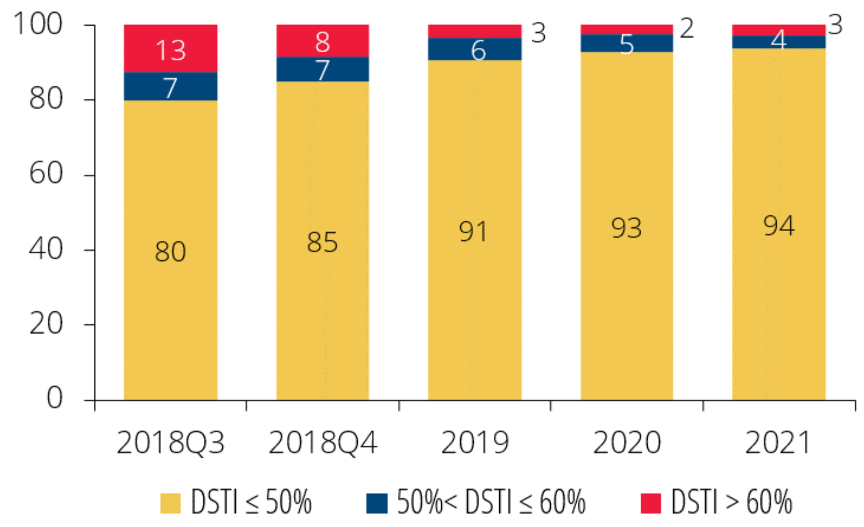


Source: Banco de Portugal (Central Credit Register).

DSTI

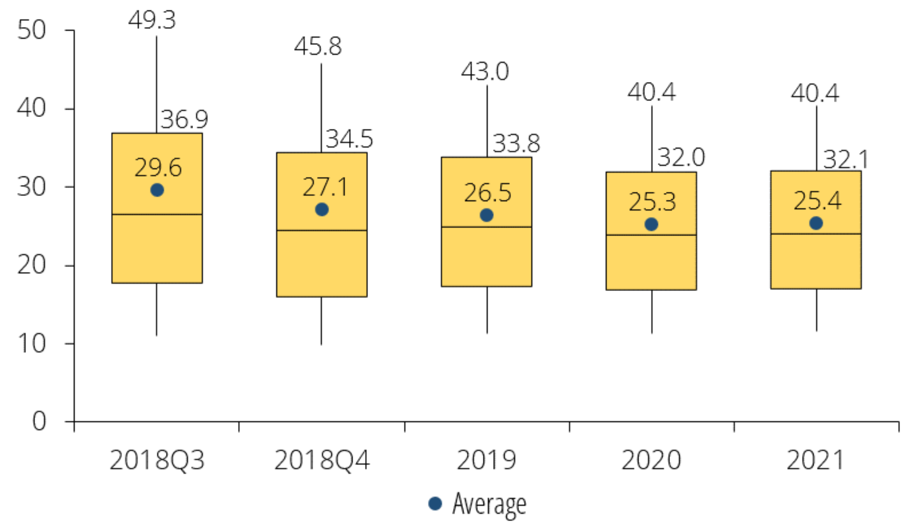
- In 2021, 94% of new housing and consumer loans were granted to borrowers with a **stressed DSTI ratio** of up to 50%.
- In 2021, 75% of new housing and consumer loans were associated with borrowers that had an **effective DSTI ratio** of up to 32%.

Distribution of new loans to households by stressed DSTI ratio | Per cent



Source: Banco de Portugal. | Note: Based on sample of 13 institutions, representing about 95% of the amount of new loans to households.

Distribution of the effective DSTI ratio for new loans to households | Per cent



Source: Banco de Portugal. Note: Effective DSTI ratio excludes shocks on the interest rate and income). The lower and upper ends correspond to the 10th and 90th percentile respectively, whereas in the box the lower and upper ends correspond to the 25th and 75th percentile respectively.

