Banc Ceannais na hÉireann
Central Bank of Ireland
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# Consultation Paper 146

## Mortgage measures framework review

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# Contents



Back to “Contents”

# Mortgage measures framework review

The Central Bank of Ireland introduced regulations in 2015, which placed limits on the proportion of new residential mortgage lending that could take place at high loan-to-value (LTV) and loan-to-income (LTI) ratios. With the measures now in place for almost seven years, the Central Bank has committed to a detailed review of the mortgage measures framework. The aim of the review is to ensure the continued appropriateness of the measures into the future, given broader changes in the housing and mortgage markets and the wider economy since their introduction. The framework review has been progressing over the course of 2021 and is due to conclude in the second half of 2022. This consultation paper marks the second step in the public engagement component of the framework review, following the initial listening events and the online survey conducted last June and July.

## Introduction

In 2015, the Central Bank introduced the mortgage measures, which form an integral part of the Central Bank's macroprudential framework to safeguard financial stability. The mortgage measures were designed with two objectives at their core:

- Increasing the resilience of banks and borrowers to negative economic and financial shocks.
- Dampening the pro-cyclicality of credit and house prices, so that a damaging credit-house price spiral does not re-emerge.

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

Back to "Contents"

observed during the mid-2000s.[1] This has helped increase the resilience of lenders and borrowers, as evidenced during the COVID-19 pandemic (Gaffney & Greaney, 2020). The measures have also prevented the re-emergence of a credit-house price feedback loop. This is evident in survey data of house price expectations of market participants, which shifted downward immediately after the introduction of the measures, as well as in observed price data, with regions more acutely affected by the calibration of the LTI and LTV limits experiencing more pronounced slowdowns in price growth in 2015 and 2016 than other regions (Acharya et al, forthcoming).[2] Counterfactual exercises undertaken since the measures were first introduced suggest house prices may have been up to 25 per cent more expensive due to looser lending standards, had the measures not been introduced (FSR 2019 II).[3]

Over the course of 2021 and 2022, the Central Bank is conducting a review of the overall mortgage measures framework. Such periodic framework reviews, which the Central Bank considers to be in line with best practice, look to ensure that the mortgage measures continue to remain fit for purpose, in light of the ongoing evolution of the financial system and the broader economy.

Research and analysis conducted during 2021 as part of the review has explored numerous aspects of the mortgage measures framework. This analysis, along with the information gathered through the listening and engagement events[4], forms the basis for this consultation paper, which outlines the Central Bank's current thinking on the mortgage measures framework.

The Central Bank appreciates the feedback received from external stakeholders and the public through the listening and engagement events. This has provided the Central Bank with insights into the public's views on many aspects of the mortgage measures and the broader mortgage market. These include views on whether or not the measures have been successful in achieving their stated

[1] The measures have been implemented in a context of wide-ranging financial regulatory reform since the previous financial crisis.
[2] Calibration refers to the limits set on LTV and LTI and the proportion of new lending allowed above those limits.
[3] See Box 6 in the Central Bank of Ireland Financial Stability Review 2019:2 - "Estimating the impact of mortgage measures on the housing market".
[4] See Summary Report of Listening Event and Summary Report of the Online Public Engagement Survey.

Back to "Contents"

objectives, the potential for additional effects in the broader housing market, whether the mortgage measures should be a permanent feature of the mortgage market, and the elements of the mortgage measures framework that should be reviewed. The elements of the mortgage measures framework discussed in this consultation paper address many of the key themes that emerged from the listening and engagement events. This consultation brings together the feedback received from the public with the Central Bank analysis. Some of the feedback received through the listening and engagement events relates to broader housing policy that falls outside of the mandate of the Central Bank. These perspectives will be shared with other agencies that have a role in wider housing policy.

This consultation paper relates to the framework for the mortgage measures. The key areas of focus considered include:

- the objectives of the mortgage measures
- the role of dual or multiple instruments
- the choice of income-based instruments
- the role of allowances in the overall framework
- the use of differential limits by borrower type
- the frequency at which the measures should be reviewed.

The Central Bank recognises that an important dimension of the measures is their calibration, the level at which each limit is set. Several areas covered in this consultation will be key factors influencing the Central Bank's judgement around calibration, including the objectives, the role of the allowances and the overall basis upon which the measures should be reviewed. The precise calibration of the mortgage measures will be informed by the responses to this consultation paper, as well as the further research and analysis to be conducted during 2022.

Affordability of, and access to, housing is a key challenge facing many people in Ireland. Housing policy is the responsibility of a wide range of government departments and other state agencies, with the Central Bank's remit through the mortgage measures being just one component. House prices are not themselves a target of the mortgage measures, as they are determined by a complex set of factors relating to both demand-side and supply-side forces in the

Back to "Contents"

wider housing market. The Central Bank's view is that the current lack of an adequate supply of housing at a price appropriate to individuals' incomes is caused predominantly by an imbalance that would be most appropriately addressed through a focus on the level and composition of the supply of housing. There are many policy levers that can be used to stimulate additional housing supply, such as through reduced barriers to and costs of construction. The economy and society are more likely to benefit in the long run if supply is stimulated through a reduction in costs, as opposed to through an increase in prevailing price levels arising from higher borrower indebtedness (Lyons and Günneqig-Mönert 2021).

The Central Bank will consider the feedback it receives on the questions asked in this consultation paper. This feedback, in addition to further research and analysis by the Central Bank, will inform the final conclusions on the design of the framework. The Central Bank will then consider the implications for the calibration and implementation of the mortgage measures. The framework review is due to conclude in the second half of 2022. Details on how to respond to this consultation paper can be found in Section 9. The consultation period closes on Wednesday 16 March 2022 and we invite all interested stakeholders to respond.

## The objectives of the mortgage measures

In order to be effective, all policy regimes require clearly articulated policy objectives. Clear objectives provide a framework for guiding policy decisions, and provide a basis against which outcomes can be evaluated. The stated objectives of the mortgage measures since their introduction have been to increase the resilience of 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.

Respondents to the online public engagement survey provided feedback on whether they viewed the mortgage measures as being successful. A high share of respondents (71 per cent) believe that the mortgage measures have a role to play as a permanent feature of the mortgage market. While a majority (53 per cent) agree that the measures have been successful at improving borrower and bank resilience, a lower share of respondents (39 per cent) agree that the

Back to "Contents"

measures were effective in preventing another credit-fuelled house price boom. Among others, this feedback highlights the communications challenges inherent in policies such as the mortgage measures. House prices in Ireland have increased by 57.5 per cent since the introduction of the measures, which likely influences public perceptions.[5] However, the price increases have been driven by a range of factors including the imbalance between supply and demand. Mortgage credit, which is the focus of the mortgage measures, does not appear to have played an important or unsustainable role in driving house price growth since 2015.

As part of this framework review, the Central Bank has been reassessing the stated objectives of the mortgage measures. Like all policy interventions, the mortgage measures entail both benefits and costs. As part of this assessment, the Central Bank has examined the macroeconomic benefits and costs of mortgage measures such as those in place in Ireland. 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).

Like all policy interventions, the mortgage measures entail both benefits and costs. As well as affecting those drawing down a mortgage, the mortgage measures can have both benefits and costs across the wider economy and society.

*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

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

Back to "Contents"

not take into account the increasing risk of a damaging recession that builds during the boom phase (Korinek and Simsek (2016), Eggertsson and Krugman (2012)).

More specifically, there are at least three broad channels in operation that lead to particularly severe economic damage during financial recessions, all of which are dampened through the existence of mortgage measures:

- More-indebted borrowers are more likely to curtail consumption during recessions, as more of their economic resources are required to continue to service their large debt balances. In particular, they are more likely to respond to loss of income by curtailing consumption than those with smaller debt burdens (Fasianos and Lydon, 2021). This behaviour amplifies recessions in times of stress.
- During financial recessions, house prices are particularly vulnerable to falls if the boom that preceded them was based on unsustainable lending standards. When house prices fall sharply, negative equity arises for many. Knock-on risks are posed to activity levels in the housing and mortgage market, to the construction sector, to the capacity for households to borrow, and to households' economic expectations. These effects generate wider consequences and a "feedback loop" that can affect the economic well-being of all households regardless of their mortgage status (Mian, Rao, Sufi, 2013).
- Bank resilience is compromised by the higher default rates and the associated losses arising from over-indebted mortgage borrowers. In such circumstances, the banking system can act to amplify an adverse shock, through reductions in banks' willingness to supply credit to the economy (Chodorow-Reich, 2014). In extreme cases, where banking losses become systemic, public injections of capital can be required, as was the case in many jurisdictions including Ireland after 2008, with significant adverse consequences for public finances and the ability of the State to finance expenditure.

