

Economy of Ireland's "Missing Chapter 14" – Housing

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14.1 Introduction

Housing is at the core of modern economies. According to the 2009-2010 Household Budget Survey in Ireland, housing comprised a greater share of consumer expenditure than any other category. Of €42,150 spent by the typical household each year, nearly one fifth (€7,670) was spent on housing, with another 10% spent on goods and services related to housing (including fuel, light, durables and household non-durables).¹ This compares with €6,830 spent a year on food, the next largest category. For households with mortgages or private sector rents, the fraction spent on housing costs was even greater (22.5% for households with a mortgage and 26.3% for households in the private rented sector).

Not only is housing an important good, it is the dominant asset in household portfolios. Detailed information on household wealth is available from the newly established Household Finance & Consumption Survey, part of a cross-European effort to better understand household balance sheets in the wake of the Great Recession.² The typical Irish household had gross wealth of €175,500 in 2013 and debt of just over €75,000, leaving typical net wealth for Irish households of €105,000. The vast majority of Irish household wealth is held in property of some form, in particular the main residence (53% of real assets) but also land (21%) and other property (15%). Financial assets were much smaller, compared to real assets, with the majority (55%) held in savings, an average of €4,500 per household. Similarly, almost 95% of household debt related to either a mortgage on the main residence (72%) or on another property (23%).

From a household perspective, then, the housing sector matters and, related to this, it is of prime importance for policymakers. The Great Recession, associated with the Global Financial Crisis of 2008, had its roots in a run-up of housing debt and there is strong evidence that the same is true of the Great Depression of the 1930s.³ Despite this, housing has remained – at least until recently – something of a neglected topic in economics and economic policymaking, falling between the two stools of microeconomics and macroeconomics.

This chapter outlines the Irish policy space relating to housing. Section 2 gives a brief overview of the history of housing in Ireland. Section 3 outlines the economics of housing, with particular reference to the Irish housing market since the 1980s. It highlights three principal areas where policymakers interact with housing: macroprudential policy, housing supply and social housing. These are then discussed in more detail each in Sections 4-6. Section 7 concludes.

14.2 An Economic History of Irish Housing

For most of Irish history, the majority of the population lived in rural accommodation and were involved in agricultural activities. This typically meant that the bulk of housing was tied to farmsteads. Nineteenth-century Censuses reveal the poor quality of accommodation for much of Ireland's inhabitants at this time. The fraction that lived in towns and cities had, if anything, worse housing outcomes on average, with those born in cities having shorter heights – reflecting worse childhood nutrition – and living shorter lives. This was due, at least in part, to the prevalence of disease, but also of pollution, in cities.

By the mid-nineteenth century, concerted efforts were made to address the quality of housing enjoyed by those on average incomes. Rurally, this involved widespread land redistribution, through a series of Land Acts from 1870 to 1909, as well as some social housing in the form of rural cottages. In the cities, in particular in Dublin, private sector efforts led the public sector. The housing sector was revolutionised by a number of developments. The first was rail, which meant that by the late nineteenth century, Dublin was covered by a network of trams. This affected the cost of distance and enabled people to spread out. This transport revolution continued with the onset of the automobile (in particular the car and bus), which led to growth in urban footprints for at least a century.

Secondly, there was a financial revolution, with Building Societies established based around the principle of community saving financing the construction of new homes. As with transport changes, these spread from the middle class to the urban working class over time. This was particularly the case once there was State support through, for example, the Small Dwellings Acquisitions Act (1899), where local authorities lent to borrowers at preferential rates based on smaller down-payments.

For much of the period from independence to the 1980s, the State was centrally involved in the provision of housing, with the bulk of private sector activity led by the Building Societies. For those with sufficient resources to become members of a Building Society, this meant regular saving to build up a deposit (typically of around 20%) and then borrowing a multiple of the household's salary. For those with lower incomes, the State typically provided housing directly, at preferential rents. Rent controls, which were introduced in World War 1 and extended in the following six decades, effectively destroyed professional landlords as a sector in Ireland, such as the Dublin Artisan Dwellings Company.

In the 1980s and early 1990s, Ireland – in line with other developed countries, in particular the UK – made a switch from specialized (and tax-privileged) financial institutions such as Building Societies to a sector of 'universal banks'. These replaced Ireland's Building Societies as Ireland was preparing to enter the Eurozone. This entry meant not only lower interest rates but also a ready supply of funding for Irish banks.

Whereas typically Irish mortgages were funded through local deposits, by Building Societies, from the late 1990s, an increasing fraction of mortgages were funded by Irish banks borrowing themselves from abroad. The ratio of mortgage credit to deposits, which had been below 80% for a long period up to the mid-1990s, rose to 180% by 2007. As this funding was typically short-term in nature, Irish banks required on-going access to cheap credit. With the onset of the Global Financial Crisis, access to cheap external finance ended and the Irish banking system collapse.