Policy adjustment | 2022

MATURITY LIMITS

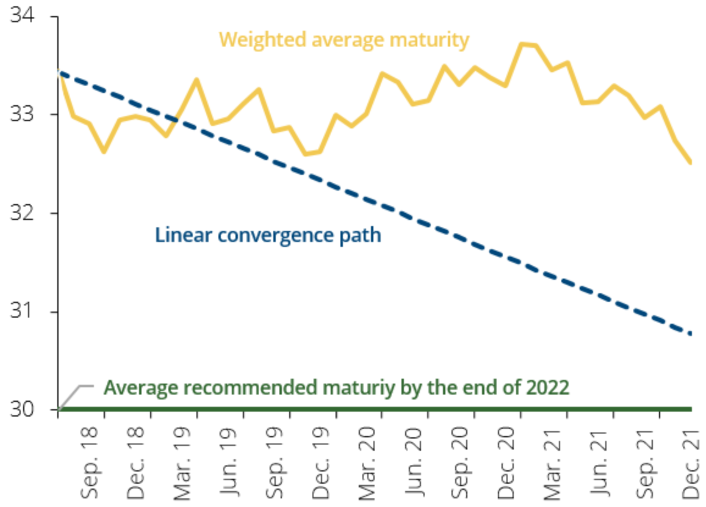
- Institutions have been complying with the **maximum maturity** for mortgage loans of 40 years.
- After 2019, the **average maturity** of new housing loans has not converged gradually to 30 years. Portugal stands out as an outlier in the EU context. New housing loans granted in 2021Q4 were concentrated on loans with maturity between 35 and 40 years (46%). As such, Banco de Portugal introduced new limits to the maximum maturity according to the age of borrower to promote convergence to average maturity of new loans of 30 years, with effect from April 1, 2022 onwards to promote the convergence of the average maturity.

Distribution of the amount of new loans for house purchase by loan maturity and age bracket of borrowers | Per cent

	Maturity					
Age bucket	**<=10 years**	**]10,20]**	**]20,30]**	**]30,35]**	**]35,40]**	**Total**
<= 30 years	0.0	0.2	0.9	1.2	13.9	16.3
]30,35]	0.1	0.2	1.4	1.9	16.8	20.4
]35,40]	0.0	0.2	2.1	5.7	13.9	21.9
]40,45]	0.0	0.3	5.6	11.8	1.6	19.3
]45,50]	0.1	0.6	11.0	1.0	0.0	12.6
>50	0.4	4.1	4.8	0.0	0.0	9.3
Total	0.7	5.6	25.9	21.6	46.3	100

Source: Banco de Portugal (Central Credit Register). | Note: Based on information reported by a sample of 9 institutions. The data refers to 2021Q4.

Weighted average maturity of new loans for house purchase | In years



Source: Banco de Portugal. | Note: Based on sample of 9 institutions, representing about 95% of the amount of new housing loans.

Impact assessment

Effectiveness and efficiency

*Vulnerabilities in the residential real estate sectors of the EEA countries**

The ESRB has considered the macroprudential measures in Portugal as fully appropriate and sufficient to mitigate the risks identified

- The European Systemic Risk Board (ESRB) published in February the results of the 2021 assessment of residential real estate sectors in European Union Member States, Iceland, Liechtenstein and Norway;
- In this assessment, the risk associated with the residential real estate sector remained high in five countries, medium in 19 countries and low in the remaining countries subject to assessment. Following this assessment, the ESRB issued warnings to five countries and recommendations to two countries;
- The risk in the residential real estate sector in Portugal was assessed as medium and the macroprudential policy implemented by the Banco de Portugal was deemed to be fully appropriate and sufficient to mitigate the risks identified. Thus the ESRB did not issue any Warning or Recommendation to Portugal.

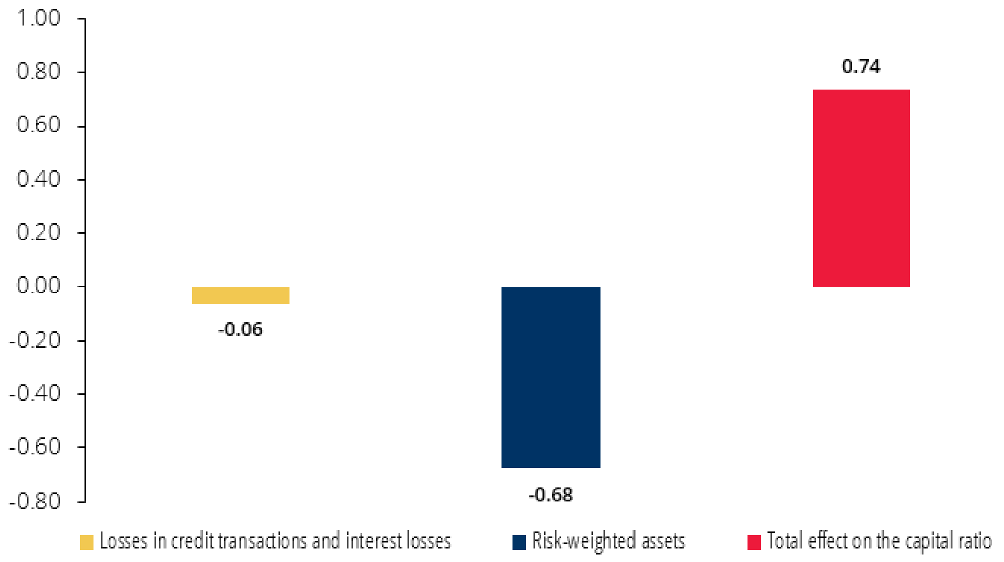
* ESRB (2022)

