Banc Ceannais na hÉireann
Central Bank of Ireland
Eurosystem

Conference - *Macroprudential mortgage measures: lessons on design, implementation and effectiveness*

Summary of the event
26 – 27 April 2022

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Introduction

This report presents a summary of the international conference that took place in April 2022 as part of the Central Bank's mortgage measures framework review. The purpose of this event was to hear the views of academics, policymakers and researchers from institutions across the globe on how macroprudential policy interventions in the mortgage market may need to adapt, in the context of an evolving financial system and broader economy. The event comprised three sessions: (i) the continued importance of borrower-based measures (ii) international experiences in macroprudential policy implementation and (iii) a panel discussion on borrower-based measures in an evolving economy. The feedback from the conference and wider engagement with external stakeholders, in addition to further research and analysis by the Central Bank, will inform the final conclusions on the design of the mortgage measures framework.

Introduction

The Central Bank's mortgage measures were first introduced in February 2015. The measures are designed to support sustainable lending practices in the Irish mortgage market. The Central Bank commenced an overarching review of the mortgage measures framework in 2021 to ensure that the measures continue to remain fit for purpose, amid continued evolution of the financial system and broader economy.

This conference is a key element of the extensive public engagement that has taken place as part of the review. Last summer, the Central Bank conducted an online survey alongside a series of listening

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events to gather the public's and other external stakeholders' feedback on the mortgage measures and the wider housing market.[1] Earlier this year a public consultation was launched for stakeholders to provide feedback on a range of questions relating to the mortgage measures framework.[2] The feedback from the survey, listening events, consultation and conference, 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 be concluded in the second half of 2022.

Deputy Governor Donnery opened the conference with a keynote address in which she outlined how the Central Bank has implemented borrower-based measures (BBMs), how the measures have fared against their objectives since their implementation, and the issues being considered as part of the framework review.[3] The event was structured along three sessions. The first session explored the academic findings on the damaging role that debt build-ups can have on the economy at large and hence the continuing need for BBMs. The experiences of other policymakers in designing and implementing BBMs across the globe were shared in the second session of the conference. The third session featured international experts who discussed how broader economic developments should be accounted for within a macroprudential framework for mortgage measures.

Session 1 – The continued importance of borrower-based measures

This session discussed the lessons of previous credit-house price booms and busts, outlining the damage these can have, not just on borrowers and banks, but on the economy at large. While this served to emphasise the benefits of BBMs in guarding against the build-up of unsustainable debt burdens, the importance of understanding the economic costs of such measures was also highlighted.

[1] See Summary Report of Listening and Engagement Events and Detailed results of the online public engagement survey.
[2] See Consultation Paper 146 Mortgage Measures Framework Review.
[3] Deputy Governor Donnery's Opening Address is available at www.centralbank.ie.

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Professor Aikman discussed the objectives of macroprudential mortgage measures and the associated economic benefits and costs of such measures. The premise was put forward that macroprudential policy benefits flow largely through two channels: avoiding debt deleveraging and strengthening bank resilience. The debt deleveraging channel concept relates to highly indebted households that are vulnerable to adverse shocks and may need to cut back on spending sharply during a period of stress in order to service their debt. Such behaviour can amplify economic downturns. This provides the rationale for macroprudential policy measures that slow the accumulation of debt. However, the empirical evidence for the debt-deleveraging channel is mixed. While many research papers find that highly indebted households debt do tend to cut consumption more than other households, other papers have argued that this relationship reflects a reversal of over-optimistic expectations and not a response to debt burdens. The bank resilience channel relates to highly indebted households that default on mortgages, which erodes bank equity capital and reduces loan supply, leading to reduced economic activity. Empirically, there is much evidence that mortgage measures such as loan-to-value (LTV), loan-to-income (LTI) and debt-service (DSR) ratios have an effect on mortgage loans' probability of default (PD) and loss given default (LGD), thereby reducing the riskiness of banks' loan portfolios. However, a lower portfolio risk may reduce a bank's equity capital requirements through the Risk Weighted Asset regime, which may offset some of the resilience benefits of such measures. The macroprudential policy costs of mortgage measures were considered to include negative effects on aggregate demand and, to a lesser extent, potential supply. Most of these costs appear to be either short-term or transitional, but the empirical evidence about costs is still scarce. Topics for future research include distributional impacts and whether this approach can inform the calibration of mortgage measures.

