Assessment of proposed macro-prudential policy measures

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Introduction and background

In this note, we assess the recent macro-prudential measures outlined by the Central Bank of Ireland. The intended policy levers, which are outlined in Central Bank of Ireland (2014), consist of the following two related proposals:

1. To restrict lending for primary dwelling purchase above 80 per cent loan-to-value (LTV) to no more than 15 per cent of the aggregate flow of all housing loans for principal dwelling purposes and
2. To restrict lending for primary dwelling purchase above 3.5 times loan-to-income (LTI) to no more than 20 per cent of that aggregate value.

These measures come at a time when house prices have been, since early 2013, increasing quite strongly, particularly in the Dublin area. In Figure 1 the year-on-year growth rates in both national and Dublin house prices are plotted. The increased rate of house price inflation is evident from late 2012/early 2013. However, in Figure 2 where the levels of both prices are plotted, it is clear that prices are still approximately 50 per cent below the height of the market in mid-2007.

General assessment

In principle, the potential application of a macro-prudential suite of measures in the Irish property market is a welcome and prudent development. The Irish property boom and subsequent bust over the period 2003 – 2013 was almost

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entirely facilitated by the sharp increase in mortgage credit extended by financial institutions operating in the Irish market. Changes in international finance from 1999/2000 onwards were especially influential in an Irish context. In particular, the advent and growth in international wholesale funding by European financial institutions resulted in a significant shift in the aggregate Irish credit supply curve without any real consequences for interest rates. In Figure 3 the large gap post-2003 between lending by Irish financial institutions and deposit levels is presented, while the substantial increase in the total external debt of the Irish banking sector is evident from Figure 4.

The far-reaching implications of this credit boom have been well documented with the ultimate consequence being the threat to the solvency of the Irish state. It is important to understand that the developments in international banking finance which lead to the Irish credit boom are still in place. It is in that context that the efficient application of a macro-prudential suite of policy levers is essential in safeguarding future financial stability. Gerlach and Peng (2005) examine how regulatory changes reduced the sensitivity of bank lending to property prices in the case of the Hong Kong market, while Duffy (2012) discusses the potential benefits of a macro-prudential system in an Irish context.

However, we feel that in the interests of both efficiency of policy implementation and the transparency with which these measures are communicated to key market participants, these levers should be applied on a counter-cyclical rules basis. This is not the case with the present proposals. In that context we would question both the absence of such rules underpinning the proposed framework and the application of the proposed measures in the Irish market at the present time.

Detailed observations on the proposed measures

1. It is prudent that both loan-to-value ratios and loan-to-income multiples are included in any suite of macro-prudential measures. Research by Campbell and Coco (2011) argues that regulators and mortgage providers should think about combinations of these concepts rather than controlling these levers in isolation, while McCarthy and McQuinn (2013) provide evidence of differences in

the usage of both credit channels (loan-to-values and loan-to-income ratios) by Irish credit institutions during the period 2000 to 2010. In particular, McCarthy and McQuinn (2013) demonstrate that, over the period in question, Irish institutions appear to rely more on the LTI channel as a means of extending increased levels of credit than the loan-to-value concept. In particular McCarthy and McQuinn define the income fraction (κ) as the proportion of gross income which Irish financial institutions allow mortgaged households to allocate to their mortgage repayment. The concept, which can be related to the LTI as follows

$$\kappa = \frac{LTI}{\left(\frac{1-(1+\ R_t)^{-\tau}}{R_t}\right)}$$

where R_t is the interest rate and τ is the duration of the mortgage, is plotted for Irish mortgage institutions in Figure 5. The large increase in the proportion is particularly evident between 2005 and 2008.

2. An increasing body of research in the macro-prudential area now argues for the use of rules in implementing these policy levers rather than discretion. Borio and Shim (2007), Goodhart (2004) and Galati and Moessner (2012), amongst others, have highlighted the importance of rules (or built in stabilizers) as opposed to discretion in calibrating macroprudential policy with the latter noting the necessity of rules for accountability, transparency and efficacy of policy implementation.

3. In that context, it is regrettable that no such rule has been outlined by the Central Bank in proposing these measures. Any such rule, we believe, needs to take into account cyclical patterns within the housing market i.e. the rule should be counter-cyclical in nature with policy measures being tightened if the rule indicates the presence of too much credit, for example, in the market and loosened if the opposite is the case.

4. Such a rule should be based on a number of key housing and property market related indicators. For example, a rule could be based on the following:

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    - The observed growth in house prices,
    - The relationship between actual house prices and an estimate of a "fundamental" house price. The fundamental price could be based on a rent-price ratio (as in Gallin (2008)) or econometrically estimated as in McQuinn (2014),
    - The observed rate of mortgage credit growth,
    - The level of housing market activity such as the number of housing units built and the ratio of housing construction to overall national output.

