Housing Finance Developments in Ireland

By Nicola Doyle[1]

Abstract

The Irish mortgage market experienced significant change in recent years. Developments in housing finance are closely monitored by central banks, as they can have important implications for many areas of concern to central banks. This paper outlines developments in Irish housing finance over the past decade and their implication for the monetary policy transmission mechanism. It compares, where possible, developments in Ireland with those in other euro area countries and, to a lesser degree, the United States and the United Kingdom. A number of studies indicate that the more flexible/developed a mortgage market is, the more responsive the economy is to changes in official interest rates. Flexibility is often measured according to the level of mortgage debt, the characteristics of the outstanding mortgage debt and the manner in which banks fund their mortgage lending. This paper finds that the Irish mortgage market became more flexible in recent years, thereby increasing the economy's sensitivity to monetary policy changes. Among the key features of recent developments are a significant increase in the level of mortgage debt; a higher prevalence of variable rate mortgage debt; higher loan-to-value (LTV) ratios and increased contract lengths for new mortgages; the introduction the tracker mortgage; changes in the funding sources of mortgage lenders. The outbreak of the financial turmoil in August 2007 and its deterioration in September 2008 led to a slight reversion in some recent trends, indicating that mortgage market flexibility may have peaked in 2007.

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1. Introduction

Housing finance is of crucial importance to the Irish economy with mortgages representing by far the largest liability of Irish households and a significant component of Irish banks' lending. Developments in housing finance are closely monitored by central banks, as changes in mortgage debt levels, the institutional characteristics of mortgage debt and bank funding can have important implications for many areas of concern to central banks. This paper focuses on the implications for the monetary policy transmission mechanism, in particular the extent to which the structure of housing finance and changes in it affect the impact of changes in official interest rates.

There are a number of ways in which developments in housing finance have important implications for the transmission of monetary policy. A larger stock of mortgage debt increases the sensitivity of households to shifts in interest rates (Debelle, 2004). In addition, the characteristics of the outstanding mortgage debt affect the speed and strength of the transmission of official interest rate changes (Calza, Monacelli and Stracca, 2006). Institutional differences across mortgage markets are often cited as a source of cross-country diversity in the strength and speed of monetary policy changes on the economy. Institutional characteristics include the level of variable rate debt, loan-to-value (LTV) ratios[2], mortgage contract duration, the degree of mortgage securitisation, among many others. The literature on housing finance often interprets these characteristics as indicators of mortgage market development/flexibility. A number of studies[3] find that the transmission of an exogenous unanticipated monetary policy change is magnified in more flexible/developed mortgage markets.

In 2008/09 the Central Bank and Financial Services Authority of Ireland (CBFSAI) participated in a task force of the Monetary Policy Committee (MPC) of the European system of Central Banks (ESCB), which examined developments in housing finance across the euro area, focusing primarily on the decade prior to 2007. The findings of the task force are contained in an European Central Bank (ECB) Occasional Paper "Housing Finance in the euro area"[4]. Some common trends are observed across national mortgage markets: mortgage debt increased in most euro area countries, as did LTV ratios, maturities and flexibility regarding repayments. However, significant heterogeneity remains, in particular regarding the share of variable rate loans in total mortgage debt, which ranges from 10 per cent to 99 per cent across euro area countries.

This paper outlines the main developments in Irish housing finance over the past decade, including the financial position of households, the characteristics of mortgage debt and the manner in which Irish banks have financed mortgage lending. It compares developments in Ireland with those of other euro area countries (based in part on information collected through the MPC task force, including information gathered through bank questionnaires distributed by National Central Banks (NCB) to a sample of banks[5]). Comparisons are also drawn with the UK and the US where possible. Although the ECB Occasional Paper focuses primarily on the decade preceding the financial turmoil, this paper will examine, where possible, recent developments for Ireland.

The paper is structured as follows. Section 2 presents information on the financial situation of Irish households, examining their level of indebtedness and net worth. Section 3 outlines developments in the characteristics of mortgage debt. Section 4 examines developments in the funding sources of mortgage lenders and Section 5 concludes.

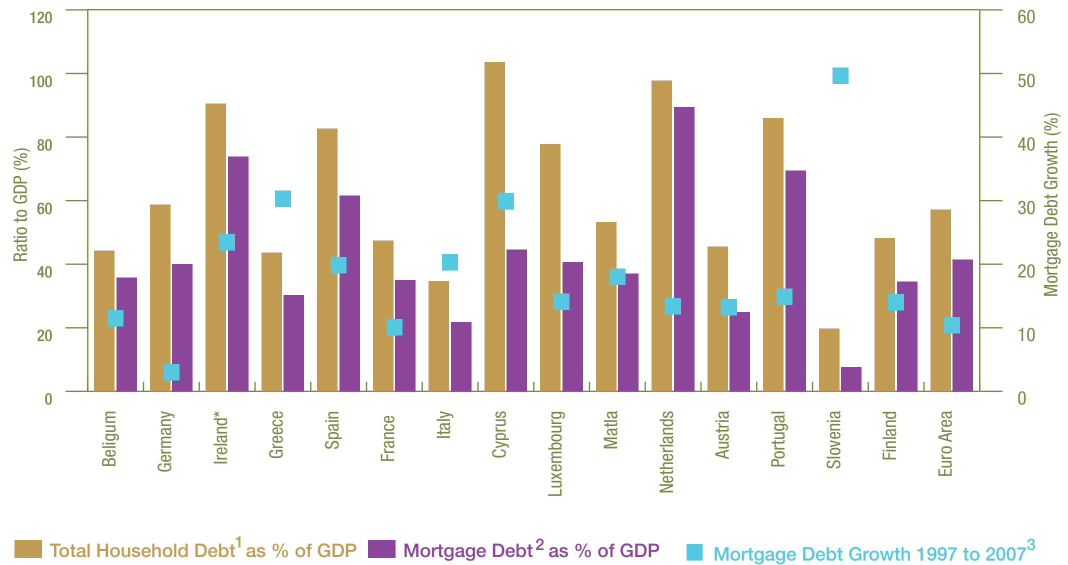
2. Housing Finance and the Financial Situation of Households