Back to "Contents"

*Macroeconomic costs of the mortgage measures*

The macroeconomic costs of mortgage measures, on the other hand, operate primarily through shorter-run effects on consumption and economic activity (see Aikman et al. (2021), for a detailed discussion of the nature of these costs). 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 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.[6] 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 homeownership rate. It is likely that borrowers' entry to the first-time buyer (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 homeownership. For example, if mortgage measures limit house price growth through the effect of reduced borrowing, but underlying demand for

[6] These effects are likely to be temporary, following on from the introduction or amendment (tightening) of macroprudential policy.

Back to "Contents"

homeownership 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. At this juncture, given how recently mortgage measures have been implemented in most jurisdictions, there is insufficient data globally to make an empirical assessment of these long-term effects.

The Central Bank is committed, as part of the new framework for the mortgage measures, to assess and communicate its judgements on the macroeconomic benefits of the mortgage measures against their macroeconomic costs.

*Principles underpinning refreshed objectives*

The refreshed objectives of the mortgage measures will be underpinned by the following key principles:

- The mortgage measures do not aim to replace lenders' own prudent underwriting criteria, but aim 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.
- 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 aim 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.

Back to "Contents"

- 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.

Based on the above, the Central Bank proposes the following update to the objectives of the mortgage measures;

"*The mortgage measures aim 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.*"

**Please provide any feedback on the channels of macroeconomic benefits and costs of the mortgage measures that the Central Bank proposes to consider within its updated framework.**

**Please provide any feedback that you have on the proposed principles underpinning the refreshed objective statement of the mortgage measures.**

## Number of Instruments

The current mortgage measures framework utilises a dual instrument approach, i.e. a collateral-based instrument (LTV) and an income-based instrument (LTI).

Each limit is associated with a specific policy aim in the current framework. As detailed in the original mortgage measures consultation paper in 2014, CP87, "LTI addresses affordability for the borrower, whereas LTV addresses the scale of potential loss to the lender in the event of the default of a borrower unable to service the debt". In combining collateral (LTV) and income based measures (e.g. LTI, Debt–to-income (DTI), Debt- service-to-income (DSTI)), the resilience of both lenders and borrowers to downturns in the housing market can be improved. International research suggests that collateral-based limits alone are not sufficient to constrain excessive household indebtedness in booms (Millard et al, 2021).

Back to "Contents"

As part of the framework review, the Central Bank has explored the role of dual or multiple instruments in macroprudential mortgage frameworks, consulting both the research literature and the experience of other jurisdictions. This work has also reflected on the operation of the dual collateral and income based restrictions (LTV and LTI) since the introduction of the mortgage measures.

Across Europe, borrower-based instruments tend to be used in combination. The stated purpose is typically to enhance their effectiveness, for example by covering a wider set of risks such as employment and housing shocks, and to limit circumvention. The IMF and ESRB report that LTV and DSTI limits are the most commonly used instruments globally (IMF, 2018) and in European countries (ESRB, 2021). In Europe, it is common for LTVs to be combined with an income-based measure such as a DSTI or LTI limit.

Borrower based instruments are commonly used in combination, despite substantial overlap due to both instruments restricting the same loan amount.

In practice, the two instruments in a dual-instrument framework will be subject to substantial overlap. This arises because both instruments restrict the same loan amount (L), relative to either household income (LTI, in the case of Ireland) or collateral value (LTV). The instruments will act, broadly speaking, to constrain similar types of borrowers in a similar way: for example an income-based limit acts to constrain the LTV choices of many borrowers, and vice-versa (Gaffney, 2019).

Central Bank analysis suggests that, given the current level of house prices to incomes in the economy and at current calibration levels of the LTI instrument (i.e. 3.5), the LTI limit is the predominant instrument determining the maximum amount of credit available to most borrowers accessing the mortgage market (see Box 1 for further detail). Only a specific group of borrowers with high incomes and relatively weak equity positions (such as those buying at the peak of the pre-2008 housing boom and looking to move), are likely to have credit availability determined by the LTV limit as currently calibrated.[7]

While LTI is currently the predominant binding constraint for an estimated three quarters of potential borrowers, LTV limits can be thought of as an additional tool to ensure that risks stemming from

[7] In addition, buy-to-let (BTL) borrowers' credit available will be determined exclusively by the LTV limit as they are exempt from the LTI requirement.

Back to "Contents"

low levels of housing equity are mitigated for all mortgage borrowers.

The importance of negative equity in financial crises cannot be overstated: negative equity acts as a "necessary condition" for mortgage default for most borrowers, acting as a "double trigger" in combination with income loss (Gerardi et al., 2018). Further, financial institutions experience losses on mortgages predominantly when negative equity prevails, highlighting the importance of equity cushions on mortgage loans for financial system resilience. Additionally, households' capacity to switch mortgage, borrow to finance consumption, or move home, are all curtailed by negative equity, with a range of adverse consequences for the economy.

Maintaining two policy instruments also allows for the capacity to change one instrument while leaving the other instrument stable, responding to specific sources of risk and providing additional policy flexibility in a rapidly-evolving environment.

Collateral and income based instruments can complement each other in improving the overall resilience of the economy. For example, income-based instruments tie developments in the housing and mortgage market to "real" developments in incomes, while also providing some affordability protection against adverse shocks. On the other hand, collateral-based limits provide a minimum guarantee of an equity cushion on all mortgages, which can bolster the resilience of financial institutions against changes in house prices and can complement regulatory capital-based instruments for banks.

In conclusion, it is the Central Bank's view that a dual-instrument approach (collateral and income based instruments) continues to be appropriate within the mortgage measures framework.

**The Central Bank proposes to maintain a dual-instrument approach with both a collateral-based and income-based instrument in place. In your opinion, is this dual-instrument approach appropriate? Please provide additional information to support your view.**

It is the Central Bank's view that a dual-instrument approach should be maintained within the mortgage measures framework. Collateral and income based instruments can complement each other in improving the overall resilience of the economy.

Back to "Contents"

## Box 1: The role of LTV and LTI within a dual-instrument framework

While LTI and LTV limits each have a distinct rationale within the mortgage measures framework, in practice each mortgage borrower will have a credit maximum determined by the more binding of the two instruments. In this Box, information on the income and equity distributions of mortgage borrowers is used to measure which of the two instruments is more likely to determine credit amounts.

The analysis in Chart A suggests that LTI is the predominant constraint likely to face most first-time buyers (FTBs), based on the distribution of incomes and deposits of recent mortgage originations. At current calibration levels, the LTV limit is expected to be the binding constraint among those on higher incomes, and with lower levels of liquid wealth available. Central Bank research suggests that, among the group that have accessed the mortgage market in recent years, LTV is often lowered through access to additional wealth, such as gifts, among those drawing down at the 3.5 LTI limit (Gaffney, 2019).

Among the group of "potential SSBs" (second-time and subsequent borrowers) – those who already have a mortgage - the primacy of the LTI limit is again clear (Chart B). Even in 2013, when house prices were weak following the previous crisis, 69 per cent of potential SSBs would have been restricted by a 3.5 LTI ahead of an 80 per cent LTV. By 2018, after substantial house price growth softened potential LTV-based constraints for many mortgage holders, the LTI-bound group grew to 81 per cent. Central Bank analysis suggests that the primacy of the LTI limit would continue to hold at higher levels of the LTI limit, and that expectations for further house price growth relative to incomes will further bolster this pattern.

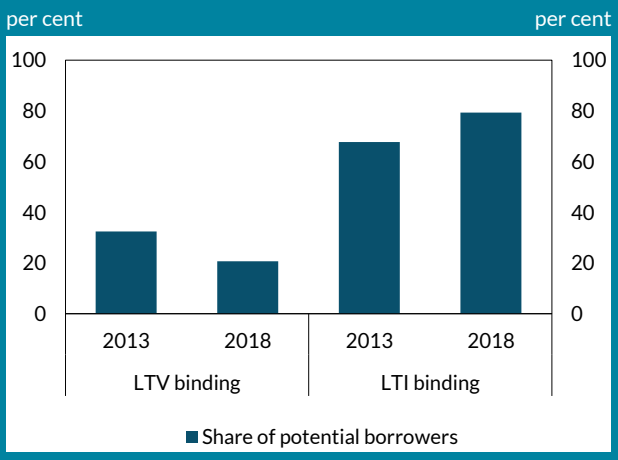
Each analysis suggests that the LTI limit is the predominant binding constraint among those accessing the mortgage market. This finding helps to inform on the way in which calibration choices on the LTV and LTI limits are interdependent, and on how they transmit to the borrowers looking to access mortgage finance.

**Chart A: Constraint for a range of income and wealth levels; potential FTBs**

| Wealth → / Income | €25k | €40k | €72k |
|---|---|---|---|
| € 50,000 | LTI | LTI | LTI |
| € 66,000 | LTV | LTI | LTI |
| € 87,000 | LTV | LTI | LTI |

Source: Central Bank of Ireland, new mortgage lending monitoring template 2015-2020.

