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Macro-prudential measures and the housing market

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Abstract

The Central Bank recently published a Consultation document on macro-prudential policy for residential mortgage lending including limits on loan-to-value and loan-to-income ratios. The consultation process highlighted a number of potential implications of these measures for the housing market, particularly for the rental market and for housing supply. This Letter first discusses some of the underlying economics of the housing market in a simple analytical framework. It then considers the potential implications of the proposed macro-prudential measures on the rental market and on housing supply in more detail, including possible policy options to counteract negative aspects.

1 Introduction

The Central Bank recently published a Consultation document on macro-prudential policy for residential mortgage lending.[2] This paper proposed measures in relation to loan-to-value ratios and loan-to-income ratios. The primary objective of these measures is to increase the resilience of the banking and household sectors to financial shocks, while the secondary objective is to dampen the procyclical dynamics between property lending and housing prices. Nonetheless, these measures will alter the dynamics of the housing market and the incentives of both banks and borrowers. In particular, the effects on the rental market and on the supply of housing have been raised in the consultation process and broader public debate. This Letter discusses the effect of the measures in a simple analytical framework, before examining their potential impact on the rental market and housing. We also review policies which could counteract negative effects of the measures.

The range of policy options is diverse and many are outside the control of the Central Bank. It is worth noting that some of the policy options put forward involve a cost to the Exchequer. In these cases a rigorous cost-benefit analysis is required. Moreover, given the fiscal situation facing the country, scope for additional government expenditure may be limited.

The impact of policy measures relating to the property market can be complicated, making it difficult to judge the overall effect. To this end, in Section 2 some of the underlying economics of the housing market are discussed. In Section 3, the effects on housing supply and the rental market are

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[2]See Central Bank of Ireland (2014).

considered in detail, and possible policy options to counteract them are outlined. Section 4 concludes.

2 The housing market - an analytical framework

A lot of the discussion on the proposed macro-prudential measures relate to the functioning of the housing market. It may be useful, therefore, to discuss some of the underlying economics of this market before discussing individual aspects in detail. In this Section, we do so in a simple analytical framework, which abstracts from a number of issues including localised housing market pressures. Three considerations are important:

1. The current outstanding stock of housing is unchanged by the measures. As such, the existing stock (supply) of housing is unaffected by the proposed measures.
2. Demand for housing must be considered in the aggregate. When demand for owner-occupied housing falls, demand for rented accommodation increases. The relative shifts in demand alter pricing and shift incentive for investors.
3. Over time, supply of new dwellings may be influenced by the measures.

The current outstanding stock of housing is unchanged by the measures. As such, current supply of housing is unaffected.

Many commentators have referred to the effect on the supply of housing of the current measures. It is important to note that the current stock of housing, approximately 2 million units, will be unaffected by the measures. As a result, the effects of the measures on the existing stock of houses in the absence of a supply response (that is, in the short run) are of interest.

Demand for housing must be considered in the aggregate. When demand for owner-occupied housing falls, demand for rented accommodation increases. The relative shifts in demand alter pricing and shift incentives for investors.