2.1 Mortgage Debt

Over the decade prior to 2008 household debt increased considerably in Ireland and across the euro area, both in absolute terms and relative to variables such as GDP and

[2] Mortgage value as a percentage of property value at the inception of the mortgage contract.
[3] Calza, Monacelli and Stracca (2006), IMF (2008), Debelle (2004).
[4] Drudi et al (2009). This paper is available at http://www.ecb.int/pub/.
[5] Irish banks surveyed accounted for approximately 80 per cent of the Irish mortgage market.

Figure 1: Euro Area Household Debt 2007



Source: Drudi et al. (2009)
[1]Total household debt refers to stock of loans provided by MFIs to households, including those derecognised from their balance sheets.
[2]Mortgage debt refers loans for house purchased provided by MFIs to households, including loans derecognised from their balance sheets.
[3]Growth rates refer to 2003 to 2007 for Cyprus, 1999 to 2006 for Luxembourg, 2005 to 2007 for Slovenia and 2001 to 2007 for Finland.

disposable income. Mortgage debt accounted for the bulk of this increase, growing at an annual average rate of 23 per cent in Ireland between 1997 and 2007. The pace of Irish mortgage growth was stronger than that of the euro area (10 per cent) and most, but not all, other member states, see Figure 1. By the end of 2007 mortgage debt accounted for 82 per cent of Irish households' debt. The ratio of housing debt to GDP provides a useful comparison of the size of housing finance markets across countries. At 91 per cent, Irish household-debt-to-GDP in 2007 was well above the euro area ratio (57 per cent) and among the higher ratio countries, see Figure 1. There was a considerable spread in this ratio, however, with low figures for Italy, Slovenia, Greece and higher figures for the Netherlands, Cyprus, Ireland, Portugal and Spain. The chart also indicates that mortgage debt accounts for the majority of household debt in most euro area countries.

2.2 Households' Assets

The counterpart to household indebtedness is the value of household net assets. The Central Statistics Office (CSO) produces annual balance sheet data on the financial assets and liabilities of Irish households and Cussen, Kelly and Phelan (2008) have extended this to produce data on households' non-financial assets (housing assets) and net worth[6]. These data indicate that the net worth of households increased significantly from 250 per cent of GNP in 2002 to 373 per cent of GNP by 2007. The substantial increase was driven by the increase in the value of housing stock (non-financial assets), which accounted for 80 per cent of household's net worth in 2007. Table 1 reports data on non-financial assets held by Irish households and households in six other euro area countries[7] for which data are available. The ratio of non-financial assets to GDP in 2007 was greatest for Spain (580 per cent) with Ireland[8] (301 per cent) representing the median level. In 2007 housing wealth accounted for the bulk of household wealth in all countries considered.

[6] Cussen, Kelly and Phelan (2008) use housing assets as a proxy for non-financial assets. Net worth equals non-financial assets (housing assets) plus net financial assets (financial assets minus financial liabilities).
[7] Germany, Spain, France, Italy, the Netherlands and Portugal.
[8] Irish data is measured relative to GNP.

Table 1: Household Wealth 2007

Country:	Non-Financial Assets	Gross Financial Assets	Net Financial Assets[1]	Net Worth[2]	Non-Financial Assets as % of Net Worth
	percentages of GDP				%
Germany	217	188	125	341	63
Ireland[3]	***301***	***191***	***73***	***373***	***81***
Spain	580	182	93	674	86
France	350	189	126	476	73
Italy	363	241	193	556	65
Euro Area	***na***	***201***	***133***	***na***	***na***
Netherlands	253	266	146	398	63
Portugal	215	221	121	336	64

[1]Net Financial Assets equals Gross Financial Assets minus Financial Liabilities.
[2]Net Worth equal Non-Financial Assets plus Net Financial Assets.
[3]Irish data are as a percentage of GNP.
Source: Cussen, Kelly and Phelan (2008), Drudi et al (2009), and author's own calculations.

Whilst growth in households' net assets increased substantially in recent years, it did not keep pace with that of personal sector credit. Scaling the level of household debt by the value of household assets provides an aggregate measure of leverage for households (Debelle, 2004). The data indicate that the leverage ratio of the Irish household sector increased from 14 per cent in 2001 to 25 per cent in 2007, which, though higher than in the recent past, suggests that mortgage debt still accounted for less than a quarter of housing assets in 2007. The ratio of mortgage-debt-to-housing-wealth also increased over the period from 11 per cent in 2001 to 23 per cent by 2007. Latest statistics from the CSO indicate that the net financial assets of households fell by 31 per cent in 2008. Given this statistic and the significant declines experienced in house values, both the leverage and mortgage-to-housing wealth ratios will have increased further in 2008 and 2009.