**Chart B: Binding constraint; potential SSB borrowers**




Source: Central Bank of Ireland, Household Finance and Consumption Survey.

Notes: Estimates of credit available (CA) presented throughout, which calculate hypothetical maximum mortgage amounts as the minimum of two mortgages: one based on each of the LTI and LTV limits. In chart A, the income and wealth amounts are chosen to represent the 25th, 50th and 75th percentiles of the income and deposit distribution among FTBs between 2015 and 2020. Direct estimates of FTB wealth are not included, because they cannot be measured reliably in micro data sources due to the potential availability of parental and other family gifts. In chart B, rather than using information on mortgage drawdowns, the joint distribution of income and home equity of a representative sample of mortgage holders is used. The LTV-based loan is calculated as (4* home equity), reflecting the SSB LTV limits of 80 per cent in place since 2015, on the assumption that only home equity and no other financial resources are used to fund SSB downpayments.

Back to "Contents"

## Choosing an income-based instrument

While the LTV limit has no alternative formulation, the income-based limit can take several different forms, with examples of these seen internationally. In Ireland, the mortgage measures framework currently uses a loan-to-gross-income (LTI) ratio as its income-based instrument.

In DTI and DSTI measures, the ratio generally includes all the debt of the borrower, and not just the mortgage loan amount which is used in an LTI measure. In a number of jurisdictions, the total debt ratio is motivated by the prevention of leakages from mortgage debt limits in the form of unsecured credit taken out by borrowers, often to fund a mortgage deposit. As part of the framework review, the Central Bank has reviewed the relative merits of LTI, DTI and DSTI ratio limits and has also considered the use of net income compared to gross income for the income-based macroprudential instrument.

### Debt-to-Income (DTI) versus Loan-to-Income (LTI)

One set of considerations is whether the income-based limit should cover only mortgage debt or include other types of household debt.

An LTI limit, focussing solely on mortgage debt, has the advantage of directly addressing the core element of the Central Bank's proposed objective statement, which focuses on risks stemming from unsustainable *mortgage* lending standards. This reflects the centrality of housing assets and mortgage debt for household and lender balance sheets in Ireland and, more broadly, for financial stability. In Ireland, mortgages are the largest liability on the household sector's balance sheet and the largest loan exposures on the banking sector's balance sheet.

The first potential rationale for moving to DTI relates to concern about possible leakages from an LTI or an LTV measure due to borrowers taking on unsecured loans to meet these requirements. In Ireland, Central Bank analysis of loan drawdowns finds that borrowers *reduce* their non-mortgage debts prior to mortgage origination (see Box 2), indicating that this pattern has not been in operation to date. In addition, the data available to assess the relative size of mortgage and non-mortgage debts is now available and regularly analysed by the Central Bank, through both the Central Credit Register and the mortgage measures monitoring templates data. It is also the case that drawdowns of non-mortgage credit to

It is the Central Bank's view that DSTI and DTI limits are less appropriate than LTI limits for use in the Irish mortgage measures framework.

A DTI limit at mortgage origination would only capture a relatively small additional amount of borrower indebtedness.

A DSTI limit would have the potential to increase the inherent pro-cyclicality of the framework, as well as its complexity due to the potential need for maturity limits and stressed interest rates alongside DSTI.

Back to "Contents"

boost the size of a mortgage downpayment would be in contravention of the anti-avoidance clause within the mortgage measures, and would also fall short of the supervisory expectations placed on lenders.

A second potential rationale for expanding the income-based limit to other forms of debt would be if non-mortgage household debt, in and of itself, was particularly material from a financial stability perspective. Central Bank analysis suggests that among recent borrowers of mortgage home loans, non-mortgage debts are small relative to home loan debt at mortgage origination. Approximately 70 per cent of mortgage borrowers in 2020 had either no or very low value non-mortgage debt (below €1,000) at the point of mortgage origination (Box 2). On this basis, a DTI limit at mortgage origination would only capture a relatively small additional amount of borrower indebtedness, and is unlikely based on recent experience to mitigate material levels of additional systemic risk.

There is some evidence that mortgage borrowers increase their levels of borrowing after mortgage origination (Box 2), although these additional non-mortgage borrowings reach just 6 per cent of mortgage debt balances two years after mortgage origination. From a practical point of view, if one were concerned from a systemic risk perspective about the level of drawdown of non-mortgage debts after mortgage origination, it would be necessary to regulate the DTI limit at the origination of *all* credit agreements. This would entail a significant increase in the number of credit agreements covered by the borrower-based measures, which based on 2020 loan originations, would increase by a factor of twelve.[8] Furthermore, there are a wide array of finance providers offering consumer credit in Ireland, including retail banks, credit unions, and a range of other types of lender. If the mortgage measures were to regulate DTI at origination of all mortgage and consumer credit contracts, there would be a substantial increase in the number of lenders covered by the measures. This would entail a significant regulatory burden to cover a relatively small amount of additional debt. A continuous monitoring of trends across mortgage and non-mortgage borrowing in the future will allow the Central Bank to assess whether its current

[8] Based on credit agreements on the Central Credit Register that were originated to individuals during 2020 and that remained outstanding at the end of that year.

Back to "Contents"

assessment of the non-systemic nature of non-mortgage borrowing continues to hold.

Finally, there are inherent differences between different types of household debt from an affordability perspective, which are not captured well under a debt-to-income tool. Because of very different interest rates and terms, a given value of mortgage debt poses a very different risk to a typical unsecured debt of equal value. For example, a typical personal loan incurs a higher interest rate and is required to be repaid more quickly than a typical mortgage loan.[9] A debt-to-income tool would treat these as equivalent, which is not desirable to capture the different types of risks posed by these borrowings.

Overall, given the evidence to date, the Central Bank does not judge that the costs of increased complexity of moving to a DTI limit would justify the benefits from a financial stability perspective, given the objectives of the mortgage measures.

### Debt-Service-to-Income (DSTI) versus Loan-to-Income (LTI)

DSTI limits are commonly used in other jurisdictions (IMF, 2018). These limits consider the capacity of borrowers to service their debt relative to their income, focussing on monthly repayments rather than total loan balances outstanding. This topic was raised by numerous members of the public in their feedback in the online survey.

The conceptual benefit of a DSTI metric, relative to an LTI, is that it aligns borrowing capacity closely to individual repayment capacity at the time of origination. However, there a number of potential limitations to such a measure, relative to a LTI limit.

First, a DSTI based limit creates an incentive for very long maturities which would lower monthly repayments in order to comply with the regulation. There are additional risks associated with longer mortgage maturities, for example through slower amortization.[10] To guard against these risks, many jurisdictions that employ a DSTI limit

[9]For example, €1,000 of a personal loan with a term of 5 years and an interest rate of 7.55% is not comparable from an affordability perspective to €1,000 of a mortgage loan with a term of 25 years and an interest rate of 2.72%. (Weighted average interest rate on consumer loans and new Irish mortgage agreements as of September 2021: Central Bank of Ireland – Retail Interest Rates – September 2021, Statistical Release (10 November 2021).

[10] For example, Kelly et al. (2015) show that, after controlling for LTI and LTV at origination, longer-term mortgages have higher default risk in Ireland.

Back to "Contents"

also introduce additional maturity limits. This increases the complexity of the overall framework, in order to address a limitation of the chosen DSTI measure.

Second, moving to a DSTI limit would create a direct link between the borrowing limits afforded by the mortgage measures and the level of mortgage interest rates. This may not necessarily be a desirable policy outcome, depending on the factors that drive mortgage interest rates. In cases where lower mortgage interest rates reflect longer-running structural changes, as embedded in a lowering of the "natural rate" of interest across the economy, it may be desirable for the increased borrowing capacity that is associated with a lower natural rate to be reflected in the calibration of mortgage measures. However, given that mortgage contracts have long durations, there are risks associated with the inherent uncertainty around both estimates of and projections for the natural rate. In that context, the extent to which regulations such as the mortgage measures should enable different levels of indebtedness in response to movements in the estimated natural rate is a key policy judgement. It would not necessarily be optimal for that to be a mechanical outcome of the regime at all times, which would be the case under a DSTI tool.

In addition, the Central Bank's assessment has highlighted two additional drivers of mortgage interest rates that may limit the desirability of DSTI as a policy tool. Firstly, mortgage rates will respond to changes in monetary policy owing to cyclical factors that may move the policy rate temporarily away from the equilibrium rate, and will vary over time depending on shocks affecting the economy. From the perspective of the mortgage measures, it may not be desirable that such cyclical changes in the monetary policy stance would directly translate into an increase in the mortgage amount that is compliant with the macroprudential limit, as would be the case under DSTI regulation.