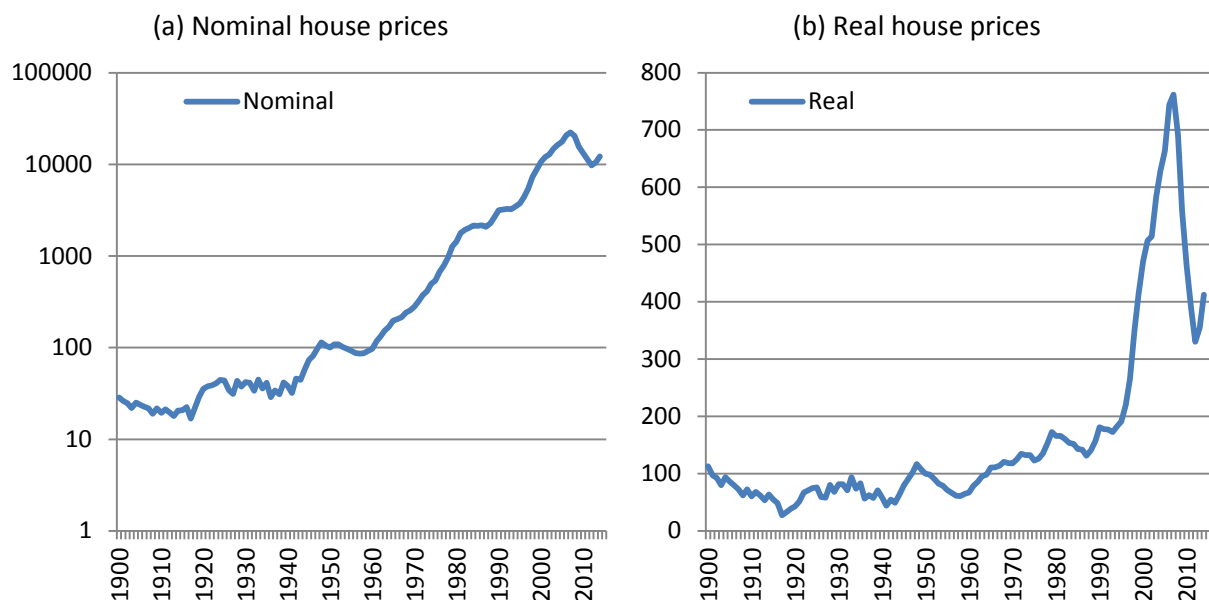
By that stage, Irish house prices had risen by a factor of between 3 and 4 in the space of a little over ten years. Evidence from Ireland and elsewhere is clear about the causal nature of easy credit: the single most important drivers of higher house prices in Ireland, particularly in the period 2001-2007, was excess mortgage credit. This was reflected in the deposit required of first-time buyers. Whereas first-time buyers up to the 1990s typically brought a down-payment of 20% or more, by 2006, the median first-time buyer had a deposit of less than 5% and in many cases no deposit at all. All else being equal, a smaller deposit means a household with the same income can borrow a greater amount.

The Irish housing bubble was also characterised by a building boom. More than 80,000 new homes were built in 2005 and again in 2006, roughly twice the rate suggested by the size of the population. Unfortunately, most of the excess homes were built in areas with low demand, due to the availability of tax write-offs in areas in need of “rural renewal”. This meant that while there were a large number of vacant homes by the end of the bubble, they were far from underlying demand.

Since 2012, this mismatch of supply and demand has characterised the Irish housing market. It can be seen in the scarcity of student accommodation, increasing homeless, including of those in work, and in the rapid increase of prices and rents in certain parts of the country. In Dublin, prices and rents have risen by up to 40% between 2012 and 2015. In other parts of the country, particularly in rural areas where tax reliefs were most generous, prices and rents have registered hardly any increase in the same period. This reflects the underlying economics of the housing market, in particular the importance of access to employment and thus to centres of population.

An overview of the path of house prices in Ireland – using the example of the Dublin market – is given in Figure 14.1. The left-hand panel charts nominal house prices and reveals that a property which cost €300 in 1900 would have been worth approximately €2,000 in 1950 and roughly €250,000 in 2014. These seemingly impressive capital gains are driven in particular by a rise in prices 1960-1990, a time of rapid consumer price inflation. Stripping out the changes in the general price level, a different pattern emerges (Panel (b) in Figure 14.1). While there are clear boom-bust cycles in Dublin house prices, overall, prices in the late 1980s were not significantly different to those in the early 1900s or the late 1940s. The dramatic house price bubble of 1995-2007 – during which time Dublin prices rose by a factor of six – and the subsequent crash of more than 50% are unlike anything witnessed before.

Figure 14.1 – Index of house prices in Dublin, 1900-2015 (1950 = 100)

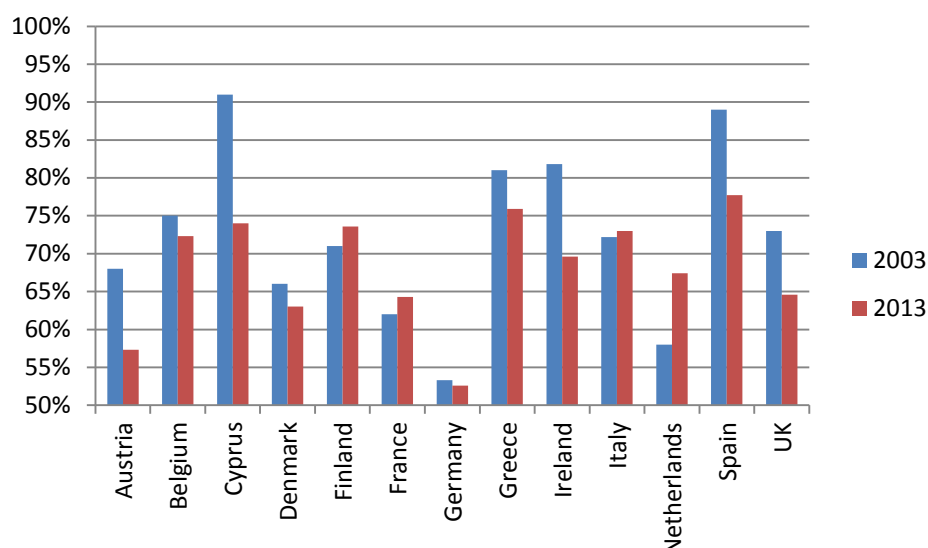


Source: Author's academic research

A final point about Ireland's housing market relates to tenure. As mentioned above, strict rent controls combined with generous social housing provision all but eliminated the professional landlord from Irish housing. This has meant a lack of institutional investors in Irish housing and