5. At this point in the Irish market based on these criteria, it is not clear that the envisaged measures are fully warranted. While house price growth has been significant over the past 18 months, in McQuinn (2014), for example, the results of four standard models of Irish house prices suggest that, as of 2013 quarter 4, Irish house prices still appear to be *undervalued*. This is mainly due to the very sharp and persistent fall recorded in Irish house prices between 2007 and early 2013. In Figure 6 the degree of undervaluation from the four models is plotted.

    Furthermore, McQuinn (2014) also examines the stock and flow of mortgage credit in the domestic market. This analysis suggests that credit levels are still very low in the Irish mortgage market and are not a significant determinant of price movements at this point.

    Finally, housing construction is at historically low levels with an average of just over 9,000 units being built in the Irish market between 2011 and 2013.

6. The key issue then is whether it is appropriate to apply the proposed measures in such a context? Both policy levers (restrictions on LTVs and LTIs) are, as a growing literature suggests,

quite powerful in moderating house price inflation, therefore, the introduction of these measures sends quite a strong signal to the market.

7. This is important as far as the supply-side of the market is concerned. Most commentators have identified a lack of housing supply as the main policy concern in the Irish housing market at present. Duffy, Byrne and Fitzgerald (2014) estimate that something in the region of 25,000 new households will be formed per annum in the medium-term. Given the already very low levels of housing construction, there is a danger that the adoption of these measures may have additional, adverse implications for future residential supply. Both property developers and financial institutions may be concerned about movements in future prices and the potential affordability of prospective mortgagers.

8. Alternatively, a counter-cyclical rules based approach to macro-prudential policy could help to anchor house price expectations going forward. A potential range could be identified for both LTVs and LTIs and the maximum amount of each lever on that range permissible by the regulator would be established at any point in time on the basis of a counter-cyclical rule. From a housing supply perspective, this would have the highly desirable effect of removing significant fluctuations in house price movements and consequently enabling financiers and property developers alike to plan housing supply decisions in a more stable and sustainable manner.

   Overall, in the interests of policy efficiency and transparency, any such rule should be on the basis of a regular assessment of the indicators discussed in point 4 with the results of the relevant analysis published.

   Ultimately, if such a rule were successful, it could potentially have quite a significant stabilising influence on price expectations within the market.