2.3 Household Survey Data

Whilst aggregate data provide an illustration of the sensitivity of an economy to developments in housing finance, they can conceal substantial variation in the distribution of debt across households. The distribution of debt across households has important implications for the sensitivity of the economy to interest rate shocks as characteristics of indebted households can differ from those of the population as a whole. For example, using data from the Central Statistics Office's (CSO) household budget surveys (HBS), Kearns (2004) finds that higher-income households accounted for the greater part of the increase in mortgage debt in the late 1990s.

Data from the CSO's HBS provide a breakdown of mortgage holders across age and income categories for 2004/05, and this can be compared with data from six other euro area countries, see Table 2. It should be noted that the information in Table 2 reflects the latest data available for the countries and not necessarily 2005[9]. In 2005, 36 per cent of Irish households held a mortgage, a share slightly greater than most of the six other euro area countries but lower than the UK and the US. The majority of these households (80 per cent) were in higher income quartiles[10] with the lowest income quartile accounting for less than 4 per cent of mortgaged households. In addition, only a small proportion of households within the lowest income quartile held a mortgage, see Table 2. In terms of age, Ireland has a relatively high proportion of young households with mortgages: in 2004/05, 49 per cent of households with a head under 35 years of age held a mortgage and this category accounted for 23 per cent of all mortgaged households. Households with a head aged between 35 and 44 had the highest incidence of mortgage debt, as almost two-thirds of these households held a mortgage in 2005.

[9] Data for Greece and the Netherlands refers to 2007. Data for Spain and Portugal reflect 2006. German data refers to 2003 and French data reflects 2003/2004.
[10] Third and fourth income quartiles.

Table 2: Latest household budget survey data for selected euro area countries, the US and the UK

	Share of households with a mortgage	Share of households in the lowest income quartiles with a mortgage	Share of households (head < 35 years) with a mortgage
Germany	27	7	16
Ireland	***36***	***7***	***49***
Greece	17	4	12
Spain	25	8	46
France	30	na	35
Italy	12	4	14
Netherlands	39	23	25
Portugal	30	6	53
United States	45	na	na
United Kingdom	40	na	na

Source: CSO Household Budget Survey 2005 and Drudi et al (2009).

Comparing data from HBS 1999/2000 and HBS 2004/05 indicates that the share of lower income households (i.e. households in the lowest income quartile) within mortgaged households declined from 9 per cent to under 4 per cent. In addition, the proportion of lower income[11] households with mortgages also declined from 28 per cent to 25 per cent. In contrast, the share of higher income households with mortgages increased slightly over this period. The representation of young households (< 35 years) among mortgaged households also increased over this period. These developments imply mixed effects for interest rate sensitivity. The ratio of mortgage repayments to income is often used when evaluating the sensitivity of households to interest rate changes in countries where the share of variable rate mortgages is high, as in Ireland. Data from the HBS indicate that these ratios tends to decrease with household income and age for Irish households. Therefore, the increased representation of younger households and higher-income households among overall mortgaged households would exert opposing effects making the net effect difficult to quantify.

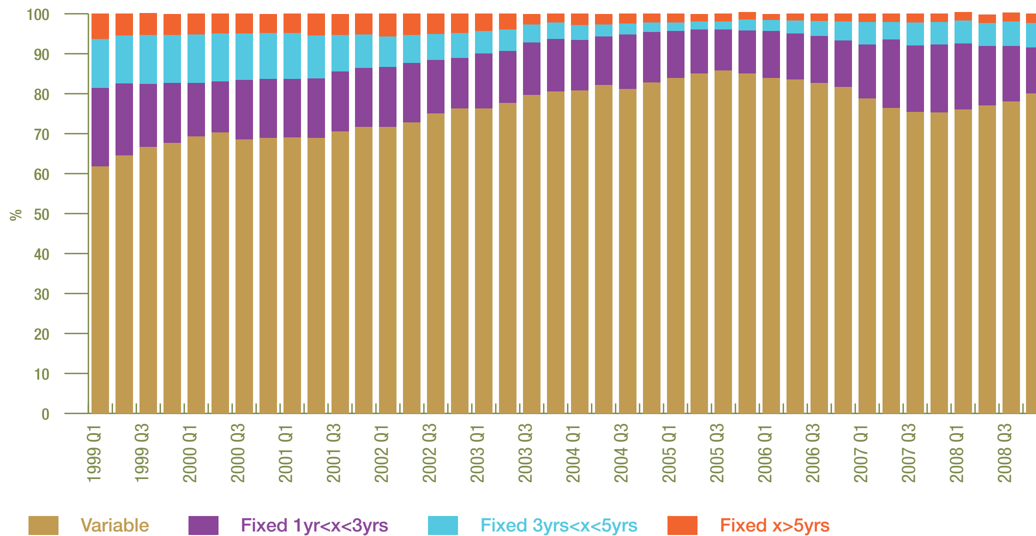
3. Characteristics of Mortgage Debt

As previously stated, differences across mortgage markets are often cited as a source of cross-country heterogeneity in the strength and speed of monetary policy changes on the economy. Calza, Monacelli and Stracca (2006) find that, as one might expect, the transmission of an exogenous unanticipated monetary policy change is magnified in more flexible/developed mortgage markets, i.e. those that have higher LTV ratios, a greater prevalence of variable rate debt and the availability of mortgage equity withdrawal. They find that the sensitivity of consumption to monetary policy changes increases with higher LTV ratios and repayment rates. In addition, they find that the prevalence of variable interest rate mortgages, and hence a stronger pass-through of interest rate changes to mortgage lending rates, also enhances the responsiveness of consumption to monetary policy shocks.