similarly a lack of expertise. However, Ireland's private rented sector is comparable in size to many other developed countries. This is shown in Figure 14.2 below, which outlines owner-occupancy rates across European countries. Whereas the majority of households in Ireland are owner-occupiers, as is the case in other developed countries, this fraction has fallen from over 80% in the early 2000s to less than 70% in the mid-2010s.

Figure 14.2 – Fraction of households in owner-occupied dwellings, 2003 and 2013 (or nearest years)



Source: European Mortgage Federation, Hypostat 2014

A point taken up in Section 14.6 is that not all those who don't own their own homes are in the private rented sector. The extent of social housing varies significantly across countries and indeed has varied substantially in Ireland over time.

14.3 The Economics of Housing

The ability to buy and sell housing means that the sector can be thought of as a market, with price and quantity outcomes reflecting underlying supply and demand. The asset-based nature of housing – in other words, its durability and the possibility of reselling it at a later date – means that demand will reflect not just demand for housing as a service (the rental component) but also the costs and/or potential gains of holding housing as an asset.

For those who own their own home, housing as a service is often termed “implicit rent”: just as a house in the rented sector has an occupier (tenant) who pays rent to an owner (landlord), it is possible to think of those who own their homes as receiving rent payments from themselves. Put another way, the owner of a housing asset is saving on accommodation costs by not having to rent somewhere to live. This is different to someone with the same wealth but who bought a different type of asset (e.g. shares in a publicly listed company); they would still need to spend on rents.

14.3.1 Housing as a Composite Good

In addition to the distinction between housing as a service and housing as an asset, a second central feature of housing is that it is a composite good, such that every individual dwelling is unique. Microeconomic studies of housing – in other words, where the unit of observation is the individual

house, rather than the housing market – exploit this fact. They are typically structured in the following form: the price/rent of an individual dwelling depends on a range of dwelling characteristics and a range of location characteristics. In brief, the value of any property can be broken down into its site and what is built on that site.

Dwelling characteristics include the size, type, age and quality of the built dwelling itself. Comparisons across dwellings need to take into account in particular the number of rooms (such as bedrooms) but more generally the full floor area. More accurate comparisons will also take into account the type of dwelling: a 70sqm apartment will face a different demand curve to a 70sqm terraced house. Similar issues arise with age – typically newer properties command a higher price but vintage premiums (e.g. for Victorian or Georgian homes) also exist. Recently, following an EU directive, it has become mandatory for properties listed for sale or rent to include their Building Energy Rating (BER) and research has shown that more energy efficient homes command a price and rent premium.

The second set of characteristics that affect the value of a dwelling relate to the plot of land. Whereas the owner has relatively complete control – subject to, for example, preservation orders – over the value of what is built on the site, they do not have any meaningful control over the value of their site. This depends on a large set of factors, including distance to the nearest city centre, distance to the coast, and proximity to amenities such as transport facilities, green space and schools. The site value will also depend on factors that depend on neighbourhood characteristics, rather than geography, such as the fraction of people in the neighbourhood that have a degree, the fraction at work, or the crime rate.

Due to the fact that dwelling characteristics can, in most cases, be replaced, they are limited by that replacement value. The bulk of variation in housing prices comes instead from the land value. This is not highlighted separately in the remainder of Section 14.3 but is a theme for policy discussed in later sections.

14.3.2 Fundamentals

It is useful to highlight the distinction between two sets of factors affecting housing market outcomes: fundamentals and asset factors. Fundamentals affect both implicit rents (reflected in the price of housing) and market rents, whereas asset factors affect the relationship between rents and prices. Explained below are the three main fundamentals affecting the price of housing: household income, demographics and housing supply.

Income

Income is a key measure of underlying demand for housing and is best measured as real (i.e. inflation-adjusted) income per household. The relationship between incomes and house prices is positive: households will spend more on housing as average incomes rise or as the typical household enjoys an additional source of income. This latter effect could be, for example, with greater numbers of women staying in the labour force while raising families. This factor also includes, crucially, unemployment. If ten percent of the working age population lose their employment, as happened between late 2007 and early 2010, this reduces the number of incomes the average household enjoys.

The positive relationship between income and accommodation costs occurs through two channels. Firstly, even if households keep constant the fraction of their expenditure devoted to housing, an increase in income will mean more to be spent on housing. Without any change in housing supply, this merely pushes house prices up. Secondly, there is empirical evidence that housing may be what economists term a luxury good. This means that as incomes increase, the fraction of money spent on housing does not stay static, it increases. Evidence from the Irish housing market over the period 1975-2012 suggests that an increase in income of 10% (keeping other factors, including the general price level, constant) is associated with a 12.6% increase in the real price of housing.