Professor Mian provided a broad overview of how to think about BBMs from the perspective of real macroeconomic considerations, including GDP growth, unemployment and hysteresis, taking into account cyclical and structural dimensions. Evidence from the global financial crisis (GFC) suggests that growth in household credit, which was mainly in the form of mortgage credit, seems to be particularly

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damaging to the real economy. The premise is put forward that cyclical disruptions associated with rising debt levels can be made smoother through risk-sharing between the ultimate debtors and creditors, such as “escape valves” like debt forgiveness. Evidence from the United States during the GFC shows that states with higher debt forgiveness rates had less severe GDP downturns. However, structural causes of rising credit supply, such as trends in inequality affecting equilibrium interest rates, dominate over the long-run horizon. These can only be addressed by a wider range of structural economic policies rather than through macroprudential regulation.

Professor Schularick’s presentation focused on the topics of debt booms and the interactions between the financial stability and monetary policy considerations of central banks. In line with the outline by Professor Mian, household debt booms tend to be followed by severe recessions: the economy does not tend to return to previous output levels within five years of such a recession. By contrast, corporate debt booms do not appear to affect the average recession path. In addition, unemployment is higher after a household debt boom. The discussion on the interaction between monetary policy and financial vulnerabilities highlighted the challenges in understanding these dynamics. Little is known on whether a monetary policy that stabilises the economy and reduces economic volatility results in more risk-taking. Central banks may use higher interest rates to “lean against the wind” and defuse financial stability risks during booms in credit and asset prices, but this is empirically more likely to precede a crisis than to prevent one. In summary, the evidence suggests that using monetary policy to achieve financial stability objectives is difficult, lacks some empirical evidence about other effects, and may often be counter-productive.

The session concluded with a discussion among conference participants. The view was expressed that distributional effects of BBMs, for example, on tenures and ownership, should be addressed through government policies and that central banks should maintain a macroprudential perspective.

Participants asked how can the coexistence of long-term growth in household credit and falling home ownership rates in advanced economies be explained. Panel members expressed views that part of the increase in credit translated directly to higher prices of housing,

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but that there were also countries that experienced large nominal increases in house prices without much credit growth.

Participants asked whether the high cost of risk-sharing in debt agreements explained its apparently low prevalence in the mortgage market. Responses included the idea that the most economically impactful forms of risk-sharing would affect cash flows when they are most needed, such as forbearances that reduce mortgage payments during times of high unemployment; this could include facilitating mortgage refinance to lower interest rates, or less-stringent bankruptcy regulation. Additionally, the opinion was expressed that based on the empirical finance literature, there is little evidence that long-run responses to more generous debt forgiveness involve a large impact on *ex ante* behaviour, such as repricing contracts in line with risk sharing.

In relation to the interaction between monetary and macroprudential policy, the view was expressed that at times of low policy rates, macroprudential policy can help reduce risk-taking, with a main role of macroprudential policy being the prevention of excessive leverage at times when there is a strong temptation to expand balance sheets due to monetary policy.

Session 2 – Fit for purpose: exploring international experiences in macroprudential policy implementation

The purpose of this session was to gather the perspectives of policymakers from the macroprudential authorities of New Zealand, Portugal and Norway on the design and implementation of BBMs.

Deputy Governor Christian Hawkesby discussed the motivations behind the introduction of BBMs by the Reserve Bank of New Zealand (RBNZ), their experience of managing the measures over time, the lessons learned from that experience and the next steps on their macroprudential agenda. The RBNZ introduced LTV limits in 2013 in response to growing concerns that rising house prices, especially in Auckland, would lead to vulnerabilities in the financial system. The measures have been adjusted a number of times in response to market developments, including a complete pause of all measures during COVID-19 and a subsequent reinstatement to the tightest levels to date. The fact that the framework for

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macroprudential policy is in its infancy, compared to the monetary policy framework, was highlighted as a key challenge when considering the decision making process. Among the key lessons noted were the importance of obtaining public support for the measures, the modest effect of LTV limits on house price cycles compared to monetary policy actions, the primary beneficial effects being the improved quality of bank loan portfolios, and the need for a complete set of tools, including debt to income limits, as evidenced by the continued increase in debt-to-income ratios. A key part of the future work of the RBNZ is to expand the macroprudential toolkit to better manage risks and build resilience in the financial system, as well as putting macroprudential policy on an equal footing with monetary policy, in terms of consistency of approach and signalling the path ahead.

