ESRI Research Note

Updated Estimates on the Extent of Negative Equity in the Irish Housing Market

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Research Notes are short papers on focused research issues.

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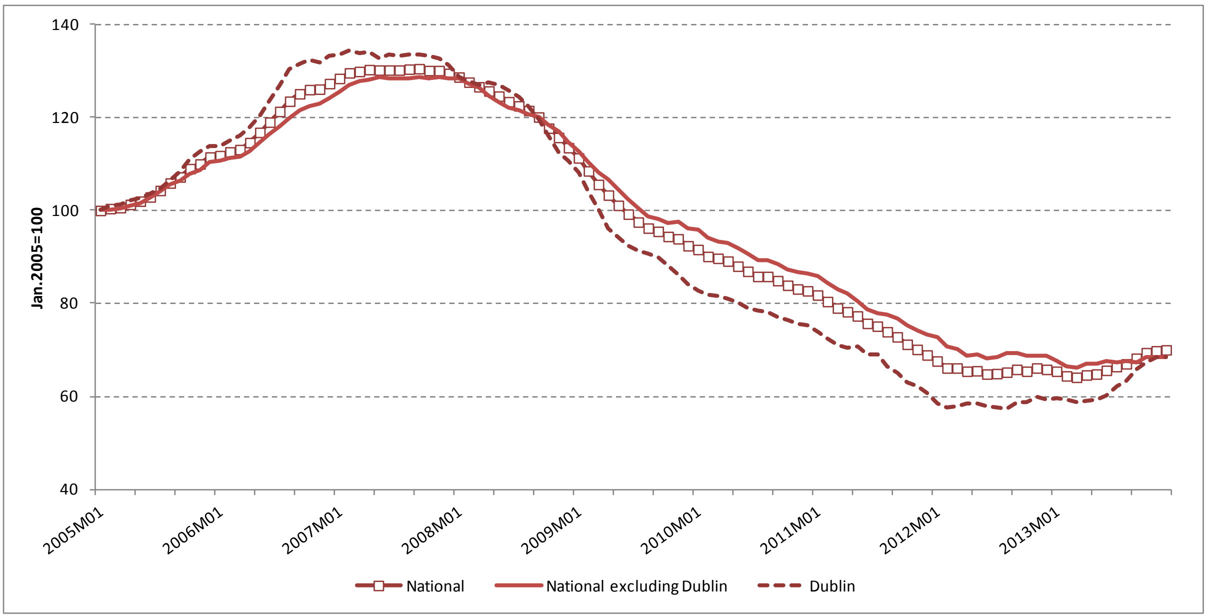
1. Introduction

Negative equity occurs when the price of a property falls below the value of the outstanding mortgage secured on that property. Given the scale of the housing market downturn it is not surprising that previous research has shown the presence of widespread negative equity in Ireland. Duffy (2010) provided an estimate using aggregate data, based on data available to Autumn 2009. At that time house prices were down 27 per cent from their peak. However, we now know that the decline in house prices lasted until the latter half of 2013 and that house prices fell much further. The CSO *Residential Property Price Index* shows a peak to trough decline in house prices nationally of over 50 per cent, with prices in Dublin falling by over 57 per cent peak to trough. More recently the Index shows some recovery in house prices during 2013. This has, to date, been primarily driven by price movements in Dublin where prices in December 2013 were over 15 per cent higher than a year previously. In contrast, house prices outside Dublin were moderately lower than they had been in December 2012.

FIGURE 1 Residential Property Price Index



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This note looks at the previous estimate of negative equity in light of the deeper decline in house prices and also assesses the impact of the increase in prices experienced in 2013. As well as impacting on the financial well-being of households affected, negative equity can also have implications for personal consumption (Lydon and O'Hanlon, 2012, Gerlach-Kristen, 2013, McCarthy and McQuinn, 2013)), savings (Disney *et al*., 2010), and labour market mobility (Ferreira *et al*., 2012).

Section 2 sets out the main assumptions, while in Section 3 the estimates for the extent of negative equity are presented. Section 4 concludes.

2. Assumptions

In order to determine whether or not a borrower is experiencing negative equity we need to estimate the current value of the property and the current mortgage balance. Given the regional dimension to the house price increases experienced to date, with prices in Dublin 15.7 per cent higher annually at the end of 2013, while prices in the rest of the country were up by 6.4 per cent, we look at what has happened to the numbers in negative equity in Dublin. In addition to movements in price, the extent of negative equity will also be influenced by any reduction in the capital balance outstanding as a result of mortgage repayments. Our approach requires a number of assumptions:

Volume of mortgages: Data on the number of mortgages drawn down each year are taken from Department of Environment data up to 2007, when it was discontinued, and from Irish Banking Federation data thereafter. Unfortunately, data on mortgage draw-downs are not available regionally. However, Census data show that Dublin accounts for approximately 30 per cent of households with a mortgage. We apply this to the total number of new mortgages to get an estimate of mortgage numbers for Dublin.