Household income can affect the relationship between prices and rents through a third channel. If it is the case that home-ownership rates increase with incomes, then as incomes go up over time – in particular relative to the cost and supply of dwellings – this will reduce the demand for rented accommodation relative to the owner-occupied sector. This channel may be offset somewhat by any increase in the cost of construction as incomes increase (e.g. if building wages increase).

Demographics

The second demand-side factor affecting rents, both market rents and implicit rents, is demographics. There are a number of elements to demographics that affect housing demand, including fertility rates, longevity, the age structure of the population and divorce/separation rates. These are best captured in the broadest measure of demographics, the number of persons per household. This number is typically slow-moving and has been falling from roughly 4 in the 1970s to less than 3 today.

To see how the ratio of persons to households could impact house prices and rents, consider the housing requirements of a population of four million people split into two million two-person households versus the same population split into one million four-person households. Over the period 1980-2012, the number of persons in the typical Irish household fell by one. This increase in effective housing demand per head of population was associated with an increase in real house prices of roughly 40%.

Housing Supply

In terms of impact on prices and rents, housing supply works in the opposite direction to household income. An increase in the number of dwellings relative to the number of households gives the demand side of the market greater bargaining power, lowering prices and rents. Note that this factor also includes net migration, as a large inflow (for example) of households into the country reduces the quantity of housing stock available to each household, thus driving down supply relative to demand.

The correct measure of housing supply is not the number of dwellings per household, but instead the value of the housing stock (measured annually by the Central Statistics Office in the national accounts as the real net capital stock in residential dwellings) per household. This is because not all dwellings are equal. If Ireland's housing stock has been gradually moving over time from smaller rural cottages and urban terraced dwellings to larger and/or more energy efficient homes, this increase in the quality of supply will not be reflected in a count of dwellings.

Research on the Irish housing market 1975-2012 suggests that an increase in the real value of the housing stock of 10% is associated with a fall in real house prices of 8%. While the exact relationship

between supply and rental values has not been studied yet, a similar relationship is likely. Note that the effect is slightly less than proportional: as housing stock increases, there is a price effect but also a small quantity effect.

14.3.3 Asset Factors

The three factors outlined above – real incomes per household, real housing supply per household, and the number of persons per household – affect both prices and rents in the housing market. A further two factors affect the relationship between the price and the rent: the user cost and credit conditions.

Changes in both user cost and credit conditions can be thought of as shifts in the demand curve. The concepts also relate to finance theory. A financial asset's yield can be thought of as reflecting the ratio of returns (e.g. dividends or price gains) to the price of the asset. Similarly, housing has an annual yield – the ratio of rents to prices – than can be measured and compared with other assets.

User Cost

The user cost refers to the cost of capital, taking into account the direct borrowing costs (the mortgage interest rate), but also holding costs (such as maintenance and depreciation) and expected capital gains. This is a core concept in finance and applies also to housing due to its durable nature.

In relation to residential housing in Ireland, there are two main contributors to user cost. The first is the cost of holding housing. For owner-occupiers, this includes the nominal mortgage interest rate (before 2013, the net or after-tax rate was different to the gross or advertised rate due to mortgage interest relief), costs of maintenance and depreciation, and property taxes such as stamp duty and Local Property Tax. Most of these are costs that are relatively stable over time, while the most variable – the mortgage interest rate – has varied within narrow bands (roughly 3% to 6%) since Ireland entered the eurozone.

The second, and typically more important aspect of the user cost equation is expectations of future house prices, in other words expected capital gain. As mentioned above, interest rates and property taxes have a relatively small range over the course of the cycle. However, expectations about the annual change in house prices can vary between +20% year-on-year (as was the case in the mid-2000s) and -20% (as was the case in the early 2010s). This is based off the behaviourally realistic assumption that house price expectations are to some extent adaptive, i.e. they reflect not only expected future changes in fundamentals but also momentum from recent trends.

Among the gaps in our knowledge of the housing market – not just in Ireland but indeed across the developed world – is a high-quality, high-frequency measure of housing market expectations.⁴ In practice, these need to be measured in a survey format and without survey extending back in time, it is not possible to say definitively what the impact of expectations on housing market outcomes has been. A relatively standard assumption is that the average change in house prices over the last four years is a good measure of expected capital gains. When applied to Ireland, this suggests that the user cost rose from -10% (with strong price appreciation, there was no cost to capital) to +20% between 2006 and 2012, an increase in costs that was associated with a fall in equilibrium prices of 45%.

A negative user cost suggests almost irrepressible demand for housing, as appears to have been the case in Ireland in the final stages of the housing market bubble, and is far from healthy. A per-annum user cost of 20% also is highly unhealthy and suggested that any normalization of expectations would lead to an outward shift in demand for housing and thus a rise in price. In lay terms, this is often described as house prices “overshooting” both on the way up and the way down and stems, as described above, from adaptive expectations.

Credit conditions

The fifth major factor affecting housing market outcomes is non-price conditions in the mortgage credit market. To see why non-price conditions matter, consider a contrast between 2006 and 2014. The Irish mortgage market in 2014 may have offered similar interest rates to the market in 2006 but the conditions of borrowing were very different. In particular, a significant fraction of first-time buyers in 2006 required no down-payment on their mortgage, while many others required a deposit of less than 5%. In contrast, most first-time buyers in 2014 required a deposit of at least 10% in many cases 15%.