The Norwegian experience in the realm of BBMs was presented by Director Hægeland. Norway's macroprudential policy framework has two pillars: capital requirements, including a SyRB of 4.5 per cent and a CCyB of 2.5 per cent by 2023, and BBMs. The BBMs complement the capital requirements, which would have been insufficient alone. Norway's measures comprise a LTV and DTI limit, an interest rate stress test, amortisation requirements at high LTVs, a lower LTV limit for investors in Oslo, and a pool of allowances to exceed limits. An LTV limit guideline was initially introduced in 2011 and formalised in regulation in 2015. Since then, the regulations have been tightened, a DTI limit introduced and consumer debt included. The data reveal that LTV guidelines reduced the number of higher-LTV households. Looking across the market in 2021, the measures affect many borrowers, as shown by clustering of mortgage amounts at the dual limits of LTV and DTI. Allowances are seen as assisting market efficiency: a significant part of them are extended to first-time buyers, who tend to require more credit to purchase housing. Going forward, the expected higher interest rate path is likely to see the stress test become more binding and the DTI limit less binding. There are likely to be lessons arising for policymakers with respect to BBMs in a period of increasing interest rates. Overall, BBMs must strike a balance between market efficiency and the mitigation of risk build-up in the financial system. Norges Bank considers BBMs as a permanent feature, but with clear cyclical benefits in addition to the primary structural benefit of higher resilience.

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Ms. Leal provided insights into the Banco de Portugal's experience in designing and implementing BBMs in 2018. The objectives of BBMs were to encourage the adoption of prudent credit standards to promote the resilience of the system and of borrowers, improving their ability to absorb adverse shocks. This was motivated by Portugal's experiences following a sovereign debt crisis and recession, when banks faced challenges from high non-performing loan (NPL) ratios and an emerging environment of potential excessive risk-taking, amid high house price growth, an easing of lending standards and increasing household indebtedness. The BBMs are applicable to new mortgage and consumer loans and are a combination of LTV limits, debt service-to-income (DSTI) limits, maturity limits and a regular payment requirement. The BBMs are implemented by means of a non-binding recommendation on a "comply-or-explain" basis. Institutions have broadly complied with the recommendation: only 1 per cent of new mortgages exceed the 90 per cent LTV limit. Maturities have declined somewhat, but not by as much as had been expected, with many new loans having maturities between 35 and 40 years. Evaluation studies show that the BBMs has been effective in improving the resilience of both borrowers and banks and in changing the macroprudential stance from accommodative to neutral. Comprehensive consultation with external stakeholders and the development of transparent governance and accountability processes are considered to have been key to the success of the BBMs in Portugal.

The ensuing discussion among conference participants considered the concept of "social licence" and the importance of engagement with stakeholders. Consultation with the public is of great importance in garnering support for BBMs and ensuring accountability on the part of policymakers. The challenges in balancing the diverse views of the public and political entities with central banks' obligations to deliver on their financial stability mandated were noted. While there can be broad agreement that BBMs are necessary, particularly during a low interest-rate environment, the distributional impacts of the measures can lead to significant debate. The risk associated with including additional objectives for BBMs and the potential for the inappropriate intrusion of addressing distributional effects was raised. Experience in New Zealand pointed to the importance of the central bank being guided

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by its objective of financial stability when considering government policy on house buyers, for example.

