



Institutional Investment and
the Private Rental Sector in
Ireland

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Executive Summary

This report provides an overview of the Ireland's private rental sector (PRS)², including its evolution over time and current conditions, how it fits within Ireland's wider housing needs, and the policy priorities needed for a sustainable PRS over coming decades. It finds that Ireland will have a substantial housing need – close to 50,000 homes per year under the baseline scenario – until at least mid-century, if its housing stock is to reflect the country's demographics. The scale of that need means that Ireland is hugely reliant on importing foreign savings each year. Building close to 50,000 homes per year would require capital of close to €16bn annually, almost all of which would come from overseas.

Ireland's on-going convergence in its tenure patterns to those of its European peers means that this need for housing and the capital to fund it will be split across the three main tenure categories: owner-occupied, market rental, and social housing. Regardless of tenure, the bulk of net housing need over coming decades will be for one- and two-person households in urban areas. However, households with fewer persons are more expensive to build per person, highlighting the importance of collective investment vehicles to address this funding need. In Ireland, this challenge is exacerbated by very high construction costs, relative to ordinary incomes and to costs in other countries. This combined viability-affordability challenge means the break-even cost of a two-bedroom apartment in Ireland is close to €450,000, something that only the top sixth of the income distribution could sustainably afford currently. With social housing realistically available for at most the bottom third of the income distribution, the challenge for policymakers is clear: how to reform the housing system to ensure that all households are covered by either market housing or social housing.

This report contains five sections, including a brief introductory section following this Executive Summary. Section 2 reviews the context and profile of Ireland's PRS. Over one quarter of Irish households rent their homes, a fraction that has risen significantly in recent decades, even as population has grown strongly. Ireland's rental sector is, however, dominated by smaller-scale landlords: a 2014 study found that two thirds of landlords owned just one property. This reflects the development of PRS in Ireland since independence. Rarely has it been viable, given prevailing construction costs and market rents, for new rental housing to be built for anything other than the top of the income distribution. The exception - during the late 1990s and early 2000s - was due to unprecedented tax breaks, such as Section 23.

² Throughout this report, we use the term Private Rental Sector (PRS) to refer to rental accommodation provided by private operators, rather than by national or local government or by Approved Housing Bodies (AHBs). Where necessary, the prevalence of the Housing Assistance Payment (HAP) within the PRS will be discussed. 'Build to Rent' (BTR) is used to refer to the new developments that fall within the scope of Ireland's relevant planning codes.

While those tax breaks, coupled with loose lending, drove the Celtic Tiger bubble and crash, they highlight a key feature of the housing market here: the laws of supply and demand. Areas that saw a number of new homes built in the early 2000s well beyond any realistic measure of demand have housing prices that, as of the early 2020s, are still well below Celtic Tiger peaks. Areas - such as Dublin and Cork cities - that did not witness excess construction have instead experienced a doubling of rental prices over the course of the last decade. This makes the rental price increases of the 2010s the largest on record in Dublin, where figures extend back to 1945. Rents have also risen substantially faster than incomes: while rents are 40% above Celtic Tiger peaks, on average, incomes have risen by 10% in the same period.

The increase in rental prices has arisen due to an extraordinary lack of supply of rental homes, not just in Dublin but across Ireland, that has emerged over the course of the 2010s. As the population has grown, with an increase in particular in age cohorts more likely to rent, there has been next-to-no new rental accommodation built in the country. Especially with the unusual wider macroeconomic conditions, in particular low returns on safe assets such as government debt, the introduction of 'build to rent' (BTR) planning codes, and related changes in taxation, have helped bring significant investor funding to Ireland's PRS. At the outbreak of covid19, over 30,000 new rental homes were planned for Dublin, with further homes planned for Cork city.

To put these numbers in context, it is necessary to understand Ireland's long-term housing needs, across all major tenures (owner-occupied, market rental, and social), a task undertaken in Section 3. Four sources drive the need for new homes to be built. The first two – natural increase in the population and net migration – imply a need for over 30,000 new homes per year in the 2020s and 2030s, with more needed if net migration is higher than the relatively crude projections used for assessing demand. Additional housing need comes from household size and from obsolescence, which is related to internal migration. For both existing household size and urbanization rate, Ireland is an outlier amongst its European peers currently. In both cases, there is little evidence to suggest that the unusual current household size or urbanization rate reflects something unique about the Irish economy. On the contrary, household size is already artificially elevated while the increasing prevalence of long commutes reflects a growing disconnect between the labour market and the housing market.

With a population of 6.5 million by mid-century, arranged into households of 2.1 persons on average, and where 0.6% of the existing building stock becomes obsolete each year, the underlying housing need in Ireland is just under 49,000 per year 2016-2051. Of these, roughly 20,000 are likely to be needed in the Greater Dublin Area, given its relative lack of construction in recent decades, leading to the emergence of a 'Dublin premium' in housing prices that didn't exist prior to the 1990s. Based on recent

funding patterns for real estate investment, Ireland will be hugely reliant on importing capital from abroad to meet these needs. In particular, in scaling up from 20,000 homes per year to 45,000 homes per year (excluding one-offs), an extra €75bn is needed each decade, of which €70bn would come from international sources.

The major challenge in meeting this substantial housing need across all tenures is viability. Especially in a housing system where the majority of new homes needed are for smaller households and in urban areas, the viability of apartments, given prevailing incomes and construction costs, is key. However, a range of studies, both Irish and international, show that the construction of apartments is very expensive here, while the planning system presents additional challenges, especially around delays and uncertainty for potential projects. The all-in cost of an urban two-bedroom apartment in Ireland is estimated to be between €450,000 and €615,000, where all costs including land, equity and taxation are included. Even with a cost of just €400,000 to build, a two-bedroom apartment has a break-even monthly rental requirement of €1,650 at prevailing yields. Given the income distribution and tax system, this would mean that new apartments are viable only for the top sixth of renter households. The willingness of longer-term capital to accept lower yields than other types of investor, and thus spread the high burden of construction costs over a longer duration, effectively lowers the break-even monthly rent, even without any fall in costs.

In short, Ireland's housing system has become characterized by very high thresholds for the viability of new homes together with limited provision of social housing. As its population changes into smaller and more urban households, these challenges will become more acute. This report outlines three policy priorities in its final section, situated within a with a more broadly articulated goal of consistency in housing policy. Perhaps more than anything else, the lack of a stable policy environment threatens the investment needed to build Ireland's homes. Therefore, it is incumbent on policymakers to outline how they envisage the housing system in Ireland working, the role of market rental housing within that, the policy framework that will deliver society's goals – and then enabling that system to do its work. Especially in a sector such as housing, where the time taken from planning to delivery can be a number of years, repeated large-scale changes to housing policy will limit future investment.

With that strategic approach in mind, this report describes its three policy priorities. The first is the prioritization of viability, so that the market can be used to address much of Ireland's substantial housing need, especially for smaller and urban households over coming decades. The second policy priority is ensuring affordable rents, achieved through adequate availability rather than direct manipulation of rents, especially across tenancies. The final policy area relates to the equitable taxation of income earned from Ireland's PRS.

1. Introduction

This report examines the development of Ireland's private rental sector (PRS), within the context of the broader Irish housing system, and outlines the likely contours of its future development and the related policy priorities. As explained in the report, how Irish people live their lives has changed in recent decade and will continue to change – but as yet, our housing stock lags far behind. In too many respects, we have to adjust to our housing stock, rather than adjusting our housing stock to suit our needs.

Ireland is something of an outlier in Europe. It is the one country that will experience faster population growth in the 21st century than it did in the 20th. That means its housing challenges are unique. This is particularly so when one considers Ireland's starting point. As of the early 2010s, less than 15% of Ireland's homes were in apartments, compared to roughly half of the EU's overall housing stock. But while Ireland is unusual in some respects, it is converging in other important ways. This includes its age profile, household size and urbanization rate, as well as increasingly its patterns of tenure.

This report is written within that context. It is structured in four main sections, after this Introduction. Section 2 presents an overview of the context and profile of Ireland's PRS. It starts by describing tenure patterns in Ireland, both over the long-run and, for the post-2000 period, compared to Ireland's peers. Documenting the link between housing finance systems, patterns of tenure and urban development, it then reviews the evolution of Ireland's rental sector over the past century, with a particular focus on developments since the 1980s. This is followed by a description of current conditions in Ireland's rental market, including price and availability trends. The section concludes by describing the outlook for Ireland's PRS in the early 2020s, including the current projected pipeline.

The third section begins by outlining the demand drivers for housing, including rental accommodation, over the medium- to long-term. Two features of this exercise are worth commenting on. Firstly, it focuses on overall housing need, rather than demand for a specific tenure. Secondly, by using scenarios for key parameters, this exercise highlights a number of potential limitations of current Government estimates of housing demand. The scale of housing need – in particular given suppressed household formation – is substantial and this section also quantifies the likely funding requirements for PRS in the medium term. It closes by examining the viability of newly built accommodation.

Section 4 opens with an overview of Ireland's renters and their rental homes. Its second part examines in detail the affordability of Irish rental homes, both from a market perspective and from a viability perspective. In particular, it identifies two groups that could be termed a 'forgotten middle', served by neither the social housing

system nor, because of high construction costs, the market segment – firstly, existing households in the private rental sector with incomes too low for new rental housing, and secondly, likely suppressed households, in particular those aged 18-49 in full-time employment but living with parents.

The fifth and final section presents three policy priorities for Ireland’s private rental sector. Firstly, viability of construction must be prioritized, so that the market can be more effectively harnessed to address much of Ireland’s substantial housing need. The second policy area relates to ensuring that rents are affordable. Ireland should learn from mistakes made in other countries about rent controls, especially across tenancies, and instead look to ensure that rents are affordable through adequate availability rather than direct manipulation of rents. The final policy area relates to the equitable taxation of income earned from Ireland’s PRS.

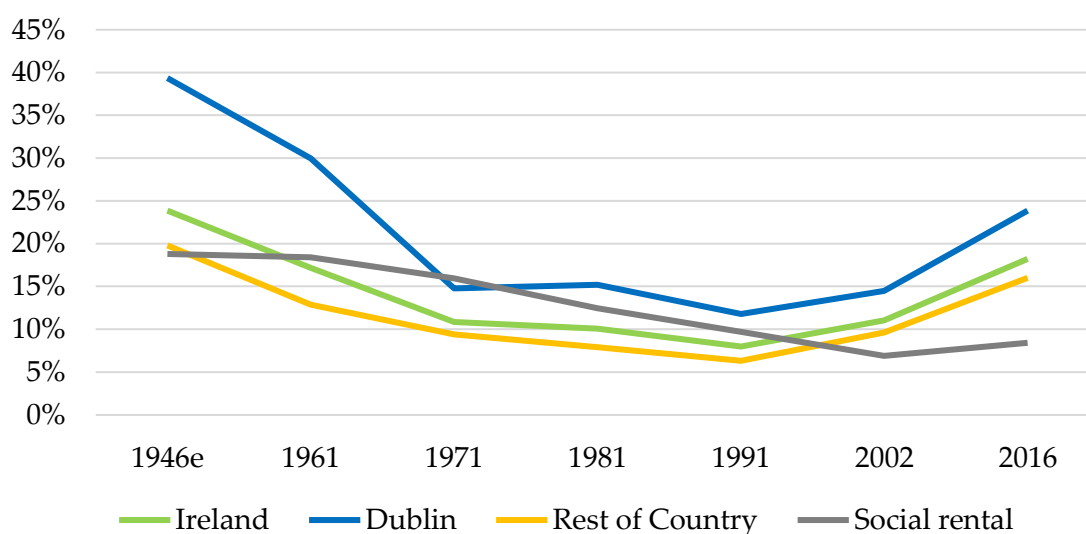
2. The Context & Profile of Ireland's PRS

This section opens by describing patterns of tenure, in particular relating to the rental sector, in Ireland over the past 75 years. It compares this to Ireland's peers and outlines the link between housing finance systems, patterns of tenure and urban development. It then charts the evolution of Ireland's rental sector, both private and public, since the late 19th century, with a particular focus on developments since the 1980s. This is followed by a description of current conditions in Ireland's rental market, in particular relating to trends in price and availability. The section concludes by describing the outlook for Ireland's PRS in the early 2020s.

2.1 Tenure & Housing in Ireland

Over one quarter of households in Ireland rent their homes. Figures from the most recent Census, undertaken in 2016, show that 18% of households rent their home from a private landlord, while a further 8% rent from a Local Authority or an Approved Housing Body. In Dublin, the fraction in the private rental sector is higher, accounting for nearly one quarter of households.

Figure 1. Share of households in rented accommodation, by region



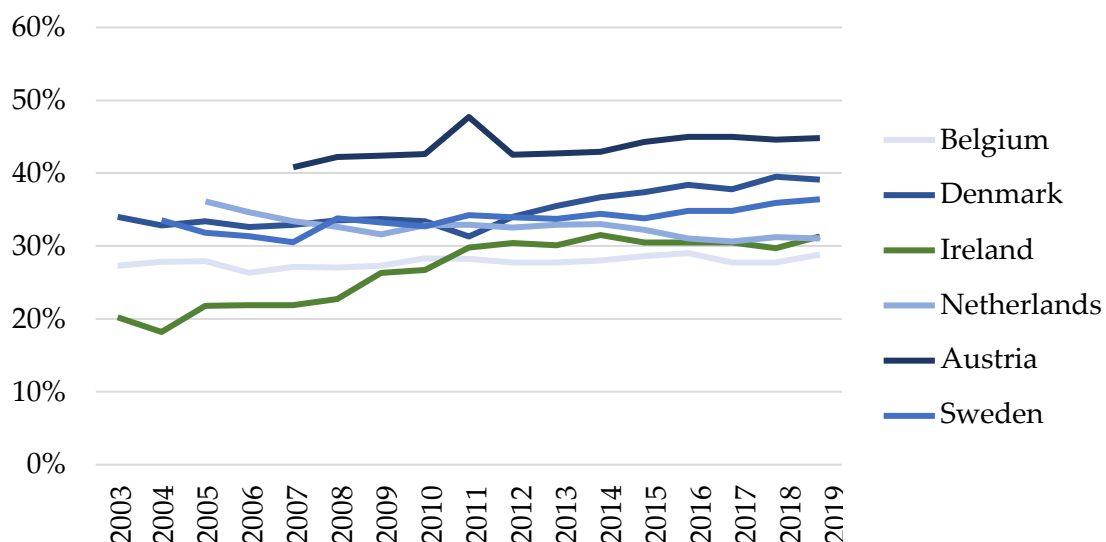
Source and notes: Calculations based on various issues of Ireland's Census. Estimate for 1946 is based on overall number in rental accommodation, using the 1961 split between those in private rental and those in local authority rental accommodation.

Figure 1 presents trends in these tenures since 1946, using data from Ireland's Censuses between that year and 2016. At both national and Dublin level, there has been a big increase in the share in the private rental sector over the past generation, with an almost doubling in the share nationally in private rentals during that period. In Dublin, the share has doubled from 12% to 24%. This means that the share in private rental accommodation is at its highest in over half a century. In the first 25 years after

World War 2, rental accommodation declined as a share of overall housing. This was most notable in Dublin, where more than half of households in 1946 were in either private or public rental markets; by 1971, just 16% were in the private rental sector, with a similar share in public housing.

One caveat to these figures is important: the rise of the Housing Assistance Payment (HAP) since 2015 has blurred the distinction between market and social rental sectors. Established in 2015, HAP is an income support for households in the PRS. As of 2016, there were just under 10,000 households in receipt of HAP, of which only 1,100 were in Dublin. By 2019, however, this had risen to over 45,000 nationally (and almost 11,000 in Dublin). The 2016 Census indicates that there were 310,000 households in Ireland in the PRS (of which 115,000 were in Dublin). Taking these numbers, this implies that the fraction of households in the full private market nationally was 16%, with a further 3% in HAP and 9% in social; for Dublin, the equivalent figures are 22% in full PRS, 2% in HAP and 11% in social.