The deposit required of the typical first-time buyer is a measure of leverage, or how stretched a first-time buyer is. The higher the leverage, the less protected an asset-holder is in response to a negative price shock. If first-time buyers are required to have a 20% deposit to obtain a mortgage, this means that if house prices were to fall by 15%, and a family that needed to move (e.g. in response to losing a job) would have enough equity to be able to absorb the fall in house price. In contrast, if first-time buyers need no deposit, i.e. the mortgage is worth 100% of the value of their home, then any fall in house prices means that they will be unable to sell up in response to a loss of income or employment. This situation describes the fate of many families in Ireland once the Irish housing market collapsed after 2007.

Somewhat surprisingly, given their importance in the macroeconomy, long-run series on the loan-to-value (LTV) of the typical first-time buyer are not available for Ireland.⁵ However, a proxy measure, the ratio of the stock of mortgages to the stock of deposits, captures the change in credit conditions in this period. The increase in this ratio by 100 percentage points was associated with a 56% increase in the level of real house prices.

For the period from 2000 on, it has been possible to measure the loan-to-value of the typical first-time buyer. In brief, an increase of ten percentage points in the typical first-time buyer’s LTV is associated with an increase in ratio of prices to rents of just over 20%. In concrete terms, suppose the average capital value of a dwelling is €170,000 and the average monthly rent is €800; thus the average gross yield (annual rent relative to prices) is 5.6%. Based on what happened in the Irish residential housing market 2000-2012, an increase in the LTV by 10pp is associated with a fall in the yield from 5.6% to 5.2% in equilibrium. In other words, it is not just user cost that determines the equilibrium yield for housing, it is also credit conditions.

14.3.4 Tenure Factors

Text

14.4 Macroprudential Policy

Policy intervention in relation to the housing market typically will not be in reference to either incomes or demographics. Income is, in many senses, an outcome variable and it is unlikely that any

government would attempt to stimulate income purely to alter housing market outcomes (as opposed to policy measures to stimulate income for its own sake). Similarly, it is unlikely that policy would be designed to affect demographics purely to affect the housing market.

Instead, there are three principal areas where housing market policy is undertaken: macroprudential policy, reflecting the asset factors outlined above; housing supply; and social housing policies, reflecting tenure concerns. These three areas are discussed in this and following sections.

The term macroprudential policy refers to regulation of the financial system that aims to reduce the risk of the financial system as a whole, particularly the risk it could pose to the broader economy. While the term is relatively new, policies that would now be characterised as macroprudential date back at least to the 1930s response to the Great Depression, if not before.

Macroprudential policy is typically seen as regulation relating to the financial sector, rather than housing sector. Nonetheless, as highlighted in the introduction to this chapter, the strong overlap between housing and finance, particularly at the household level, means that the two sectors are inextricably linked.

In terms of housing-related finance, the two dominant forms of macroprudential regulation are loan-to-value and debt-to-income. Since early 2015, both are in force in the Irish housing market.

14.4.1 Central Bank Mortgage Regulations

In January 2015, the Central Bank of Ireland introduced proportionate limits for loan-to-value and loan-to-income for new mortgage lending, covering both “primary dwelling houses” (PDHs, or owner-occupied homes) and buy-to-let (BTL) mortgages. For owner-occupied homes, both conditions must apply, i.e. households will be only be able to borrow a certain multiple of their income provided it is also not beyond a certain multiple of their savings.

On loan-to-value, there are different limits for first-time buyers and for other buyers. Non-first time buyers are subject to a limit of 80% LTV for their mortgages – if a family that already has a mortgage wants to borrow €400,000, they must have €100,000 in savings. BTL mortgages are subject to a more stringent 70% LTV requirement.

For first-time buyers, the rules are more complicated. Up to a mortgage of €220,000, a maximum LTV of 90 per cent will apply. Beyond this, a maximum of 80% will apply, but only on the excess above €220,000. So, for example, a first-time buyer looking to borrow €440,000 will be subject to a 90% LTV cap on the first €220,000 and 80% on the second €220,000, meaning a 15% LTV in total.

In addition, owner-occupier mortgages are subject to a limit of 3.5 times loan to gross income (LTI). But in the case of both LTV and LTI caps, over the entire loan book of individual banks, exceptions are allowed. In particular, banks are allowed exceed the 3.5 LTI limit on a total of 20% of the value of all PDH mortgages each year. Banks are also allowed exceed the LTV restrictions for PDH mortgages for up to 15% of their mortgage book.

14.4.2 Issues arising

As highlighted in Section 14.2, Irish Building Societies lasted for over a century with internal lending rules similar to what are now macroprudential requirements, in particular relating to the ratio of saving to lending. This long history of stability, combined with similar international experiences, is

indicative of the desirability of such requirements. Indeed, empirical analysis of the Irish housing market suggests that the single biggest contributor to the bubble in the run-up to 2007 was the decline in lending standards.

Nonetheless, while there is widespread agreement that the broad thrust of the macroprudential regulations is desirable, the exact nature of the Central Bank rules raises questions. All market regulation is typically designed to address a market failure and the rationale for limiting leverage by putting in place a maximum loan-to-value ratio can be described as addressing the market failure of excess leverage.