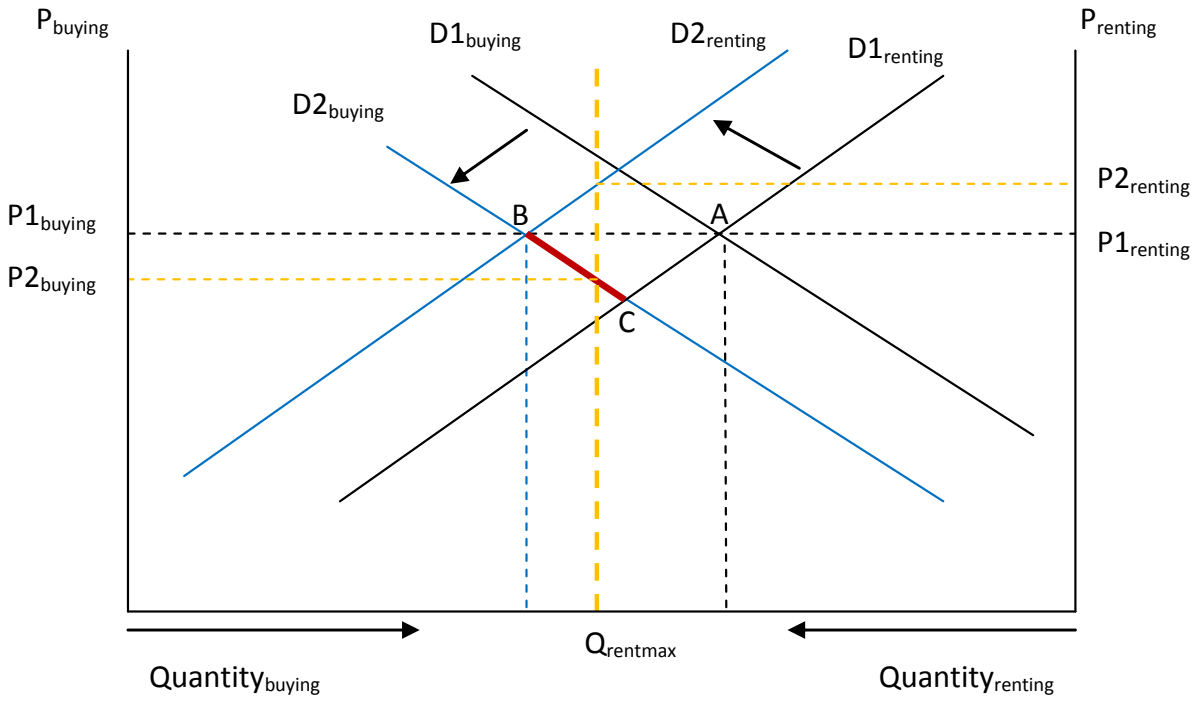
If people do not purchase a house, they must still live somewhere. For simplicity, assume that the price of housing is the cost of living there for one period. For an owner occupier, this is the cost of the mortgage plus depreciation, taxes and maintenance costs less the expected capital gain, or the so called user cost of the house. For renters, it is the rent. Abstracting from transactions costs and assuming that all dwellings are equally suited to renting and owner-occupation, the cost of owning and renting will equalise such that the marginal individual is indifferent between the two housing options.

This situation is characterised in Figure 1. Since we are discussing the short run, the stock of housing, measured on the horizontal axis, is fixed. The price of owner occupied housing, the user cost, is on the left hand axis, and the demand curve for owner occupied housing slopes downwards from left to right. The price of rented housing is on the right hand scale. As a result, the demand curve for rented housing slopes downwards from right to left. The initial market position is at the intersection of $D1_{buying}$ and $D1_{renting}$ (point A). From this point we can see equilibrium rent and price ($P1_{renting}$, $P1_{buying}$), and also the quantity of each type of housing demanded (measured on the horizontal axis).

The LTV and LTI limits can be expected to shift the demand curve for owner occupied housing inwards (from $D1_{buying}$ to $D2_{buying}$ in Figure 1). There are two reasons for this: some borrowers are no longer able to save sufficiently to buy a house, and the measures will reduce expectations of future house price appreciation. However, since fewer people buy houses, the demand for rented housing must increase. Assume the simplest scenario in which everybody who does not buy a house rents instead, causing the demand curve for rented housing to shift outward by exactly the same amount as demand for owner occupied housing shifted inwards ($D2_{renting}$). The result is a change in the quantities of owner occupied and rented housing, but not in the prices (point B).

Of course, this one-for-one movement from owner occupation into renting may not be realistic. It is likely that some portion of people who cannot currently buy may delay household formation, either by living longer with their parents or by renting in shared accommodation. In this case, the demand curve for rented accommodation will not shift all the way out to $D2_{renting}$. Instead, it will shift to some point between $D1_{renting}$ and $D2_{renting}$, and the market equilibrium will be somewhere between points B and C on the $D2_{buying}$ curve (highlighted in red on Figure 1). In this scenario, the price of both renting and buying falls. The price of renting falls despite rising demand for rented hous-

Figure 1: Demand for owner-occupied and rented accommodation



ing because the aggregate demand in the housing-market has fallen while the stock of houses is fixed. This would result in a structural downward shift in owner occupancy rates over time.