The long-term nature of mortgage liabilities must be considered in the context of cyclical changes in monetary policy also. The vast majority of Irish mortgages are either floating-rate or on fixation periods of less than five years. The larger loans issued in compliance with DSTI regulation during periods of low rates would create greater exposure to future interest rate rises, potentially increasing medium-term risks across a full interest rate cycle.

Back to "Contents"

Mortgage interest rates are also influenced by lenders' own risk taking behaviour, as summarised for example by the spread of mortgage rates over risk free interest rates. Given the objectives of the measures, it would not be appropriate for this element to be embedded directly within the macroprudential limit, as would again be the case under a DSTI regulation. A range of non-mortgage credit conditions, such as documentation requirements, approval of weaker credit scores and the treatment of irregular income, have also been shown to loosen when mortgage spreads are lower. These factors imply that, under a DSTI, a fixed macroprudential policy stance would actually allow for looser borrowing conditions at precisely the same time that a range of other cyclical factors are leading to accumulation of risk in the housing and mortgage market.

Some of the above concerns could be mitigated by the inclusion of a set stressed interest rate together with the DSTI and maturity limits.[11] However, as with the addition of the maturity limit, this adds further complexity to the framework. Indeed, a DSTI limit, with a stressed interest rate parameter and a maturity limit would become equivalent (in a more complex way) to an LTI limit.

Central Bank analysis of mortgages since 2015 highlights the interaction between the interest rate environment and borrower and lender behaviour. Substantial reductions in new mortgage interest rates since 2015 have been accompanied by an increase in the average and median amounts on new mortgage loans, reflecting the growth in house prices and the capacity to service larger debt amounts at lower rates. This implies that, despite lower rates, mortgages are larger relative to incomes in 2020 than they were in 2015. If a macroprudential DSTI ratio had been in place, this tendency would have been further amplified as the lower rate environment would have directly fed into the maximum mortgage amounts available under the macroprudential regulation.

Finally, lenders' own credit assessments typically rely on a debt-service type metric, which will vary based on tax treatment converting gross to net income, as well as the interest rate prevailing.

[11] Stressed interest rate requirements would ensure that borrowers are able to meet repayments in a scenario where interest rates increased – for example, a stressed interest rate of 2 per cent above the loans current interest rate. A similar requirement to stress test the interest rate is included in the Consumer Protection Code.

Back to "Contents"

These credit assessments are subject to regular scrutiny from the Central Bank under both a prudential and a consumer protection mandate. The adoption of a DSTI metric as a macroprudential tool would risk blurring the lines between the macroprudential measures and the responsibility of lenders to continue to use these assessments as a core part of credit risk management, which the Central Bank believes is the first line of defence against the build-up of systemic risk.

Overall, a potential move to a DSTI limit would have the potential to increase the inherent pro-cyclicality of the framework as well as its complexity, due to the potential need for maturity limits and stressed interest rates alongside DSTI.

Back to “Contents”

## Box 2: Overall debt profiles of mortgage borrowers

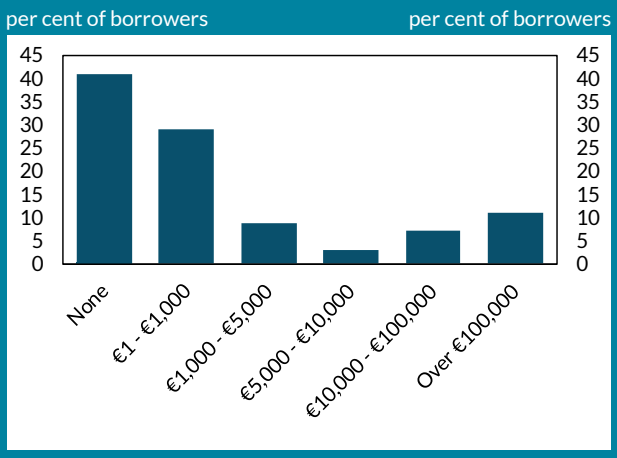
This Box uses information from the Central Credit Register and mortgage measures monitoring templates to identify debt profiles of owner-occupier mortgage borrowers, focusing on debts not secured on the main residence, which are not covered by the mortgage measures.

Most mortgage borrowers have no other debts or very small debts at the time of mortgage drawdown. Among borrowers of home loans in 2020, average debt for all other purposes was only six per cent of the size of the home loan. The median amount was less than €1,000 (Chart A). Most of the total is consumer debt, such as personal loans, hire purchase agreements and credit cards. Business debt and buy-to-let mortgage debt are significant for a small number of borrowers, but are not large on aggregate among current mortgage applicants.

The Central Credit Register shows that the average home loan borrower takes on more debt in the years after mortgage drawdown. This pattern is most prominent among first-time buyers, whose average non-mortgage debts rise from 2.6 per cent to 5.8 per cent of the size of the home loan after two years (Chart B). Personal loans over €15,000 comprise almost half of the growth in debt, including a large share of loans for home renovations.

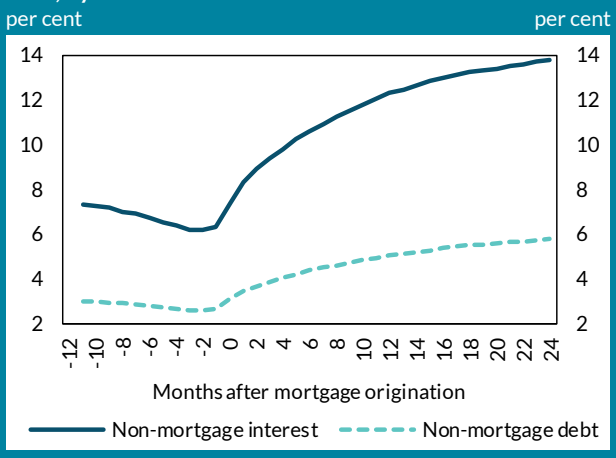
Consumer debts typically involve higher interest rates than mortgages. Consequently, average non-mortgage interest costs rise relatively more strongly than debt balances, from 6.3 per cent to 13.8 per cent of home loan interest costs after two years. These findings show that the total amount owed by mortgage borrowers, and their debt service costs, can increase significantly from the levels observed by lenders at the time of mortgage origination.

**Chart A: Profile of non-mortgage debt size among owner-occupiers borrowing in 2020**




Source: Monitoring Templates Data, Central Bank of Ireland.
Notes: Sample of four mortgage lenders providing data on non-mortgage debts to the Central Bank of Ireland.

**Chart B: Non-mortgage interest costs and debt among FTB borrowers as shares of home loan interest costs and debt, by month**




Source: Central Credit Register, Central Bank of Ireland.
Notes: Non-mortgage interest and debt during the 12 months prior to drawdown and the first 24 months of the home loan, expressed as shares of mortgage interest and debt at the time of origination.

Back to "Contents"

## Box 3: The relationship between LTI and Debt or Loan Service to Income (DSTI/LSTI)

This box examines the relationship between DSTI/LSTI and LTI. It highlights differences in the DSTI and LTI distributions, showing the shares of mortgages at different LTI levels by their DSTI category. It also illustrates the LSTIs equivalent to LTI of 3.5 for different household types.

Estimates of DSTI using mortgage measures monitoring templates data show that as LTI increases, average DSTI also increases. To explore the relationship between DSTI and LTI, Table A shows shares of borrowers' DSTI levels within categories of LTI. While 60% of borrowers with an LTI<3 have a DSTI<20%, 13% of borrowers with an LTI <3 have a DSTI>33%, a threshold often considered excessive (Kelly et al 2019). These are typically older borrowers who are borrowing at shorter maturities, while higher interest rates also play a role in explaining higher DSTI levels at lower LTIs. 83% of borrowers with an LTI above the 3.5 limit have a DSTI of between 20-33% at current mortgage interest rates.

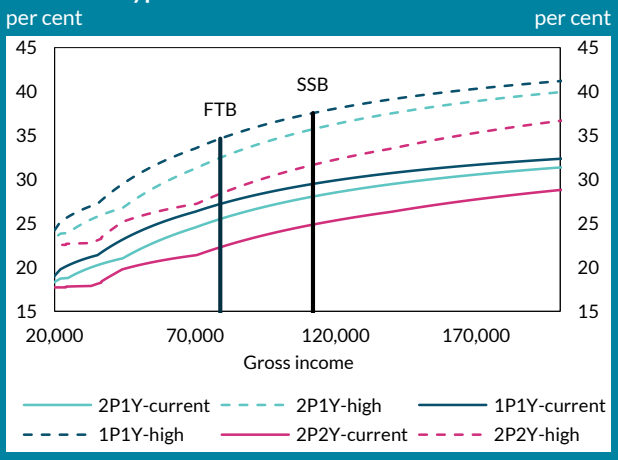
Chart B shows how much LSTI can vary at a 3.5 LTI for different household types and income levels, due to the progressive nature of the Irish tax system and the different treatment of couples and single people.[1] The analysis indicates that, if drawing down the maximum LTI, between a quarter and a fifth of net income is being used on mortgage repayments for most borrower types assuming mortgage interest rates are around current levels. Mortgage repayment burdens as a share of post-tax income grow larger as incomes rise, reflecting higher tax rates among higher-income borrowers.