Figure 2. Share of households in rented accommodation, by country



Source and notes: Calculations based on EU-SILC data, published in Eurostat [ILC_LVHO02_custom_836616].

Figure 2 presents Ireland’s rental tenure trends in an international perspective, by comparing the fraction in rented accommodation in Ireland with five other smaller EU member states in Western Europe. The underlying data source is the EU’s Survey of Income & Living Conditions, rather than administrative data such as a Census, and the nature of the questions means that both market rental and social/below-market rental sectors need to be combined to give reliable information at country level. However, the overall pattern is clear. Firstly, Ireland largely converged with its Western European peers during the 2000s in the extent of its rental sector. While it had

been an outlier in 2003, with just 20% of responding households renting, compared to 30% in peer countries, by 2011 the fraction renting in Ireland was similar to many of its peers. Secondly, during the 2010s, that convergence largely paused, even as the rental sector continued to grow in other countries, such as Denmark and Sweden.

Countries' patterns of tenure are related to the pattern of urban development and to their housing finance system. Blackwell & Kohl (2018) review four different types of housing finance system and highlight the important links between them and urban development and tenure composition. In particular, they note the potential for path-dependency, where countries with deposit-based finance systems, such as the UK and Ireland, are more likely to follow low-density, higher-sprawl modes of development. This is in contrast to bond-based mortgage finance systems, such as those in Denmark and Sweden. In that context, Ireland's convergence during the 2000s – albeit driven by tax policies and a credit bubble, as discussed in Section 2.2 – marks an important shift away from path-dependent processes that are unlikely to match underlying housing need, as outlined in Section 3.2

As discussed by Blackwell & Kohl (2018), there is a strong connection between tenure and the form of housing. Deposit-based building societies, for example, are likely to specialize in the funding of single-family housing. Ireland's development sector during the 20th century was largely funded on this model, with retail banks not involved in any substantial way in the provision of mortgage finance. Bond-based mortgage banks, on the other hand, are more capable of providing the type of credit required for multi-family housing. This is important given Ireland's extreme outlier status in the nature of its existing housing stock – with less than 15% of its housing stock in apartments, compared to 50% for the EU as a whole.

With household size declining, there will be a much greater requirement over coming decades for multi-family and apartment housing, including for households that are 'pre-family' and 'post-family', as well as 'no-family' households. Such housing exhibits economies of scale from single ownership, for example relating to the provision of common amenities or cost of maintenance. As a result, across the high-income world, the tendency is for single-family housing to be largely owner-occupied and for apartment accommodation (both for-profit and non-profit) to be mainly based on rental tenures. The consequent funding requirements of this are outlined in more detail in Section 3.2, but this has significant implications for the tenure bias shown in housing policy in Ireland.

2.2 The Evolution of Ireland's PRS

Ireland's private rental sector (PRS) is currently dominated by smaller-scale landlords. Research by DKM (2014), on behalf of Ireland's Residential Tenancies Bureau (RTB) found that two thirds of landlords surveyed owned just one property, while only 10%

owned more than three. While many of those surveyed did work full-time as landlords, many were accidental landlords; just under 40% were over the age of 55. This unusual profile of owners of residential rental properties reflects a combination of varying policies relating to rental accommodation in Ireland since independence, in particular rental reliefs in the early 21st century, explained in more detail below, as well as factors such as the path-dependent interaction between dominant modes of housing finance and urban development, mentioned in Section 2.1.

Overall, as mentioned above, there is a significant difference in capital costs and project finance risk between houses (or single-family developments) and apartments (or multi-family developments). The type of finance and expertise required to build multi-family is closer to that seen in the office development sector, rather than houses, with longer overall lead times and the particular requirements of the development precluding staggered release of equity from the scheme, as is standard with the phased sale of individual homes on housing estates. History suggests that, until the late 2010s, apartment development in Ireland was never a sustainably rational investment without some form of subvention, with the partial exception of niche locations capable of sustaining very high values.

For almost all of the 19th century, there were no purpose-built apartments constructed in Ireland. This and the later absence of apartment construction reflects a unique element of Ireland's demographic development: unlike all our European peers, Ireland's population fell, rather than increased rapidly, between the mid-19th and mid-20th century. This meant there was, effectively, no pressure on either the policy or finance systems to plan how to accommodate density: instead, sparser and more sprawled greenfield development was sufficient.

Instead, during the 19th century, large Georgian houses were converted to tenements, as their former value as single-family homes was no longer viable. The lack of purpose-built accommodation was reflected in the high prevalence of exceptionally poor-quality housing in urban areas, including Dublin, at this time. Partly as a result, in the 1890s, Guinness and some other institutions, such as the Dublin Artisan Dwellings Company, began the development of subsidised urban apartment housing. Employers engaged in this activity to ensure the welfare of employees, who consequently only partially contributed to the capital cost of their homes.

In the initial decades after independence, given the very poor living conditions in repurposed tenements, slum clearance was a strong policy priority. The rise of new modes of transport, including trams and later buses and cars, meant that suburbanization was the easier policy to choose, compared to brownfield development. Major suburban home building, in what are now Dublin's inner suburbs, was heavily subsidised up to 60%, with buyers only having to pay typically

40% of the cost. Inner-city apartment building was restricted to Dublin Corporation and led by its architect Herbert Simms. Reflecting their high up-front costs, however, a number of proposed apartment schemes were abandoned by the local and national government, as they were too expensive relative to suburban houses.

By and large, the private-sector development of urban brownfield sites – both apartments and offices – was largely non-existent until the second half of the 20th century, due to lack of viability. After the Earlsfort Mansions, built in 1905 on Earlsfort Terrace, no private sector apartments were built in Ireland for five decades (McManus 2011). The next development was The Mespil, on Sussex Road in Dublin 4. The majority of units there were built between 1952 and 1954, with three final blocks (of 11 in total) added in 1958, 1967 and 1972 (Boyd 2019). In all, the development comprises roughly 300 apartments in eleven blocks of up to 6 floors. It was an investment of Irish Estates (a part of the Irish Life Assurance Company, ILAC) and thus was essentially underwritten by the state, which owned over 90% of Irish Life during the period 1947-1991.

Despite the success of The Mespil, construction of further apartments was very limited, reflecting both viability and policy challenges. This marked a stark contrast with the office sector. During the 1960s, there were 478 office blocks built in Dublin, with a further 75 added 1970-1975 (Hanna 2013). The small number of additional apartments built in Dublin before the 1990s effectively relied on state guarantees and were opposed by the relevant local authorities. These include St. Ann's, Donnybrook, which comprises 54 two-bed apartments on five floors and was completed in 1965. These apartments were marketed as Dublin's first 'luxury' apartments.

A second example is Ardoyne House, built beside Herbert Park and completed in 1967. This single block of 44 apartments on eleven floors was developed by Albion Securities, a UK company, and financed by Irish Life at a cost of £350,000. Both St. Ann's and Ardoyne House were refused permission by Dublin Corporation (Donovan 2019). Instead, their sanction came from the relevant Minister at the level of the national government.

Overall, the re-emergence of apartment development from the 1950s until the 1990s was limited to places where market values, usually for owner-occupiers, could cover the capital costs – this meant in Dublin, rather than across the country, and within Dublin, in Ballsbridge (and other parts of Dublin 4) and in certain seafront locations. To take the example of Ardoyne House given above, its overall cost of £350,000 meant £32,000 per floor, or £9,000 per 3-bedroom apartment and £7,000 per 2-bedroom apartment. A sample of 80 sale listings from the Irish Times in 1967, already concentrated in Dublin's higher value locations reveals a typical price of three-bedroom accommodation that year of just under £4,900, and close to £4,200 for two-

bedroom homes. This gives an indication of just how far above regular incomes viability was in the late 1960s. A similar pattern emerges for the late 2010s, as discussed in Section 4.3.

During the same period in the second half of the 20th century, the Irish State largely emulated post-war developments in most European countries in relation to public housing. Specifically, it sought to develop very large-scale public housing projects, using cheap pre-cast modular systems, with Ballymun Towers being the best-known example. Both in construction and subsequent operation, the quality of these public projects was poor. Many have been demolished since while many other have been substantially renovated. It is also clear from these projects, and their counterparts in other countries, that the overconcentration of one socio-economic group within these schemes was not successful. As a result, “inclusionary zoning” has become the norm across the high-income world. In this system, multi-family housing developments are designed to be mixed-tenure, with both market and social/affordable rental, and as a result mixed in demographic composition.

Starting in the late 1980s, with the Urban Renewal Bill of 1986, policy in relation to urban blight changed. In line with other elements of the economic system, there was a retrenchment of State involvement, with the intention of harnessing market forces to deliver on social goals. In the case of housing, this involved the introduction of tax incentives to build apartments in areas of urban blight, in order to overcome challenges of viability that had not abated. The subsidy from government amounted to around 40% of the capital cost of the development, on average.

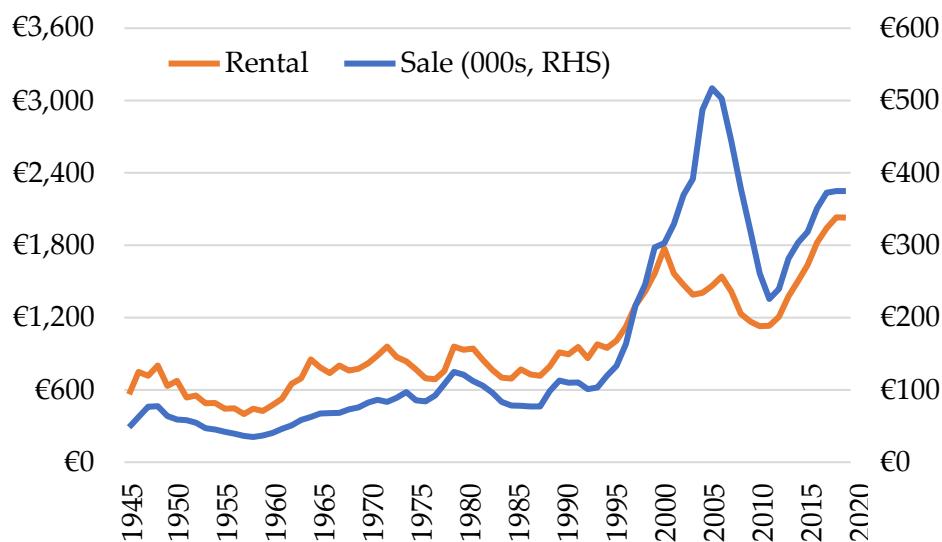
The most well-known of the tax reliefs was known as “Section 23 relief”. This worked by allowing investors to offset rental income against the cost of the property, less its site value. This meant that typically more than 80 per cent of the purchase price could be used as a tax-free allowance, and investors could take the full value of the tax break in the first year, if rental income was high enough (or spread it over a period of up to 20 years otherwise). The more rental income they have, the quicker they can receive the benefit of the tax relief. To give a worked example, where a Section 23 apartment cost €300,000, with an associated tax break of €275,000, any rental income up to that amount (€275,000) would qualify. At a marginal rate of tax of 42%, the tax relief was worth up to that fraction of the tax break (in this instance, €115,500).

A tax break of such magnitude had the effect of largely eliminating the viability constraint. Where the prospective investor believed rental income would hold up, i.e. where there would be adequate income to fully take advantage of the tax break, only site costs had to be covered. (Prospective investors may not even have had to believe in the rental income from that particular property, as the relief applied to rental income earned from all Irish real estate, residential or commercial, owned by the

investor.) Unsurprisingly, given its generosity, Section 23 properties sold at a premium to investors. And perhaps predictably, its initial focus on urban blight was lost during the 1990s and early 2000s and it became a scheme that covered much of Ireland. In rural renewal schemes, the tax break was, if anything, proportionately greater, as site values were lower.

While Section 23 is now typically associated with excess supply of housing in rural areas, the tax reliefs achieved the original goal of improving the supply of rental accommodation in urban areas. This can be seen in Figure 3, which shows the inflation-adjusted path of the rental and sale price of housing in Dublin since 1945. While the late 1990s saw significant increases in the price of both types of housing, the cost of rental accommodation fell in the early 2000s, in response to the significant new supply that had been built. This was at a time when criteria for mortgage lending were being relaxed and first-time buyers went from needing a deposit of 25% or more to 5% or less. Indeed, the cost of rental housing in Dublin fell more or less throughout the 2000s and only surpassed the 2001 peak in 2017. However, as the incentives targeted private taxpayers, they became the main providers of rental homes. Unlike in the rest of Europe, where institutional investors play a central role in the provision of rental accommodation, those investors were effectively priced out by the tax break, for which they could not qualify.

Figure 3. Inflation-adjusted housing prices in Dublin since 1945



Source and notes: Calculations based on Keely & Lyons (2020) and daft.ie report.

At the same time, the initial impact of Ireland's entry into the eurozone was to ease the credit constraint faced by Irish banks. With a lower cost of capital and abundant credit available to them, Ireland experienced a classic Kindleberger credit bubble. Such a cycle starts with an initial favourable improvement in economic conditions. In

Ireland's case, this was its discovery of a successful business model to generate export revenues, as a base for mostly North American firms to access the newly-formed Single European Market. Combined with global shifts in financial technology and regulation, this initial change in fundamentals pushed up demand for housing, which in turn led to expectations of future capital gains on the part of both borrowers and lenders. It was for this reason that apartments kept being built even as the tax incentives were phased out in 2004; buyers of apartments focused on capital gains, rather than rental income, to justify their purchases. Understandably, in that environment, institutional investors – whose focus is predominantly on real rental income – did not become involved in the market.

The Global Financial Crisis of 2008 solidified the end of Ireland's housing bubble. With no capital gains or tax reliefs, demand for apartments collapsed outside urban centres. According to figures published in the daft.ie reports, the average value of a one-bedroom apartment in Longford fell from a peak of close to €180,000 in late 2006 to just €30,000 in early 2014. While an extreme example, it epitomizes both the impact of new supply on prices – Longford apartment values could not have fallen this much without additional supply during the 2000s driven by tax reliefs – and the importance of market values in determining viability. Across the Irish housing market, including in urban centres, the value of apartments fell well below replacement cost between 2008 and 2012, making any new development impossible.

This viability problem was compounded by regulatory changes. The tax reliefs had meant that developers without any significant experience in apartment construction had entered the market during the 2000s. In that context, a number of the new homes built were of poor quality. Reacting to this, central planning authorities introduced minimum specifications largely based on a model developed in the UK. However, in many local authority areas, in particular those where demand for multi-family developments was likely to be greatest, councillors sought to further increase these specifications by up to 20% more in some cases. As discussed in Section 5.1, it is an elementary aspect of public administration that new regulations bring benefits but also bring costs. Increasing minimum specifications for new apartments pushed the viability of prospective developments well beyond the market. In 2015, central government eventually reacted to this, by bringing standards back in line with the 2008 central standards. In addition, they adjusted building codes to eliminate some other structural inefficiencies, recognising the link between regulations and the viability of apartment development.

It was around this time that established international institutional investors in apartments moved into the Irish market. Some had initially arrived as part of the deleveraging required, after the housing market crash, and acquired residential

portfolios. But with very strong underlying housing need (as explained in Section 3.1), their attention turned in the mid-2010s to building new homes. This was aided by the introduction of Real Estate Investment Trusts (REITs) and other collective investment vehicles, moves that brought the Irish market into line with other high-income countries. Across the OECD, it is common for real estate to be owned and funded by longer-term institutional investors rather than, as had been the case in Ireland between the 1990s and the 2000s, highly leveraged private investors.