Borio (1995) notes that the strength of income effects associated with interest rate changes will depend on the size of indebtedness, the maturity of the outstanding contracts and, above all, the share of variable rate funding. The IMF (2008) provides cross-country evidence that the responsiveness of overall output and house prices to monetary policy shocks tends to be greater in economies with more flexible mortgage markets. They identify flexibility according to six institutional characteristics: typical LTV ratio; the availability of mortgage equity withdrawal; the average maturity of mortgage contracts; the availability of no cost prepayment; the proportion of outstanding residential loans issued as covered bonds; the percentage of outstanding residential loans that are securitised. This section documents the main developments in the characteristics of Irish

[11] Those in the first and second income quartile.

Figure 2: Outstanding Irish Residential Mortgages by Interest Setting Period, 1999Q1 to 2008Q4



Source: CBFSAI

mortgage debt in recent years, comparing the situation, where possible, with other euro area countries and, to a lesser degree, the US and the UK.

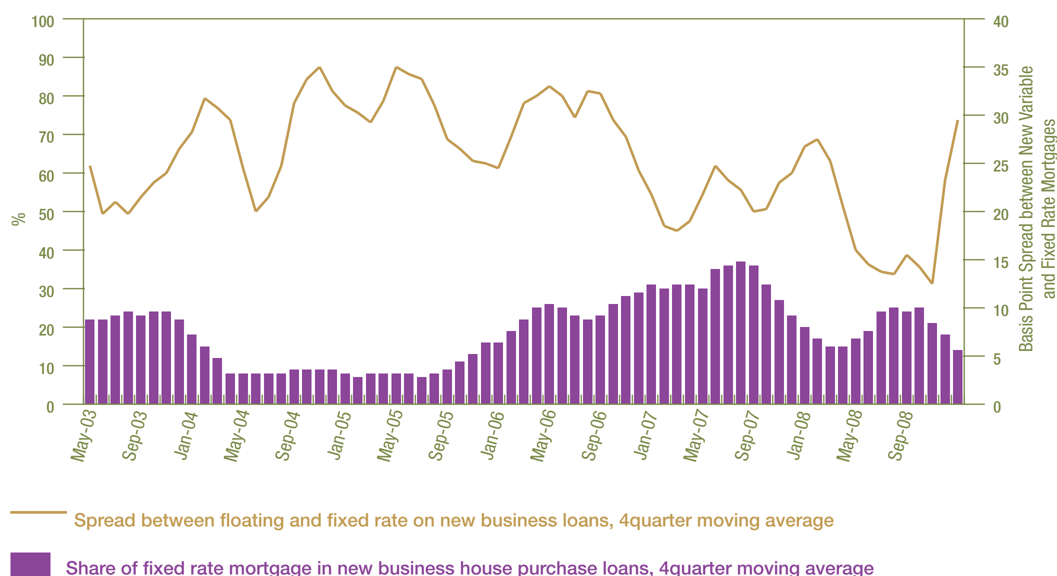
3.1 Fixed versus Variable Loans

The share of variable loans in the total outstanding Irish mortgage stock increased significantly over the last decade. At the beginning of 1999, variable rate loans accounted for slightly over half the outstanding mortgage stock while, by the end of 2007, three out of four Irish mortgages were variable. Of the outstanding fixed rate mortgages at end-2007, less than a third were fixed for a period greater than 3 years, and only 8 per cent were fixed for more than 5 years.

A recent study by O'Donnell and Keeney (2009) finds that the interest rate is the most important feature for Irish borrowers when selecting a mortgage product. Available data on new mortgage loans highlights borrowers' sensitivity to interest rates: over the period from 2003 to 2008, the share of fixed rate loans in new mortgages was lowest from 2003 to 2005, a period characterised by low and declining interest rates and an above average spread between the variable (floating) and fixed rates, see Figure 3. As the spread between rates declined and interest rates in general began to rise, the share of fixed rate mortgages increased.

The increase in the share of variable rate mortgages in the outstanding stock also reflected the widespread introduction of new variable rate products during this period, see Table 3. The greater part of the new variable rate products were versions of tracker rate mortgages: mortgages where the interest rate charged equals the main ECB refinancing rate plus a premium set at inception. Therefore, when the ECB rate decreases the bank is obliged to fully pass the decrease onto tracker mortgage holders. Tracker mortgages are estimated to account for approximately 60 per cent of the outstanding variable rate mortgage stock (Kelly 2009). Therefore, a significant proportion of Irish mortgage holders are highly sensitive to ECB rate movements. Banks surveyed for the euro area exercise indicated that the ECB main refinancing rate and the 3-month EURIBOR were the main index rates against which variable rate mortgages were adjusted in 2007.

