Marketing Material

AN AFFORDABLE APPROACH TO RESIDENTIAL INVESTMENT

October 2021

IN A NUTSHELL

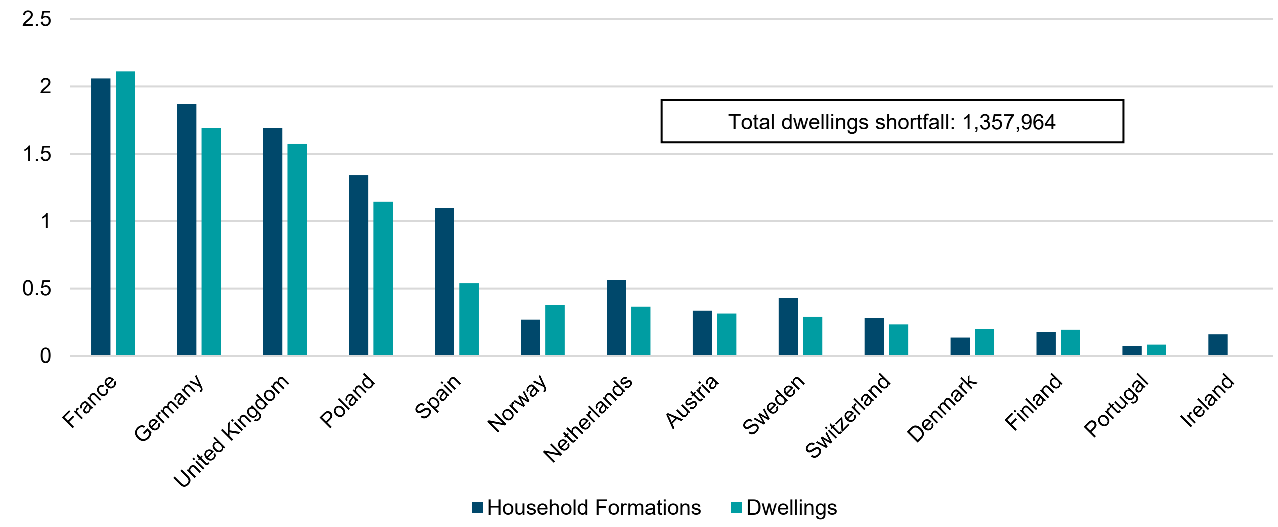
- Most major markets in Europe have seen household formations grow at a faster rate than dwellings over the past 10 years.
- Young people moving to cities for employment are struggling with affordability to an even greater extent.
- Rising unaffordability presents risks as well as opportunities for investors. Risks include changing regulation and potentially higher tenant turnover. Opportunities lie in investing in affordable housing, contributing to easing issues of undersupply.
- Affordable housing can deliver attractive returns in terms of a stable income stream and capital value growth.

Increasing numbers of people are struggling to find affordable housing across Europe. At the root of the issue is a structural demand/supply imbalance: household formations outpaced completions of new housing stock in Europe over the past decade. Homeownership has become increasingly unattainable with rising house prices, higher deposit requirements and reduced mortgage availability since the Global Financial Crisis. An increased shift to rental accommodation – especially by younger generations – coupled with a structural housing undersupply has put pressure on the rental market, and ultimately pushing up rents.

Structural undersupply of housing

Most major markets in Europe have seen household formations grow at a faster rate than dwellings over the past 10 years. In Europe there is a shortfall of around 1.4 million dwellings since 2011. The problem is especially acute in Germany, the United Kingdom, the Netherlands, and Spain.

DWELLINGS AND HOUSEHOLD FORMATIONS, MILLIONS, 2011-2020



Source: Oxford Economics, September 2021; OECD Questionnaire on Affordable and Social Housing & Eurostat, 2021. Note: data runs from 2011-2018 for Switzerland and Germany.

The issue of undersupply is particularly apparent in major metropolitan areas, yet ongoing urbanisation and falling household sizes suggest demand for housing in cities will continue to grow. The percentage of Europe's population living in urban areas today is approximately 72%[1] but by 2050, it is expected to rise to 76%.[2] At the same time, average household size is forecast to decline by 4%. These trends combined have added an estimated 6.9 million households to Europe's major cities since 2010 and are expected to add another 4.5 million by the end of this decade.[3]

This presents a particular problem for young people moving to cities for employment. The CBRE Global Millennials Survey found that 74% of those surveyed thought that wages are not keeping up with house prices and 50% were living at home due to lack of residential affordability.[4]

Financial factors have exacerbated house price growth. Central bank interest rates in the Euro area have fallen since the 2008 Global Financial Crisis, and have remained at 0% since 2016.[5] The cost of borrowing for house purchases has correspondingly declined, from an average of 3.4% in 2010 to 1.3% in 2021, allowing households to borrow more towards their purchase.[6]