2.3 Current Conditions in Ireland's PRS

The Irish housing system, as of the early 2020s, can be characterized as one exhibiting chronic and worsening shortages, particularly for rental homes and on a scale unprecedented in its modern history. This section provides an overview of trends in the price and availability of homes in Ireland, comparing and contrasting trends in its rental sector with those in the fsale market over the past fifteen years. It then provides a longer-term context for those more recent trends, which highlights the severity of recent developments.

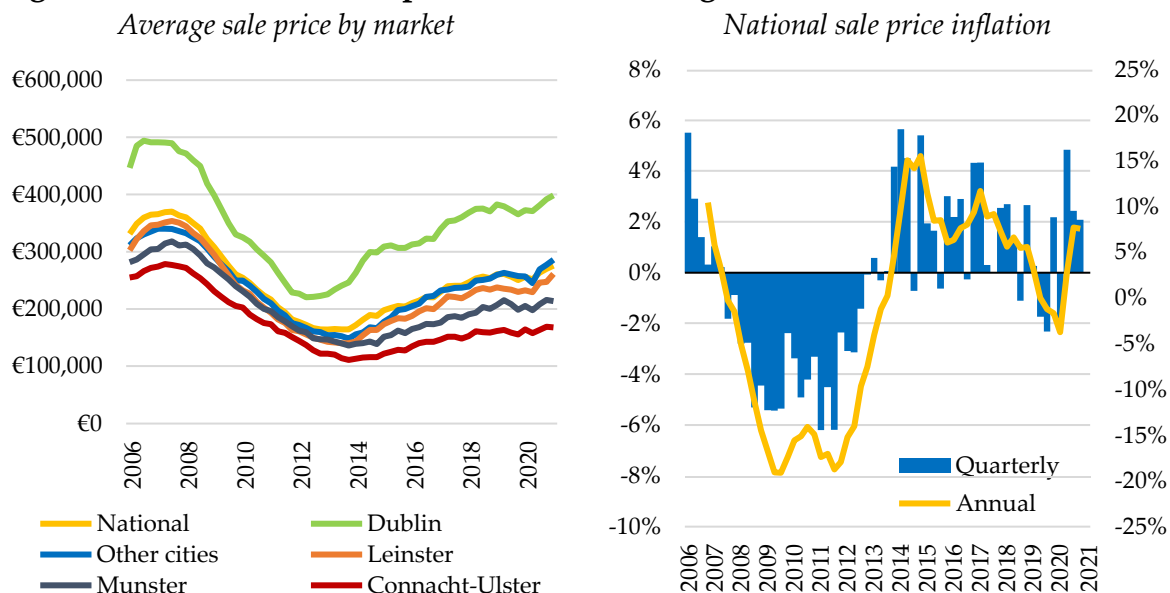
Between 2007 and 2012, as mentioned briefly above, sale prices in Ireland fell by slightly more than half. Thereafter, they rebounded, with large increases in prices – especially in urban centres – between 2014 and 2018. The average price of Irish housing 2006-2021, by major region, is shown in the left-hand panel of Figure 4, while the right-hand panel shows both the annual (right-hand axis) and quarterly (left-hand axis) change in prices. Overall, prices bottomed out earlier and have risen by more in and close to urban centres, with Dublin prices up 80% and prices in the four other cities up 93% on average by early 2021, compared to their lowest levels a decade earlier. Compared to their Celtic Tiger peak, sale prices remain on average one quarter below, but this average hides variation in the extent of falls and subsequent increases. In Connacht & Ulster (outside Galway city), prices are still 40% below peak levels, while in a number of urban areas, including Cork, Galway and Limerick cities and many parts of Dublin, prices are between 15% and 20% below peak values.³

With construction of new homes for sale increasing in recent years, sale prices were largely stable in 2019 and in certain markets even fell slightly. However, covid19 pushed sales prices in Dublin higher – with prices rising 7% during 2020 – as lockdowns and other restrictions of economic activity led to a sharp fall in the volume of sale listings, with knock-on effects for the stock available to buy and for sale prices.

³ For consistency across sale and rental measures, and across national and regional figures for prices and availability, housing prices are taken from the Daft.ie Reports, which cover both tenures and provides figures for 54 markets across Ireland on a hedonic mix-adjusted basis that is comparable across tenures. While based on listed prices, the timing and pattern of price movements is consistent if alternate sources, such as the CSO RPPI (sales) and ESRI RTB (rental) indices are used instead.

In Ireland’s private rental market, price falls in the immediate post-Celtic Tiger period were smaller than in the sale segment but still significant. Unlike in the sales segment, falls were slightly larger in urban areas than elsewhere. Having peaked in early 2008, rental prices fell by 28% nationally (30% in Dublin) during the following two years and exhibited, on the whole, little change during 2011 and 2012. The major difference between sale and rental price falls in that period was that sale prices fell twice as much, in two distinct phases, compared to the rental segment. This reflects the change in (non-price) conditions in the mortgage finance market, including buyer and lender confidence and factors such as the down-payment required by borrowers, which fell from over 25% in 2000 to 5% or less, on average, by the mid-2000s and then rose to between 10% and 15% by the mid-2010s.

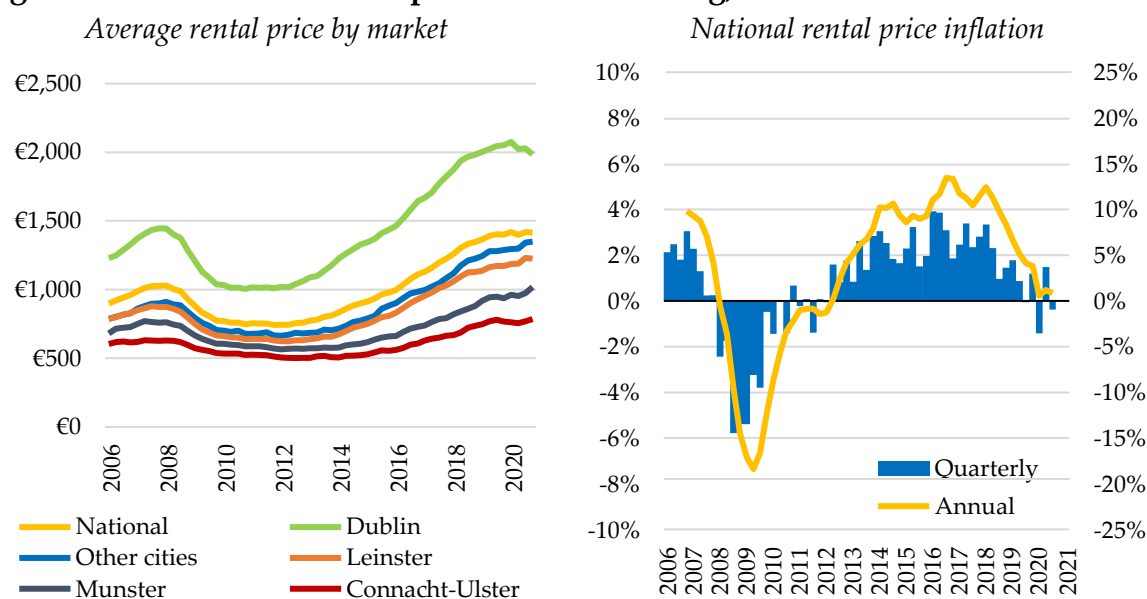
Figure 4. Trends in the sale price of Irish housing, 2006-2021



Source: Analysis of the Daft.ie Reports. Axes in the right-hand panel are aligned with the equivalent graph for rental prices; quarterly inflation (blue columns) is read off the left-hand axis while annual inflation (yellow line) is read off the right-hand axis.

Figure 5 shows trends in the rental price of Irish housing since 2006. The contrast with the sales segment, shown in Figure 4, is apparent in the difference across segments in how prices in the early 2020s compare to the Celtic Tiger peak. While sale prices remain about one quarter below 2007 levels, rental prices are close to 40% above – and in the major cities outside Dublin the increase compared to 2007 is closer to 50%. This reflects the consistency of rental price increases during the 2010s, with the average market rent in Ireland rising for 29 consecutive quarters, from an average of €743 in the second quarter of 2012 to a high of €1,403 in the third quarter of 2019.

Figure 5. Trends in the rental price of Irish housing, 2006-2021



Source: Analysis of the Daft.ie Reports. Axes in the right-hand panel are aligned with the equivalent graph for sale prices; quarterly inflation (blue columns) is read off the left-hand axis while annual inflation (yellow line) is read off the right-hand axis.

Over the course of the 2010s, rents in urban centres surpassed their Celtic Tiger peak in 2016 and had more than doubled by early 2020. As discussed in Section 2.2, Keely & Lyons (2020) estimate average rents for the Dublin area at annual frequency from 1945, allowing a comparison of the 2010s rental upswing with other episodes of rental inflation in recent decades. Adjusting for inflation in the wider economy, the upswing in rents in Dublin during the 2010s was the longest and most pronounced in its post-World War 2 history, surpassing the doubling of real rents seen 1959-1964. Table 1 gives a summary of Dublin’s rental booms since 1945, defined as periods where real (inflation-adjusted) rents increased by at least 25% over three or more years and confirms just how extraordinary the episode of rental inflation during the 2010s was.

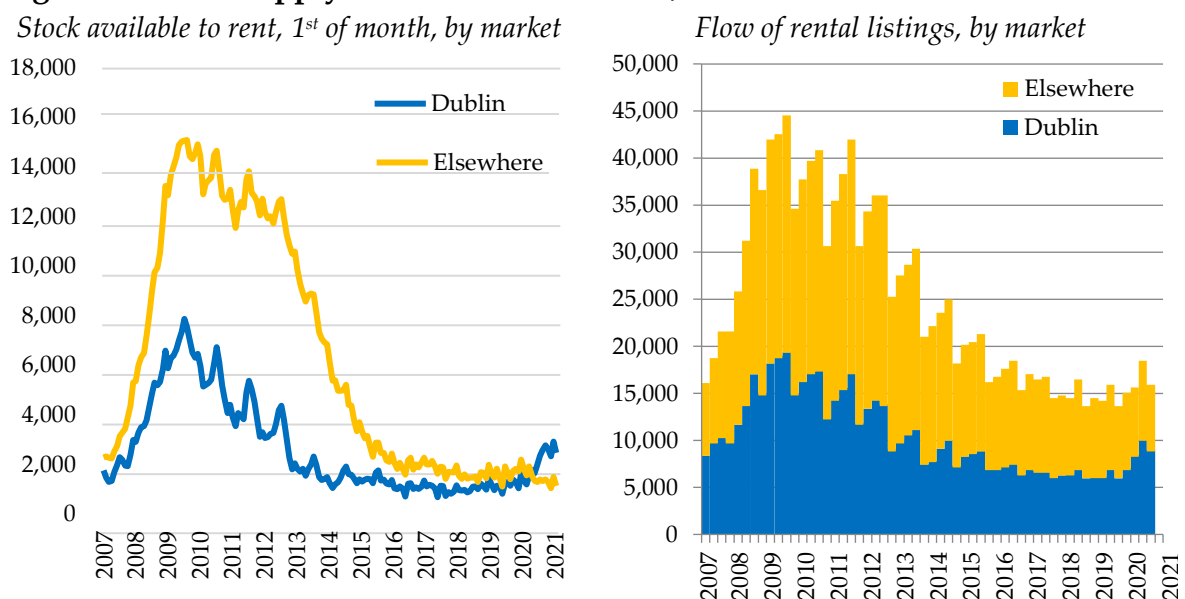
Table 1. Rental booms in Dublin since 1945, ranked by price increase

Period	Percentage change in real rents	Peak monthly rent (in current euro)	Duration
2010-2020	107%	€2,074	10 years
1959-1964	101%	€852	5 years
1995-2001	87%	€1,773	6 years
1968-1972	26%	€959	4 years

Source and notes: Calculations based on Keely & Lyons (2020) and the daft.ie report.

While covid19 was associated with the resumption of sale price inflation, it had – at least in Dublin – the opposite effect in the capital’s rental market, with falls of 3% during 2020. As with the sale segment, price trends reflect supply – both across the 2010s and during 2020. In the private rental market, the availability of homes in urban centres had fallen to record lows during the late 2010s. However, in the year starting February 2020, covid19 led to a doubling of the availability of rental homes in Dublin. This likely reflects the combination of reduced inward migration, due to travel restrictions, as well as, in the first few months of the pandemic, additional supply from short-term lets moving into the long-term rental market.

Figure 6. Rental supply in Dublin and Ireland, 2007-2021



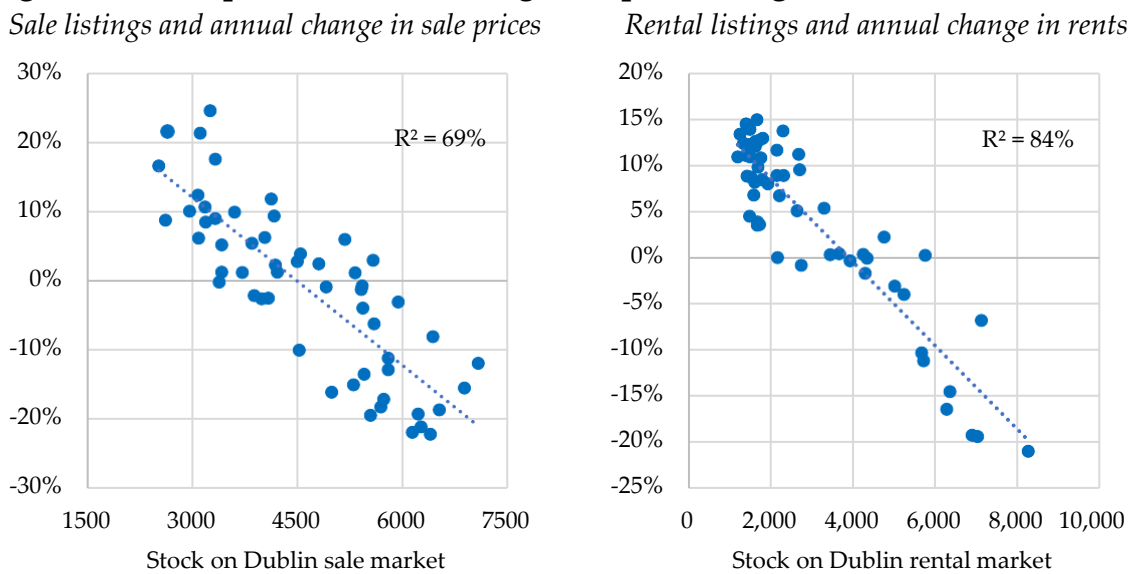
Source and notes: Calculations based on daft.ie report.

These supply dynamics are shown in Figure 6. Its left-hand panel shows the stock of homes available to rent on daft.ie, on the first of each month, from the start of 2007 through to early 2021. The extraordinarily tight stock available to rent from 2015 to early 2020 is apparent – as is the increase in availability in the end of the series in Dublin, and the further tightening of rental supply elsewhere in the country. This increase in availability in Dublin is driven by a higher volume of listings, as shown in the right-hand panel of Figure 6. This measures the number of rental listings that take place during a given quarter. The final two quarters of 2020 saw the largest number of rental listings in Dublin in five years.

