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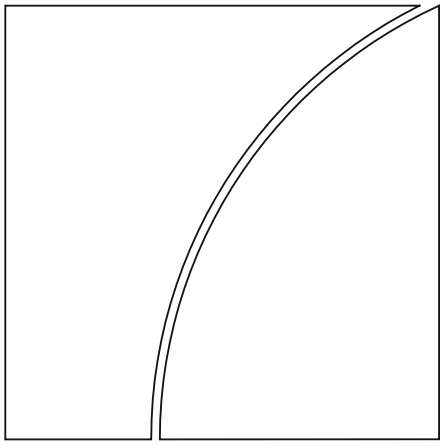

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Macroprudential policies to mitigate housing market risks

Country case study: Ireland

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Macroprudential policies to mitigate housing market risks Case study – Ireland

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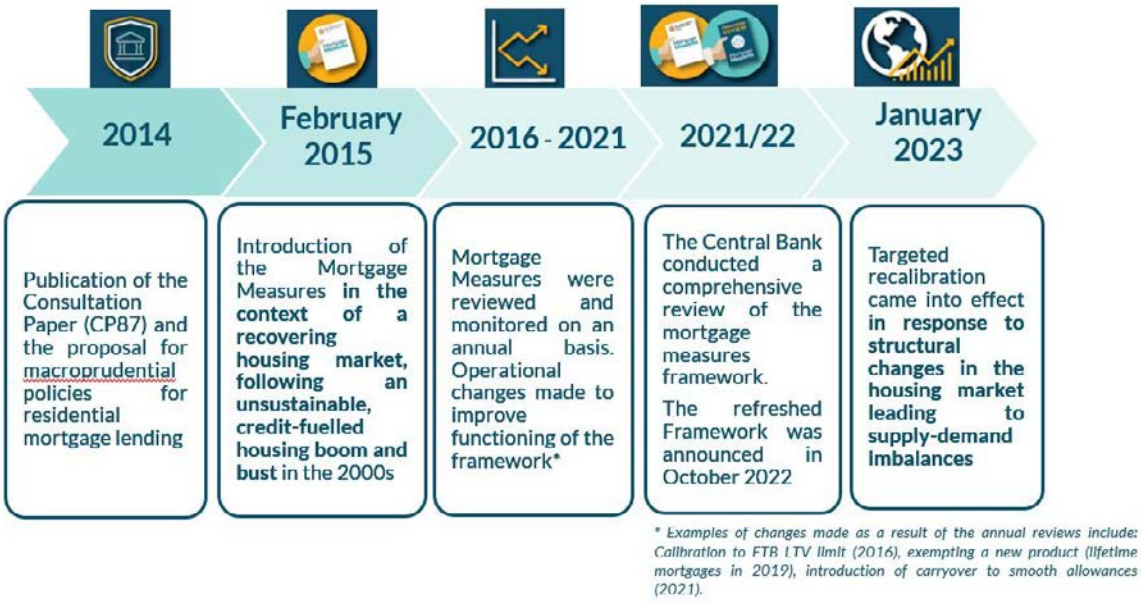
Mortgage measures in Ireland were first introduced in February 2015 and represent a key element of the Central Bank of Ireland's macroprudential framework to safeguard financial stability. The measures are specifically designed to support sustainable lending practices by banks and other lenders and to prevent unaffordable and unsustainable debt levels from building up within the Irish financial system. In practice, the measures place limits on the proportion of new residential mortgage lending that can take place at high loan-to-value (LTV) and loan-to-income (LTI) ratios.

Graph 1: Timeline of macroprudential policies for mortgages in Ireland



Source: Central Bank of Ireland.

Since their introduction, the measures have contributed to an improvement in the credit quality of new mortgage loans by guarding against a return to lending at high LTI and LTV ratios such as those observed during the mid-2000s.[1] The measures have also inhibited the re-emergence of a credit-house price feedback loop. Since 2016, a review of the calibration and operation of the mortgage measures has been conducted on an annual basis. More recently, over the course of 2021 and 2022, the Central Bank conducted an in-depth and comprehensive review of the overall mortgage measures framework. This review, which the Central Bank considers to be in line with best practice in policymaking, looked to ensure

[1] The measures have been implemented in a context of wide-ranging financial regulatory reform since the previous financial crisis.