So far, the analysis has assumed that all houses that are currently owner occupied are perfectly suited to being rented. While this is not unreasonable, it may not necessarily be the case, particularly not in the very short run; for instance, some currently owner-occupied houses may not meet rental regulations, or it may be argued that the current quantity of family-sized rental accommodation may be small. In this scenario, the price of renting and buying will not equalise. The scenario can be characterised in Figure 1 by a vertical line which marks the maximum possible quantity of rental units in the current outstanding stock. The dashed yellow line at $Q_{rentmax}$ in Figure 1 shows one variation of this outcome: the price of housing falls more than it otherwise would ($P2_{buying}$), and the price of renting, in this scenario, rises ($P2_{renting}$). However, as can be seen from Figure 1, if demand for renting does not shift all the way up to D2renting, it is still possible that rents will fall, depending on the position of $Q_{rentmax}$.

It should be noted that in this latter scenario there is a wedge between the price of owner occupied housing and rented housing. As a result, the rental yield rises and it becomes attractive to be a landlord: people who do not want to sell their house at this lower price will find it financially attractive to rent it out. Over time, this should cause an increase in the amount of rented accommodation (a leftward shift in the vertical line) and an eventual equalisation in prices again to levels at or below the current market equilibrium.

In the longer term, the construction of new units may be influenced by the measures.

It is important to emphasise that the analytical framework described here does not account for a change in the overall stock of housing. In the longer term the proposed measures can affect the supply of additional new units of housing through the impact on builders expectations of future prices. Nonetheless, any new units added to the current stock, all else equal, should have a

[3] It is also possible that changing demographics will shift demand over time.

downward effect on prices.[3]

In this context, it has been estimated that in the medium term annual additions to the current stock should be approximately 25,000 units.[4] In terms of the proposed macroprudential measures, Cussen et al (2015) estimate that the cumulative impact over a number of years relative to the scenario in which no measures were adopted, is a reduction in the new units constructed equivalent to approximately 0.1 per cent of the current stock.[5] Nonetheless, as already noted, there are regional differences in housing stock, and issues of over- or under-supply may be more acute in some areas than others.

Overall, the simple analysis above illustrates two important points. First, the proposed measures do not impact the outstanding stock of housing; any impact on supply applies only to the construction of future additional units. Second, the proposed measures will not necessarily increase rents: in fact, the analysis suggests that it is possible for rents to fall, once it is taken into consideration that the supply of rented accommodation will increase as well as demand.

3 Impact of the measures on the housing market

The above analysis provides a framework for considering the potential impact of the proposed measures on the housing market as a whole. This section discusses in detail two aspects of this: the impact on housing supply and the impact of increased demand in the rental sector. In doing so, a number of possible policy options for dealing with these side effects are outlined.

3.1 Effect on housing supply

It has been argued that the introduction of the proposed macro-prudential measures will reduce house purchases and the incentive to construct new units. As discussed in Section 2, the proposed measures will only affect the supply of new houses, not the existing stock. Nonetheless, at present it is likely that there is regional excess of demand for units, due to demographic pressures, the low level of construction activity in recent years, the stabilisation in incomes and unemployment and perhaps expectations of future house price appreciation.

In addition, the literature indicates that supply side property market measures can complement demand-side instruments, and help dampen housing cycles.[6] For instance, studies show that areas with elastic housing supply have shorter bubbles and smaller price increases.[7] It has been shown that in Hong Kong, land supply is the second most important factor driving house prices after real GDP per capita.[8] Therefore, ensuring an elastic supply of housing can complement with the overall objectives of the Central Bank in terms of dampening housing cycles and thereby protecting financial stability.