Nonetheless, as Figure 6 shows, overall levels of rental availability in the capital remain low compared to levels seen when rents were last stable. It is possible to examine in more detail the link between changes in housing prices, either rental or sale, and the availability of homes on the market. This is shown in the two panels of

Figure 7, which focuses on the Dublin rental and sales segments. In each panel, the horizontal axis shows the availability of homes on the first day of each quarter – homes to rent in the right-hand panel and homes available to buy in the left-hand panel. The vertical axis shows the subsequent changes in rental or sale prices, over the following 12-month period. The very strong link between supply and prices is clear from the tight downward-sloping pattern in both panels.

Figure 7. Scatterplot of Dublin listings and price changes, 2006-2021



Source and notes: Calculations based on daft.ie report. The vertical axis in both panels shows the annual change in housing prices in Dublin, while the horizontal axis shows the number of homes available to buy (left-hand panel) or to rent (right-hand panel) on the first day of each quarter.

More specifically, in Dublin’s rental market, the level of availability associated with stable rents is about 4,000 homes, as seen where the dotted line crosses the 0% line. This means that, as was routinely the case in the late 2010s, when there have been just 2,000 homes available to rent, typically this has resulted in strong upward pressure on rents. Conversely, where the availability of homes has been above 4,000, this is usually associated with downward pressure on rents. Indeed, over the entire period 2006-2021, there was only one quarter when more than 4,000 homes were available to rent and rents subsequently rose. Similarly, out of 38 quarters when availability of rental homes has been very low – below 3,000 on the first of the quarter – rents rose strongly thereafter in 36 of those quarters. In just two – both in 2020, at a time of extraordinary and temporary suppression of demand – was that low level of availability not associated with rent rises. The overwhelming evidence from both sale and rental markets in Dublin, therefore, is that availability is the key determinant of subsequent price changes: supply matters.

2.4 Ireland's PRS in the Early 2020s

By the start of the covid19 outbreak in Ireland in early 2020, institutional investors in residential real estate had started to finance the construction in new-build apartment development. In 2018, 'build-to-rent' planning codes were introduced, which relaxed minimum specifications where developments were for rental, while still maintaining some of Europe's highest minimum specifications (IIP 2021). The code also made it a condition that the development be held for at least 15 years by a single owner. Combined with the broader macroeconomic environment, in particular very low or negative yields on low-risk assets, this helped make Irish rental homes salient for long-term international capital, including European pension funds. Especially in the context of very high construction costs in Ireland (see Section 3.3), longer-term capital can spread those costs over a longer duration, effectively lowering the break-even monthly rent without any fall in costs.

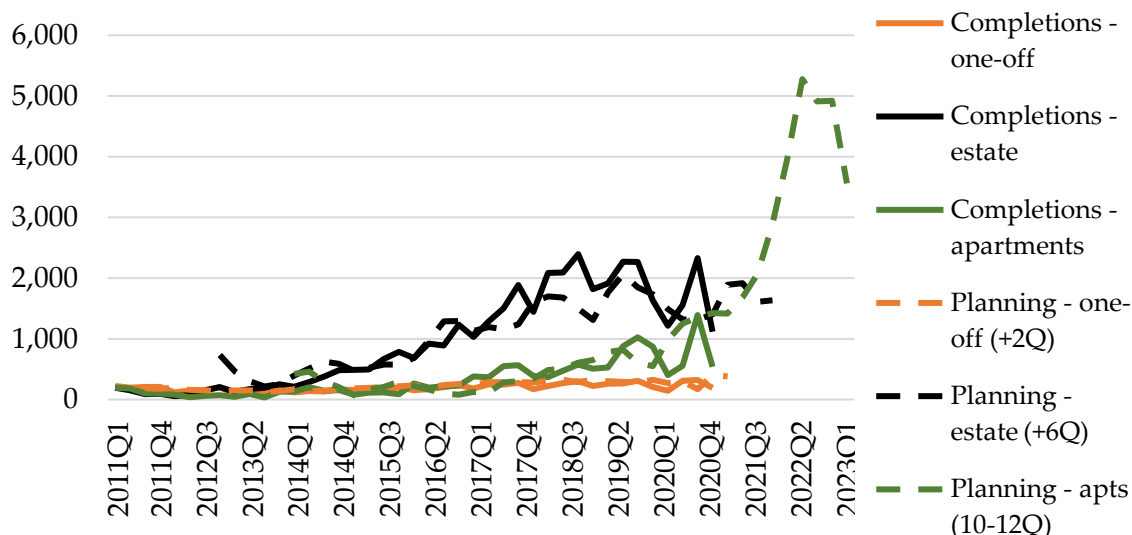
However, the willingness of institutional investment to finance the construction of new rental homes has opened a debate around the role those investors play. One particular concern expressed by some in the policy debate is whether they are "squeezing out" owner-occupiers. This line of reasoning is based on the idea that there is only a fixed capacity for new homes in an economy, either due to land constraints or capital constraints. It is an argument that misses the counterfactual that, if the rental homes were not financed by institutional investors, in most cases they would not have been built at all.

As mentioned above and discussed in Section 3.2, Ireland's membership of the eurozone means that there is, effectively, no capital constraint where investment in the construction of new homes is justified by economic fundamentals. In relation to the land constraint, this is negligible also. Ireland has very low overall population density compared to many of its peers – the island was home to more people in 1841 than in 2021, despite far more basic technologies available at that time. It is, more accurately, a space constraint, as height is another margin of adjustment. Nonetheless, while technologically no space constraint exists in Ireland, a policy constraint may become binding, with the government's Housing Need Demands Assessment based on very low projections of housing need out to the 2040s.

The scale of new potential rental supply can be seen in two ways. The first is shown in Figure 8, which charts the number of completions of new homes in the Greater Dublin Area, by type, as well as the number of homes for which planning permission has been granted, lagged to reflect the typical gap between the granting of permission and the completion. Three property types are shown: one-off homes, estate houses, and apartments. The trend for one-offs is, as elsewhere in Ireland, largely independent of market conditions. The increase in the completion of estate houses after 2014 is

apparent – although the level of supply after 2019 appears relatively stable in aggregate. This suggests that the likely dynamics of supply – in terms of new construction – in the early 2020s will be quite different to those that prevailed during the 2010s.

Figure 8. Completions and lagged permission of new homes in the Greater Dublin Area, by type



Source and notes: Analysis of CSO and Department of Housing figures; planning permission figures are lagged to reflect time between permission and completion – by two quarters for one-off homes, six quarters for estate houses, and 10-12 quarters for apartments.

The most significant shift, however, is in the construction of apartments. Data on planning permissions lodged by end-2020 suggest that, by mid-2022, between 4,000 and 5,000 apartments could be completed per quarter. This reflects the growth of the private rental sector and highlights the fallacy in the argument that these apartments would have been built and sold to owner-occupiers otherwise. Given that fewer than 10,000 apartments were built in the entire period 2011-2019, this increase in construction of apartments – largely to rent – is a welcome development, especially in the context of the link between availability and rents shown in Figure 7.

The second way to evaluate the likely impact of new PRS construction in the early 2020s is by considering the likely impact of the volume of built-to-rent apartments likely to be built in Dublin in the period 2020-2025. Online listings data suggest that the capital needs roughly 1,000 listings per week to match demand, or approximately 13,000 listings per quarter. The GDA currently sees approximately 8,000 listings per quarter. The gap of 5,000 rental homes is quarterly and would need to be met with construction of new homes for as many quarters as the typical tenancy length.

Tenancy length is itself, of course, a function of conditions in the rental market and over the past decade has drifted from close to a year on average to almost four years (Lyons & Westmore 2020). Assuming that additional supply eases conditions in the rental market, similar to what happened during 2020 and early 2021 due to covid19, it is reasonable to think that, with additional rental supply, tenancy length would fall to 2.5 or 3 years, or 10-12 quarters. This would imply that 5,000 new rental homes are needed in Dublin for each of 10-12 quarters, i.e. the current shortfall of rental homes in Dublin is between 50,000 and 60,000 homes.

As of 2020, the total estimated pipeline of build-to-rent apartments in Dublin over the period 2020-2025 is roughly 30,000 units (Lyons 2020). This number is based on the aggregate of projects under construction, with planning granted or submitted, and projects at pre-planning stage. This means it is likely that at least some of these units may not be built within five years. In summary, the existing pipeline of build-to-rent apartments is likely to amount to only half the backlog of missing rental homes in Dublin needed to bring rents back to affordable levels. In addition, as discussed in Section 3, due to demographics and other attributes, the underlying need for accommodation in Dublin will continue to grow into the 2030s and 2040s.

3. Housing & Funding for Ireland's Homes

This section outlines the demand drivers for housing, including rental accommodation, over the medium- to long-term. It focuses on overall housing need, rather than need for a particular tenure (what might be termed 'market demand'), given the role policy plays in determining tenure patterns. Given the scale of housing need outlined, it then quantifies the likely funding requirements for PRS in the medium term and, given the profile of likely investors, expected returns and priorities. Lastly, it examines the viability of newly built accommodation, relative to the income distribution of Irish households and individuals, and related trends in supply of new homes.

3.1 Ireland's Housing Need to mid-Century

The underlying need for new additions to the housing stock in any economy comes ultimately from three principal sources. The first is change in overall population. Unique in Europe, Ireland is set to enjoy faster population growth in the 21st century than in the 20th. This growth has two main components: natural increase and net migration. Strictly speaking, natural increase in the population is measured by birth minus deaths; however when considering housing need, adjustments need to be made given the nature of consumption of housing. Firstly, not every death results in one additional property becoming vacant. The lower bound for conversion of deaths into additional housing is one-half, which would apply in a situation where every adult formed half of a two-person partnership and thus only every second death, on average, results in a home becoming available. For conservatism, this lower-bound is taken for calculations made below, as the unmarried cohort aged 75 or over in Ireland currently may have non-standard living arrangements.⁴

Secondly, births do not translate into an immediate housing need. Instead, it is worth considering a stylised lifecycle of housing need. The earliest housing need at scale arises after secondary education and includes accommodation for students of higher and further education, both purpose-built and in the wider rental market, as well as accommodation for those whose education finishes at secondary level and whose employment starts thereafter. Again, to err on the side of caution, the under-25 population is set aside.⁵ Instead, natural increase in the population is measured as the difference between the 25-34 year-old female cohort and their 75-84 year-old counterpart. This can be projected forward into the 2040s, given birth rates to 2020 are known; here, official Central Statistics Office (CSO) projections are used.

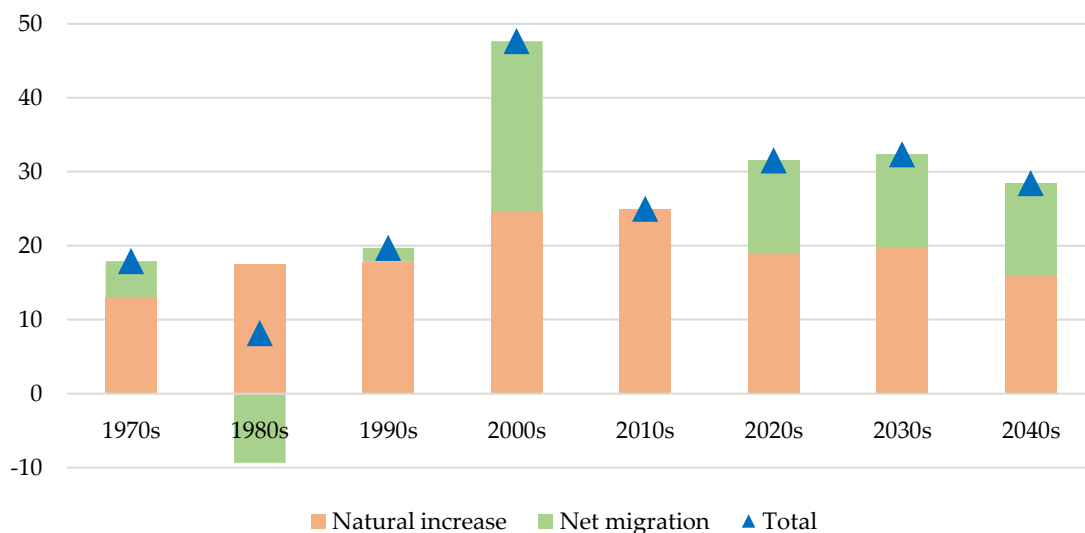
⁴ This includes, for example, members of religious communities, both ordained and lay, who may live in households of many unrelated persons.

⁵ This is equivalent to interpreting the figures presented in this section as separate to, rather than inclusive of, the housing need of Dublin's 18-24 year-old population, whether that is in student accommodation, co-living, or other housing types.

In addition to the natural increase in the population, additional housing need from population growth stems from net migration. For much of the century and a half to 2000, Ireland was a net exporter of people, a phenomenon unique in Europe that depressed housing need. The consequences of this may include a lack of expertise, on the part of the policy and construction sectors, regarding densification and re-use of existing urban land. The CSO does include net migration projections in population projections. However, these are typically based on relatively parametric levels of net migration, rather than the product of economic modelling. For example, the three values for net migration for Ireland in the 2020s are 10,000 per year, 20,000 per year and 30,000 per year. These were set following the 2016 Census and mark a significant increase on the trends set out as equivalently low, medium and high following the 2011 Census.

The shifting composition of population growth has important implications for housing need. A country relying on natural increase in its population, as Ireland did consistently until the 1990s, has greater time to plan to meet that housing need, given the long lag between births and individual housing need (as discussed above). However, net migration presents an immediate housing need. Over coming decades, however, Ireland’s population increase will shift to being increasingly driven by net migration. Already in the 2020s, 55% of Ireland’s population increase will come from net migration. By the 2040s, under the M1F2 scenario, two thirds of population growth will be due to net migration and just one third from natural increase.

Figure 9. Housing need from population increase (nationwide, 000s)



Source and notes: Analysis of CSO figures. Net natural increase is calculated by the difference between 25-34 and 75-84 female cohorts; net migration is converted from persons into 2-person households; projections for 2020s-2040s are based on CSO M1/F2 projections for natural increase and average of M1/M2 scenarios for migration.

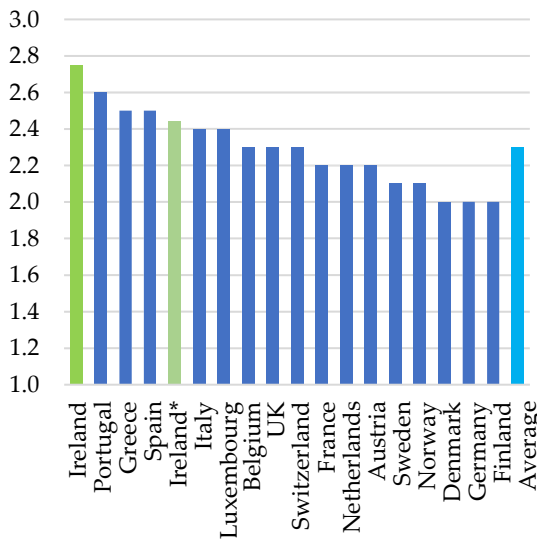
Figure 9 summarizes the impact of both these sources of population on housing need. It suggests that, throughout the 2020s and 2030s – and into the 2040s – population growth alone will create an on-going need for something like 30,000 homes nationwide per year. It is important to note that this is housing *need*, rather than the market *demand* for any particular type of housing, such as owner-occupied or market rental. This relatively stable total is a combination of a falling natural increase, which peaked in 2010 and will level off at close to 17,000 per year by 2040s, and increasingly positive trends in migration. Emigration fell 2010-2014 and 2015-2019 saw larger numbers of net migrants into Ireland.