House Price: Between 2000 and 2008 the price used is the price for Repeat buyers (movers) and First-Time Buyers (FTB) from the *permanent tsb* house price index. From 2009 price is based on the national value from the CSO *Residential Property Price Index*. Both price indices are estimated using a hedonic regression to take account of any changes in the mix of properties sold between different periods. A price for each buyer type is estimated using the ratio of FTB to repeat buyer price from the *permanent tsb* series. For Dublin, prices are initially taken from *permanent tsb* data for Dublin FTBs and Dublin repeat buyers for quarter 4 each year from 1996 to 2007. Thereafter, they are estimated as above.

Mortgage term: A mortgage term of 25 years is assumed for repeat buyers. Given the impact of the downturn the assumed mortgage term for FTBs is reduced from 35 years to 25 years from 2010 to take account of tighter credit conditions.

Interest Rate: The interest rate is the representative mortgage rate for December each year from the CSO databank. Borrowers are assumed to commence paying back their mortgage immediately. The mortgage is assumed to be repaid in full by the end of the term. In the initial years a higher proportion of the repayment goes towards repaying interest rather than reducing the capital.

Buyer type: Irish Banking Federation data are used for the share of FTBs and repeat buyers in mortgage draw-downs. The split between FTBS and Repeat buyers for the Dublin area from 2004 to 2008 is taken from Department of Environment data.

Loan-to-Value ratio: Data on the distribution of mortgages by Loan-to-Value ratio (LTV) nationally and for Dublin from 2004 to 2008 are taken from Department of Environment data. For more recent years, it is assumed that no mortgages with a 100 per cent LTV are issued. An average LTV of 75 per cent is assumed for repeat buyers and 85 per cent for FTBs.

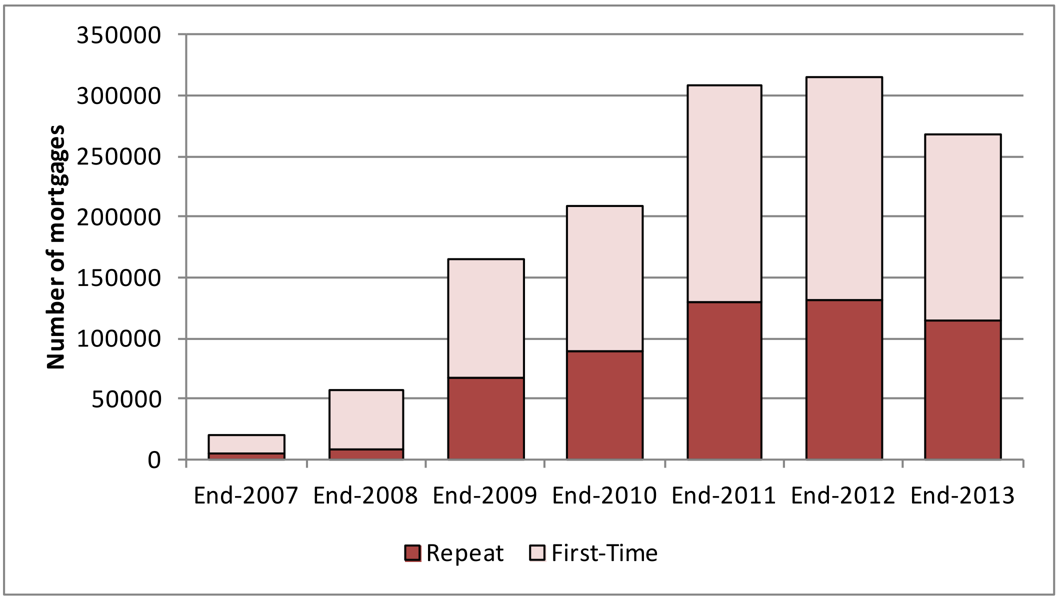
Arrears: It is assumed that borrowers are making full payments, that there are no arrears and borrowers have not released any equity from their property. However, previous research shows that of the mortgage properties found to be in negative equity, 8 per cent had also accrued more than three months worth of arrears on their mortgage books (Kennedy and McIndoe-Calder, 2012).

3. The Extent of Negative Equity

Based on these assumptions it is estimated that the total number of mortgage loans in negative equity reached a peak of over 314,000 by the end of 2012. The recovery in prices experienced in 2013 reduced the number in negative equity to 268,000 by the end of the year, a fall of approximately 45,000. Figure 2 shows negative equity by year. We can see that there was a substantial increase in numbers over the course of 2008 and over the course of 2011, reflecting in part steep price declines in each of those 12 month periods.