As such, it may be beneficial for policy makers to consider the introduction of measures which shift the supply curve outwards. Here, a range of proposals to alleviate the supply pressures in the market, which have been put forward by various sources, are discussed.

First, construction firms need *access to sustainable financing* for viable projects. In the past, the majority of construction projects were funded almost exclusively through bank debt. In the future, it is probable that development finance will be made available only to those who have also obtained a sufficient level of equity. As a consequence policy in this area could focus on:

- Supporting the provision of new and innovative financing structures, including hybrid models involving non-bank actors. Complementary sources of financing for residential projects such as mezzanine, equity, or specialist funds could be explored. Local developers with viable projects and knowledge of the Irish market could be encouraged / facilitated to seek out the involvement of foreign capital wishing to invest here.
- Investigate whether it would be prudent to further develop the role of NAMA, which has already committed to advancing €2 billion to development projects up to end-2016.
- Explore the establishment of a similar ve-

[4] See Duffy et al (2014).
[5] The authors argue that their estimates are likely to overstate the effect on supply.
[6] IMF (2013).
[7] Glaeser et at (2008).
[8] Craig and Hua (2011).

hicle to the Strategic Banking Corporation of Ireland, which was set up for SMEs focussing on the residential building industry (similar to the Builders Finance Fund in the UK). Funding could also potentially be made available through the Irish Strategic Investment Fund.

In addition, *improvements in the effectiveness and efficiency of the planning system* which eliminate variations in costs, planning processes and levies across Local Authorities could be useful. The Government has committed to publishing the general scheme of a Planning Bill, along with a new Policy Statement on Planning, which may address some of these issues.[9] Possible useful measures include:

- Cost-benefit assessment of building regulations. It has been argued that building regulations often impose large costs on developers, while providing only small benefits for renters and homeowners[10], and may have a substantial impact on the viability of projects: Moran (2014) estimates that the development costs associated with a minimum size unit (1 bed) in Dublin requires monthly rent of 1,500 to be economically viable to build.

- Lyons (2014) and others advise that the treatment of land and planning regulations needs to be streamlined: the current system involves stamp duties, development levies, commercial and industrial rates and amenity contributions, as well as the Local Property Tax. A single unified Site Value Tax would make the development process simpler and more transparent.

- The introduction of development timetables when planning permission is granted could ensure that projects are delivered on time.

- Greater use of Strategic Development Zones (in areas where development is of particular economic or more likely in this case social interest) could also be considered.

The *adequate supply of zoned and serviced land for development* is a major element if the supply of residential homes is to be increased. Current and likely future requirements at a local level should be continuously monitored and assessed to ensure this is the case.

Efforts could be made to *identify and redevelop vacant or derelict properties and sites* in urban areas, for instance, using measures that incentivise the use and development of vacant sites, including the vacant site levy. The Government has announced that it will examine possible measures in this regard.[11] However, Local Authorities have been identified as one of the major holders of derelict/vacant sites, and efforts could also be made to incentivise the more productive use of these sites.

Furthermore, the feasibility of redesignating/converting empty retail units or properties deemed unsuitable for modern office use (particularly in city centre areas) for residential use could be examined. Similarly, since Local Authorities raise more revenue from commercial rates than from property taxes, there is an incentive to zone land for commercial use.[12]

Finally, informed and effective policy decisions require improvements in *data quality*. While there have been some improvements in recent years, the quality of Irish housing/construction/mortgage market data has generally been poor. Gaps and quality shortcomings in the data, including information on the types of house required and the locations they are needed, and how these might be rectified should be a particular focus.

[9] See "Construction 2020": http://www.merrionstreet.ie/en/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf

[10] For instance, Lyons (2014), argues that many of the current regulations for new developments in Dublin, are not the norm in many other major European cities, specifically: the minimum size for apartments is larger, the requirement for each unit to have a parking space (with no account given for proximity to city centre or transport links), the prohibition of east facing units, the high ratio of lifts and stairs to units, and height restrictions on buildings.