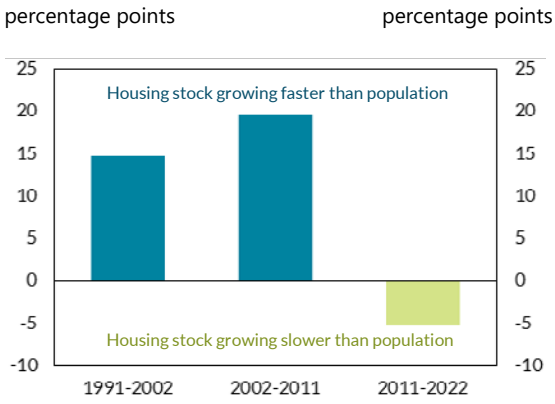
that the mortgage measures continue to remain fit for purpose into the future, in light of the changes in the Irish financial system and the broader economy. A detailed timeline of the mortgage measures in Ireland is presented in Graph 1. The aim of this chapter is to provide an overview of the main objectives of the mortgage measures in the Irish context as well as presenting an assessment of their effectiveness and the evolution of costs and benefits over time.

1. Housing as a source of risk

The introduction of the mortgage measures in 2015 was motivated by a number of structural features of the economy and financial system. Irish households and banks are highly exposed to the residential real estate sector, and at that time, over 80% of the total stock of lending to households was for the purpose of purchasing housing and mortgage loans made up almost 60% of the total stock of loans at Irish banks. The housing cycle had also begun to turn, with rapid growth in prices emerging after falls of more than 50% from 2008 to 2013.

The experience of the Irish housing boom and bust during the 2000s had shown the risks associated with lending at higher LTV and LTI levels and the link with subsequent defaults. This experience was central to the introduction of, and calibration decisions surrounding, the measures.

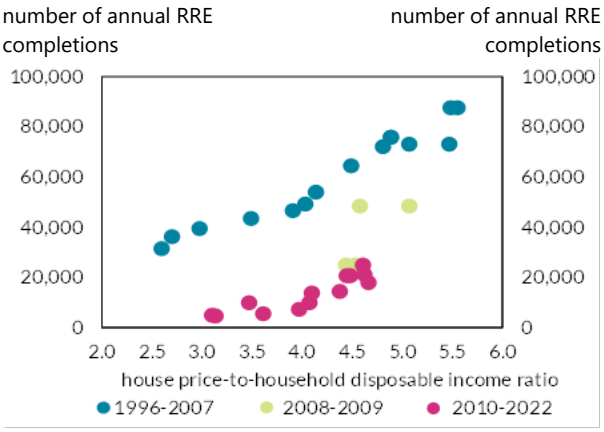
Graph 2: Over the past decade, growth in the housing stock has fallen short of population growth



Percentage point difference between growth in stock of housing and growth in population. The past decade has seen growth in the housing stock falling short of population growth, with an associated slowdown in the structural trend of falling average household size. Last observation 2022.

Sources: Central Bank of Ireland; CSO calculations.

Graph 3: Estimated dwelling completions and real house prices 1996–2022



Horizontal axis: estimated ratio of house prices to household disposable income. Vertical axis: housing units completed per year. Estimates of completions have been obtained by taking total estimates of electricity connections and removing average number of connections in each year that are unrelated to dwelling completions. Findings are robust to use of raw electricity connections data, or to using proportional estimates of completions. Last observation 2022.

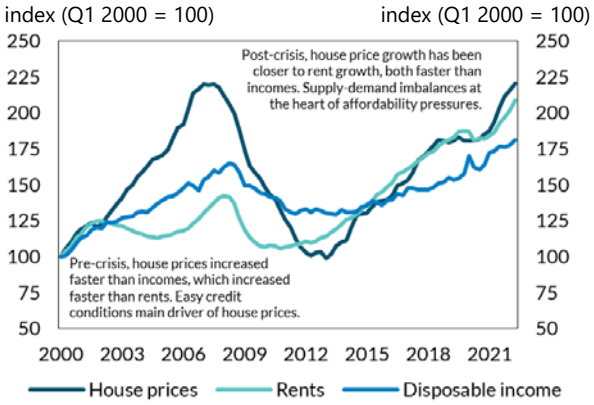
Source: Kennedy and Myers (2019).