The rationale for the loan-to-income limits, however, is unclear. Firstly, they are tied to a particular interest rate regime. If mortgage interest rates were to rise to 10%-15%, rather than 3-6%, as was the case in the 1980s, the limits would be significantly less relevant as few banks would be willing to extend families four or five times their gross income. Consider a €350,000 property with an 85% loan of roughly €300,000. At a mortgage interest rate of 4%, the monthly repayment would be €1,400, whereas at 8% the repayment would be almost €2,200 and at 12% just over €3,000. It is not clear how a limit of borrowing relative to gross income protects lenders or borrowers.

A further complication arises given the variation in land values around the country. In early 2015, when the regulations were brought in, the value of a three-bedroomed semi-detached property varied from less than €70,000 in some areas to over €700,000 in others. This variation in house prices far exceeds the variation in incomes across space and reflects different amenities, such as access to employment, offered in different locations. It also allows households to choose housing that reflects their priorities: for some families, access to expensive urban amenities is important and this will be reflected in their spending, whereas for others, they would rather spend their income on goods, not amenities.

Under the Central Bank regulations, families that otherwise would rather spend more of their income on housing than other goods may be forced to substitute away into other goods. For example, a household whose income means they would have to borrow four times their gross income to buy in Dublin may instead be told to buy further away from Dublin, where prices are cheaper but their fuel bills larger.

14.5 Housing Supply

Housing supply has two components. The first is natural churn in the market, which depends on tastes, as well as the natural increase or decrease in the market due to first-time buyers and deaths/executor sales. The second, and more important element of supply in determining prices and rents, is the construction of new homes.⁶

Construction of new units is based on a number of hard and soft parameters. At its simplest, construction will take place where the difference between the net present value of rental income and the cost of building is positive. The net present value of rental income means the value, in today's terms, of the rental service into the future and will reflect both prevailing rents (either market or implicit) and the rate at which future amounts are discounted. Costs include a desired profit margin, so in a competitive construction market, any positive difference between income and costs ought to be reflected in the residual factor, namely land prices.

The core concept in understanding building supply, therefore, is the break-even rent. This is the level of market or implicit rent at which all costs, including whatever return is desired by the owners of capital, are covered. Assuming for the moment that the cost of a plot of land is residual, i.e. reflects other costs, rather than speculative, there are ten key parameters determining the break-even rent associated with a dwelling. Thus, for a given level of demand, which will reflect income, demographics, user cost and credit conditions, these parameters will largely determine the supply of new homes. They can be categorized, roughly, as either regulatory factors or market factors.

14.5.1 Regulatory factors

Five regulatory factors affecting costs are outlined below: size restrictions; density restrictions; construction costs; local authority levies; and VAT. Four are “hard costs”, i.e. in euro per square metre terms, while the fifth – the VAT rate – is a “soft cost” in percentage terms. A key metric in the housing supply equation is the ratio of hard costs to soft costs (both regulatory and market).

The first factor is the required (average or minimum) size per unit in square metres. This is set at local level currently in Ireland, but with national guidelines for all multi-unit developments. For one- and two-bedroom apartments, the minimum unit size in Dublin (in particular in Dublin City Council and in Dun Laoghaire-Rathdown) is, at the time of writing in 2015, among the largest in Europe. This means that the minimum size is greatest in the parts of the Irish housing market that could sustain smaller units due to the presence of location-specific amenities. While larger units bring benefits reflected in higher rental values, they also add to costs.

The second factor is the number of units allowed per acre. This varies widely across the country and, in Dublin City Council where pressure for agglomeration is greatest, there are guidelines for bringing about greater density but also, paradoxically, stringent limits on height. These limits vary by district within Dublin, and are typically limited to seven stories, with some areas allowed twelve stories. In some local authority areas, in particular in Dublin, the number of units is further restricted by limits on orientation and the regulated ratio of lifts/stairwells to units on each floor. For example, as is the case currently in central Dublin, a one-acre site where no solely north- or east-facing units are allowed (and where the vast majority of units must be dual-orientation) will have a smaller number of units than one where a greater mix is allowed.

A third, and central factor, in determining the break-even rent is the cost of construction per square metre. In theory, construction costs could be considered a market factor. However, in the Irish case, while the cost of building materials is largely subject to global forces, the dominant element in construction costs – the hourly wage rate in construction – is heavily regulated. In addition other regulations, such as the requirement for each unit in an apartment block to have its own basement car-parking space, add to construction costs.

There is some evidence that construction costs per square metre are significantly higher in Ireland than in its peers. For example, the 2013 survey of international construction costs by Turner & Turner suggests that the cost per square metre of medium density apartments is almost 45% more expensive than in Germany (€1,360/m² vs. €950/m²). Similarly, online calculators of rebuild costs by professionals suggest that, for a family home, the price of an additional square metre in Dublin is almost €1,800, compared to €1,700 in the Greater London area and €1,000 in Northern Ireland.⁷ A policy analysis of the reason construction is so expensive in Ireland is required to address the issue of a lack of supply.

The two final regulatory factors relate to taxes. One is local authority levies, which are typically levied on a per-square metre. The other is the VAT rate, which is regulated nationally: construction activities are subject to a reduced 13.5% VAT rate. In practical terms, the VAT rate can be thought of as effectively a profit margin charged by the state.

14.5.2 Market factors

In addition to the five regulatory factors outlined above, there are five market factors that help determine the break-even rent and thus the supply of new dwellings, for a given set of demand factors including incomes. All five are “soft costs”, i.e. in percentage terms.