Assessing the effectiveness of the Portuguese borrower-based measure in the Covid-19 context*

Portuguese borrower-based measure was successful in increasing the resilience of households as well as of the banking system in the Covid-19 context.

- The borrower-based measure, defined as an LTV ratio cap of 90%, a shocked DSTI ratio cap of 50%, and a maturity cap for mortgage loans of 40 years, leads to (i) a reduction in households' loss rate (LR), caused by both a decrease in households' probability of default (PD) and loss given default (LGD) (ii) an increase in the capital ratio of the banking system, compared with a scenario where these limits are not in place. The shocked DSTI ratio cap, calculated according to the Portuguese borrower-based measure, further (i) decreases the risk parameters of the borrowers and (ii) increases the capital ratio of banks.

Impact of the macroprudential measure on the capital ratio of the banking system | Percentage points



Source: Banco de Portugal.

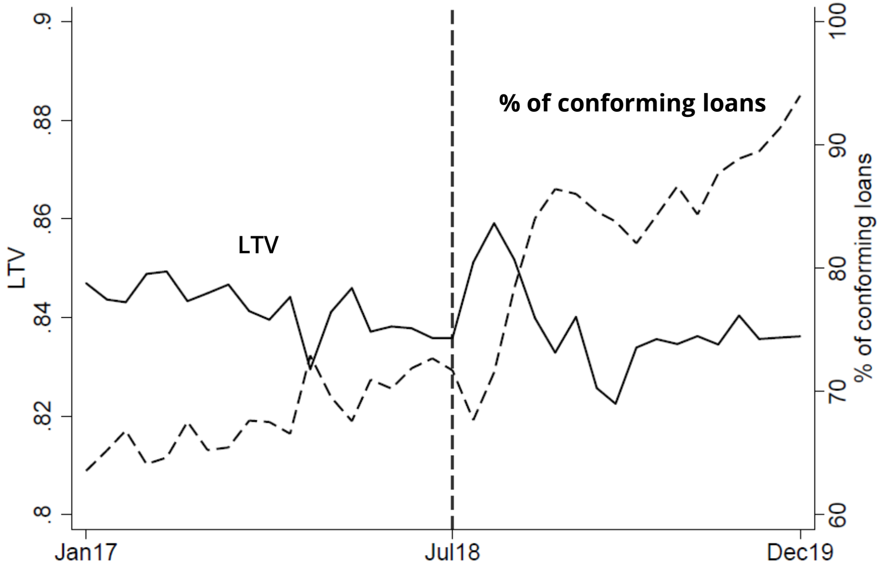
* Neugebauer, Oliveira, Ramos (2021)

The impact of a macroprudential borrower based measure on households' leverage and housing choices

Improvement of the risk profile of households following the introduction of the LTV limits

- Authors use loan-level credit register data to assess the impact of new limits to the loan-to-value (LTV) ratio limits on households' leverage and housing choices. After the recommendation came into effect, the average LTV decreased and the percentage of loans with an LTV less than or equal to 90% increased from approximately 71% in July 2018 to 94% in December 2019. According to the estimates, approximately 28 percent of the households were constrained by the introduction of the limits to the LTV ratio.
- Difference-in-differences estimation strategy suggests that the policy change was effective in reducing households' leverage as constrained households take out smaller loans and have lower loan-to-income ratios.