Additional housing demand comes from falling household size and obsolescence, which is related to internal migration – both highlight the importance of urban homes for smaller households. Turning to household size first, Figure 10 shows average household size in Ireland in the context of its neighbours and its trend over time. The left-hand panel reveals Ireland to have had the largest average household size in Western Europe during the 2010s, at 2.75, compared to a Western European average of 2.3 and 2.0 in some countries. By 2020, average household in some countries, including Sweden, was estimated to be just 1.8. The right-hand panel shows the evolution of the average household size in Ireland since 1966. The steady fall in average household size 1966-2011 mirrors trends seen in other countries, as later marriages, smaller families, a greater fraction not marrying/having children, and longer lives combine to make one- and two-person households the clear majority of households in all high-income countries.

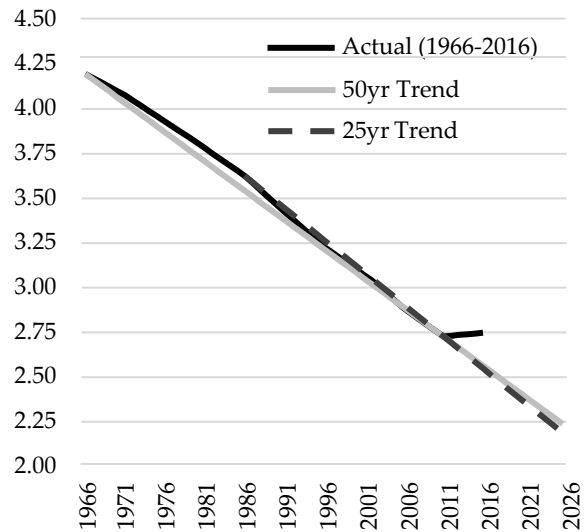
There is a noticeable pause in the downward trend in the period 2011-2016, as seen in the actual outcome compared to either the 50-year trend or the 25-year trend to 2011. Some commentators have interpreted Ireland's divergence from European trends in recent years as evidence of different demographic arrangements or different housing preferences. However, the abrupt timing of the change in trend – at exactly the same time very few homes were built (for more, see Section 3.3) – makes this highly implausible. Indeed, a disproportionate fraction of new households added in Ireland between 2011 and 2016 were households that included unrelated persons, a strong signal that the pause in declining household size was unrelated to unusual movements in underlying demographic attributes. For that reason, in the left-hand panel, in addition to the raw number for Ireland, which comes from the 2016 Census, an adjusted estimate is given for Ireland for the same year. This lower number, 2.44, reflects underlying demographics and is calculated by redistributing some of those recorded as living with unrelated persons, at the time of the 2016 Census, into smaller households of one and two persons.

Figure 10. Household size by country and, for Ireland, by year/trend

*Average household size by European country
(mid-2010s)*



*Average household in Ireland, over time
(including trend rates after 2011)*



Source and notes: Analysis of Census of Ireland (various issues). Left-hand panel: "Ireland" refers to an estimate of the underlying household size in Ireland, as of 2016, as explained in the text. Right-hand panel: values between Census years are geometrically interpolated. Trend rates, after 2011, are as explained in the text.*

Changes in average household size are, by the nature of the measure, small in scale. However, the impact on housing need of these changes can be significant. By way of thought experiment, consider a country with a fixed population of 4 million, where average household size falls from 4 persons to 2 persons over the course of a century. Without any change in population, underlying housing need has doubled – from 1 million homes to 2 million homes. In addition, the housing needed for two million households of two persons is different in type and mix to the housing needed for one million households of four persons.

In practice, even in a country with a fixed population, the construction requirements in going from four- to two-persons households would be greater than just doubling the housing stock. This is due to obsolescence, i.e. the fact that every year a small fraction of an economy's housing stock falls out of use. Ireland's Central Statistics Office (CSO) estimates, as part of its annual National Accounts, that the country's housing stock falls in value by 0.8% per year. In a country with two million dwellings, this would mean that 16,000 fall out of use each year. It is for this reason that even countries with stable demographics (both overall population and household size) require new homes to be built each year.

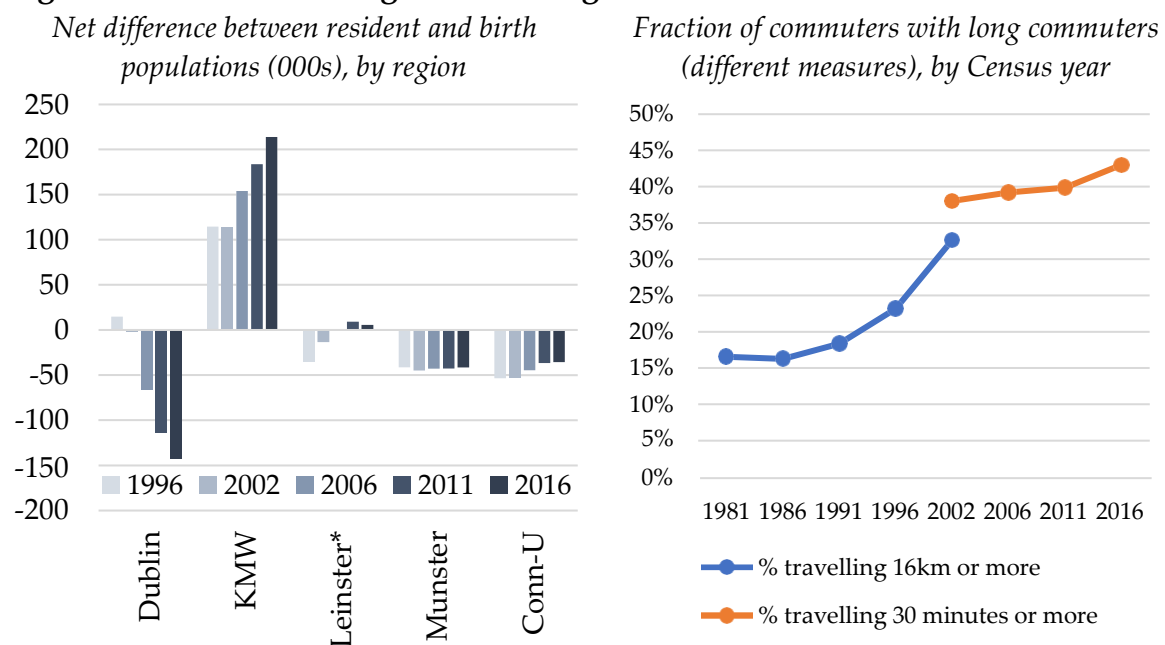
Obsolescence is usually tricky to measure and not entirely external to conditions in the housing system. Estimates of obsolescence in Ireland between 2011 and 2016, using

Census data and data on completions, suggest rates far lower than 0.8% per year. But these lower rates likely reflect that, without better options, households took up residence in dwellings that were less than optimal given their requirements, for example those in rural areas far from work.

This highlights an important determinant of obsolescence: internal migration and urbanization. Consider, again, the same country of 4 million, moving from four- to two-person households. Where the four-person households are rural and the two-person households are urban, the likely obsolescence of existing housing is even greater, as they are a poor fit not only for the household type but also location.

Ireland is currently undergoing a delayed and stunted process of urbanization. UN data show that its urbanization rate had been, in the 1960s, amongst the lowest in Western Europe, together with Portugal. This reflected its economic structure, with agriculture forming a larger share of the workforce and the economy in Ireland than in its Western European peers. Over the past half-century, Ireland’s economic structure has transformed completely, with its workforce now predominantly in service activities, which are prone to clustering. Over 80% of jobs take place in cities. However, fewer than two thirds of Irish people live in cities. This growing disconnect between where Irish households live and where they work can be seen in other official statistics.

Figure 11. Indicators of regional housing mismatch



Source and notes: Analysis of Census of Ireland (various issues). Left-hand panel: “KMW” refers to Kildare, Meath and Wicklow, “Leinster*” to the rest of the province of Leinster, and “Conn-U” to Connacht and the three counties of Ulster in the Republic of Ireland.

Figure 11 presents two of these measures, based on Lyons & Westmore (2020). The left-hand panel shows, for certain regions of Ireland, including Dublin and the counties immediately surrounding it, the gap between the number of people born in that county still living in Ireland and the number of Irish-born residents of that county. Since the 1990s, Dublin has gone from being a ‘net importer’ of people from elsewhere in Ireland – the standard role for a major city – to being a net exporter of people to other parts of the country, in particular (but not limited to) the three counties surrounding it. The right-hand panel shows the fraction of daily commuters with ‘long’ commutes, defined (up to 1996) as travelling 16km (10 miles) or more each way and, thereafter, as travelling 30 minutes or more each way. This, combined with more granular data, confirms that the move of urban households away from the principal city does not reflect an unexpected shift in its economic structure away from urban centres, but instead a lack of housing in those centres. While Ireland’s labour market is as urbanized as its peers, its housing market lags significantly behind.

Ireland’s overall population is projected to grow from less than 5 million in 2016 to between 5.6m and 6.7m by 2051, with estimates in 2020 indicating that Ireland is tracking most closely to the high migration/low fertility (M1/F2) scenario developed in the 2016 projections. This would mean a mid-century population of 6.5m. Given the existing stock of occupied dwellings in 2016, likely obsolescence between the 2010s and the 2050s, and the prevailing average household size mid-century, this means that Ireland needs to build between 2.8m and 3.4m dwellings, between 2016 and 2051. Table 2 combines the information on Ireland’s projected population growth 2016-2051 with scenarios for obsolescence and average household size, to generate high-level estimates of the number of new homes needed to be built per year to meet underlying housing need. The baseline is where Ireland’s household size falls by 2051 to something in line with the Western European average currently, while obsolescence is below the CSO figure but above recent levels, reflecting resumption of urbanization. This suggests housing need of close to 49,000 homes per year – with alternative assumptions giving a range of 38,000-61,000.

Table 2. Dwellings needed in Ireland, per year, 2016-2051 (000s), by scenario

Annual obsolescence rate	Average household size		
	2.3	2.1	1.9
0.4% obsolescence	38.2	45.9	55.2
0.6% obsolescence	41.1	48.8	58.1
0.8% obsolescence	43.8	51.5	60.8

Source and notes: Calculations based on Census figures, as described in the text.

This estimate is far above public policy targets, such as those in *Rebuilding Ireland*. These targets are largely based on existing policy measures and the likely capacity for growth in the construction sector, rather than underlying need. In an ESRI report written for the Department of Housing, Local Government and Heritage, Bergin & García-Rodríguez (2020) present estimates for regional housing demand, by local authority, to 2040, an analysis that is expected to underpin the Housing Needs Demand Assessment (HNDA). Overall, their baseline model estimates housing need of just 28,000 per year between 2016 and 2040. Given obsolescence of 160,000 homes over that period with 0.4% obsolescence, a lower-bound, this would mean a net addition of just 540,000 homes by 2040. With a population of 6 million by 2040 under the M1/F2 scenario, this would mean an average household size of 2.67 in Ireland as late as 2040, even though existing demographics in 2016 already implied a true household size of between 2.4 and 2.45. Such a household size would mean that Ireland would be unique in the world for combining large household size with high incomes and an ageing society and would require increasingly delayed household formation by adults.

As this exercise shows, the ESRI projections of housing need are problematic for four principal reasons. Firstly, they rely on, among other things, historical patterns of housing prices and internal migration, themselves a function of increasingly inadequate housing supply in urban centres since the 1970s (for more, see below). Thus, the sprawl associated with Ireland's economic development 1996-2016 is forecast to continue, by design. Second, and related, they assume that obsolescence in the period 2016-2040 matches that between 2011-2016. As discussed above, this is a problematic assumption given minimal construction levels during those years and one that is also based on historical models of development that brought about significant sprawl. Thirdly, they base housing demand stemming from population increase on fertility, rather than the true age of household formation (taken here to be 25-34 year-olds), a difference that has significant implications for estimating overall housing need into the medium term, given Ireland's age pyramid over coming decades. Finally, and most crucially in explaining their unusually low estimate of housing need, they assume that household size stays at 2016 levels.⁶ By so doing, they eliminate one of the largest likely sources of housing need.

By way of contrast, the housing need figures presented in Table 2 align with Central Bank of Ireland estimates of underlying housing need (Conefrey & Staunton, 2019). They note that, where household size converges to the rate in the UK, estimated new

⁶ Technically, they make assumptions about the inverse of household size, the 'headship rate' (what fraction of the population is the head of a household). They do this at the level of the local authority, by five-year age group (20-24 year-olds, 25-29 year-olds, and so on), rather than on aggregate. However, its net effect is to substantially understate housing need by requiring future age cohorts to live in the same pattern as past cohorts.

housing demand in Ireland would be 47,000 units per year during the 2020s and over 51,000 per year in the 2030s. Without any change in household size, a very unlikely scenario given underlying demographics, they estimate demand would be close to 33,000 on average during these decades, similar to the high-migration scenario in the ESRI exercise.

The national figure of 49,000 presented in Table 2 is based on realistic aggregate parameters of population increase, household size and obsolescence and makes no assumption about the internal distribution of the population. It can be used to calculate housing need in the Greater Dublin Area, using assumptions about the spread of the population, however. Table 3 decomposes both national and Dublin figures by underlying source of housing need. Between the 2010s and the 2050s, the Greater Dublin Area is likely to need roughly 20,000 homes per year, across all tenure types. This represents just above 40% of national housing need on an annual basis, reflecting the under-provision of housing in Dublin since the 1970s and in particular since the early 2010s (for more, see Section 3.3).

Table 3. Rounded estimates of new housing units required in Ireland and in Greater Dublin Area, per year, 2021-2035

Source	National	Greater Dublin Area
Obsolescence	10,000	3,000
Changing household size	12,000	6,000
Natural Increase	19,000	8,000
Net Migration	8,000	3,500
Total	49,000	20,500

Source and notes: Author calculations, assuming 0.6% obsolescence of existing housing stock per year, a fall in household size to 2.5 by 2035, a natural increase of 19,000 households per year (as measured by the difference between 25-34 year-old and 75-84 year-old age cohorts) and net migration averaging 20,000 per year (in 2.5 person households due to dwelling mix).

A final note is appropriate regarding Table 3. As noted, it covers housing need, rather than demand for any particular tenure type, such as owner-occupied or market rental housing. In many countries, it is common that one quarter of housing – or more – is met by the social or subsidised housing sector. In Ireland, the fraction of new

construction that is social housing is typically closer to 10%. Of the remainder, current trends suggest a roughly 2-to-1 ratio for owner-occupied to rental homes. This would suggest a breakdown in Dublin of something like 2,000 social units per year, 6,000 market rental and 12,000 owner-occupied. However, as discussed in the analysis of ESRI housing need estimates, the use of past or existing trends to extrapolate is problematic. The figures here are based on an assumption that all housing need is met. Recent decades have shown that, without significant policy change, a more likely outcome is suppressed housing supply, an artificially elevated household size and suppressed urbanization and net internal and international migration.

3.2 Funding Ireland's Housing Need

Whatever the level of housing need, a long-lived asset such as housing requires capital. Financial capital can come in either debt or equity forms: debt capital involves fixed repayments and means the risk is borne principally by the borrower, while equity capital involves the investor taking a stake in the asset and thus sharing in both upside and downside risk. The capital can be provided domestically, by Irish households directly (or indirectly through firms) or by the state, or it can come from international sources.

The greater Ireland's housing need in coming decades, the greater will be its need to import capital from abroad to finance the construction of the homes it needs. As an economy with significant population growth in coming decades, and thus a net borrower, Ireland is fortunate in that it shares a monetary union with older and wealthy countries that are, on balance, net savers. This means that Ireland can take advantage of an elastic supply of international capital, at low cost, in a way that it simply could not do prior to entry into the eurozone.