**Table A: Share of mortgages at different LTI levels, by DSTI category**

| DSTI | | LTI | |
|---|---|---|---|
| | <3 | >=3<=3.5 | >3.5 |
| <20% | 60 | 28 | 12 |
| >=20-<=33% | 27 | 64 | 83 |
| >33% | 13 | 8 | 6 |

Source: Calculations using monitoring template data.
Notes: Percentage share of borrowers. DSTI is estimated on a best efforts basis. Net income is used to calculate DSTI along with the total instalment on the loan and an estimate of the repayment of additional non-loan debt. 2020 data only.

**Chart B: LSTI ratio equivalent to 3.5 LTI among different household types**




Source: Central Bank of Ireland.
Notes: solid lines calculate LSTI based on a 3% mortgage rate, while dashed lines use a 5% rate. 2P2Y refers to a 2-person, 2-income household. Solid vertical lines indicate average incomes of the FTB and SSB groups in recent mortgage origination data.

[1] LTI is converted into a loan service to net income ratio (LSTI) and the implicit repayment burden for various representative incomes and household compositions is calculated, based on average interest rates and loan terms and the 3.5 LTI limit. Three different household groups are considered (single, one-income couple and two-income couple) which are treated marginally differently for tax purposes. The LSTI repayment burdens are calculated (excluding non-mortgage debt) based on a loan amount of 3.5 times income over a term of 30 years, bearing the weighted average of new mortgage lending rates during June 2021 (2.68%).

Back to "Contents"

## Gross versus net income

The LTI limit is currently based on gross household income before tax. The Central Bank has also considered the appropriateness of an LTI limit based on net income (LTNI).[12]

The use of net income would conceptually be more closely aligned to individuals' available income that can be used to repay borrowing, at the point of mortgage origination. In addition, the use of gross income implies that borrowers with lower effective tax rates can borrow a smaller multiple of net income. Due to the progressive income tax system in Ireland, a flat gross LTI limit of 3.5 effectively limits lower-income borrowers to a smaller multiple of their net income than is the case for higher-income borrowers. The use of an LTNI instrument could potentially address this differentiation by setting the loan amount as a proportion of their net income.

The Central Bank has concluded that there would be substantial challenges, complexities and risks associated with a move from LTI to LTNI. Firstly, credit outcomes would change in a variety of ways across different cohorts of borrowers, due to the differing tax treatment across the population, posing different distributional challenges. For example, for single borrowers, who do not avail of the sharing of tax credits, net incomes are lower than for dual-income households. Furthermore, some types of employment involve larger deductions to gross salary, so the available multiple of net income is also relatively higher when facing a gross LTI limit. A move to an LTNI instrument would be more constraining on these borrowers, and would also involve challenges in defining which deductions from gross income should and should not be included in defining net income.

In addition, by moving from an LTI to an LTNI regime, the mortgage measures would become more exposed to changes in tax policy. Direct experience of the previous two decades in Ireland suggests that tax policy is cyclical to economic conditions, with net income likely to be a larger fraction of gross income during a boom, and a smaller fraction of gross income during a downturn. This feature would create pro-cyclicality in the mortgage measures, with

[12] Throughout this section, the term "net" income is used to refer to income after taxes and other statutory deductions.

Back to "Contents"

borrowing capacity for a given annual (gross) salary higher during a period of strong economic growth.

Finally, the Central Bank is mindful that net income is used in lenders' own credit risk assessments during mortgage applications, and believes it is appropriate for the mortgage measures to address system-wide risk using an LTI based on gross income, which acts as a guardrail to complement these internal lender assessments. With these factors in mind, the Central Bank proposes to maintain the income-based limit based on gross rather than net income.

**Summary**

It is the Central Bank's view that DSTI and DTI limits are less appropriate than LTI limits for use in the Irish mortgage measures framework. A DTI limit at mortgage origination would only capture a relatively small additional amount of borrower indebtedness. A DSTI limit may require additional regulation in the form of maturity limits and stressed interest rates leading to a more complex income-based instrument. Any move to a DSTI or DTI limit could add significant complexity to the mortgage measures framework and additional burden in monitoring compliance with the regulations. Further, it is the Central Bank's view that macroprudential measures should act as a system-wide guardrail to lenders' own credit risk assessments rather than replacing them, with LTI being more appropriate for this purpose than DTI or DSTI. However, the analysis underpinning this conclusion, in particular the link between DSTI and LTI and the structural changes in the interest rate environment, will continue to inform the Central Bank's considerations in determining the strategy for calibration of the measures.

**Taking both the proposed objective statement for the mortgage measures and the pros and cons of different income-based instruments into account, what are your views on the Central Bank's proposal that LTI remains the most appropriate income based instrument? Please provide additional information to support your response.**

## Use of Allowances

Allowance lending, or lending above the LTV and LTI limits, has been part of the mortgage measures framework since their introduction in 2015. The allowances allow the LTI and LTV limits to be calibrated at

Back to "Contents"

the system level, while providing flexibility for individual borrower considerations.

As part of the framework review, the Central Bank has examined the role of allowances in the overall mortgage measures framework.

The responses to the online survey highlighted some of the challenges relating to the allowance framework, with many respondents perceiving the availability of allowances to be limited predominantly to high-income borrowers. Frustration was expressed relating to the uncertainty and lack of transparency around the process of obtaining an allowance.

As part of the annual review in 2021, the Central Bank made changes to the allowances with the introduction of a "carry-over" system. The aim of this amendment is to increase the flexibility available to lenders to manage their allowances throughout the year and should help alleviate at least some of the operational issues with the allowances.

Allowances are now a well-established part of European countries' mortgage measures frameworks, having grown in usage since the Central Bank introduced the measures in 2015. Looking across countries, the allowances in Ireland are high as a proportion of total lending. By contrast, the calibration of the "headline" limits (in particular the LTI limit of 3.5) is lower than in many other countries (ESRB, 2021).[13] The net effect on the credit market of having a larger pool of allowances partially offset a lower headline LTI limit is difficult to accurately measure.

The allowances have played an important role in the Irish framework, providing flexibility for lenders and borrowers since their introduction. For example, the framework has been better able to deal with slow-moving structural factors in recent years, such as those relating to interest rates and housing supply constraints, than would have been the case with a smaller allowance pool. More broadly, it is an important principle of the regime that a macroprudential intervention will need to have flexibility to incorporate specific individual circumstances.

[13] ESRB (2021). "A Review of Macroprudential Policy in the EU in 2020" and information provided by central banks and national supervisory authorities

Back to "Contents"

When considering the appropriate calibration of the mortgage measures to meet a given policy objective, there is a balance to be struck between the calibration of the level of the limit and the level of the allowances. There are a number of issues that can inform this policy choice, including:

- Which elements of the distribution of new lending matter most from the perspective of the desired policy objective. The policy maker must ascertain whether policy objectives are best achieved by curtailing particularly high LTV / LTI lending (which would motivate minimising the size of the allowances) or by influencing a greater proportion of the distribution of new lending.
- The potential that any limit might be seen as a form of a target by lenders or borrowers.
- The degree of flexibility that is optimal to embed in the measures to deal with slow-moving, structural changes in the economy and financial system, without having to regularly recalibrate the limits themselves.
- The regional distribution of property prices across the country in the context of a uniform national limit.

The Central Bank has collected data on a regular basis, since the introduction of the mortgage measures, in order to facilitate monitoring and analysis. This has provided insights on loans which have received allowances. Focussing firstly on FTBs, borrowers with an allowance tend to be younger than those without an allowance. The use of allowances is predominant in Dublin and other higher-price urban regions, which leads to higher-price properties being purchased by borrowers with an allowance. However, it is not only across regions that borrowers with an allowance tend to access higher-value housing; even within a region, allowance loans tend to be for higher-value properties than those without an allowance. Among FTBs, loans with an allowance go to higher-value properties that appear similar in value to those being accessed by SSBs (see Box 4 for further detail on the geographic and house price distribution of these loans). Given the dominance of urban areas in the allowance pool, these borrowers tend to have higher incomes. Many of these patterns, particularly relating to the dominance of the Dublin market

Back to “Contents”

and higher-value properties, hold when analysing SSB usage of the LTI allowances.