The review of the framework incorporated an assessment of relevant structural changes in the financial system and economy since the measures were first introduced, including in the housing market. Over the past decade, the housing market in Ireland has been characterised by weakness in housing supply, which has not matched strong population growth and demand for housing (Graph 2). While weak housing supply was already evident in 2015, the imbalance between demand and supply has been considerably more persistent than would have been expected when the measures were introduced.

These developments reflect structural challenges with the supply of housing. Fewer housing units are being produced, for a given real house price level, when compared to the past (Graph 3). With housing supply failing to meet demand, both house prices and rents have risen faster than incomes (Graph 4).

Recent research has shown that housing supply in Ireland is similarly responsive to house price changes compared to the past when controlling for the costs of construction, but that – since the 2010s – the primary explanation for the weaker housing supply outturn has been a significant rise in construction costs (Lyons and Gunnewig-Mönert (2021)). More recent analysis describes how construction cost increases in 2022 have far outstripped those experienced in the preceding years (Arigoni et al (2022)). This suggests that continued difficulties may be faced in increasing housing supply delivery towards levels required to meet estimated demand over the short to medium term. These factors, which are likely to have structurally increased the equilibrium house price to income ratio in the economy, were factored into the Central Bank of Ireland's assessment of the costs and benefits of the mortgage measures.

Graph 4: House price, rent and household disposable income indices



Last observation Q2 2022.

Sources: Central Bank of Ireland; CSO calculations.

2. Governance arrangements

The measures are implemented using regulation-making powers granted to the Central Bank after the financial crisis (Section 48 of the Central Bank Supervision and Enforcement Act 2013) and apply to all lenders, both banks and non-banks, extending mortgage credit in the Irish market. The Central Bank has the power to sanction institutions that do not comply with the regulations. Compliance is ensured through the collection of granular data returns from all entities with lending above a low volume threshold. The Central Bank Commission, consisting of senior management and non-executive members appointed by the Minister of Finance, is the ultimate decision-maker on changes to the measures.[2] The Commission's decisions on measures are informed by deliberations of the Central Bank's Financial Stability Committee, which is chaired by the Governor and consists of senior leaders from across the three pillars of the Central Bank.[3]

3. Objectives of the mortgage measures

The objectives of the mortgage measures, as stated upon their introduction in 2015, were to increase the resilience of both lenders and borrowers to negative economic and financial shocks, and to reduce the risk of a damaging "feedback loop", where house prices and mortgage credit increase and reinforce each other, from developing in the future. The recent review of the mortgage measures framework reaffirmed the importance of the measures in the Irish mortgage market and found that they have worked as intended since their introduction. The review also found that there is broad support among the public for having macroprudential measures in some form as a permanent feature of the Irish mortgage market.[4]

The objectives of the mortgage measures, as of 2023 and as stated in the official framework document published by the Central Bank,[5] are to ensure sustainable lending standards in the mortgage market and prevent the emergence of an unsustainable relationship between credit and house prices. In doing so, they support the resilience of borrowers, lenders and the broader economy. The Central Bank will pursue these aims, taking into account both the macroeconomic benefits and costs that the measures pose.

Five key principles guide these objectives:

- The mortgage measures do not aim to replace lenders' own prudent underwriting criteria, but to improve the resilience of borrowers, and by association lenders, to adverse economic shocks.
- As a macroprudential tool that acts to stabilise the relationship between the mortgage and housing markets and the wider economy, the benefits of the measures – in reducing the likelihood and depth of financial recessions driven by unsustainable mortgage lending – accrue across the entire population, and not just to those accessing mortgage finance.

2 For further information on the role of the Commission, see here.

3 From the inception of the measures until mid-2023, policy discussions took place within the Macroprudential Measures Committee before proceeding to the Commission for decision. From mid-2023 onwards, such policy discussions will take place within the Bank's Financial Stability Committee, with the Commission remaining the decision-making body for mortgage measures.