The first factor is fees, with development of new dwellings incurring a range of fees, including professional, legal and compliance fees. Also included in this category (for ease of exposition) is stamp duty, although strictly speaking, this is of course a regulatory charge. These fees are in percentage terms, thus any increase in hard costs will be reflected in higher fees.

A second market factor is the interest rate (and term length) associated with site purchase and construction works. In general, this can be assumed to be determined largely at economy-wide level, although financial institutions may regard some projects as higher risk than other, which would then be reflected in the interest rate charged. Typically, Irish development projects would be funded through a mix of debt finance and equity finance (including retained earnings). The desired profit margin on equity finance is a third market factor and, as with other market factors, is a percentage addition to costs.

The above factors can be used to calculate the cost of a dwelling, including VAT and profit margins, and thus its purchase price. For owner-occupied homes, the final factor needed is a comparison of this cost with the likely purchasing power of those interested in buying the homes. This will include asset factors, including the mortgage interest rate and deposit required by buyers, as discussed above.

For rental dwellings, there are two final market factors that are relevant. The first is the desired net yield for investors. Institutional landlords will have a desired net yield, in annual terms, and this affects the relationship between the full price and the break-even monthly rent. The margin between the risk-free return and the desired return on Dublin residential rental property will be largely determined by a combination of the class-specific risk premium (property compared to bonds) and the country-specific risk premium (Ireland compared to major markets).

The last factor that affects costs and the supply of new homes is the management margin. This includes service costs (management fees) and depreciation. The gross rental yield is the combination of the desired net yield and the management margin. It is used to convert the up-front break-even costs into a monthly rent, which can then be compared with ability to pay on the market.

Taking a sample development of 36 two-bedroom apartments on a one-acre site in Dublin, and excluding land costs (until the next section), the core build costs represent roughly half of total costs. The remainder would be mostly a roughly equal split between levies, profit and VAT. With no site costs, the all-in cost of about €260,000 per unit (as of early 2015) translates into a monthly break-even rent of about €1,300 for a two-bedroom apartment. This figure, which excludes any land costs,

is well above the prevailing rent for a two-bedroom apartment in Ireland (roughly €800) and in line with the rents in the most expensive areas of Dublin.

Some have argued that the issue with profit-led development and other models, such as state provided homes or cooperative development, should be pursued. These are certainly options to be explored but they do not eliminate the opportunity cost of capital. If the state were to invest without return, this is capital that could have been employed on other projects, for example in health, education or transport, that would have delivered a social return on investment. Similarly, cooperative development (such as the German *Baugruppen*) requires the voluntary relinquishing of capital – in this case for a share in a development. It is also worth remembering that profits in a competitive market will form a relatively small share of overall costs and thus the impact on the break-even rent will be limited.

Given the apparently large discrepancy between the cost of a square metre in Ireland and in other economies, efforts to boost supply and lower the cost of accommodation are better directed at these hard costs. This is doubly so as, the lower the hard costs, the smaller the soft cost multiplier is in euro terms. For example, if profit, VAT and fees together add 30% to the hard costs, a reduction in hard costs from €200,000 to €150,000 will have a knock-on effect on 'soft costs', from €60,000 to €45,000. (In practice, the all-in soft-cost multiplier is closer to 65%.)

This has implications for minimum standards. While there may be an understandable desire to increase the quality of the minimum acceptable unit, this has an effect on cost. If an additional square metre costs €2,000 and the minimum one-bedroom apartment size is 55sqm (as it is in Dublin) and not 40sqm (as in some European cities), this means that the hard costs of the smallest allowable dwelling in Dublin are €30,000 higher. With a soft-cost multiplier of 65%, this is an additional €50,000 to the full cost of the unit. Where investors seek a 5% net yield, this adds €150 to the monthly break-even rent, a not insignificant additional cost for those on lower incomes to bear.

14.5.3 Land markets

Until now, the issue of land costs has been ignored. More specifically, it has been assumed that land costs will reflect the difference between the net present value of the market rent and the break-even costs (excluding land). This residual form of calculating land values is how many developers approach whether or not to purchase a plot of land, but it does not accurately reflect land markets.

In practice, land markets operate through a combination of residual/net present value calculations, reference points and speculative behaviour. Residual calculations take into account market rents and the cost of building, as outlined above. Reference points refer to, effectively, norms in pricing behaviour. For example, it may be the case that if an acre of land sold for €2.5m in one part of Dublin 2, then the holder of another site nearby will not be willing to sell for substantially less than this, regardless of the ratio of market rents to build costs. In addition to reference points, there are also speculative motives for holding land. Where there is no penalty for holding land vacant, those owning or purchasing land may do so, in anticipation of future capital gains.

A final source of uncertainty in land markets is the use to which land can be put. In countries such as Ireland, land has a use specified in local authority development plans but these are not fixed. By applying for planning permission, it may be possible to convert land from one use (e.g. industrial) to another or mixed use (e.g. office, retail or residential).