The majority of those experiencing negative equity are FTBs, who account for approximately 57-58 per cent of those in negative equity in each year from 2010 to 2013. This may well reflect the high initial LTVs on mortgages taken out by FTBs. While we do not have more recent data on the distribution, Department of Environment data to 2008 show that in the years 2006-2008, between 23 and 34 per cent of FTBs who took out a mortgage had an LTV of 100 per cent.

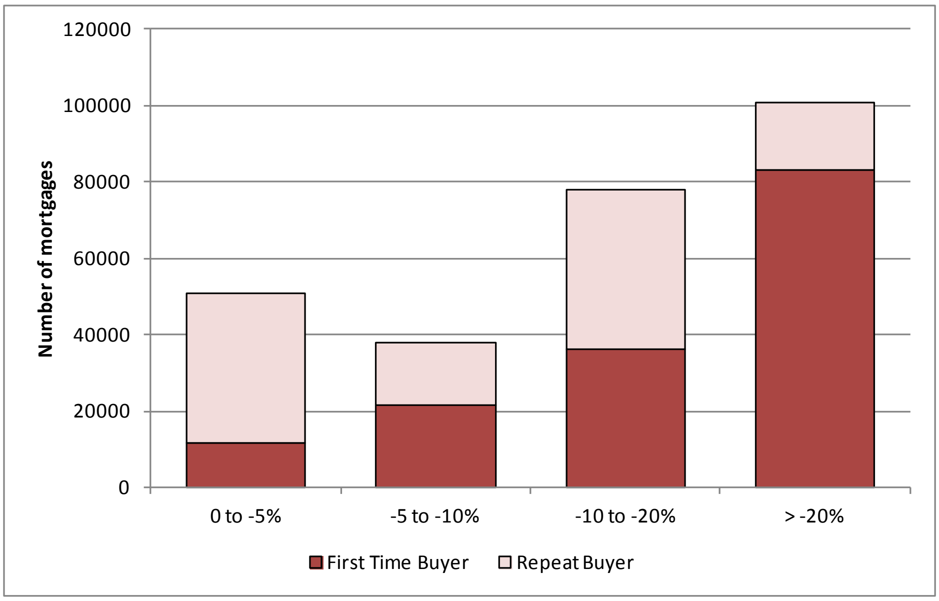
FIGURE 2 Numbers in Negative Equity, End Year



Our estimates for negative equity suggest that Dublin accounted for 40 per cent of mortgages in negative equity at the peak of the problem, close to 125,000 mortgages at the end of 2011. The numbers in negative equity in Dublin fell by over 35,000 by the end of 2013. This represents over three-quarters of the improvement experienced nationally and, as outlined above, is due to the substantially stronger increase in prices experienced in Dublin.

Given that we have estimated negative equity by calculating the house price and the outstanding mortgage balance we can look at the depth of negative equity being experienced. Figure 3 shows that at the end of 2013 there were still a large numbers of borrowers in negative equity greater than 20 per cent of the house value, the majority of which were first-time buyers.

FIGURE 3 Depth of Negative Equity, End-2013



Finally, we look at what may happen to the numbers in negative equity in 2014. This estimate is very dependent on what happens to house prices. We examine what may happen under two alternatives:

(1) First, we assume that house prices in 2014 grow at the same rate as they did in 2013. We apply the annual growth rate recorded in December 2013, an increase of 6.4 per cent nationally and 15.7 per cent in Dublin. On this basis, the numbers in negative equity nationally would fall by 66,800 to just over 200,500. In Dublin the numbers in negative equity would fall to 59,000, a decline of 28,200 from the end of 2013;

(2) Second, we take the average annual growth in the Residential Property Price Index in the first six months to June and assume no further growth in 2014. Thus, house prices nationally would increase by 9 per cent and in Dublin by 17.5 per cent. Using these growth rates, we estimate a decline in the numbers in negative equity nationally of 88,000 to 179,000 by the end of 2014. The similarity between the growth in Dublin house prices in 2013 and the growth to date this year means that using this alternative does not alter our estimate of the decline in negative equity in Dublin for 2014.

4. Conclusions

The scale of the housing market downturn has meant that Ireland is experiencing widespread negative equity at present. The recent increases in house prices reduced the numbers in negative equity at the end of 2013. The increase in house prices has mostly been in the Dublin market, suggesting that it is in this location that the majority of the improvement has been experienced.

The improvement in negative equity is important in the context of financial stability, (Hellebrandt, Kawar and Waldron, 2009). The reduction in the value of mortgage based assets can lead to a reduction in the availability of credit to both households and firms as banks make provisions for an anticipated increase in expected losses. The more mortgages that exit negative equity, the stronger the balance sheets of Irish credit institutions.

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