The challenges associated with adjusting BBMs, as occurred in some jurisdictions in response to COVID-19, were discussed. In the experience of the RBNZ, it has proved difficult to fine-tune BBMs in response to shocks. Therefore, it is likely that BBMs will be thought of more as a permanent feature rather than a temporary feature in the future and be subject to less active management. This contrasts with *ex ante* thinking where the expectation was that they could easily be adjusted if necessary. In Norway the relaxation of allowances was intended to help liquidity constrained households but this was perhaps one of the less necessary parts of the COVID-19 support package as it seemed to have unintended and diverse effects. While it showed that BBMs can be adjusted in a cyclical manner, if necessary, future adjustments would depend on situational circumstances.

Participants discussed the merits of DSRs and DTI limits. While cognisant of the benefits of using a DSR, a DTI limit was easier to implement due to the practicalities of the New Zealand banking system. The Portuguese opted for a DSTI limit as it was considered to be easier to communicate to borrowers in terms of their monthly repayments. The complementary of the two instruments is a feature of the Norwegian BBMs, in which a DSR element is incorporated through the stress-testing instrument. The DSR element is binding in the lower and middle ranges of the income distribution, while the DTI limit has the stronger effect in restricting the build-up of vulnerabilities at higher incomes.

Panel discussion - Borrower-based measures in an evolving economy

The final session of the conference focused on what the evolving economy and financial system might mean for macroprudential mortgage measures in the future. The panellists first provided some introductory remarks on their experiences in implementing BBMs.

Professor Honohan, former Governor of the Central Bank, reflected on the debate and challenges that preceded the introduction of the BBMs in Ireland in 2015. The introduction of the BBMs was motivated by a number of factors, including a resurgence in housing

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prices, which had increased by 46 per cent in Dublin in 18 months; evidence of high LTV lending; and increasing concerns that a house price-credit spiral was emerging. The choice of two instruments was articulated as protecting banks (LTV) and borrowers (LTI)—though being conscious that income is variable and that total debt-to-income would be better if it could be operationalised. When calibrating the limits, the Central Bank's desire was to apply realistic ratios. These were based on inflection points estimated from loan-level data, with strong evidence for the chosen LTV limit, while the LTI limit could have been placed between 3.5 and 4. In both cases, proportionate ceilings were applied. There was some push-back to the introduction of the measures. Some commentators said that 2014-15 was not an ideal time for BBMs. The Government's Help-to-Buy scheme effectively reduced the LTV requirement for first time buyers of new houses. However, memories of the GFC were fresh, and this aided the introduction and provided a rationale to make the BBMs permanent, while the deferral by the legislature to the Central Bank's decision provided an important democratic underpinning of the measures. After the announcement of the BBMs, house prices in Dublin stabilised with just a 4 per cent increase over the following eighteen months. There are many interesting open research questions: for example: Have the measures increased the rent-to-price ratio for property? What have been the distributional consequences of the measures?

Deputy Governor Nykänen highlighted the crucial role of resilience in the financial system in her opening remarks. The occurrence of large exogenous shocks, such as the Russian invasion of Ukraine and COVID-19, highlights the importance of banks and households being resilient to unexpected events. With respect to the design and implementation of BBMs, first, the scope should be as wide as possible, to include not only mortgages but also consumer loans; second, BBMs must be adaptive to innovations in housing finance to avoid leakages; and third, cross-border housing finance may be more prevalent in the future, and this would demand some harmonisation of measures across the EU. A minimum set of BBMs could arise following the completion of an EC review of macroprudential considerations. It is important that BBMs are used and enhanced whenever necessary. When policymakers may be at risk of inaction

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bias, this can be mitigated with a clear framework and objectives, while EU legislation could help avoid this at national level.

Director Breeden outlined the responsibility of the Bank of England Financial Policy Committee (FPC) to protect the resilience of the financial system and the role of BBMs within that mandate. The FPC's actions include guarding against excessive mortgage debt, which typically occurs during periods of extreme house price growth and had been an important source of risk historically. The FPC introduced two recommendations in 2014, prompted by concerns that rapid house price inflation would lead to a loosening in underwriting standards and an excessive rise in aggregate indebtedness and the number of highly indebted households. The first is a LTI flow limit which caps the share of new mortgages above 4.5 LTI to 15 per cent of lenders' new lending, and the second is an affordability-stressed interest rate test. The FPC recently conducted a review and is consulting on removing its affordability stress test, having judged that its LTI limit, alongside affordability testing by the conduct regulator, ought to deliver the appropriate degree of resilience in a simpler, more predictable and more proportionate way. Borrower resilience is the aim of the measures, which are there as a structural guardrail, while lender resilience is considered to be achieved by stress testing and capital requirements. The FPC has not seen the need to introduce an LTV limit to achieve its objectives. Consistent with the experience of other macroprudential authorities, BBMs are subject to much greater focus than much of the FPC's other work, highlighting that transparency, regular review and engagement are crucial.