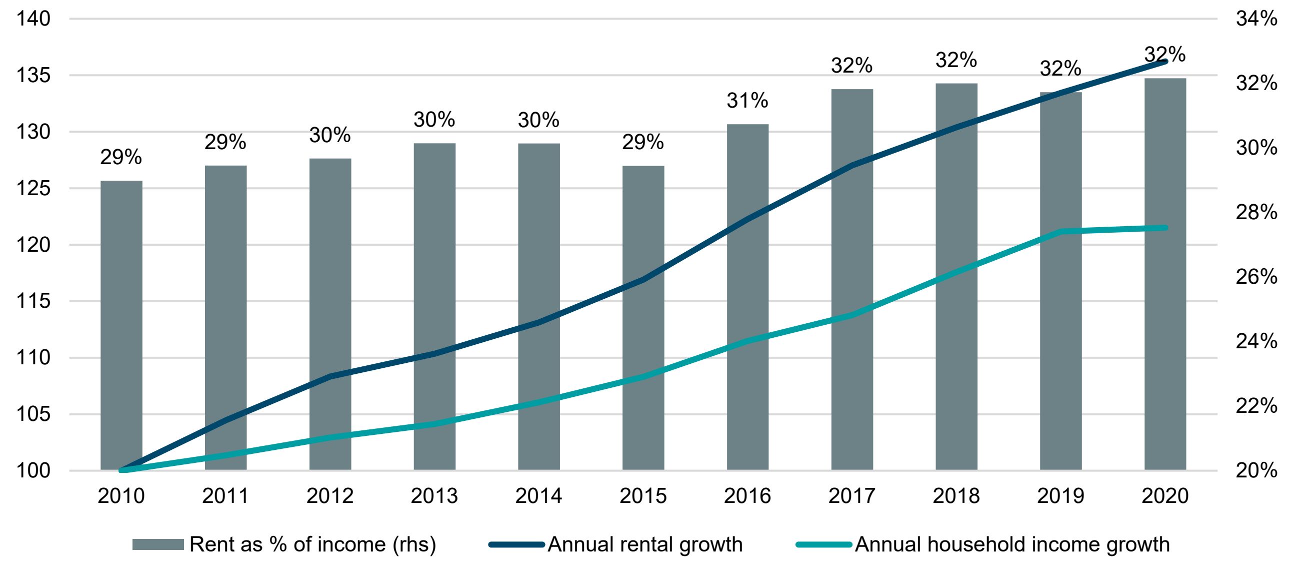
As a result of excess demand relative to supply and changing financial conditions, house price growth has averaged almost 5% p.a. across the EU over the past 5 years: well in excess of household income growth. The consequence is a move towards renting. Home ownership across the EU has declined by 1.6 percentage points from 2010 to 2019, and by as much as 5 percentage points in the United Kingdom.[7]

[1] European Investment Bank, October 2018
[2] European Commission, September 2021
[3] Oxford Economics, September 2021
[4] CBRE, Global Millennials Survey, 2016
[5] Trading Economics, September 2021
[6] European Central Bank, September 2021
[7] Eurostat, February 2021

The rental affordability problem

The shift of demand towards rented accommodation has caused affordability issues. Rental growth for the main metropolitan areas over the past five years has averaged over 3%,[8] compared to nominal household disposable income growth of less than 2%. [9] In some markets rents have risen at an even faster pace. For example, in Stuttgart, Munich, Dublin, and Madrid, average rental growth has exceeded 5% since 2016. The Covid-19 pandemic triggered a rental correction in a handful of markets, however rental growth continued in most cities, averaging around 2% in 2020 across Europe.

RENT AND HOUSEHOLD INCOME GROWTH, INDEX. 100=2010



Source: Oxford Economics, September 2021; DWS, July 2021

Why invest in affordable housing?

For investors, the rising disparities in affordability present both an opportunity and a problem. Rising rents drive investment returns but can also contribute to increased tenant turnover and vacancy, as well as regulatory risk. A number of markets in Europe have either already implemented or are considering forms of rent control. Dublin, Paris, and Barcelona now have regulation aimed at curbing rental growth and rent controls have been suggested or imposed in cities including Berlin, Stockholm, and Amsterdam.

Targeting the affordable segment of the market can help reduce these risks, as well as deliver attractive returns:

_ **Attractive, stable income**: Rental income for affordable housing is expected to grow in line with household disposable income in the range of 2-3% for Europe. Over the next decade, this is generally forecast to be more attractive than retail, office, and even corridor logistics rental growth. Affordable residential schemes often experience lower churn rates. Lower rates of tenant turnover not only reduce void periods but also other costs such as reletting fees and refurbishment requirements.

_ **Expectations of total return outperformance**: Residential schemes in affordable locations often attract a better income return as capital values relative to rent are lower and may offer further scope for capital value growth. Forward funding

[8] DWS, July 2021
[9] Oxford Economics, September 2021

residential projects generally attracts a higher ingoing yield to compensate for any development risk, foregone income, and letting risk.