It is in this context that the substantial transformation of Ireland's real estate sector since the Global Financial Crisis (GFC) needs to be understood. In particular, the capital structure of the market is now characterised by international capital, both debt and equity, flowing into the property market. The emergence of foreign capital is a consequence of the financial disintermediation in the current financial cycle. The previous financial cycle of the 2000s was characterised by significant domestic bank involvement in the real estate sector. What are now termed Irish "pillar banks" acted as an intermediary between foreign loans and the property market. However, the well-known over-extension of the Irish financial system led to post-crash restructuring and a continued low-risk appetite. Combined, these have seen domestic banks retreat from this position. The entrance of foreign capital has therefore bypassed domestic banks and established a direct link between foreign capital and the property market. There are now a broad range of international investors in the Irish property market.

In recent years, given a combination of strong housing need and the limited supply of domestic capital, private development finance in Ireland has been heavily dependent on the supply of capital from international providers. International debt and equity comprised 78% of the annual total development finance for real estate for 2017 through to 2019. Out of an average total of €5.4 billion 2017-2019, foreign real estate investment amounted to €4.2 billion, or more than three quarters. This represents €2.6 billion in debt from international banks and debt providers, and €1.6 billion in equity with Activate Capital and Castlehaven Finance the largest equity providers. This is in contrast to €1.2 billion of domestic capital, with roughly two thirds of that in the form of debt and the remaining €400m in equity form.

To understand the scale of investment needed to fund Ireland's housing need, a development finance model underpinned by several assumptions is used. First, it is based on the financial profile of completed developments in Ireland 2017-2019. Secondly, it assumes a steady state in commercial real estate, rather than a set ratio between commercial and residential.⁷ This assumption, based on the chronic supply shortage of housing and potential post-covid19 readjustment in the commercial sector, is equivalent to assuming a shift away from commercial real estate towards residential activity, where a greater level of housing activity than 2017-2019 is envisaged. It also assumes that Ireland's Pillar Banks remain conservative in their lending practices, lending approximately €800 million per annum for development, meaning capital from international sources will be needed to offset any domestic 'funding gap'. The model also assumes that the fraction of private units that are apartments increases from 20% of development finance to 55% over time, reflecting the housing need established in Section 3.1 above. Apartments are more capital-intensive and have higher unit construction costs, as discussed in Section 3.3.

With these assumptions, the delivery of increased housing supply will require significant growth in international development capital. Using the 2017-2019 pattern of financing, it is possible to project the annual development finance figures necessary to meet the demand for new housing. To meet demand for 20,000 homes per year, as well as commercial real estate needs, a blend of €6.8 billion in international capital and

⁷ This reflects the fact that CRE development has been at or even above its natural peak in terms of annual investment and delivery of space in recent years. The difference between commercial and residential segments is instructive: rents are typically 5-10% of the operating costs of the occupant in the commercial sector, but in the residential sector rents (or mortgage payments) can often be one third of disposable income. The ability to increase the burden of commercial rents means that the market can respond (and in Dublin's case in the late 2010s did so) to emerging shortages. In residential segment, the high burden means that there is little scope to scale up further. Where construction is not viable and the market cannot deliver for demand, therefore, it may be necessary for policymakers to consider how to bridge the gap.

€1.3 billion in domestic capital is needed.⁸ Where the need is 30,000 homes per year, these figures rise to €9.5 billion in international funding and €1.5 billion in domestic sources, highlighting the importance of Ireland's ability to access international capital, in order to meet strong housing need. Taking the level of need estimated above of approximately 45,000 new homes each year (excluding one-offs), the total capital needed per year for residential and commercial real estate is €15.6bn, of which just €1.8bn (11%) would come from domestic sources. In scaling up from 20,000 homes per year to 45,000 homes per year, an extra €7.5bn is needed each year, of which €7bn would come from international sources.

Clearly, in order to expand the supply of housing in Ireland, there is a significant long-term requirement for international capital inflows. Put another way, the housing crisis will be solved primarily by a significant increase in the supply of units delivered by private developers. Residential delivery, both public and private, is forecast to rise relative to their actual levels from 2017-2019 in order to meet future levels of demand. However, that increased demand will rely disproportionately on the supply of private units. Whereas in 2019, the 16,100 new units built were divided between 8,700 private units and 7,300 public units, a future scenario where 30,000 units are delivered will require an estimated 19,500 private units and 10,500 public units. Complementing this reliance on private developers will be a greater need for international finance. This will be true also where public policy in relation to subsidised or supported housing moves away from up-front grants and towards a cost-rental or similar approach, as has been suggested by a growing number of housing policymakers and organizations in recent years.

3.3 Viability and New Supply

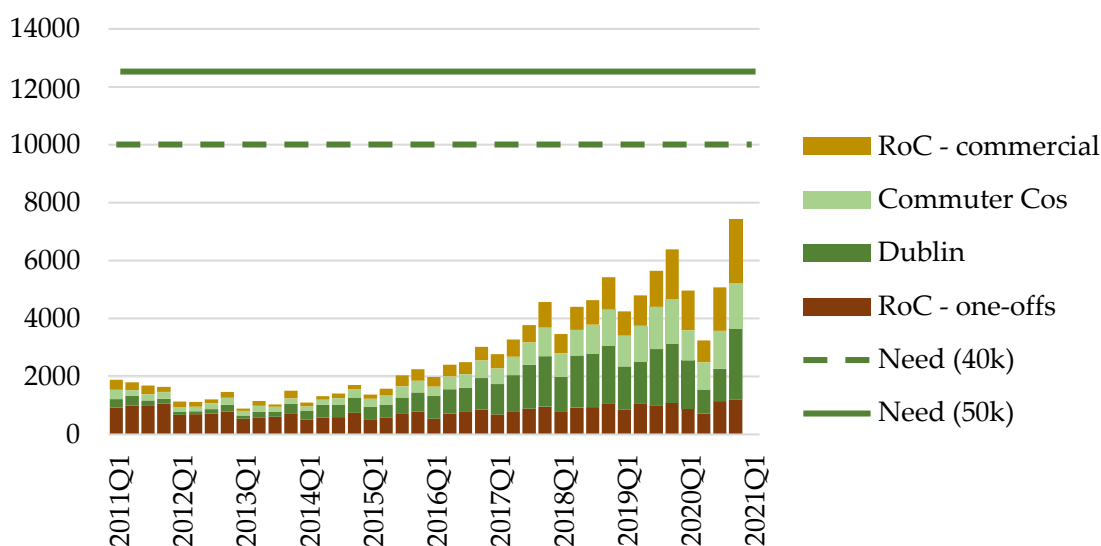
In 2020, IIP published detailed estimates of construction costs, and thus viability, in the Irish housing system (IIP 2020). Their overall cost for the construction of an 83-square-metre two-bedroom apartment in a medium-rise development is €455,000, a figure that includes €43,000 in site costs, €52,000 as the cost of equity and €54,000 for VAT. This gives an overall break-even cost of approximately €450,000 for building a two-bedroom rental apartment. A city-centre apartment faces higher site purchase costs, which has knock-on implications for other costs and brings the total cost, including VAT, to €615,000. These findings are largely confirmed by other studies, including the annual Turner & Townsend *International Construction Market* surveys of construction cost per square metre, and estimates by the Society of Chartered Surveyors of Ireland (SCSI 2021). The former finds Dublin to be one of the most expensive cities in the world in which to build medium-rise medium-specification

⁸ All these aggregate figures refer to professional housing output only and exclude approximately 5,000 one-off homes that are built each year in Ireland and which are predominantly based on domestic mortgage capital sources.

apartments. The figures are also consistent with work undertaken by the Housing Agency (2018), which found that construction costs in Dublin are comparable to London and Paris, among the world’s most expensive cities.

The cost of new homes is driven by not only construction (labour and materials) and related costs, such as the cost of capital and taxes for building, but also by the availability and cost of development land. This depends on the planning system, which, in Ireland’s case, is intertwined with the wider legal system. Many of Ireland’s peers in Europe, in particular those with civil law systems, have planning systems that combine public direction of the composition of new real estate, through for example master-plans or similar zoning systems, with clear pathways to final decisions on proposed projects. In Ireland, however, planning is intertwined with a common-law legal system, with in general a longer duration between initial proposals and a final decision, as well as far greater uncertainty, especially for larger projects.

Figure 12. New homes completed in Ireland, by location and type



Source and notes: Analysis of CSO and Department of Housing figures; demand figures taken from Section 3.1; “RoC” refers to Ireland excluding Dublin and its four commuter counties (Kildare, Louth, Meath & Wicklow). ‘Commercial’ refers to all housing other than one-offs (i.e. the sum of apartments and estate houses).

In Section 4.3, these figures are combined with information on the income distribution, taxes and transfers to demonstrate the lack of viability. For now, it suffices to note that the very high level of construction costs in Ireland explains the weak level of new supply over the course of the 2010s. Accurate data on the completion of new homes, by location and type, are available since 2011.⁹ An overview of trends in the

⁹ Before this, the completion of new homes was estimated from connections to the national electricity grid (from the 1970s to the 2010s) and from the take-up of government grants supporting the construction of new homes

completion of new homes in Ireland is given in Figure 12, alongside higher and lower estimates for underlying housing need in Ireland. The higher figure for underlying need is based on the analysis contained in Section 3.1, while the lower figure represents the uncertainty around the parameters that determine housing need.

Two features are readily apparent from Figure 12. Firstly, the picture for the decade 2011-2020 as a whole is one of substantial unmet demand. Of the approximately 500,000 new homes needed in Dublin during the 2010s, fewer than 115,000 were built and 32,000 were one-off homes mostly away from urban centres. Of those built in the Greater Dublin Area, 40% were in commuter counties, while just 20% were apartments in Dublin itself. These patterns suggest little resolution in the persistent mismatch between new housing supply, which is concentrated in larger homes outside urban centres, and new housing demand, which as discussed above is mainly in the form of smaller households and concentrated in urban centres.

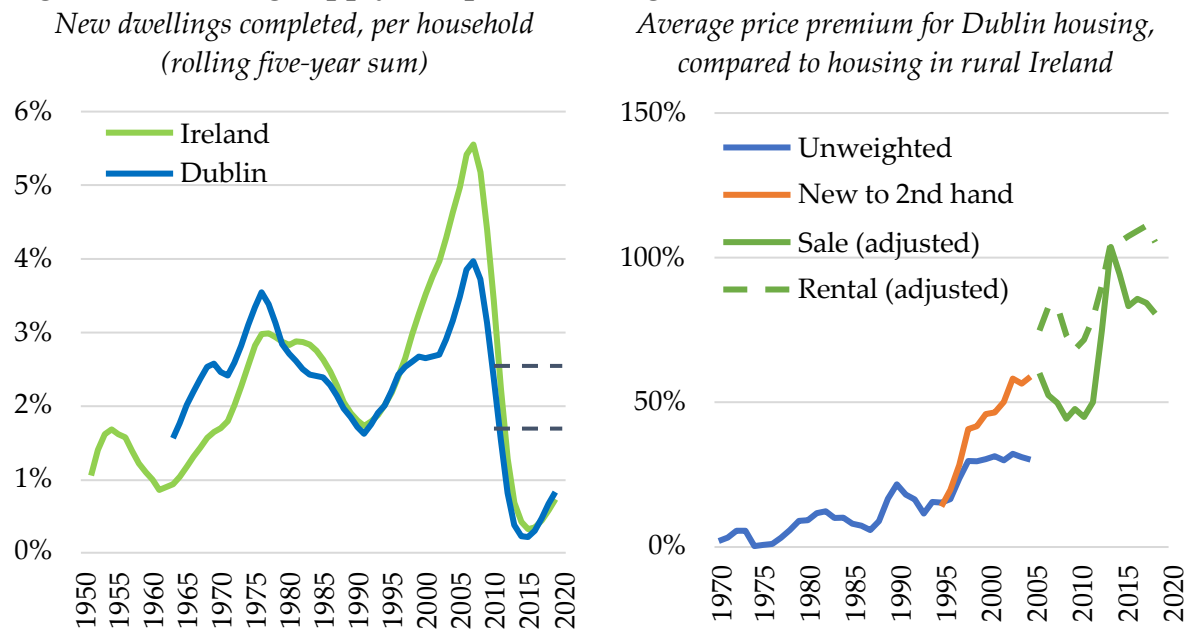
Figure 12 also shows the steady increase in new homes completed over the course of the 2010s. Indeed, the number of homes completed in the final quarter of 2020 – at 7,400 – is the highest level of the period shown but is still well below even the lower figure for likely housing need in Ireland. Figure 13 puts the level of completion of new homes in a longer-term context and also shows its link to housing prices. The left-hand panel presents estimates of the number of new homes completed – both across Ireland as a whole and in Dublin – relative to the number of households, as a five-year average. The highest value in the mid-2000s shows that, in the five years to 2005, roughly 4 homes had been built per year for every 100 households in Dublin – a peak well below the figure for Ireland as a whole, but above the previous peak in the 1970s (at roughly 3.5%). The figure for 2020 was below 1%, compared to an estimated housing need of between 1.8% and 2.6%.

The change in ranking of the Dublin and Ireland series in the left-hand panel of Figure 13 indicates the timing of the effective end in Ireland of urbanization, in housing market terms. (The urbanization of Ireland's labour market has continued, however, with the top 20% of Census divisions in 2016 accounting for almost 85% of places of work, but just 65% of places of residence.) Up to the mid-1970s, more housing was built in Dublin (and Ireland's other main cities) than elsewhere in the country. Thereafter – and especially since the 1990s – Dublin has added fewer homes, per household, than the rest of the country. The result can be seen in right-hand panel of Figure 13. Dublin homes were, on average, no more expensive than homes in rural

(from the 1940s to the 1970s). Both are regarded as reasonable approximations of the underlying trends in completions, both over time and across locations, with the important exception of post-2007 electricity connections. After 2007, there was a growing disconnect between homes connected to the grid and construction activity, with some homes – for example in 'ghost estates' partially completed at the end of the housing bubble – being connected many years after construction.

Ireland as recently as the mid-1970s. Since then, land-use restrictions have restricted the supply of land, artificially inflating land costs, while development costs – especially for apartments – have increased at a pace faster than wages or wider inflation. The persistent under-supply of new homes in Dublin since has led to the emergence of a Dublin premium of close to 100%. In four decades, the price of Dublin homes has increased significantly faster than the price of homes elsewhere, so that Dublin homes are now twice as expensive as rural Irish homes, reflecting a chronic and worsening lack of supply.

Figure 13. Housing supply and prices in long-run context



Source and notes: Calculations based on Dept of Environment figures, Irish Statistical Abstract and Census issues; and daft.ie report (right-hand). Left-hand panel: to overcome the endogeneity of population, trend rates are used for Dublin’s share of total population (post-1996) and for household size (post-2011); dashed lines after 2010 refer to low and high projections for housing need, as explained in the text. Right-hand panel: figures pre-2006 are not mix-adjusted; figures post-2006 are mix-adjusted and like-for-like across sale and rental segments but based on listed prices.