The panel proceeded to discuss a number of other topics. On the issue of the implications of house price growth for the design of BBMs, it was felt that while house prices can be an important risk indicator, the restriction of high-risk mortgage lending should be the key consideration from a financial stability perspective; the experience across the board is that BBMs are effective in this aim. Also noted was the importance of understanding demand- and supply-side factors in the housing market. Nevertheless, although it might be possible for macroprudential tools to restrict excessive housing demand, central banks should not compromise on their financial stability goals to achieve a wider range of housing policy goals that governments can pursue by using a much wider set of

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tools. In the Irish case, it was proposed that the long duration of low interest rates has been a driver of house price acceleration, which has made the LTI limit binding. However, the view was expressed that to remove or change the LTI limit could now drive prices up in proportion to the new limit affecting homebuyers, and there may be a need for governments to take other measures to remove demand from other parts of the market.

Challenges in recalibrating BBMs in the context of shocks such as the COVID-19 pandemic and the future upward path of interest rates were discussed. In the first instance, panellists noted that BBMs put borrowers and banks in a better position to face rising interest rates and other shocks, which underlines the importance of pre-emptive actions to curb the build-up of vulnerabilities and increase resilience. The experience in Finland in adjusting BBMs in response to the COVID-19 shock highlighted that BBMs are more difficult to vary in a downturn than in an upturn; it is particularly difficult to determine if there is demand to make use of opportunities from looser limits, or indeed, if demand is still strong enough to cause vulnerabilities. In the United Kingdom, the calibration of BBMs reflects structural factors and not cyclical factors, i.e. structural changes to factors that affect the affordability of loans, specifically interest rates or the rate of growth of income. Therefore, if rising interest rates reflect a return to normality, BBMs would not be recalibrated, but if the normal level of rates is higher than had been expected previously, this would be taken into account in future reviews. In the case of Ireland, price-to-rent ratios did not increase in the low interest-rate environment, as might have been expected. Therefore, it is unclear what would happen to the ratio in an environment of rising interest rates. It was suggested that there may be another dimension at play in this dynamic, perhaps relating to the supply of housing, suggesting a need for government to enter more aggressively into the planning process and / or in supplying housing for some low- and middle-income earners.

The challenges of dealing with the distributional effects of BBMs were considered by the panellists. Affordability and access to housing are subject to much public commentary across jurisdictions. In Finland, first-time buyers (FTBs) have a looser LTV limit to assure younger households of access to the housing market, and this measure has not caused a surge in borrowing by FTBs. In the UK,

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while the perception is that BBMs are restricting access to home ownership, the analysis suggests that this is true to a very limited extent, as only 1 per cent of borrowers are constrained by the measures. That analysis had also showed that raising a deposit was the biggest challenge to buying a home in the UK, yet there is no LTV limit measure. Loosening LTI-based BBMs to facilitate FTBs would likely provide only a short-term benefit and would ultimately put further pressure on house prices, thereby worsening access for households in the future and reducing resilience.

The question of whether or not BBMs should account for regional disparities in housing markets was discussed. The consensus among panellists was that region-specific limits are not desirable, as they could result in regulatory arbitrage and unintended consequences. BBMs with sufficient flexibility at the aggregate level are preferable, such as the use of allowances to exceed limits. On allowances, the view was expressed that it would be a mistake to seek to compensate economic disadvantage with extra debt, and so allowances should not override the creditworthiness assessments of banks; instead, allowances should match creditworthy borrowers to appropriately sized loans. In cases where the allocation of allowances gives rise to questions of bias or discrimination, other policies such as consumer protection codes should frame banks' own credit policies and their engagement with borrowers.