4 See Summary report of listening and engagement events, report on the results of the online public engagement survey.

5 See The Central Bank's framework for the macroprudential mortgage measures.

- The mortgage measures framework will take into account the costs that the measures impose on the Irish economy, and the Central Bank will continue to develop tools that aid the assessment of trade-offs between benefits and costs.
- The mortgage measures framework operates at the system-wide level and the Central Bank will aim to weigh up the costs and benefits of the measures as they are experienced across the population.
- The Central Bank will aim to provide information and research on the potential distributional effects of the measures.

4. Macroprudential instruments in practice

The mortgage measures work by setting limits on the amount that people can borrow to buy residential property using LTI and LTV limits. The LTI limit restricts the amount of money borrowed to a maximum of 4 times gross income for first-time buyers (FTBs) and 3.5 times gross income for second/subsequent buyers (SSBs). The LTV limit requires a minimum deposit in order to get a mortgage. Both FTBs and SSBs need to have a minimum deposit of 10%. Buy-to-let buyers (BTLs) need to have a minimum deposit of 30%. Lenders can also lend a certain amount above the limits. The proportion of lending allowed above the limits currently applies at the level of the borrower type, such that: 15% of FTB lending, 15% of SSB lending and 10% of buy-to-let (BTL) lending can take place above the limits (Graph 5).

Graph 5: Macroprudential framework for mortgages; details of the current and previous LTV and LTI regulation (current regulation in force since 1 January 2023)

Borrower Type	First Time Buyers (FTBs)		Second and Subsequent Buyers (SSBs)		Buy-to-Let (BTL)	
	Current	*Previous*	*Current*	*Previous*	*Current*	*Previous*
Limits under the mortgage measures	LTI: **4x** LTV: 90%	LTI: 3.5x LTV: 90%	LTI: 3.5x LTV: **90%**	LTI: 3.5x LTV: 80%	LTV: 70%	LTV: 70%
Allowance share above the limits	15%	LTI: 20% LTV: 5%	15%	LTI: 10% LTV: 20%	10%	10%
Exemptions	Switcher loans are exempt from the mortgage measures. The LTI limit does not apply to lifetime mortgages. The LTV limit does not apply to negative equity mortgages.					

Measures apply to all mortgage lending in Ireland, irrespective of the type of lender (banks and non-banks). Main changes from 1 January 2023 include: increase in FTB LTI limit from 3.5 to 4x, increase in SSB LTV from 80% to 90%, and a change in the structure of the allowance pools from allowances based on borrower and limit type (eg FTB LTI) to just borrower type (eg FTB).

The mortgage measures framework utilises a dual instrument approach, ie a combination of a collateral-based instrument (LTV) and an income-based instrument (LTI).[6] The LTI limit provides a long-term link between developments in the housing market and the real economy, by restricting mortgage borrowing relative to household incomes. It also provides for affordability at mortgage origination, directly

[6] A combination of instruments is most common internationally to address a distinct source of risk. See the Central Bank Governor's blog for more insights into the combination of instruments used internationally.

ensuring sustainable lending standards. An LTV limit provides a buffer against the risk of house price falls, which could leave borrowers in negative equity. The equity cushion provided by a minimum deposit requirement supports borrowers, as negative equity can lead to many negative economic and social outcomes, including limiting the ability to move home, switch mortgage, or access home equity to finance consumption. Collateral and income-based instruments are seen by the Central Bank as complements.

While ultimately based on policymaker judgment, the calibration of the mortgage measures is informed by empirical research and analysis. For example, Hallissey et al (2014) found a positive relationship between originating LTV and LTI ratios and subsequent defaults. Research by the Central Bank also highlighted a strong rationale for a differential limit across different borrowers. In particular, the differential limit was grounded in evidence of lower credit risk among FTBs. Kelly et al (2014) found that FTBs have lower default risk relative to SSBs. This finding continued to hold using data on defaults updated to 2018 (Giuliana (2019)) and during the pandemic when measured through payment break take-up rates (Gaffney and Greaney (2020)).