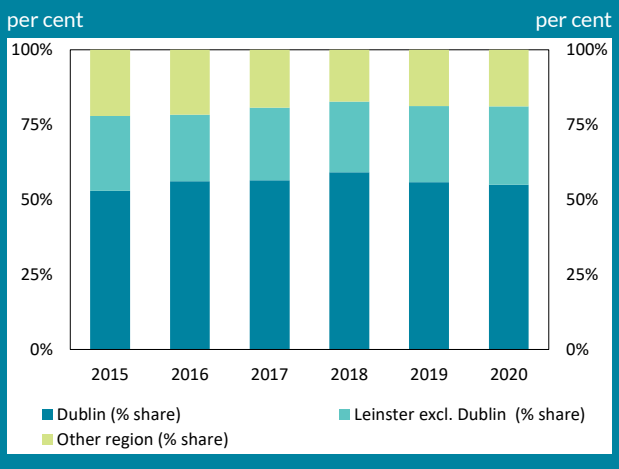
## Box 4: The use of allowances in the mortgage measures framework

Allowances represent a significant proportion of the lending to homebuyers, accounting for an average of one in five loans since the introduction of the measures. These mortgages above the LTI and LTV limits differ systemically from other mortgages both in terms of assignment and housing market outcomes.

Mortgages with an allowance tend to be more common in regions with high house prices relative to incomes, such as Dublin. This is especially true for the LTI allowance cohort. Chart A shows the share of primary dwelling house (PDH) loans with an allowance from 2015 – 2020. Over half of all allowances are originated to borrowers purchasing in Dublin, with a further quarter in the commuter counties of Kildare, Meath and Wicklow.[1] On average these loans have higher originating balances, higher average incomes and longer loan terms, in part reflecting the younger age of the borrowers with an allowance (New Mortgage Lending, 2020).[2]

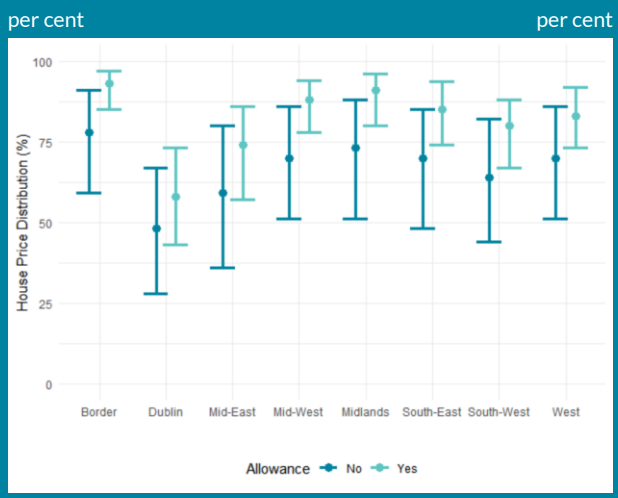
Borrowers with allowances are associated with significantly higher house prices, even after accounting for regional differences. Chart B shows the interquartile range for FTBs (with and without allowance) within the overall house price distribution (based on the property price register) over 2015 -2020. This shows that FTBs with an allowance use the additional leverage to purchase significantly more expensive properties, even within the same region. In contrast, SSBs with an allowance purchase properties that are broadly similar to those without an allowance. This chart highlights that the use of allowances facilitates FTBs to purchase a more expensive property than they otherwise would have done (and in fact, purchase properties more similar in price range to those of SSBs).

**Chart A: Share of lending with an allowance by region, 2015 – 2020**




Source: Monitoring Templates Data, Central Bank of Ireland.
Notes: Both LTV and LTI allowances.

**Chart B: Interquartile range for FTBs with & without an allowance, within the overall house price distribution by region**




Source: Property Price Register and Monitoring Templates Data, Central Bank of Ireland.

[1] Approximately 70% of borrowers with an allowance in the Leinster (excluding. Dublin) category are located in these three counties.
[2] SSBs with an LTV allowance and FTBs with an LTI allowance have higher average incomes,. However SSBs with an LTI allowance tend to have a lower average income.

Back to "Contents"

The current framework for allowances allows a relatively high proportion of lending above the LTV and LTI limits. Allowances have become particularly important, based on current calibration levels, in facilitating access to credit for certain borrower groups, in particular in certain regions. This means that lenders' commercial decisions have wider socioeconomic implications in Ireland than in regimes that have a smaller proportion of loans allowable above the calibrated level of the limits.

It is proposed as part of the framework review that the allowances remain part of the framework, continuing to allow lenders to issue a certain amount of above-limit credit to cater for idiosyncratic individual circumstances. However, it is proposed that as part the framework review, the Central Bank would revisit the balance between the calibration of the limits and size of the pool of allowance lending.

**What is your opinion on the role of allowances as part of the mortgage measures? Do you agree that allowances are important to maintain flexibility within the framework?**

**What is your view on the proposal that the Central Bank reconsider the balance between the calibration of the limits and the level of the allowances?**

It is the Central Bank's view that the allowances remain part of the framework, continuing to allow lenders to issue a certain amount of above-limit credit to cater for idiosyncratic individual circumstances. However, it is proposed that the Central Bank would revisit the balance between the calibration of the limits and size of the pool of allowance lending.

## Differential limits by borrower type

Under the mortgage measures framework, a common LTI limit of 3.5 currently applies to both FTBs and SSBs, whereas a differential LTV applies: 90 per cent for FTBs, 80 per cent for SSBs, and 70 per cent for Buy-to-Let (BTL) mortgages.[14]

The feedback received from the online public engagement survey highlighted the LTV differential between FTBs and SSBs as a source of concern among many respondents. This feedback has led to the differential LTV limit becoming a primary area of focus for the mortgage measures framework review. The Central Bank considers the rationale for the tighter LTV limit for BTL borrowers as still valid, given the links between strong house price growth and the historic share of BTLs in the housing market, alongside a positive correlation

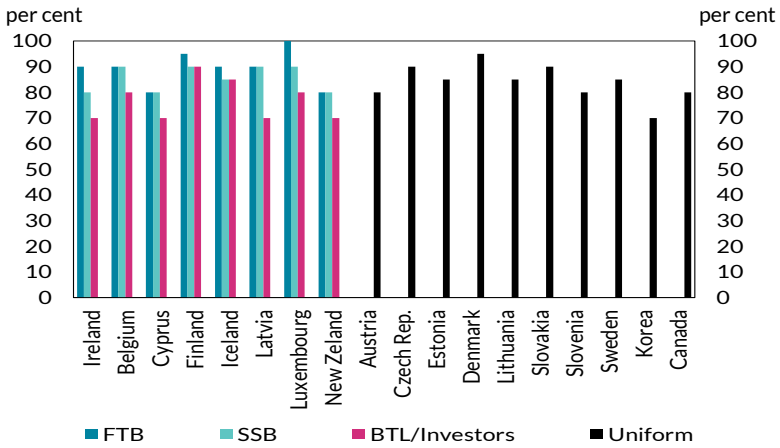
[14] The LTI limit does not apply to BTL borrowers.

Back to "Contents"

between overvaluation in the market and BTL activity (McCarthy et al, 2015).

Differential treatment for different borrowers has been reviewed in light of international experiences, the rationale behind the differentiation, and the dual-instrument approach favoured by the Central Bank (i.e. use of both an LTV and LTI limit). A review of the international literature indicates that differential limits are a common feature of macroprudential mortgage measures, albeit by no means a universal approach. The iMaPP database compiled by the IMF highlighted a number of countries where different LTV limits applied across loan categories (IE, BE, CZ, FI, LV, LU, NZ, IS) as shown in Chart 1.

**Chart 1: Differential LTV limits across selected countries**




Source: ESRB: Review of Macroprudential Policy in the EU in 2020 (published July 2021), IMF: iMaPP database (published August 2021) and select National Authorities.
Notes: Denmark, Austria and Belgium have recommendations rather than binding regulations in place. In Denmark, stricter LTVs apply when DTI surpasses a certain threshold. In Cyprus, an LTV of 80% applies to all primary permanent residences and 70% to all other. In Estonia and Latvia, the max. LTV increases by 5pp with a public guarantee. In Canada, the LTV increases for government-insured mortgages and decreases for non-conforming loans. In Korea, LTVs are considerably tighter for certain locations. Chart does not included allowed LTV ranges implied by allowances.

Central Bank research has highlighted a number of areas in which a strong rationale for a differential limit across borrower types exists.

Firstly, in the current framework, the differential limit is grounded in evidence of lower credit risk among FTBs. Kelly, O'Malley, O'Toole, (2015) show that FTBs have lower default risk relative to SSBs, and that this differential was particularly strong after the previous crisis among loans issued at LTV levels between 80 and 90 per cent. This finding continued to hold using data on defaults updated to 2018

Back to "Contents"

(Giuliana, 2019) and during the pandemic when measured through payment break take-up rates (Gaffney and Greaney, 2020).