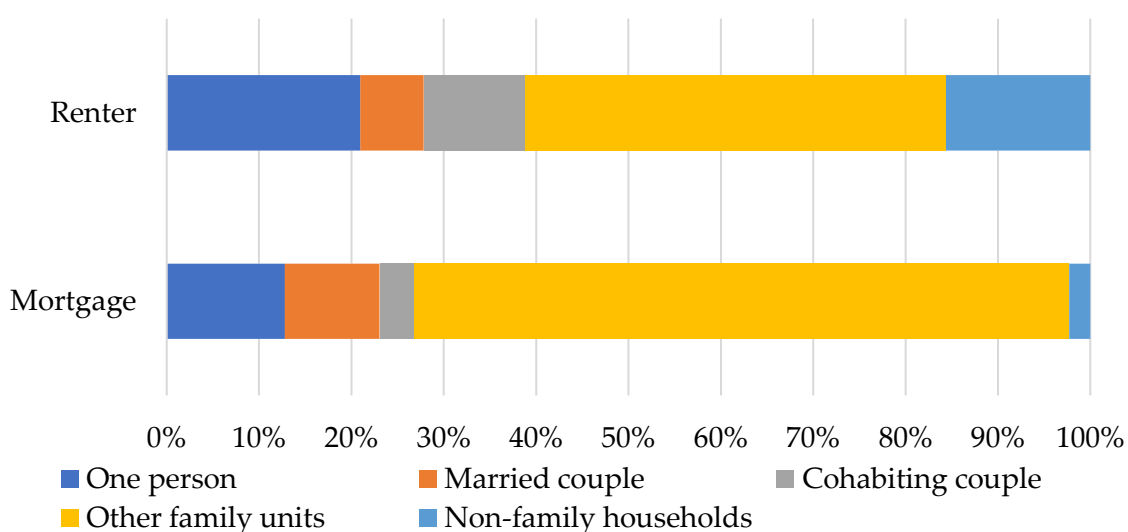
4. People and Homes

This section firstly provides an overview of Ireland’s renters and their rental homes. This includes Census data, survey results by the Housing Agency and data from institutional owners of rental properties. The second part of Section 4 examines in detail the affordability of Irish rental homes, both from a market perspective and from a viability perspective. In particular, it identifies two groups that could be termed a ‘forgotten middle’, served by neither the social housing system nor, due to current conditions, the market segment. These groups are, firstly, existing households in the private rental sector with incomes too low for new rental housing, and secondly, likely suppressed households, especially those aged 18-49 in full-time employment but living with parents.

4.1 Ireland’s Renters & Rental Homes

Of 1.7 million private households in Ireland’s 2016 Census, just over 310,000 were rented from a private landlord, roughly twice the number in the social rental sector. 1.15 million households were owner-occupiers, with just over half occupying their homes free of any mortgage debt. Comparing those in the private rental sector with owner-occupier households with a mortgage, as the most comparable other tenure, reveals important differences. This includes the type of household, as shown in Figure 14. For households with a mortgage, almost three quarters are family units with children (or similar), while 27% are one- or two-person households. In the rental sector, however, family units make up less than half of all households (46%), while 1-2 person households are similar in scale (39%). 16% are non-family households, compared to just 2% of households with a mortgage.

Figure 14. Type of household, for selected tenures, 2016



Source and notes: Calculations based on Census 2016 Table E4025.

As suggested by Figure 14, renters disproportionately comprise ‘crammer’ households of unrelated persons. Of 107,000 non-family private households in the 2016 Census, more than half (57,390) are in the rental sector, with the vast majority of those households made up of unrelated persons. Just 23,000 non-family households were made up of related persons outside the rental sector. This is consistent with significant suppressed household formation due to inadequate housing supply.

A related feature of Ireland’s PRS is its key role in supporting foreign direct investment (FDI) and migration more generally. New residents in Ireland overwhelmingly rely on the PRS for their accommodation needs and Ireland has experienced greater flows of new residents over the last decades. PPS numbers are issued to new residents in Ireland on their arrival and aggregate statistics are published by the government. In 2011, just under 68,000 new PPS numbers were issued, an average of 1,300 per week. By 2019, this had almost doubled to 126,000 (over 2,400 per week). Similarly, a 2017 report by the American Chamber of Commerce, ‘Growing Great Teams in Ireland: The role of the residential rental sector’, highlighted the key role played by adequate supply of rental accommodation in facilitating the creation of new jobs – and, conversely, the challenges faced by firms looking to expand in Ireland given the lack of rental accommodation in recent years. Inadequate housing supply, in other words, may not only be suppressing household formation, it may also be suppressing the creation of new jobs.

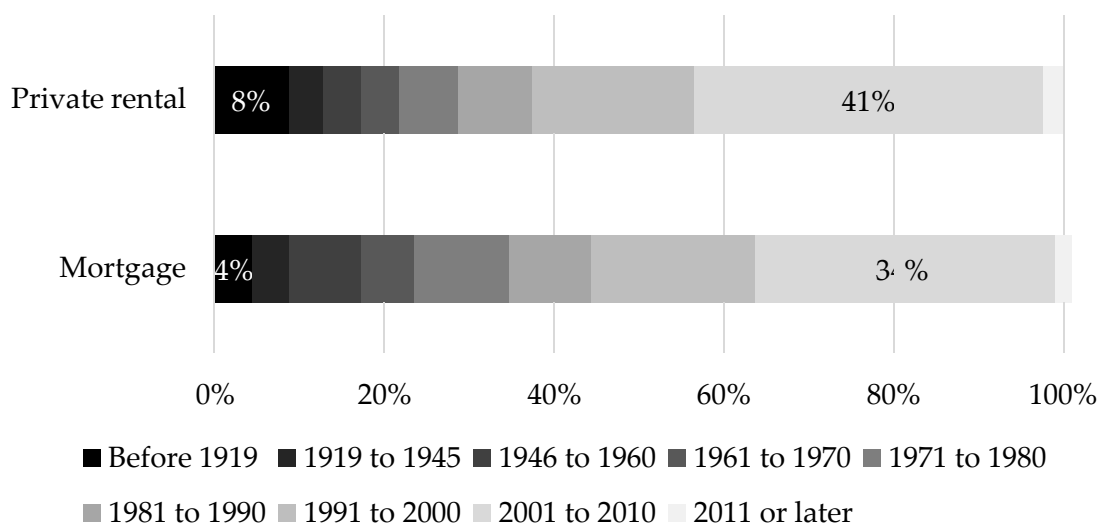
Related to the discussion of HAP in Section 2.1, Allen-Coghlan et al (2020) document that those in the private rental sector who are not in receipt of any housing subsidy represent just under half of all renters – approximately 230,000 households. They are typically higher-income earners, with a median gross income per household of €57,000, with 85% in employment and three quarters under the age of 40. They find a higher proportion of households with two or more adults relative to other tenures, in other words adults living together as housemates, again consistent with the presence of significant suppressed household formation.

The Housing Agency’s 2020 *Housing Attitudes* survey provides further information on tenants and their experience. The 2020 survey included 569 renters, of whom 325 were private and 244 social. Those in the private rental sector exhibited very high levels of satisfaction with their experience, with 90% satisfied or very satisfied (almost ten percentage points higher than for social renters). Further, over three quarters have a desire to stay in their home long term, with the average length of time private renters have been in their current home at 4.5 years. Nonetheless, a key reason for renting is potential mobility, with almost two in five renters unsure of where they want to live long-term. Institutional investors who responded to a survey undertaken for this study confirmed the long average stay by tenants. One reports an average stay of six

years, while for another, almost one third of its occupants have been in their homes at least four years.

With the majority of Ireland’s rental homes run by landlords with three or fewer properties, rather than institutional landlords, a number of respondents renting from smaller landlords report issues relating to maintenance (12%) and energy efficiency (23% reported an issue keeping their home warm). This is in contrast to rental homes managed by Ireland’s institutional landlords. The stock of apartments operated by one landlord, with over 1,000 units under management, shows the energy efficiency of modern rental homes: one quarter of homes were A-rated (on the BER scale) with a further half B-rated. Just 5% were D1 or lower. Similarly, over one quarter of respondents to the Housing Agency’s survey reported a shortage of space. In contrast, in a survey conducted for this study, four institutional investors who reported an average apartment size all reported one of 75m2 or higher.

Figure 15. Vintage of rented and mortgage housing stock (urban areas), 2016



Source and notes: Calculations based on Census 2016.

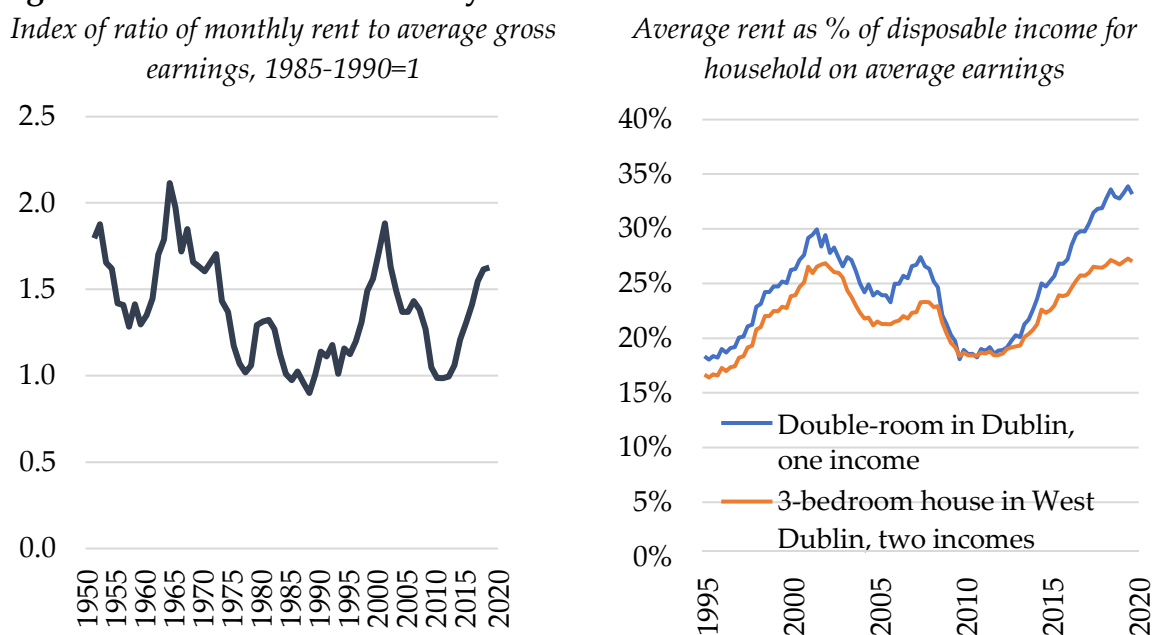
Figure 15 shows the distribution of both private rental and owner-with-a-mortgage housing stock, in urban areas, using Census 2016 data. The series are coloured dark-to-light from oldest to newest, to highlight the trends. As can be seen, the private rental stock, as of 2016, was both older and newer than the housing stock for renters’ peers with a mortgage. Almost twice as many (8.4% vs. 4.4%) rental homes are at least a century old, while 44% were built in the 21st century, compared to 36% for the mortgage stock of housing. This age composition is reflected in Ireland’s housing stock more broadly. Unlike most European countries, where the most common vintage of housing is the immediate post-WW2 period, Ireland’s housing stock is skewed to both older and newer vintages. The prevalence of older housing stock –

especially in rural areas – underscores the likelihood for elevated obsolescence over coming decades, as Ireland urbanizes.

4.2 Affordability in Ireland

This subsection presents firstly measures of market affordability, comparing prevailing market rents to incomes, and second measures of income viability, in other words what income level would be required to sustainably bear the cost of newly built rental accommodation, given current construction costs. To start, Figure 16 presents two measures of rental affordability, using Dublin data. The left-hand panel shows, in index form, the ratio of average monthly rents in Dublin to average gross earnings from 1950.¹⁰ It suggests that over the long run, as best it can be measured, rental affordability improved steadily between the mid-1960s and mid-1990s. Significant increases in rents in the late 1990s led to a supply response, which improved affordability throughout the 2000s but those gains in the 2000s were undone during the 2010s.

Figure 16. Trends in affordability of rental accommodation in Dublin



Source and notes: Calculations based on various CSO sources, Keely & Lyons (2020) and daft.ie reports.

The right-hand panel of Figure 16 presents more detailed figures for the period since 1995, in particular using estimates of disposable (after-tax) income rather than gross earnings. Given the significant changes in tax rates over the period 1995-2020, it presents a slightly different pattern during that period to the longer-run chart. In

¹⁰ Before 2008, trends shown are ‘average industrial earnings’, rather than economy-wide averages, due to data availability.

particular, it suggests that – whether measured as the burden of the rent for a double room, given one income, or for a three-bedroom house in West Dublin with two incomes – affordability in 2020 was at least as challenging as at any time over the previous 25 years. This tallies with the information on real (inflation-adjusted) rents presented in Section 2.3. It also corresponds to the findings of a recent study by Cluid (2021), which examines the ability of various deciles of income-earners to afford market rents.

The presence of market outcomes such as an equilibrium rent is not, however, evidence of the presence of an optimal outcome. Rather, it reflects outcomes given existing supply and demand. In other words, there may be substantial suppressed housing need, which takes the form of artificially high household size, as discussed in Section 3.1. More broadly, in a functioning housing system, underlying need for new housing would be met either by the market, for those with adequate incomes, or by the social housing system otherwise. As outlined above, however, Ireland’s housing system has become characterized by very high thresholds for the viability of new homes together with limited provision of social housing. As a result, the housing system is characterized by what can be termed a “forgotten middle”, similar to Lyons (2021) – i.e. individuals and households with income too high to qualify for social housing but insufficient for newly-built market housing.

Drawing on Lyons (2021), this section profiles this Forgotten Middle, by identifying their income range and then using data from the 2016-2019 Irish respondents to the EU’s Survey of Income & Living Conditions (EU-SILC). In particular, it focuses on two groups. The first group comprises existing households in market rental accommodation that fall within the specified income range, while the second represents suppressed household formation, in line with the underlying demographics of housing need described in Section 3.1 and with Cluid (2021). Specifically, it identifies full-time workers living with adult parents, who in healthier housing systems would be living in their own accommodation but whose income is insufficient for new homes to be built viably.¹¹

Four parameters are needed to identify the income ranges that could be classified as the ‘forgotten middle’. The first is the cut-off for social housing supports; the number used here is €35,000, as this reflects the maximum income a household can earn to be considered for social housing.¹² For those living with their parents and in full-time

¹¹ Trends over time are important to consider, given this context: housing input costs (labour and materials) have increased by 2.5 times the general consumer price index since the mid-1970s. At the same time, taxes such as VAT have grown. This means that the nature of the tax take must be seen as a contributory factor in limiting viability.

¹² The threshold is lower in some counties but this is the level taken here, for conservatism. It should also be noted that it is not the case that there is universal coverage under this threshold.

work, no lower threshold is applied, as practically speaking, no social housing is available for them in Ireland. The second parameter is the highest fraction of disposable income that can be sustained as the burden of housing costs. The fraction used here will be 30% of net disposable income, the usual cut-off applied, although given the challenges faced, leading Approved Housing Bodies (AHBs) in Ireland are now examining a threshold of 35% instead.

The third parameter is the break-even cost of newly-built rental accommodation, converted into monthly terms, so that it can be compared to monthly disposable income and in particular the maximum sustainable share of that income. To do this, the costs outlined in Section 3.3, as compiled by Linesight Consultants, are used. This overall figure can be converted into a break-even monthly rent, in two steps. Firstly, an assumption is required around the net annual income needed by capital-holders. The rise of PRS as an investment class in Ireland, as discussed in Section 2.3, has meant that yields are closer to 4% per year than 6% per year, as would have been the case in the mid-2010s: to simplify, pension funds can spread the same fixed costs over a longer number of years than other investors with shorter horizons. The second figure needed to convert up-front costs into a monthly rent is the cost of management. For these purposes, 20% of gross rental income is set aside for these costs, reflecting the higher standard of amenities, level of service and reinvestment associated with institutionally funded PRS. This means that where the owners seek a 4% income return, the gross yield needed is 5% per year.