The role of FTBs and SSBs in the housing cycle has been shown to differ in important ways for macroprudential policy. As such, the differential treatment of mortgages by borrower type has been and continues to be a key feature of the mortgage measures framework. Arising from the framework review, the Central Bank decided to move the differential treatment across borrower types from the LTV limit to the LTI limit. This move was motivated by the following findings of the 2021/22 framework review:

- Given the growth in house prices relative to incomes since the measures were introduced, the LTI has become the clear binding constraint for a majority of borrowers.[7]
- With FTB entrants being on average seven years younger than SSB entrants in recent years, income growth potential after mortgage origination is higher for FTBs. This greater earning potential allows a higher starting LTI to be sustained without the same risks to future borrower resilience.
- In a rising housing market, the LTI limit is more effective in reducing procyclicality than the LTV limit, as house prices typically rise faster than incomes.
- Finally, the policy costs relating to challenges accessing the mortgage market were deemed to be higher for potential FTBs than potential SSBs. Moving the differential treatment from LTV to LTI would provide these borrowers with additional policy support by allowing them a higher income multiple than those who already own their own home.

Allowance lending (or lending above the LTV and LTI limits) has been part of the mortgage measures framework since its introduction in 2015, allowing lenders to issue a certain volume of lending above the limits set out in the mortgage measures. The allowances give flexibility for individual borrower circumstances to be taken into account by lenders, in line with their own individual lending policies. The Central Bank, however, concluded in the 2022 review that the system of allowances in place in the previous framework was overly complex. The increase in the FTB LTI limit to 4x, and the SSB LTV limit to 90%, are both expected to reduce the importance of the allowances in overall credit allocation. The move to a single allowance pool of 15% of FTB and SSB lending respectively was intended to reduce complexity in the framework.

The Central Bank views the mortgage measures as a permanent feature of the Irish housing market. This reflects the Bank's position that across the financial cycle the measures have an important role to play in acting as guardrails for mortgage lending standards and ultimately in contributing to a stabilisation of the house price-credit cycle. Based on this view, the Central Bank has communicated that the calibration of the mortgage measures will be adjusted based on structural rather than cyclical factors.

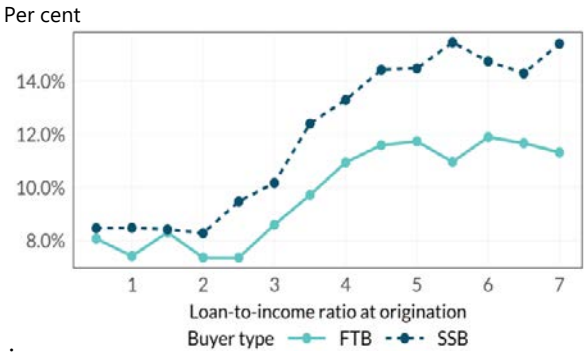
[7] See also the section "Framework design" in the Central Bank's framework for the macroprudential mortgage measures.

Structural factors are seen as slow-moving features which play a key role in determining the equilibrium level of house prices relative to incomes or magnitude of risks to affordability.

5. Effectiveness

The resilience benefits of the mortgage measures are difficult to fully assess in the absence of a major shock to repayment capacity. However, analysis of the take-up of payment moratoriums during the Covid-19 pandemic indicates that loans issued at higher LTI ratios clearly exhibited a greater need for this form of payment support, strongly indicative of lower credit risk at lower-LTI lending (Graph 6). The resilience benefits can also be observed in the sustainable evolution of lending standards, with much lower levels of high-risk loan issuance in recent years compared to periods when house prices were at a similar level relative to incomes, in 2004 (Graph 7). Credit risk, when measured by recent default flows (Graph 8) is also significantly lower for newer loans than for those issued before the financial crisis, owing both to a change in banks' risk appetite and to the effect of the mortgage measures.

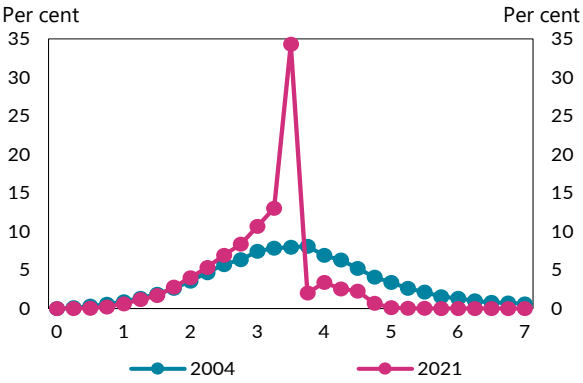
Graph 6: Lending at higher LTI and LTV loans associated with higher likelihood of financial distress; most recent example from payment break take-up during pandemic



Each data point represents loans with LTI at origination in a bracket of width 0.5, ending at and including the value depicted in the chart.