Panellists discussed whether policymakers should focus only on the most vulnerable loans rather than the whole distribution or the average. In the case of the UK, it is considered important to look at the entirety of the distribution, tracking both aggregate debt levels and the tail of highly indebted households, including those which are bunched just below the 4.5 LTI limit. Finland does not yet have a loan register for borrowers on-time with their payments, but would consider such analysis if the data were available.

The role of institutional investors in residential real estate markets in other jurisdictions was explored. Evidence from the UK suggests that investors account for a small share of the market, and that rising housing demand is broadly based across both homebuyers and renters. In Finland, the build-up of institutional investors has been an important driver of housing construction, but it is considered that the risks associated with this activity are best addressed by building

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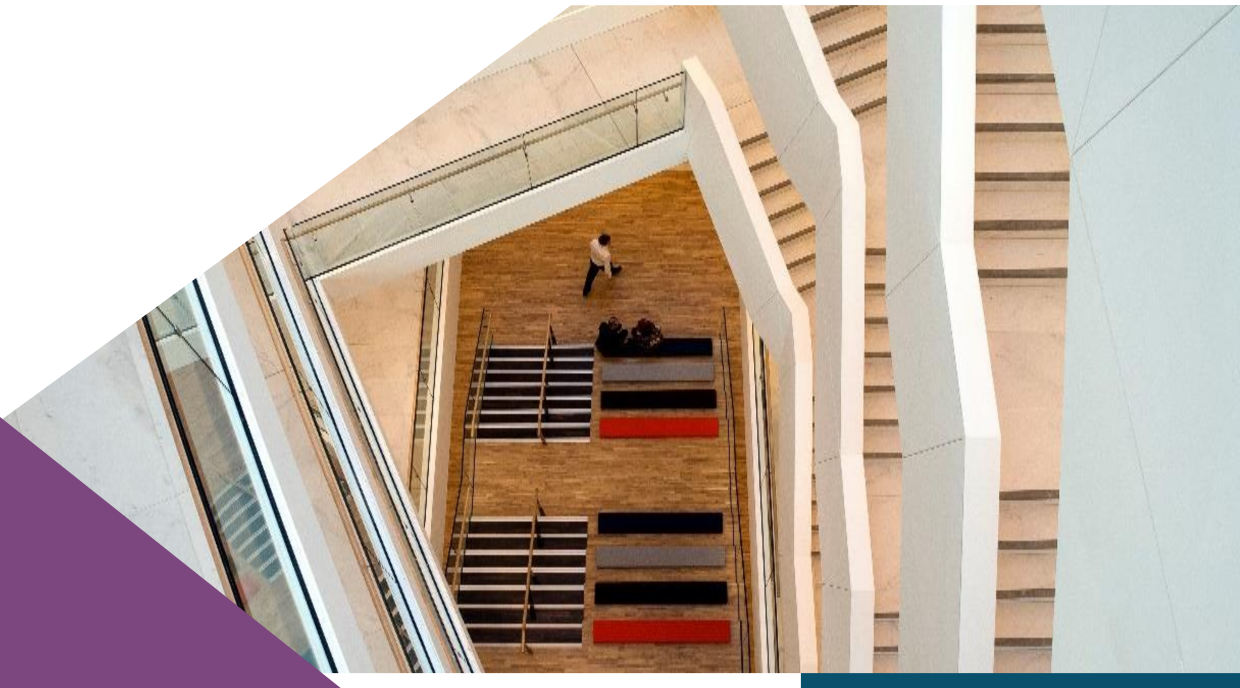
resilience in the banking sector and not through the use of BBMs. The presence of institutional investors in the Irish rental market is viewed as having increased predominantly in response to the low interest rate environment, and if it is the case that any such institutions also have tax advantages that increase prices, any loopholes should be reviewed and tightened up.

Concluding remarks

The event concluded with closing remarks by the Central Bank's Director for Financial Stability, Vasileios Madouros.[4] The event facilitated the coming together of academics, policymakers and researchers to share perspectives, learnings and expertise on many elements of macroprudential frameworks and was therefore highly valuable for the Central Bank's work on the mortgage measures framework review.

[4] See Director Madouros's closing remarks on www.centralbank.ie.



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