Even where an apartment cost €400,000 to build, below the €450,000 described in Section 3.3, this would need to generate €20,000 in annual rental income for it to be viable to build, in other words a two-bedroom apartment has a breakeven monthly rent of no less than €1,650. Given the Irish tax system, a gross annual income of €100,000 yields a net monthly disposable income, for a married couple, of €5,400 per month. 30% of this monthly income is €1,620, meaning that, given prevailing construction costs and yields, as well as the tax system, the construction of new rental homes is only viable for households with a gross annual income of at least €100,000.

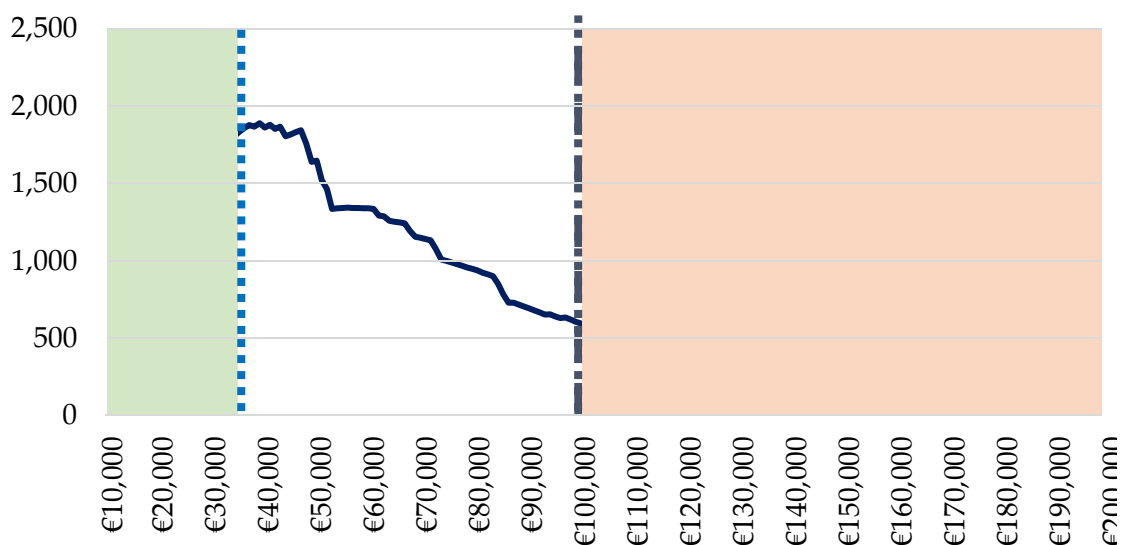
The final piece of information required to identify the 'forgotten middle' is the income distribution of households, actual and suppressed. For simplicity, the focus is on the Greater Dublin Area, as this is where the existing supply constraint is greatest (as exhibited by the Dublin price premium, shown in Figure 13). This exercise is described in more detail in Lyons (2021). In short, it uses the CSO's 'Geographical Profiles of Income in Ireland' report, a special analysis that combines administrative records on household income, including earned income and social transfers, with Census records from 2016. This gives, by local authority and by tenure, key features of the distribution of household income, including the 10th, 25th, 50th, 75th and 90th percentiles, as well as

the mean and standard deviation. Combining information on the total number of households in the private rental sector in a local authority with these cut-offs, it is possible to estimate the number of households in particular income ranges.

Overall, of 675,000 households in the GDA, nearly 140,000 households rent privately and have household income of between €10,000 and €200,000. Of these, almost half earn less than €50,000 per year. Using the various parameters outlined above, Figure 14 puts all households in Dublin’s private rental market into three categories. On the left-hand side, in the area shaded green, are nearly 39,000 households whose gross income is between €10,000 and €35,000, the upper bound reflecting official cut-offs for eligibility for social housing in the GDA. The orange-shaded area, on the right-hand side of Figure 17, includes the 22,000 households whose income in 2016 was high enough (above €100,000) that those households could sustainably afford the break-even rent of a newly built two-bedroom apartment in Dublin.

This shows the practical effects of exceptionally high construction costs in Ireland: only the top 16%, or one-sixth, of renter households in the GDA, can sustain those costs. Taking into account those eligible, in principle, for social housing support, this leaves a “forgotten middle” of over 75,000 households, roughly 56% of renting households in the Greater Dublin Area, whose incomes are inadequate for new housing to be viable but who are ineligible, even in principle, for social housing.

Figure 17. The “Forgotten Middle” in Dublin’s renting households



Source and notes: Calculations based on CSO figures, as described in Lyons (2021).

This analysis, by its nature, relies on households already having been formed. However, as outlined in Section 3 above, it is also important to consider households that would form, were housing more available and affordable. Lyons (2021) does this

by using SILC data. The identification of suppressed households is based on the principle that, in a sustainable housing system, it should be possible for an adult in full-time employment to afford their own home. Thus, the following are identified as suppressed households: those at work, with a personal employment income of less than €75,000, between the age of 18 and 49 and living with their parents. This suggests that, conservatively, 8% of the 18-49 age cohort are suppressed households. There were an estimated 2.2 million persons aged 18-49 in Ireland in April 2020, according to the CSO. The analysis above implies approximately 175,000 of those are individuals who would form new households. Allowing for these to be split across one- and two-person households, this implies an additional 116,000 households that have not formed due to inadequate housing and ultimately because of a lack of viability.

5. Policy Priorities for Ireland's PRS

In this concluding section, three policy priorities are outlined for Ireland's private rental sector. All are situated within a broader aim – that of policy certainty. Perhaps more than anything else, the lack of a stable policy environment threatens the investment needed to build Ireland's homes. Therefore, it is incumbent on policymakers in Ireland to outline how they envisage the housing system in Ireland working, the role of market rental housing within that, and the policy framework that will deliver society's goals – and then leaving that system to work uninterrupted.

Especially in a sector such as housing, where the time taken from planning to residence can be a number of years, repeated large-scale changes to housing policy will limit future investment. It is imperative for the future of the private rental sector that the legislative environment provides clear visibility and long-term stability to provide owners, developers, and financiers with the confidence required to progress with similarly long-term investment commitments. Related to this is the efficiency of the planning system. In all democracies, the ability of supply to respond to new housing need is shaped by building and land use requirements and restrictions, reflecting the preferences of voters and planners. However, housing systems struggle when subject to lengthy or unclear processes of evaluation, arbitration and adjudication between competing interests.

The World Bank's *Doing Business* report, for example, records the time for construction permits to clear at 164 days in Ireland, more than twice the time taken in countries such as Denmark and Finland. Greater certainty and timeliness of the planning process would aid greater responsiveness of supply. Within this context of greater policy stability and certainty, three further PRS policy priorities are described below. The first is the prioritization of viability, so that the market can be used to address much of Ireland's substantial housing need, especially for smaller and urban households over coming decades. This also relates to the second policy area, ensuring rents are affordable, through adequate availability rather than direct manipulation of rents, especially across tenancies. The final policy area relates to the equitable taxation of income earned from Ireland's PRS.

Viable Construction

The first policy priority relates to the viability of construction. As noted in Section 2, and likely related to Ireland's unique demographic trajectory over the past 150 years, the construction of apartments has not been viable for the majority of the income distribution without significant subsidy. Both international and Irish-based studies confirm that Ireland is one of the most expensive places in the world in which to build apartments. The planning system adds further complications, especially the potential for delays and uncertainty for larger-scale projects. Section 4.2 outlined the

implication this has for private construction of apartments, whether sale or rental: only the top sixth of the income distribution could afford a newly-built rental home. It is for this reason that the construction of new apartments has been so limited since the Celtic Tiger, despite strong underlying need.

However, it is simply not practical for public policy to subsidise five-sixths of the income distribution, even setting aside the equity implications of subsidising half of households in the top third of the income distribution. Over coming decades, the net additions to Irish households will be concentrated in 1-2 person households. This makes the viability of apartments more pertinent now than at any point since independence. The low yields on risk-free assets globally have meant that Ireland has been able to import long-term capital at a cost that would have been unimaginable prior to entry into the eurozone: whereas the annual yield on housing was at least 10% and often closer to 15% throughout the period 1945-1995, investors are prepared to accept net yields well below 5% currently.

Nonetheless, it would be unwise for Irish policy to rely on this conjunction of factors outside of domestic control. Policymakers should audit construction costs in Ireland, compared to peer economies in the OECD, and develop targets for reducing those costs, in particular aligning cost reductions to the income distribution, to deliver clarity on the fraction of the income distribution policymakers expect to be accommodated by the private market. While reductions in many cost elements will take time, previous work by Linesight (2020) has highlighted that taxation and public-sector driven input costs are higher in Ireland than elsewhere, offering policymakers direct opportunities to reduce break-even rents. For example, VAT remains chargeable on PRS, even though the homes built are not sold, unlike in other countries. The urgency of this policy priority is heightened by Ireland's transition from relatively uniform households of four or more persons in the mid-20th century to a much more diverse array of household types by the mid-21st, with a much greater fraction living in households of one or two persons, with greater up-front per-person costs.

Affordable Rents

The second policy priority follows from the first and from the clear link between availability and affordability presented in Section 2.3 above. The lower the point of viability, on the income distribution, the greater will be the new supply added by institutional investors to Ireland's private rental sector. Contrary to some commentary, there is nothing that requires large cities to be more expensive than other parts of a housing system. Indeed, until the 1980s, homes in Dublin were no more expensive, on average, than homes elsewhere, as supply matched (relatively weak) demand. The lack of affordability in Ireland's rental sector directly follows from the inability of supply to match demand in recent decades, driven both by land-use

restrictions and by cost input inflation. The exception – when rents fell in the early 2000s, at a time of rapidly rising sale prices – confirms the potential for additional supply to drive rents down, as these years saw significant new rental supply.

In response to upward pressure on rents during the 2010s, policymakers have attempted to directly control rents – as exemplified by the Rent Pressure Zones (RPZs) introduced in 2016. Indeed, RPZs attempt to set rents not just within a tenancy but also between tenancies by targeting restrictions by unit rather than by occupier. This is at odds with best practice across the OECD, where unit-level rent controls between tenancies are rare, as such restrictions remove incentives for owners to invest in their rental units beyond essential maintenance requirements. A majority of countries focus on protecting tenants from rental rate volatility with restrictions during the term of occupation, while encouraging owners to invest in properties between protected tenancies with an appropriate return on their invested capital.

In 22 of 35 countries that responded to the OECD's QuASH survey (OECD 2019), the rate (and frequency) at which rent levels can be increased during the term of a contract is regulated for at least part of the market. However, in only three OECD countries are rental levels regulated at the start of a tenancy. For two of those countries (Colombia and Luxembourg), maximum rents relate to either its commercial value or invested capital. In Sweden, rents are the output of complex collective bargaining, involving municipal housing companies and the Swedish Tenants Union, as well as private landlord representatives.¹³ Other systems regulating rents exist, although in countries such as the Australia, Canada and the USA, these vary considerably by city, state or province.

Across the OECD as a whole, the majority of countries (21 of 35) do not regulate initial rents, reflecting a consensus on the potentially harmful effects of so doing. A substantial literature in housing economics has examined the effects of rent controls, largely focusing on the US, where rent controls are prevalent. This research often (but not always) find some benefits for those in rent-controlled homes. But the consensus in the literature is that rent controls bring significant negative spill-overs. Fallis and Smith (1984) show that rent control laws establish a segmented market for rental properties; excess demand in the controlled sector spills over in the uncontrolled sector which may see increased rents caused by constrained supply due to the controls. Early and Phelps (1999) examined almost fifty cities in the USA, 1984-1996, and found that the existence of rent control increases rents in the uncontrolled sector by more than 13%. And more recently, Diamond et al. (2019) found that San

¹³ To this list may be added the Netherlands, where there are controls on rents for dwellings with rent levels below a certain threshold, in what is equivalent to a social rental sector, and Australia, where the initial rent for homes owned by community housing providers is controlled.

Francisco's 1994 rent control law caused a 5.1% citywide rent increase from 1995 to 2012, adding up to an extra \$2.9 billion cost shared by current and future San Francisco renters.

The effects of rent controls are not limited to prices and include both the supply of rental homes and their quality. The same San Francisco study found rent-controlled properties were 10% more likely to be converted into owner-occupier homes and there were similar findings for Cambridge, MA in Sims (2007). The result of rent controls was a reduction in available rental housing stock. When combined with a policy of unit-based rent control, restricting rental levels between protected tenant occupation and reducing landlord incentives to improve and upgrade properties, the result has been shown to lead to both lower quality rental housing units and less rental stock available. Sims (2007) and Autor et al. (2014) also found that lower rents brought about by rent control reflected a lack of maintenance. Unable to recoup maintenance, let alone improvements, landlords let the quality of their rental properties decline, causing the rent in nearby uncontrolled units to also fall in value.

Ultimately, rent controls – especially across tenancies – do not address the underlying cause and furthermore may exacerbate the initial problem by reducing new housing supply and the quality of existing rental supply. As detailed in earlier Sections, there is clear evidence that supply is a primary determinant of rents in Ireland: as new supply has entered the market against stable demand rents have fallen. As a result, increasing supply has proven to be a far more effective way of providing affordable rents than implementing rent controls.

Where policymaker concern relates to rent burdens, an alternative approach would be to regulate the rent burden faced by households and allow housing supply to adapt. By capping the rent burden, this ensures affordability but would require a far greater understanding by policymakers of demographics, the income distribution and construction costs as well as the links between them. Another option is to directly link the viability of new construction to the income distribution and to social housing supports. A system that explicitly commits to provide housing supports for those without the income to cover break-even rents represents the best opportunity to provide housing for all over coming decades. An obvious mechanism for doing this is through a comprehensive cost-rental system, supported by an income subsidy. Such housing can result in integrated tenures within developments, with market and social tenures mixed, rather than segregated.

Equitable Taxation

Ultimately, as Ireland converges over coming decades with its peers elsewhere in Europe, in age structure, household size and urbanization, the vast bulk of additional housing need will be urban areas and for smaller households of 1-2 persons. This

housing is more expensive per person, creating a greater need for collective investment action, relative to a system where one-off family housing played a key role. Given this need for collective investments, and given Ireland's need to import substantial amounts of capital annually over coming decades, appropriate structures are needed to facilitate this.

A common misconception mentioned in public discourse relating to Ireland's PRS is that there is a 'tax break' for institutional landlords. Owner occupancy remains subject to very preferential tax treatment compared to all other forms of ownership, including exemption from capital gains tax, as well as tax rebates (through the Help to Buy scheme). Within the private rental sector, the tax treatment of institutional investors in Ireland is similar to standard practice in other countries.

Specifically, the REIT and ICAV structures introduced during the 2010s fixed the problem of potential "double taxation", with investors being taxed in Ireland and their resident tax jurisdiction, if different. The significant investment in Irish PRS since by international capital, in particular pension funds, reflects this standardization. In particular, the introduction of REITs and collective investment vehicles (IREFs) provided the necessary transparent structures to attract large scale international capital from pension and insurance funds into residential housing as an investable asset. This happened at a time when the broader macroeconomic environment was very unusual, with low or negative returns on risk-free assets. Combined with Ireland's growing and thus net borrower status within a union made up mostly of older net-saver countries, Ireland has started to see the capital imports required to meet its substantial housing need, through the professionalisation of the rental segment.

In relation to equity of tax treatment, as things stand, tax is paid by the shareholder or pensioner investing in Irish rental accommodation – whether in Ireland or abroad – at the point they get the income. In other words, private capital can be aggregated, with small investors able to invest via a large professionally managed entity. This is equivalent to Irish pensioners investing in real estate, commercial or residential, in other countries. Where policymaker concern relates to moderating rent burdens, consideration should be given to rent deductibility for tax purposes, similar to the Rental Tax Credit programme that used to apply. Such a scheme would both improve the affordability of PRS while also shifting the relative tax benefit to occupants.

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