Figure 3: Share of Fixed Rate Mortgages in New Buisness Volumes and Spread between Fixed and Variable Rate Loans: Ireland, 2003 to 2008



Source: CBFSAI, author's own calculations

Following the inception of the financial turmoil in August 2007, banks began removing tracker mortgages from their product range, i.e. they ceased to offer tracker mortgages to new customers. By April 2009 the tracker mortgage product had effectively disappeared for new borrowers, see Table 3. In addition, since 2006 banks have introduced more fixed rate products and reduced the number of variable rate products. Some institutions have introduced 10-year fixed rate products. However, the share of variable rate mortgages in the outstanding stock has continued to increase, reaching 80 per cent by the end of 2008.

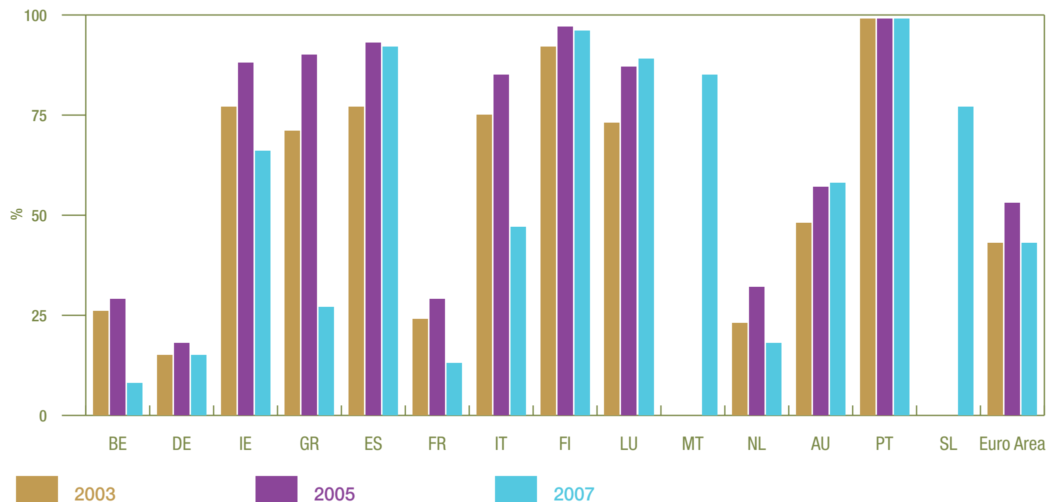
Table 3: Number of Irish Mortgage Products

	1997	2006	2009
Fixed-rate mortgage products:	***93***	***71***	***82***
— 1 to 3 years	60	41	56
— 3 to 5 years	24	18	21
— Fixed greater than 5 years	9	12	5
Variable rate mortgage products:	***44***	***78***	***45***
Standard variable-rate mortgages	34	19	43
Tracker rate mortgages		57	2
Other*	10	2	
Total	**181**	**298**	**254**

*Other category includes current account saver, surplus builder/homeplan, discount and 3 in 1 mortgages.

Source: Cronin and Monks (2006), MONEYMATE and authors own calculations.

Figure 4: Share of Variable Rate Lending in New Loans to Euro Area Housholds for House Purchase, 2003, 2005, 2007



Source: Drudi et al. (2009)

Variable rate loans are more popular than fixed rate mortgages in most euro area countries, see Figure 4. Portugal has the highest share of variable rate mortgages at 99 per cent. However, the minority of countries where fixed rate loans dominate (Belgium, Germany, France and the Netherlands) represent 65 per cent of all euro area housing loans. In contrast to Ireland, the majority of fixed rate loans in these countries are fixed for long periods of time, typically 10 years or more. The UK is quite similar to Ireland; over half of its loans are variable and approximately two thirds of its fixed rate debt has a relatively short fixation period. In contrast, the majority of US mortgage contracts are fixed[12].

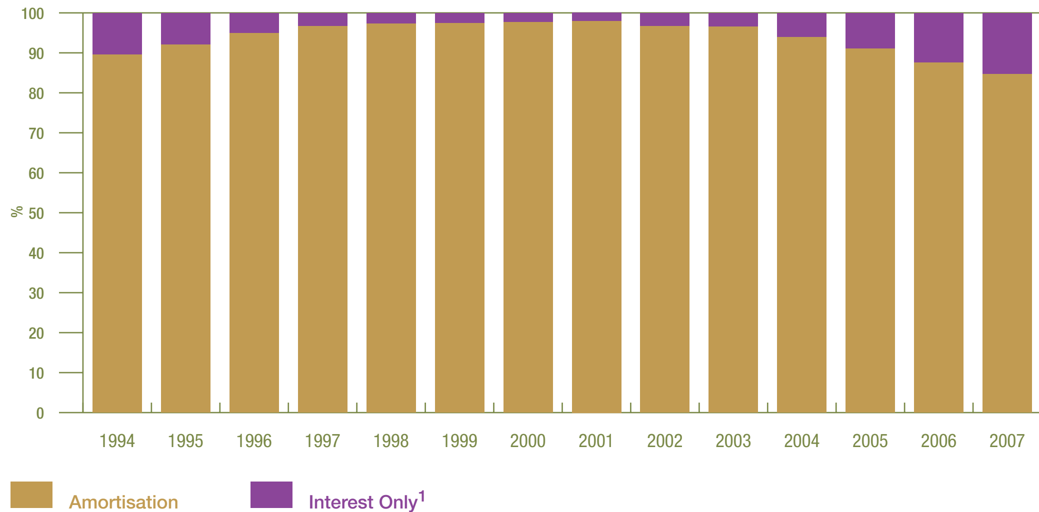
An important qualification with respect to fixed versus variable rate mortgages and interest rate sensitivity is the ease with which borrowers can switch from fixed to variable rate mortgages. If the cost of prepaying a fixed rate mortgage and switching to a variable rate mortgage is minimal, as is the case in the US, then the economy is more sensitive to interest rate changes than one would expect given the distribution of mortgages across variable and fixed rates. When rates fall US borrowers are more likely to switch from fixed to variable, however, when rates rise they are more likely to hold onto their fixed rate mortgages. Early repayment of fixed mortgages is possible in all euro area countries but penalties are incurred. With respect to Ireland, all institutions surveyed for the euro area exercise charged customers a penalty for switching. Some institutions indicated that the interest they expected to lose, as a result of the switch from fixed to variable, was a key factor in calculating this penalty.