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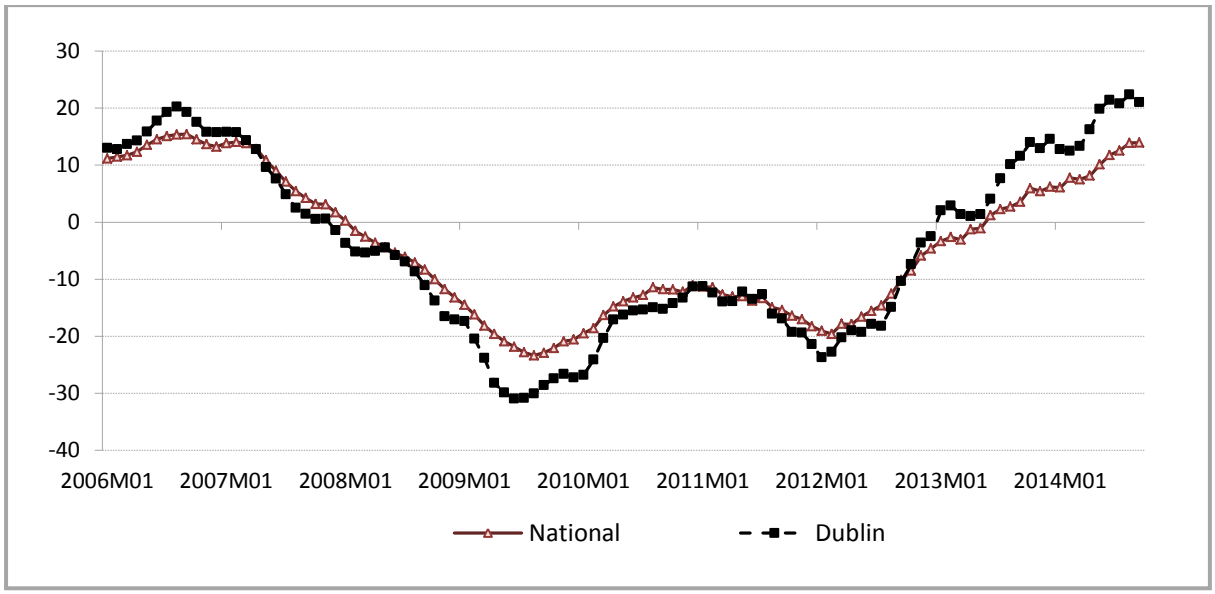
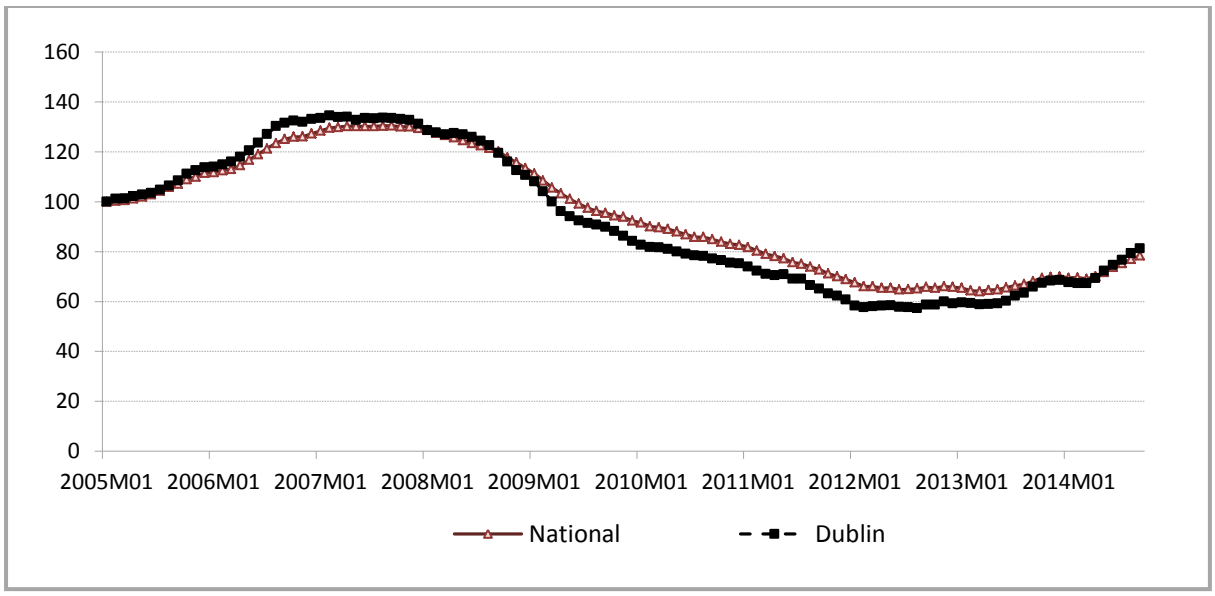
FIGURE 1 Year-on-Year Changes (%) in Irish House Prices (Nominal) 2006:1 - 2014:9



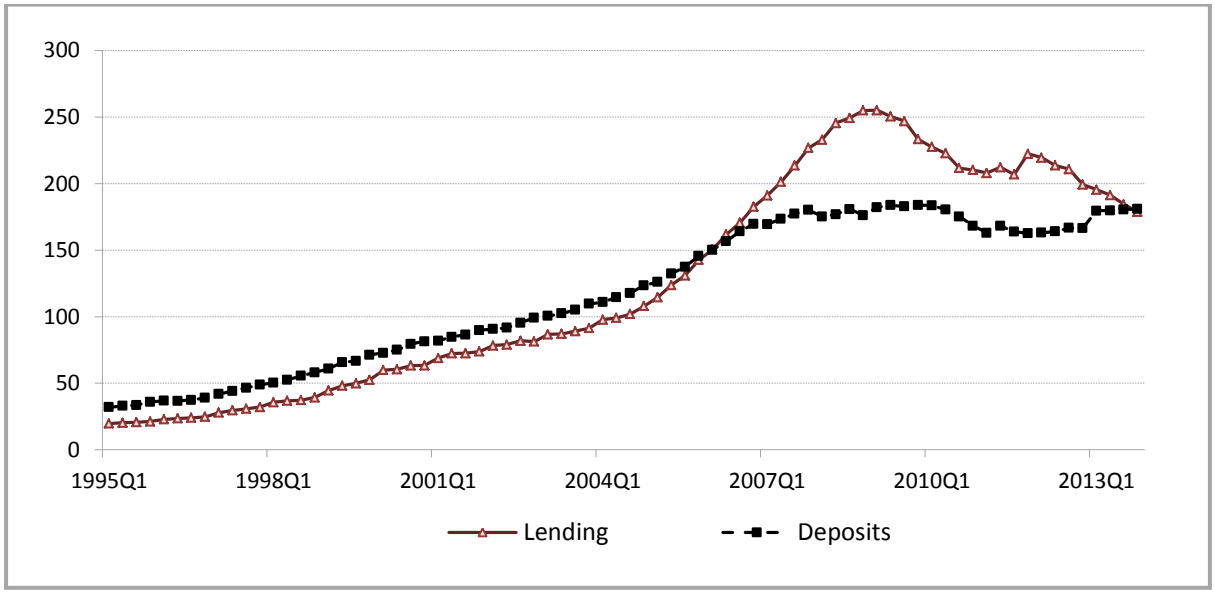
Source: Central Statistics Office.