The Irish market for development land has, since 2010, been dominated by the National Asset Management Agency (NAMA). This agency was set up as a 'bad bank', to recapitalise the Irish financial system. Roughly €77bn of loans, secured against what was valued at approximately €88bn of collateral at the peak, were bought from the Irish banks for about €37bn. These are then to be sold off over time at amounts that reflect their long-term economic value. As of early 2015, it is envisaged that NAMA will not make a loss and may make a small profit.⁸

However, NAMA's work has meant that it has become the dominant market player in development land in Ireland. Its exact role is unclear, as in theory it should be a supplier (of land) to developers but in practice, it is the stated intention of NAMA to remain as a landholder in Dublin's north docklands. In addition, land that NAMA does sell is not sold on condition of development, thus incentivising speculative landholders. The combination of all these factors means that the price of development land currently is far from the textbook case of residual valuation.

14.6 Social Housing

The final area of housing policy relates to tenure and social housing. In practical terms, one could think of households ordered from richest to poorest. The richest fraction, perhaps 70% (cf. Figure 14.2), have incomes that are both high enough and secure enough to borrow a mortgage and thus they typically own their home. Of the remaining 30% of households, these will be split between those in the private rented sector and those in the social housing sector.

The private rented sector has, as described above, a minimum rent below which costs are not covered. As outlined in the previous section, it is difficult to build new accommodation at a monthly cost of less than €1,000. At the same time, households can only devote a certain fraction of their disposable income sustainably to accommodation. The rule of thumb is that a household should not spend more than one third of its income on housing. Taking into account the Irish tax system, this means that a household earning €45,000 should be spending no more than €1,000 per month on housing.

The role for the State in providing social housing is, therefore, clear. Regardless of the minimum cost of providing adequate housing, there will be a segment of the population with insufficient income to cover their accommodation costs. The rationale for State intervention is therefore to ensure access to housing for all, taken as a basic human right. It is also clear from this the ideal form of State intervention: a supplement to income to ensure that accommodation costs can be met. In particular, given the rationale for intervention, the subsidy should be larger, the poorer the household. If €12,000 is needed for adequate accommodation per year, and no more than one third of after-tax income should be spent on accommodation, those households with an after-tax income of €30,000 should receive a far smaller subsidy than those with an after-tax income of €20,000.

Unfortunately, Ireland's current social housing system is such that this clarity is lacking. As with other aspects of the welfare system, the predominant form of housing subsidy, rent supplement, is a fixed amount. This hinders vertical equity while the on/off nature of the subsidy has implications for horizontal equity across working and unemployed households.

In addition, Ireland's social housing system has moved away from debt-financed publicly funded construction of new homes. Under what is termed the Part V arrangement (after the relevant section of the Planning & Development Acts, 2000-2006), developers are typically required to set

aside 20% of any new development for social housing. Aside from the fact that developers were often able to get around this requirement, either directly (through payments to the local authority) or indirectly, this has the in-built feature of generating quantities of social housing that are pro-cyclical, while demand for social housing is likely to be strongly counter-cyclical. In particular, when private developers are building 8,000 dwellings a year, rather than 80,000, the provision of social housing is likely to be grossly inadequate.

Ireland's Housing Finance Agency exists precisely to lend to local authorities and voluntary housing bodies, giving the social sector access to international capital markets. In addition, the underlying collateral is strong, given the rental payments are effectively State-guaranteed. However, the weakness (and indeed complexity) of the prevailing Differential Rent schemes, coupled with a reliance on fixed Rent Supplement subsidies, means that there is very little demand on the part of social housing providers for development capital.

14.7 Conclusion

Still to be written!

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¹ CSO, *Household Budget Survey 2009-2010: First Results*, March 2012. Available at: <http://www.cso.ie/en/media/csoie/releasespublications/documents/housing/2010/0910first.pdf> (accessed 11 March 2015).

² CSO, *Household Finance and Consumption Survey 2013*, January 2015. Available at: <http://www.cso.ie/en/media/csoie/releasespublications/documents/socialconditions/2013/hfcs2013.pdf> (accessed 11 March 2015).

³ For more on the role of housing and household debt in the Great Recession (and Great Depression), see Barry Eichengreen (2014), *Hall of Mirrors*, and Mian & Sufi (2014), *House of Debt*.

⁴ An annual survey was conducted in Ireland by the ESRI, as a supplement to the Consumer Sentiment Survey 2003-2008. Since 2011, a similar consumer survey, now undertaken on an on-going basis and reported quarterly, is part of the Daft.ie Report.

⁵ In late February 2015, the Central Bank of Ireland launched a Household Credit Market Report but this also does not report the typical loan-to-value of first-time buyers.

⁶ Rather than the gross number of new dwellings built, the addition to supply each year is the amount net of obsolescence, in other words housing that has depreciated past the point at which it is habitable. While the rate of depreciation is not known with certainty, the rate of new completions was so low in 2011/2012 that in certain periods it is likely Ireland's housing stock was shrinking.

⁷ Sources: Turner & Townsend, 'A brighter outlook: International construction cost survey 2013'; SCSi House Rebuilding Calculator (available online at: https://www.scsi.ie/advice/house_rebuilding_calculator) and BCIS Public Rebuild Calculator (available online at: <http://calculator.bcis.co.uk/>), both accessed last 16th March 2015. Sterling figures were converted to euro using a 0.75 euro/sterling exchange rate.

⁸ It is worth pointing out that, in the context of all bank liabilities having been guaranteed by the taxpayer, the exact amount paid by NAMA for the loans was of secondary importance. For example, if NAMA had paid less for the loans, and thus subsequently made a larger profit, this would have meant that taxpayers would have had to inject larger amounts into the banks.