[11] See "Construction 2020": http://www.merrionstreet.ie/en/wp-content/uploads/2014/05/Construction-Strategy-14-May-20141.pdf

[12] For instance, the Dublin Industrial Estate (in North County Dublin) which is a semi vacant industrial estate in excess of one hundred acres in a particularly well serviced location is an oft cited example of an area zoned for industrial use but where perhaps it would be better put to residential use. This and similar decisions could be reviewed.

3.2 Implications of increased demand in the rental market

Since the proposed measures will force borrowers to save longer, it has been argued that there will be an increase in demand for rented accommodation, which may lead to a rise in rents. In addition, any increase in rents could have implications for affordability in the sector and government services that provide relief. On the other hand, as discussed in Section 2, it is not necessarily the case that the cost of renting will increase as a result of the proposed measures, since the supply of rental accommodation may also increase. Indeed, in New Zealand, no change in trend rental inflation has been observed following the introduction of similar LTV measures.

Nonetheless, it is also the case that as a result of the proposed measures owner-occupancy rates will probably fall somewhat.[13] It is clear that renting and owning are not considered close substitutes in Ireland as they are in other countries. Since many more people will rent for longer periods of time as a result of these measures, policies which enhance the attractiveness of renting as a long-term option should be considered.

To this end, recent survey data shows that 45 per cent of tenants agreed that they would be more likely to rent long-term if there was the possibility of rent stability and 29 per cent say they would be more likely to do so if there was the possibility of a longer term lease.[14] Indeed, long-term rental contracts are a feature of many economies where renting for extended periods is common. Such contracts may at least partly reflect the role of institutional investors or individuals investing in property for purposes such as additional pension in retirement.[15] These investors are typically focussed on a steady income stream, rather than capital gain, and have long investment horizons and strong preferences for tenants who stay for an extended period of time. In this regard, Budget 2013 introduced Real Estate Investment Trusts (REITs) to Ireland. To late-2014, approximately 1,500 residential units were acquired by REITs.

Further measures to *attract institutional investors* could include re-examining the tax regime for landlords investing in the residential investment sector, which is generally seen as less favourable than for investors in commercial investment property.[16] For instance, the interest deduction is 75 per cent for residential rental properties, compared with 100 per cent for the commercial rental sector.

Efforts to *improve the type and quality* of rental accommodation may also be beneficial. To this end, the argument has been made that an emphasis should be placed by planners on the building of family-sized apartments, which would help to make renting apartments a long-term option.[17]

Social housing policy can also play a role. Data indicates that more than 30 per cent of private landlords receive rent supplement.[18] If more social housing units were provided directly, pressure on the private rental market could be eased. Furthermore, in some parts of the country, it has been argued that rent supplement determines the level of private rents. To this end, the Government announced the provision of 35,000 additional social housing units at a cost of 3.8 billion over the next 6 years, but continues to envisage 75,000 households being provided for through local authority provision via the private rented sector.[19] There is of course a cost to the Exchequer associated with the large scale building social housing. However, it should be noted that increasing the supply of housing units more generally would also ease pressure on the rental market.

In the UK, *'build to rent schemes'* provide debt guarantees designed specifically to attract investment into the private rented sector from fixed-

[13] To understand the change in owner-occupancy rates, consider a situation in which all people enter the workforce, save for a number of years, and then buy a property at the age of, say, 25. After implementation, all borrowers need some extra years to save their deposit and can therefore buy at the age of 25 plus these extra years. Thus, after the introduction of the measures, everyone in the cohort between 25 years old and 25 plus these extra years old will not be owner occupiers anymore. This does not take account of the fact that some borrowers may never be able to save the new, higher, deposit. See Miles (2014) for a discussion.

[14] Housing agency (2014b).

[15] In Germany, where many people rent for extended periods, a large share of landlords are individuals, however, they do so for retirement purposes rather than capital gains, and are therefore interested in a steady income stream from long-term tenants (see ECB (2009), particularly Box 3).

[16] Housing Agency (2014a).

[17] See Society of Chartered Surveyors Ireland (2014).

[18] Housing Agency (2014b).