3.2 Redemption Scheme

Annuity mortgages, where interest and principal payments are made on a monthly basis, are the most popular form of mortgages in Ireland. However, the popularity of interest-only mortgages, whereby only interest payments are made for a set period, usually less than 5 years, has grown in recent years. In 2001, interest-only mortgages accounted for only 2 per cent of newly approved loans. By 2007 this figure had reached 15 per cent. Over this period banks introduced a number of interest-only mortgage products aimed at the investor market. Data from the IBF/Price Waterhouse Cooper (PWC) Mortgage Market

[12] Although new adjustable rate contracts were introduced in recent years and gained popularity in the sub-prime market.

Figure 5: Approved New Irish Mortgages by Redmeption Scheme, 1994 to 2007



Source: Department of the Environment

Profile indicate that investors accounted for 13 per cent of new mortgages between 2005 and 2007. However, not all interest-only mortgage holders were buy-to-let investors and vice versa. Following the decline in property prices, banks began to remove interest only mortgages from their product range. In addition, the IBF/PWC data for 2008 indicate that the share of investment mortgages in new mortgages declined slightly to 12 per cent.

3.3 Loan-To-Value (LTV) Ratios

Information was collected through the bank questionnaire on the typical LTV ratios for first time buyer loans in 2007. The ratio for Ireland, at 83 per cent for new first-time buyers, was slightly higher than figures for the euro area, the US and the UK, see Table 4. The Netherlands recorded the highest ratios at 101 per cent. There are no legal restrictions on LTV ratios in Ireland or any other euro area country. However, the treatment of mortgage loans under Basel II is dependent on whether they pass a certain threshold: Irish banks are required to hold more capital against loans with LTV ratios above 75 per cent. According to responses to the questionnaire, mortgages with LTV ratios above this threshold tend to be charged at a higher interest rate. The majority of Irish banks surveyed charged a higher interest rate on a mortgage with an LTV of 95 per cent compared to a similar mortgage with an LTV of 75 per cent. In some instances, the difference was greater than 20 basis points. In contrast, few institutions reported charging a higher interest rate on mortgages with LTV ratios of 75 per cent compared to those with LTV ratios of 50 per cent. In all cases the difference was under 20 basis points. Similar rules in relation to Basel II apply in other euro area countries, albeit with varying LTV thresholds: Spain and Italy (80 per cent), Greece and Portugal (75 per cent) and Finland (70 per cent). On average, euro area Monetary Financial Institutions (MFIs) charge a higher rate on mortgages with LTV ratios of 95 per cent compared with those with LTV ratios of 75 per cent.

Despite the interest rate premium, Department of the Environment data indicate that mortgages with LTV ratios over 95 per cent became increasingly popular among first time buyers in recent years. The share of first-time buyers with LTV ratios over 95 per cent increased from 2004 to 2006 before declining

Table 4: Characteristics of Loans for House Purchase 2007*

	Percentage of variable rate loans in new residential mortgages	Typical Loan-To-Value Ratio	Average Typical Term (years)
Beligum	10	80	20
Germany	15	70	25-30
Ireland	***67***	**83**	**31-35**
Greece	28	73	15-20
Spain	91	72.5	30
France	15	91	19
Italy	47	65	22
Cyprus	n.a.	80	20-25
Luxembourg	90	87	20
Euro Area	***43***	**79**	**na**
Malta	85	63	35
Netherlands	18	101	30
Austria	61	84	30
Portugal	99	71	35
Slovenia	80	65	20
Finland	96	81	20-25
United Kingdom**	Majority Variable	80	25
United States**	Majority Fixed	75	30

Source: Drudi et al (2009) and IMF (2008).
*Euro area data based on results of bank questionnaires.
**UK and US data based on IMF calculations average 2003-2006.

slightly in 2007, predominantly due to a lower issuance of 100 per cent mortgages. By the end of 2008, 100 per cent mortgages were no longer available, as following the decline in property prices, banks became more restrictive with respect to LTV ratios. Results from the Quarterly Bank Lending Survey (BLS) for Ireland highlight a tightening of credit standards by banks in relation to LTV ratios since October 2007, a trend that has also been observed at the euro area level.