Second, the differential treatment between FTBs and SSBs is also a mechanism for the framework to recognise, and account for, the difficulties FTBs have in saving for a deposit, while meeting rental payments. The higher LTV limit and corresponding lower deposit requirement for FTBs was incorporated into the design of the mortgage measures following feedback to the Central Bank's original consultation in 2014.[15] While motivated by the different credit risk of FTBs compared to SSBs, the higher LTV limit for FTBs also acknowledges challenges around access to finance and home ownership that are experienced by FTBs. Difficulties in accumulating a deposit while simultaneously paying rent was once again a key theme highlighted by respondents to the online survey earlier this year. Alongside difficulties in saving for a deposit, respondents also felt that a track record of meeting rental payments should be given greater consideration as part of a mortgage application. As discussed in Box 6 below, the Central Bank's view is that a minimum level of housing equity, as required by an LTV limit, is critical from a systemic risk point of view. However, the use of a lower deposit requirement for FTBs compared to SSBs does provide a mechanism for acknowledging some of the issues FTBs have in saving for a deposit while meeting rental payments.

Third, it is also the case that, by virtue of the nature of housing equity accumulation, the two borrower groups respond very differently to the house price cycle. When house prices are rising, a fixed LTV limit will act to counter-cyclically reduce the capacity of renters to enter the FTB market, given that higher house prices mean a requirement for a larger downpayment. By contrast, for those already with a mortgage (potential SSBs), a fixed LTV limit acts pro-cyclically during a housing upswing. As house prices rise, home equity grows, increasing the property value at which mortgaged households can transact if they sell their existing property as part of a move. These home equity effects can be significant. For example, house price growth since 2015 has more than doubled the value of property that could be purchased solely by converting home equity into a 20 per cent deposit for the average potential SSB (see Box 5).

[15] See Feedback Statement on CP87.

Back to "Contents"

The dual-instrument nature of the mortgage measures framework discussed in Section 3 also has implications for the differential limits. The degree to which differential limits on LTV across borrower types (as in the current framework) will actually lead to differing credit outcomes will depend on the binding nature of the LTI limit through the housing cycle. In cases where the LTI is the binding constraint, the differential LTV treatment across borrower types will have a negligible impact on credit volumes. Estimates presented in Section 3 suggest that LTI is the binding constraint for around three quarters of potential SSB purchasers currently, which restrains the direct role that is played by the differential LTV limit in driving aggregate outcomes.

Overall, it is the Central Bank's view that a differential limit by type of borrower group continues to have merit. A differential limit ensures that the fundamentally different role played by borrower types in the housing cycle features explicitly within the framework. Therefore, the Central Bank proposes that a differential treatment across FTBs and SSBs should be maintained as part of the mortgage measures framework. Nevertheless, there are different options for achieving that outcome: via differential limits on either or both instrument, or via differential allowances (combined with a uniform limit). The Central Bank would welcome feedback on the merits of different options for achieving this.

It is the Central Bank's view that a differential limit by type of borrower continues to have merit. Differential treatment ensures that the fundamentally different role played by borrower types in the housing cycle features explicitly within the framework.

**The differential treatment for FTBs reflects their different risk profile and the challenges for FTBs in accessing mortgage finance, including paying rents while saving for a deposit. Would you agree that differential treatment across borrower groups remains suitable, given their different characteristics and the different roles they play in the housing cycle?**

**If so, what would you consider to be the most appropriate option for the choice and design of implementing differential treatment across borrower groups?**

Back to "Contents"

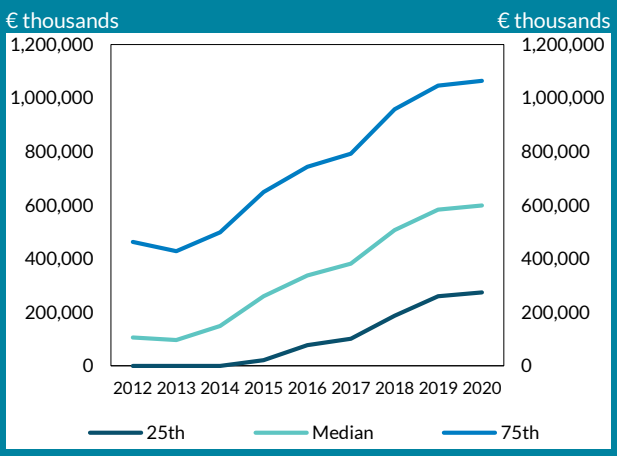
## Box 5: FTBs, SSBs, and the housing cycle

The differential LTV limit across borrower types has been motivated in the framework up to now by difference in default risk between FTBs, SSBs and buy-to-let borrowers (BTLs). In this Box, we highlight an additional rationale for differential treatment of FTB and SSB borrowers: their role in amplifying the housing cycle.

Put simply, house price growth has opposite effects across the two borrower types: for renters looking to enter the FTB market, house price growth makes saving for a downpayment more difficult, as the euro value required rises for a fixed LTV limit. Conversely, among those with a mortgage looking to enter the SSB market, house price growth increases the value of home equity, which can be monetised upon sale and carried forward and leveraged as a downpayment for the subsequent purchase. These differences, along with risks relating to mortgage holders extracting equity from their homes to finance consumption, are key channels through which the housing market can pose substantial macro-financial risks through cyclical amplification.

Chart A shows the extent of this during the recent housing cycle. Between 2012 and 2020, as house prices grew substantially in Ireland, the size of potential house purchases available to mortgaged homeowners grew accordingly. In 2012, the median mortgage holder could purchase a new home worth roughly €105,000 based solely on leveraging their existing home equity at an LTV of 80, with more than one quarter of borrowers having zero capacity to transact due to negative equity. By 2017, the median value had grown to close to €380,000, and to almost €600,000 by 2020, substantial increases in transaction capacity that "passively" accrued to mortgage holders as a result of the housing cycle.

**Chart A: Distribution of maximum payable house purchase prices out of home equity for SSBs, 2012-2020**




Source: Central Bank of Ireland Loan Level Data.
Notes: Estimates of the "maximum payable amount" in Chart A are based on the cross-section of mortgage borrowers' home equity positions at December of each year from 2012 to 2020. In all cases, home equity is multiplied by 5 to calculate the purchase amount available to each borrower (based on the assumption of a 20% deposit requirement for second and subsequent buyers).

Growth in the 75$^{th}$ percentile highlights the power of leverage to facilitate large mortgage transactions during a housing upswing. If all home equity was converted into a downpayment for a new mortgage, the top 25 per cent of borrowers would have been able to purchase a home worth €650,000 in 2015, at

Back to "Contents"

an LTV of 80 per cent. This figure had risen to €1.1million by 2020, owing to the substantial house price appreciation that had occurred in the intervening years.

By contrast, for those in the rental market aiming to enter the FTB market at a 90 per cent LTV, the savings amount required grew in each year from 2013 to 2020. Based on an estimate of national average nominal house prices (calculated using a combination of nominal hedonic average values from the PTSB/ESRI index in 2005 with CSO house price indices), a prospective FTB buying the average property would have required a €17,000 downpayment at end-2013, with this rising to €25,000 by end-2017 and €28,000 by end-2020. Given that this growth in downpayment required during a housing upswing will lead to an increased in the length of time spent saving, a constant LTV limit acts counter-cyclically to slow transactions in the FTB segment. This effect is stronger if rents are growing at the same time, eroding savings capacity, or if house price growth outpaces income growth for renters.

### Box 6: Rental payments and prospective home buyers

Respondents to the Central Bank online survey highlighted how rental payments made by prospective home buyers were a key barrier in saving for a deposit. In addition, their ability to consistently pay rent was not sufficiently, in their opinion, taken into account when determining the creditworthiness of their mortgage application. Respondents highlighted how rental payments currently are often higher than the monthly payment associated with a mortgage required to purchase an equivalent property,

The Central Bank is acutely aware of the challenges in saving for a deposit, particularly for FTBs who do not hold any equity in an existing property. These challenges are acknowledged, in part, in the lower deposit requirement for FTBs compared to SSBs. The system of allowances also permits a small share of FTB lending to have a deposit less than the 10 per cent requirement. However, the low share of FTB loans with an LTV allowance indicates that lenders have a limited appetite to originate loans at LTV ratios above 90 per cent.

Before providing a mortgage, lenders are required to undertake thorough creditworthiness assessments to ensure a borrower will be able to repay the mortgage. This assessment must take into account the individual circumstances of the borrower. In general, rental payments are one of the factors taken into account in the affordability assessment as part of lenders' regular underwriting process to assess borrowers' ability to repay a mortgage. It is also important to note that the ability to make regular repayments – evidenced through rental payments – does not substitute for the protection for borrowers in having a deposit. A mortgage deposit acts as a cushion of housing equity, and can help households to absorb house price falls without the borrower falling into negative equity. As discussed in Section 3 above, negative equity can have a series of adverse impacts on households, relating to capacity to switch mortgage, borrow to finance consumption, or move home. From the lenders' perspective, losses on mortgages are predominantly experienced when negative equity prevails, which also points to the importance of a cushion of housing equity.