(Average) LTV ratio over time and percentage of conforming loans



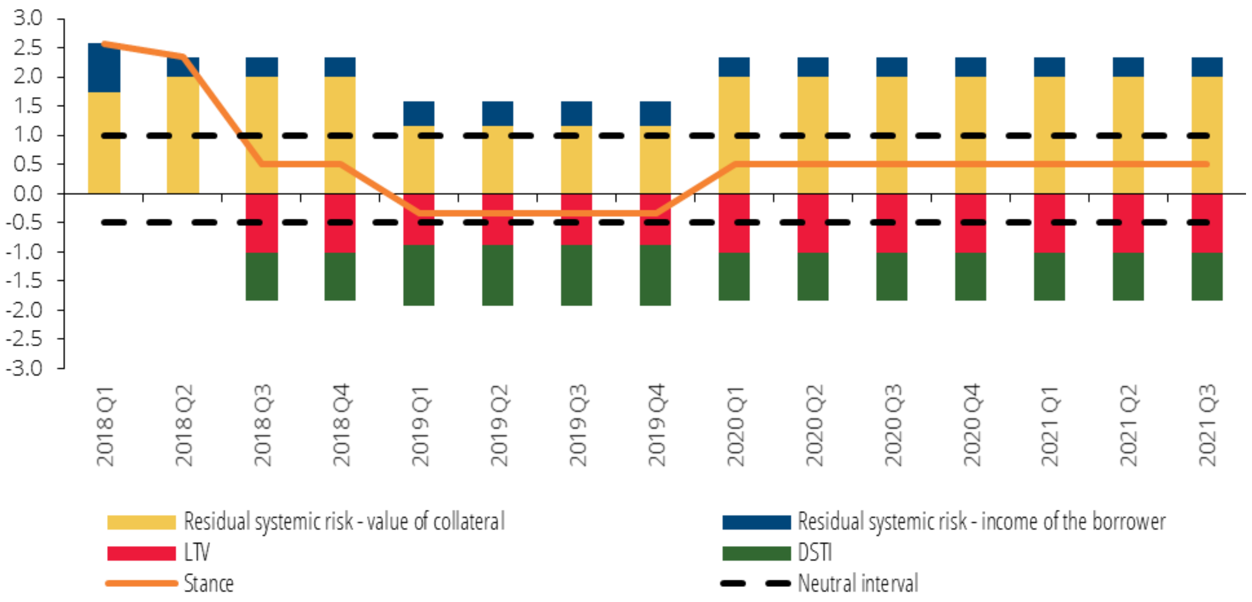
Source: Banco de Portugal.

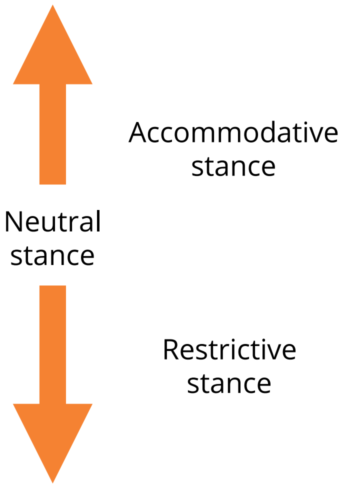
* Abreu, Félix, Oliveira, Silva (2021)

*Impact of the measure on the stance of macroprudential policy**

The Portuguese borrower-based measure introduced in 2018 Q3 changed the evaluation of the macroprudential stance from accommodative to neutral.

Macroprudential policy stance





Sources: ESRB (2021), ECB and Banco de Portugal.

* Special issue in *Macroprudential Recommendation on new credit agreements for consumers - progress report*, March 2022

Key takeaways

KEY TAKEAWAYS

- Policy work needs to be grounded on both theoretical and empirical modelling. The richness of micro-datasets available at Banco de Portugal informed the calibration of the BBM and allowed for the evaluation of its ex-ante impact.

- Banco de Portugal conducted several empirical ex-post studies to assess the effectiveness of the BBM. The results of these studies show that the Portuguese BBM has been effective in improving the risk profile of the borrowers and in changing the evaluation of the macroprudential stance from accommodative to neutral.

- The experience of Banco de Portugal shows that good external communication, governance and accountability devices are key for the success of BBMs.


THANK YOU
OBRIGADA

Selected Literature

SELECTED LITERATURE

- Katja Neugebauer & Vítor Oliveira & Ângelo Ramos, 2021. "Assessing the effectiveness of the Portuguese borrower-based measure in the Covid-19 context", Banco de Portugal *Working Paper* wp202110.
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