3.4 Mortgage Equity Withdrawal

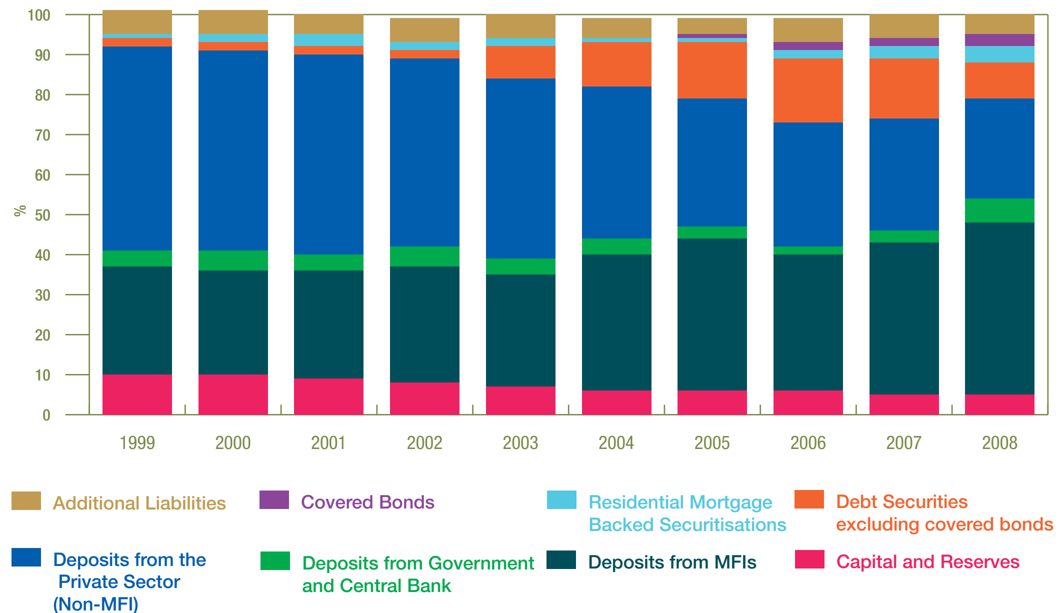
Mortgage Equity Withdrawal (MEW) refers to the ability of current homeowners to borrow against the net value of their house, i.e., the current market price minus mortgage liabilities. The ability to borrow against home equity enables borrowers to directly access their housing wealth by borrowing more when house prices increase and/or interest rates decrease. Therefore, MEW makes housing wealth more liquid potentially resulting in a higher wealth effects for interest rate decreases and house price increases (OECD, 2005). Similar to other euro area countries and in contrast to the UK[13] and the US, MEW only became more widely available in Ireland in recent years (Hogan and O'Sullivan, 2007). The questionnaire distributed to Irish banks for the euro area exercise, indicates that 10 per cent of new residential mortgages issued in 2007 were for the purpose of MEW. The most popular form of MEW is the top-up mortgage, whereby a homeowner simply increases the principal amount of their mortgage. The incidence of euro area borrowers taking out mortgages for purposes other than buying a house is limited. For most countries, such mortgages accounted for less than 6 per cent of new residential mortgages in 2007. However, the figure was higher for Greece and Portugal at 30 per cent and 20 per cent, respectively (Drudi et al, 2009).

3.5 Maturity

Historically, Irish mortgage contracts were typically 20 years in duration (Cronin and Monks, 2006). Results from the Irish bank questionnaire indicate that 82 per cent of new first time buyer mortgage contracts in 2007 had a maturity length greater than 30 years. This figure is significantly higher than those of other euro area countries, see Table 4. However, the HBS data in Section 1 indicates that Ireland has a higher proportion of younger mortgage holders. Longer-term maturity contracts appear to have been targeted at young first time buyers. Given the high LTV ratios favoured by first time

[13] It has been a common feature of the UK mortgage market for over 15 years.

Figure 6: Total Funding of Irish Mortgage Lenders[1] by Source, 1999 to 2008



Source: CBFSAI and European Covered Bond Council

buyers, these long maturities may have been necessary to keep repayments at a more manageable level.

4. Funding Sources of Mortgage Lenders

This section examines the funding sources of domestic Irish mortgage lending institutions over the period from 1999 to 2008. The significant mortgage growth experienced over this period would not have been possible without banks' ability to access significant amounts of non-traditional (non-deposit based) funding. The Irish data is sourced from Table C7[14] of the CBFSAI Monthly Statistics and refers to banks classified as Mortgage Lending Institutions, so classified as they account for over 99 per cent of mortgage lending[15]. Data collected for the euro area exercise is used where possible to compare developments in Ireland with those in other euro area countries.

Housing finance is not the primary, although it is the largest, business function of Mortgage Lending Institutions: at the end of 2007 residential mortgages accounted for 45 per cent of their total lending. As these institutions engage in other forms of lending, it is difficult to directly link mortgage lending with particular funding sources[16]. Residential mortgage backed securitisation (RMBS) and mortgage backed covered bonds are two funding sources that can be directly linked to housing finance and are considered by the IMF (2008) as indicators of mortgage market flexibility; the greater the level of activity the more flexible/developed the market. Since only a part of mortgage debt is securitised, it is necessary to also examine trends in the banks' more general sources of funding i.e. retail deposits, interbank loans and debt security issuance.