FIGURE 2 Irish House Price (Nominal) Levels (Index 2005 =100) 2005:1 - 2014:9



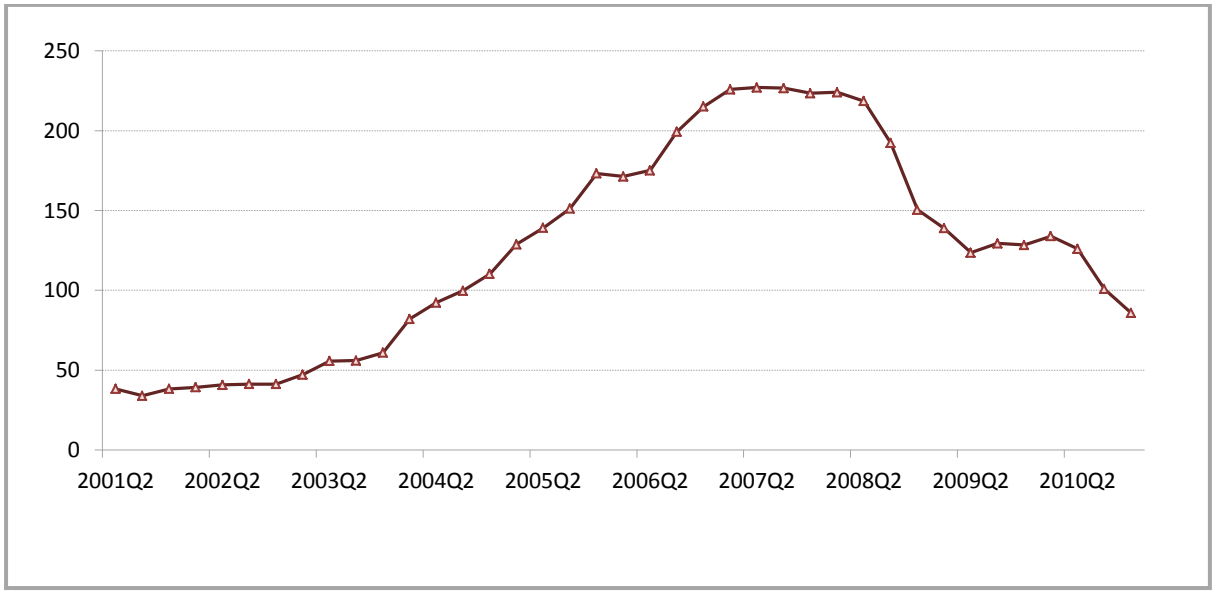
Source: Central Statistics Office.

FIGURE 3 Private Sector Lending and Deposits (€ 000 millions) to the Irish Economy 1995:1 - 2013:4