[19] See Department of the Environment, Community and Local Government (2014).

income investors who want a stable, long-term return on investment without exposure to residential property risk.[20] Criteria for receiving guarantees include: a solid management structure, suitable asset cover, a viable exit strategy, robust rental demand and clarity on where and how debt will be raised.

Finally, it has been argued that encouraging*more purpose-built student accommodation* could ease pressure on the rental market. Property Industry Ireland (2014) notes that student accommodation is not recognised as a specific property type and must therefore meet the same Planning Regulations and building control requirements as all other residential accommodation. Regulations and requirements specifically for student accommodation could increase the viability of purpose-built developments.

4 Conclusion

This Letter discussed the effect of the proposed macro-prudential measures on the housing market, focussing particularly on issues of popular debate: the impact on the rental market and on housing supply. Some possible mitigating policy options were also reviewed.

A simple analysis of the housing market indicated that the proposed measures may not necessarily increase rents: in fact, the analysis suggested that rents could fall, once it is taken into consideration that the supply of rented accommodation is likely to increase as well as demand. Furthermore, the proposed measures do not impact the outstanding stock of housing; any impact on supply applies only to the construction of future additional units.

A detailed discussion highlighted a number of possible policy options to deal with the impact on housing supply and the rental market of the proposed measures. The policy options are largely outside the control of the Central Bank, and may often involve a cost to the Exchequer, requiring a rigorous cost-benefit analysis. However, the success of the proposed measures is likely to depend on broad public acceptance that they are useful and necessary. For the Central Bank, communicating clearly that the objectives of the measures are to reduce the probability and cost of future crises, and to protect consumers from over-indebtedness will be important. In addition, taking steps to address the potential side effects of the measures, perhaps including encouraging other policy spheres to do so, may also help.

References

[1] Central Bank of Ireland, (2014), "Macro-prudential policy for residential mortgage lending", Consultation Paper CP87.

[2] Craig, R. S. and C Hua, (2011), "The determinants of property prices in Hong Kong SAR: implications for policy", IMF Working Paper WP/11/277.

[3] Cussen, M., M. O'Brien, L. Onorante and G. O'Reilly, (2015), "Assessing the impact of macroprudential measures", Central Bank of Ireland, Economic Letter, No. 3.

[4] Department of the Environment, Community and Local Government, (2014), "Social housing strategy 2020: support, supply and reform", November.

[5] Duffy, D., D. Byrne and J. Fitzgerald, (2014), "Alternative scenarios for new household formation in Ireland", Special Article in Quarterly Economic Commentary, Spring.

[6] ECB, (2009), "Housing finance in the euro area", Structural Issues Report, March.

[7] Glaeser, Gyourko and Saiz, (2008), "Housing supply and housing bubbles", Journal of Urban Economics, Vol 64(2), pp. 198-217.

[20] See https://www.gov.uk/government/policies/improving-the-rented-housing-sector–2/supporting-pages/private-rented-sector for more detail.

[8] Housing Agency, (2014a), "Rent stability in the private rented sector, Final Report", prepared for The Housing Agency on behalf of the PRTB, September.

[9] Housing Agency, (2014b), "Future of the Private Rented Sector, Final Report", prepared for The Housing Agency on behalf of the PRTB, October.

[10] IMF, (2013), "Key Aspects of Macroprudential policy Background paper", June.

[11] Lyons, R., (2014), "The Daft.ie rental report An analysis of recent trends in the Irish rental market", May.

[12] Miles, D., (2014), "Mortgages, housing and monetary policy what lies ahead?", speech given to the Northern Housing Consortium, York Racecourse, 22 November.

[13] Moran, B., (2014), "The housing challenge in Ireland", presentation delivered to the Urban Land Institute (Colloquium -Development Standards), December.

[14] Property Industry Ireland, (2014), "Delivering Irelands property needs: pre-budget submission to the Minister of Finance", July.

[15] Society of Chartered Surveyors Ireland, (2014), "Delivering houses: a ten step strategy to address the housing supply shortage".