Traditionally, retail deposits[17] were the main source of funding for Irish mortgage lenders; in 1999 they accounted for over half of total funding. However, despite annual average growth of 15 per cent from 1999 to 2007, growth in retail deposits did not match that of overall lending, resulting in an increase in the funding gap[18]. Similar trends were evident in other euro

[14] Please note that this data only refers to institutions operating in Ireland and therefore does not capture group subsidiaries operating outside of Ireland.
[15] Figure based on December 2007 data.
[16] A number of banks surveyed indicated that this was a difficulty.
[17] Deposits from the Private Sector excluding Monetary Financial Institutions.
[18] The spread between loans and private sector deposits.

area countries, in particular those that also experienced significant growth in mortgage lending: Spain, the Netherlands and Portugal. Germany was the only euro area country that experienced a reduction in its funding gap over this period. The growing gap between loans and retail deposits across euro area countries was financed by increasing recourse to wholesale funding, with a varying combination of interbank funding and debt securities[19]. By the end of 2007 interbank deposits and debt securities accounted for 53 per cent of Irish mortgage lenders' funding, compared with 30 per cent in 1999.

Another key feature of funding developments over the pre-turmoil decade was the increase in RMBS and mortgage backed covered bonds issuance in Ireland and a number of euro area countries. Between 2003 and 2007 the volume of mortgage backed covered bonds issued in the euro area increased by 80 per cent. The increase was largely driven by changes in the legal and regulatory landscape, as well as housing market dynamics. Legislation enabling their issuance was only introduced in Ireland in 2001 and the first issuance occurred in 2004 with a value of €200 million. By 2007 the level of outstanding mortgage backed covered bonds had grown to €13.5 billion, accounting for 14 per cent of total mortgage debt and 2 per cent of total funding. Similar to other euro area countries, securitisation is a relatively new phenomenon in Ireland and is less widespread when compared with the US. However, RMBS issuance by Irish mortgage lenders grew at an annual average rate of 53 per cent from 1999 to 2007. By the end of 2007, 24 per cent of residential mortgages had been securitised. This compares with 7 per cent in 1999.

The global financial turmoil that began in August 2007 did not initially hamper Irish mortgage lenders' ability to obtain funding. Although the securitisation and mortgage backed covered bonds markets came to a virtual standstill, banks were still able to raise retail and interbank deposits. However, when the crisis deteriorated further in September 2008 following the collapse of Lehman Brothers, the resulting freeze in interbank money markets put severe pressure on banks in Ireland and across the euro area.

[19] Excluding mortgage backed covered bonds.

The deterioration in Irish banks' funding conditions resulted in Government interventions, which included a two-year guarantee arrangement on all deposits, covered bonds, senior debt and dated subordinated debt (lower tier II) for six Irish mortgage lending institutions[20]. Tensions in money markets eased towards the end of 2008 following ECB liquidity injections, significant interest rate cuts, and various Government interventions. RMBS and mortgage backed covered bond issuance picked up in 2008, as banks were able to use these securities as collateral to obtain ECB funding. RMBS levels doubled in 2008 predominantly reflecting the internal securitisation phenomenon observed at the euro area level. Internal securitisation refers to credit institutions repurchasing the residential mortgage backed securities they issue through the Special Purpose Vehicle (SPV). The primary reason for internal securitisation is that these securities can be used as collateral against ECB loans. Mortgage backed covered bond issuance also increased in 2008 reaching €19 billion. The financial crisis has significantly changed the environment in which banks operate and, as a result, considerable efforts have been made to reduce their funding gaps.

5. Conclusion

Developments in Irish housing finance over the past decade indicate an increased sensitivity of mortgage holders and lending institutions to ECB interest rate movements. Mortgage debt increased considerably in Ireland from 1999 to 2007, outpacing growth at the euro area level and exceeding that of personal sector credit and house prices. As a result, mortgage debt currently represents a greater proportion of Irish households' liabilities and net worth. The growth in the Irish mortgage market has important consequences for the economy including increased sensitivity of households to interest rate changes. However, the speed and strength of the transmission of monetary policy changes is largely dependent on the characteristics of the outstanding debt. A number of studies indicate that the more flexible a mortgage market, the stronger the transmission of interest rate

[20] The guarantee was also offered to five other foreign-owned institutions. These included Ulster Bank, First Active, Halifax Bank of Scotland, IIB Bank and Postbank. To date only Postbank has availed of the guarantee.

movements. Developments in Irish housing finance over the past decade indicate that the mortgage market has become more flexible: the share of variable rate debt, LTV ratios, maturity length, the proportion of mortgages securitised and issuance of mortgage backed covered bonds all have increased.

Developments in the Irish mortgage market place it among the more flexible national markets in the euro area. Changes in Irish housing finance conditions have been similar to those documented in a number of other euro area countries, although significant diversity remains across national mortgage markets. Perhaps the most striking feature of this is the share of variable rate mortgages in total outstanding mortgages across countries, which ranged from 10 per cent to 99 per cent in 2007. The prevalence of variable rate debt, in particular tracker mortgages, in the outstanding Irish mortgage stock indicate that the majority of Irish borrowers are very sensitive to ECB interest rate movements. Changes in the funding structure of mortgage lenders heightened their sensitivity to official ECB rate changes as they became more reliant on market-based sources of funding.

The recent financial turmoil, however, which began in August 2007 and worsened in September 2008, resulted in the slight reversion of some recent trends, in particular banks' reliance on wholesale funding sources. In addition, the characteristics of new mortgage contracts have changed: LTV ratios have been reduced, while interest-only and tracker mortgage products have effectively been withdrawn. These developments indicate that mortgage market flexibility may have peaked in 2007 implying a reduction in sensitivity to ECB official rate changes going forward.

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