Back to "Contents"

## Strategy around the calibration of the mortgage measures and periodic reviews

The Central Bank views the mortgage measures as a permanent feature of the Irish housing market. This reflects the 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 housing-credit cycle.

Nevertheless, the measures being a permanent feature of the market does not mean that their calibration is permanently fixed. Since their introduction, the mortgage measures have been reviewed on an annual basis. The annual review has aimed to ensure that, over time, the measures continue to meet their objectives and has provided a formal process through which changes to the measures could be made where appropriate. The Central Bank has made a number of changes to the measures since 2015. Nonetheless, the main parameters of the measures (i.e. LTI and LTV limits) have remained broadly constant.

As part of the framework review, the Central Bank has again reflected on the conditions that would motivate a change in the calibration of the measures (consistent with their objectives).

The Central Bank has not, to date, made changes to the parameters of the measures based on cyclical conditions or credit dynamics. However, it is important to note that conditions in the mortgage market have not been pointing to excessive build-up of risks over this period, with mortgage lending growth having remained at relatively low levels. Some other jurisdictions have experience with using these types of measures to address cyclical conditions in the past.[16]

The experience with the measures to date points to a strong rationale for avoiding frequent changes (or indeed expectations of change) to the calibration of the measures. These include the need to avoid disruption to the functioning of the mortgage market and the potential consequences of policy uncertainty for the housing supply pipeline. Feedback received from stakeholders (e.g. property and business representatives) as part of the Listening Events in July 2021

[16] For example, New Zealand have stated that their LTV limit is counter-cyclical. They have regularly adjusted their measures in response to cyclical and economic developments, most recently in response to the Covid-19 crisis.

Back to “Contents”

strongly advocated the benefits of stability with regards to the mortgage measures. Historic experience with changes to the measures has also indicated the disruption that changes (in particular to the allowances) can have, particularly when these are implemented over a short period of time.

It is the Central Bank's view that the calibration of the mortgage measures would be primarily adjusted based on slower-moving structural factors rather than responding too frequently to cyclical developments.

The Central Bank is now proposing that the calibration of the mortgage measures would primarily be adjusted based on structural factors. 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. Examples of such factors include estimates of the equilibrium level of interest rates, the elasticity of housing supply or the degree of openness of the Irish economy, which has implications for the magnitude of possible downside macro-financial risks.

This approach would lend itself to changes to the way in which regular reviews of the measures are carried out. Specifically, the Central Bank is considering replacing the previous annual review process with periodic overarching reviews of the framework, perhaps every three to five years (similar to the current framework review), combined with a regular assessment of the functioning of the measures, in the context of developments in the housing and mortgage markets.

This approach would not reduce the Central Bank's monitoring of either the mortgage measures or the housing market more generally. The Central Bank would continue its regular financial stability analysis in the area and would continue to communicate its views (for example through the Financial Stability Review). The Central Bank would also continue to assess on a regular basis the operational aspects of the measures to ensure that these remain appropriate.

Therefore, while changes to the calibration of the measures would not be expected as a matter of course, the Central Bank would be in a position to respond to developments within the market as and when required.

**The Central Bank proposes that any future calibration changes of the mortgage measures would primarily reflect slower-moving, structural factors rather than responding too frequently to cyclical developments. Do you agree or disagree with this view? Please provide additional information to support your response.**

Back to "Contents"

**Taking into account the balance between the need to regularly review the measures while not inadvertently disrupting the market with overly-frequent expectations of changes to the measures, should the annual reviews of the measures be replaced by regular assessment of the functioning of the measures in the context of the mortgage market, combined with periodic overarching framework reviews, for example, every 3-5 years? Please provide further information to support your view.**

## Implications for calibration

The Central Bank's review of the mortgage measures framework is about ensuring that the measures remain fit for purpose into the future. The starting point for the review required taking a step back from the annual calibration reviews in order to assess the overarching framework for the measures.

To date, the focus of the framework review has been on these fundamental issues which underpin the Central Bank's use and implementation of the mortgage measures. The Central Bank has set out its thinking on these areas within this Consultation Paper. The issues discussed in the paper have been informed by internal research and analysis as well as the information gathered through the listening and engagement events held during 2021. The Central Bank is now seeking specific feedback on redefined objectives for the mortgage measures, the dual instrument approach, the role of allowance lending and differential limits for different borrower types. The Consultation Paper also discusses the potential for a move away from annual reviews of the mortgage measures to an approach where reviews take place on a more infrequent basis, supplemented by regular assessment of the functioning of the measures.

As the framework review moves forward, the focus will move towards the specific calibration of the measures within the overarching approach adopted. This design phase of the review will be informed by the responses to this consultation paper, in addition to further research and analysis conducted in 2022. The Central Bank will then consider the implications for the calibration and implementation of the mortgage measures. The framework review is due to conclude in the second half of 2022.

Back to "Contents"

## Providing feedback

The Central Bank invites all stakeholders to provide comments on the questions raised in this consultation paper. Please provide feedback by filling in the response form, available at **www.centralbank.ie/cp146.** The deadline for receiving feedback is **Wednesday 16 March 2022.**

The Central Bank requests that reasons are given for the responses to all questions answered and that submissions that put forward arguments for changes to the proposals set out in this consultation paper be supported, where possible, by evidence, which will aid consideration of the issues.

The Central Bank intends to make all feedback available on its website after the deadline for receiving responses has passed. Please do not include commercially sensitive material in your response, unless you consider it essential. If you do include such material, please highlight it clearly, so that reasonable steps may be taken to avoid publishing that material. This may involve publishing feedback with the sensitive material deleted and indicating the deletions.

While as indicated above, the Central Bank will take reasonable steps to avoid publishing confidential or commercially sensitive material, the Central Bank makes no guarantee that it will not publish any such information and accepts no liability whatsoever for the stakeholders' consultation responses that are subsequently published by the Central Bank. Please be aware that you are making a submission on the basis that you consent to us publishing it in full.

Back to "Contents"

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Back to "Contents"

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Back to "Contents"

# Annex

## Consultation Paper Questions

1. Please provide any feedback on the channels of macroeconomic benefits and costs of the mortgage measures that the Central Bank proposes to consider within its updated framework.
2. Please provide any feedback that you have on the proposed principles underpinning the refreshed objective statement of the mortgage measures.
3. The Central Bank proposes to maintain a dual-instrument approach with both a collateral-based and income-based instrument in place. In your opinion, is this dual-instrument approach appropriate? Please provide additional information to support your view.
4. Taking both the proposed objective statement for the mortgage measures and the pros and cons of different income-based instruments into account, what are your views on the Central Bank's proposal that LTI remains the most appropriate income based instrument? Please provide additional information to support your response.
5. What is your opinion on the role of allowances as part of the mortgage measures? Do you agree that allowances are important to maintain flexibility within the framework?
6. What is your view on the proposal that the Central Bank reconsider the balance between the calibration of the limits and the level of the allowances?
7. The differential treatment for FTBs reflects their different risk profile and the challenges for FTBs in accessing mortgage finance, including paying rents while saving for a deposit. Would you agree that differential treatment across borrower groups remains suitable, given their different characteristics and the different roles they play in the housing cycle?
8. If so, what would you consider to be the most appropriate option for the choice and design of implementing differential treatment across borrower groups?
9. The Central Bank proposes that any future calibration changes of the mortgage measures would primarily reflect slower-moving,

Back to "Contents"

structural factors rather than responding too frequently to cyclical developments. Do you agree or disagree with this view? Please provide additional information to support your response.

10. Taking into account the balance between the need to regularly review the measures while not inadvertently disrupting the market with overly-frequent expectations of changes to the measures, should the annual reviews of the measures be replaced by regular assessment of the functioning of the measures in the context of the mortgage market, combined with periodic overarching framework reviews, for example, every 3-5 years? Please provide further information to support your view.

## Abbreviations

| | |
|---|---|
| **BTL** | Buy to let |
| **CSO** | Central Statistics Office |
| **DSTI** | Debt service to income |
| **DTI** | Debt to income |
| **ESRB** | European Systemic Risk Board |
| **FSR** | Financial Stability Review |
| **FTB** | First time buyer |
| **IMF** | International Monetary Fund |
| **L** | Loan |
| **LTI** | Loan to income ratio |
| **LTNI** | Loan to net income ratio |
| **LTV** | Loan to value ratio |
| **PDH** | Primary dwelling house |
| **SSB** | Second and subsequent buyer |

Back to “Contents”

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