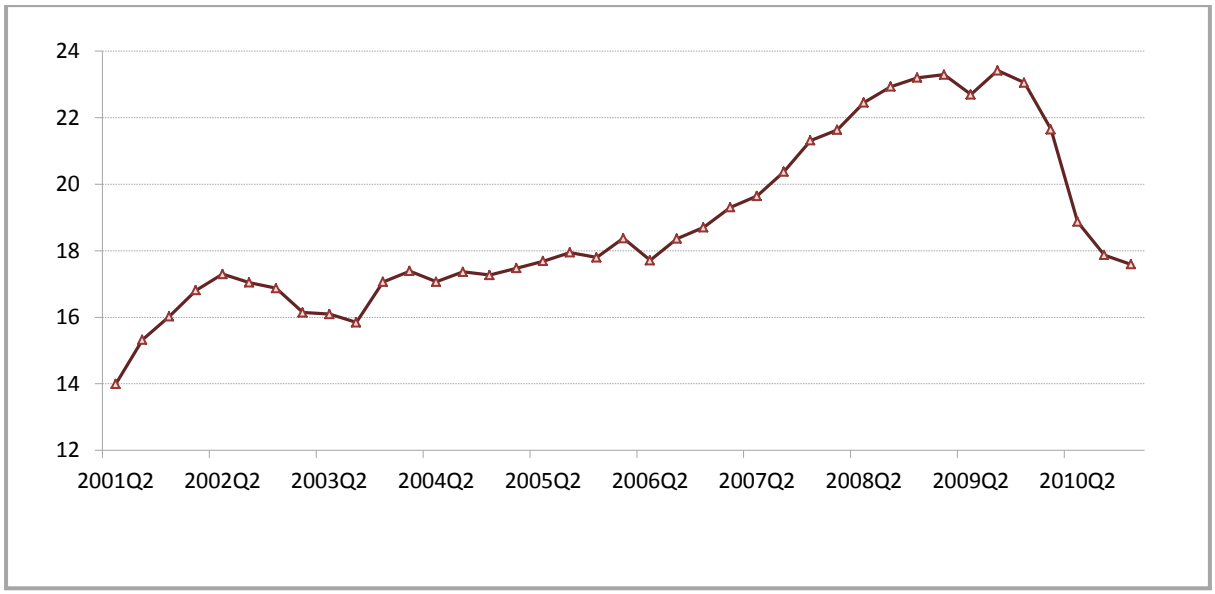
Source: Central Bank of Ireland.

FIGURE 4 Total External Debt of the Irish Banking Sector (€ 000 millions) 2000:1 - 2011:12



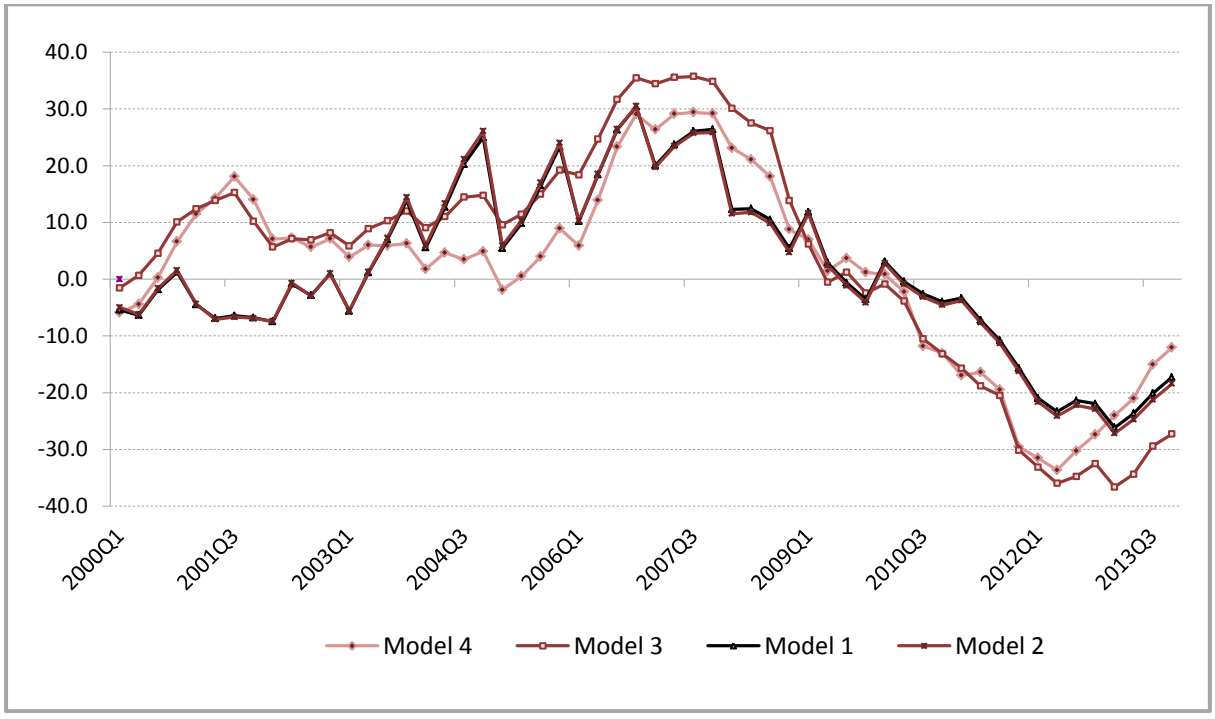
Source: Central Bank of Ireland.

FIGURE 5 Average Income Fraction (%) of Irish Financial Institutions 2000:1 - 2010:12



Source: McCarthy and McQuinn (2013).

FIGURE 6 Percentage Difference between Actual and Fundamental Prices 2000:1-2013:4



Source: McQuinn (2014).