Source: Gaffney and Greaney (2020).

Graph 7: Mortgage measures have constrained lending standards; compared to a period with similar aggregate HPI ratios, the LTI distribution now contains fewer high-debt loans



Percentage of loans at each point on LTI distribution, new lending in each of 2004 and 2021.

Source: Central Bank of Ireland.

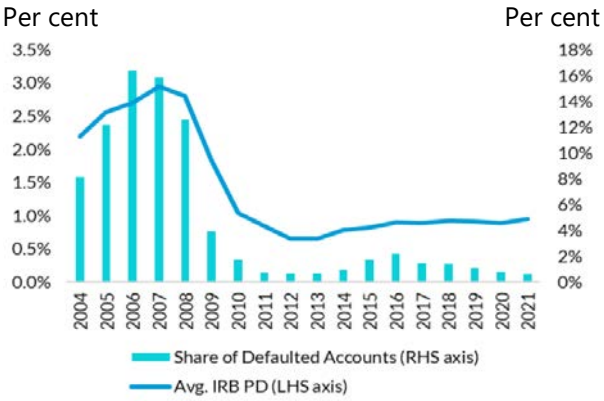
Assessing empirically whether the measures have been successful in meeting the objective of limiting the role of credit in house price developments is more challenging. House prices in Ireland have increased by 73% since the introduction of the measures, but this has not been accompanied by an increase in aggregate levels of household indebtedness.[8] The Central Bank assesses that a key driver behind the price increases observed over the period has been the imbalance between supply and demand. Using a range of techniques, researchers at the Central Bank and ESRI[9] have concluded that house prices

[8] Increase since the introduction of the mortgage measures in February 2015. Source: CSO's national Residential Property Price Index.

[9] Central Bank of Ireland (2019); McQuinn (2021).

would have been significantly higher relative to incomes in the absence of the measures, and that mortgage credit has not been an important driver of house price developments since 2015.

Graph 8: Quality of banks' mortgage lending under the measures has been significantly higher than before the financial crisis



Defaults (observed from 2018 to 2021, and modelled in banks' internal models in 2021) by origination year.

Source: Lyons and Rice (2022).

There are a number of features of the macroprudential framework in Ireland which have been important in ensuring the effectiveness of the mortgage measures. These include:

- **Access to loan-level data:** the Central Bank started collecting loan-level data on mortgage lending from 2010 (see Kennedy and McIndoe-Calder (2012)). This rich data set allowed the Central Bank to carry out in-depth research on the links between lending standards and subsequent defaults and to provide a strong evidence base for the introduction and design of these measures.
- **The strong legal basis for their introduction:** the Central Bank had a clear legal basis for introducing the mortgage measures and for the subsequent data collection for monitoring compliance with the measures. Lenders in the market must comply with the measures as the Central Bank has the power to take enforcement action if this is not the case.
- **Clear governance arrangements:** the Central Bank's Commission (board) is the decision-maker for the mortgage measures.
- **Application to both banks and non-banks**: this limits the possibility of leakages or unintended consequences, especially in the current context in which the non-bank sector has grown significantly in the new lending market.[10]
- **Extensive stakeholder engagement on the mortgage measures:** since the first Consultation Paper (CP87) which preceded the introduction of the mortgage measures, the Central Bank has

[10] See, for example, the mortgage measures section in the Central Bank's Financial Stability Review 2022:II.

carried out extensive stakeholder engagement[11] in relation to these measures. This engagement is important to ensure the legitimacy and accountability of the measures.

The Central Bank closely monitors the potential for policy leakages. An annual review of cross-border effects of the measures has, to date, not revealed evidence of cross-border leakages. The United Kingdom, the second-largest market for Irish-resident banks, also has borrower-based measures in place (see McCann and O'Toole (2019)). In terms of other leakages, there is some evidence of risk-shifting in response to the introduction of measures; for example, Acharya et al (2020) show that the implementation of LTV and LTI limits affects mortgage credit and house prices as well as other asset classes not directly targeted by the limit (ie corporate credit). These findings have informed other elements of the Central Bank's macroprudential framework including the design of the CCyB framework, which envisages that a 1.5% CCyB rate would be set in Ireland during times when risks are neither elevated nor subdued.[12]

6. Costs, benefits and unintended consequences

Like all policy interventions, mortgage measures entail both benefits and costs. As part of its framework review, the Central Bank examined the macroeconomic benefits and costs of its mortgage measures. This analysis has shown that, as well as affecting those drawing down mortgage finance, the mortgage measures can have both benefits and costs across the wider economy and society (Aikman et al (2021)).

6.1 Macroeconomic benefits of the mortgage measures

The macroeconomic benefits of macroprudential mortgage measures arise predominantly through the weakening of the self-reinforcing relationship between the housing and mortgage markets, which has been shown to drive boom-bust cycles historically. In weakening this relationship, these measures lower the probability and the severity of financial recessions, which can have large and persistent adverse macroeconomic costs, such as subsequently slower and weaker economic recoveries. These benefits are long-term in nature, and are not immediately visible to individuals in their daily lives. The reason that the mortgage and housing markets have posed such a high degree of risk to the economy in the past relates to the "negative externalities" associated with excessive levels of indebtedness.

These arise because when individual lenders or borrowers make lending and borrowing decisions, they do not typically take into account the aggregate effects of increases in leverage and rising valuations in housing. Most importantly, they do not take into account the increasing risk of a damaging recession that builds during the boom phase (see, for example, Korinek and Simsek (2016)).

6.2 Macroeconomic costs of the mortgage measures

The macroeconomic costs of mortgage measures operate primarily through shorter-run effects on consumption and economic activity (Aikman et al (2021)). For example, there are likely to be time-specific consumption-reducing effects of savings requirements on some households accumulating a mortgage deposit, although they may be balanced by lower mortgage costs at a later point in time. Mortgage lending volumes and mortgage market transactions are likely to be temporarily lower than would be the case in the absence of this type of policy, particularly in cases where the measures are binding for large

11 See Summary report, mortgage measures framework review listening and engagement events.

12 See The Central Bank's framework for macroprudential capital.

groups of borrowers. Separately, given that the leverage-reducing effect of mortgage measures is to lower house prices relative to their level in the absence of policy, a number of additional channels operate: weaker capacity to borrow from home equity, a potential reduction in construction sector activity relative to what might have happened at higher price levels, and the potential for associated weaker consumption of "white goods" that typically accompanies home purchases.

As well as being more short-term in nature than the macroeconomic benefits, these costs are less likely to affect the productive capacity of the economy in the long run than the costs that arise when damaging financial recessions follow boom-bust spells in housing and mortgage markets. Over a longer time horizon, there is greater uncertainty as to how mortgage measures affect the home ownership rate. It is likely that borrowers' entry to the FTB mortgage market would be delayed by time taken to accumulate a deposit. Previous research has shown that other forces, such as banks' own lending appetite since the 2008 crisis (Lydon and McCann (2017)) and wider societal shifts in the age distribution and labour market (Gaffney and Kinghan (2021)) have also been contributing to the changing profile of borrowers entering the FTB market in Ireland in recent years. Over the long term, there are reasons to expect that the housing market would adjust to reflect preferences for home ownership. For example, if mortgage measures limit house price growth through the effect of reduced borrowing, but underlying demand for home ownership remains constant, the cost of housing relative to incomes may adjust over the long term through either private sector or policy initiatives, delivering a supply of owned housing to those demanding it, at lower prices than would otherwise have been the case. Alternatively, certain would-be homeowners may remain in the rental market for longer than might otherwise have been the case, which may also increase the rent-to-price ratio in the housing market, with implications for the composition of supply. Due to households' reliance on housing as an asset, there are also potential adverse macroeconomic consumption implications due to lowered wealth accumulation and elevated housing costs in retirement, in cases where large cohorts of the population remain in the rental market in the long term. The presence of these effects is untestable at the current juncture given the short time frame in which macroprudential policy has been in operation in Ireland. The Central Bank will continue to deepen its understanding and measurement of the benefits and costs of the measures through analysis and research.

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