_ **Provide a positive impact**: Total expenditure on housing development in the EU has declined by 44%, from €48 billion in 2009 to €28 billion in 2015, leaving a considerable funding shortfall.[10] In addition, within the EU 42% of non-residential buildings and 38% of residential buildings were built pre-1970, before the widespread adoption of energy efficiency measures.[11] There is therefore considerable scope for the private sector to fund the growth of affordable, high-quality and energy-efficient stock for the rental market.

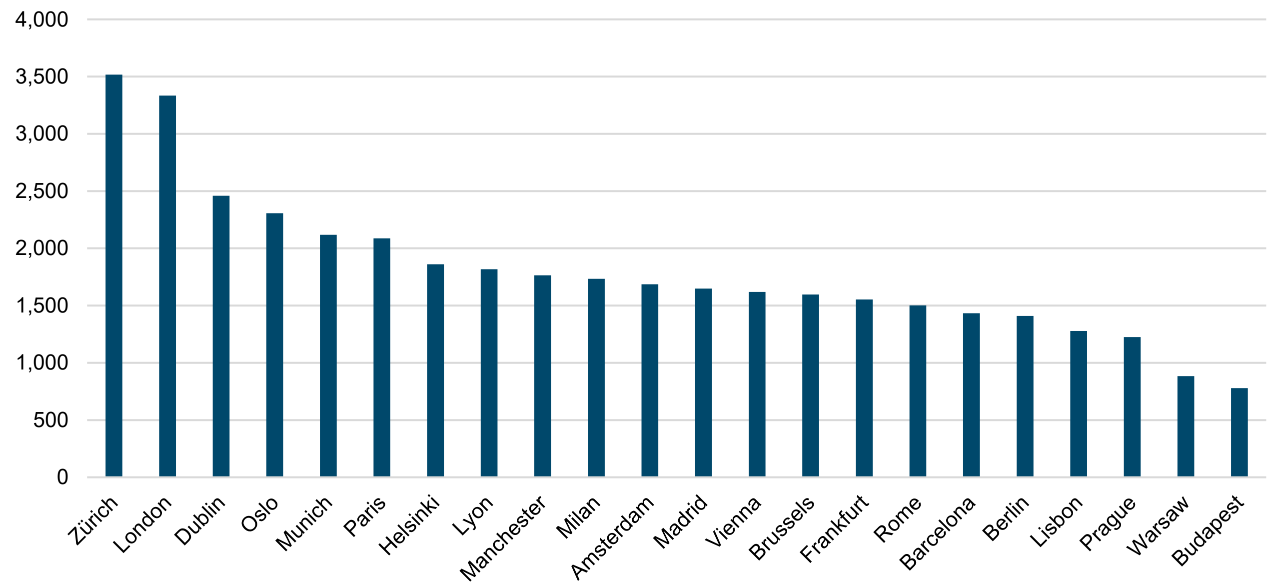
Defining an affordable residential investment

The challenge from an ESG perspective is how to benefit from the shortfall in rented accommodation and strong rental growth trends without exacerbating affordability issues.

DWS has been investing in affordable residential for over a decade, having commenced its residential investment programme in Germany. In targeting and operating affordable housing in mature markets such as Germany, the Netherlands and the Nordics, it has been possible to develop a framework to invest in the newer markets such as Spain, the United Kingdom and Ireland. This provides a basic screen to ensure investments are likely to be affordable for the target market at acquisition and disposal.

Our framework starts with the Eurostat definition of housing cost unaffordability. This definition assumes housing costs are unaffordable when they exceed 40% of household disposable incomes. Using data on average household disposable income by city, it is possible to screen out individual assets as being unaffordable when the rent exceeds the 40% threshold.

MAXIMUM AFFORDABLE RENTS (€, 40% OF MONTHLY HOUSEHOLD DISPOSABLE INCOME)



Source: Oxford Economics, September 2021

After this initial screening, in markets where there is greater transparency, it is possible to adjust our analysis further to compensate for expected incomes at a sub-market level. We are also able to adjust for differing propensities for multiple earners to share an apartment. In especially supply constrained markets such as Dublin and London, it is possible to assume

[10] National Housing Federation, October 2017
[11] RICS, July 2020

a degree of cost sharing between multiple earners. Instead of assuming that most one-bed apartments in a scheme will be rented by a single earner, it is possible to assume that half will be rented by couples.

We then calculate affordability for the present and the end of the holding period, using forecasts for rental growth and household disposable incomes.

At a market level, the 40% screen allows a tighter focus on submarkets within cities where residential schemes are more affordable for the local population. These locations are also likely to experience stronger population growth. For example, inner Paris has been losing population at a rate of about 0.5% p.a. over the past 5 years, while the wider Ile-de-France region – which includes affordable suburban markets – has gained population at a rate of 0.3%.[12]

Some markets are highly regulated, which can distort market pricing and complicate defining an asset or unit as affordable. Regulation can vary across Europe from limiting rental uplifts such as in France to points-based systems such as the Netherlands which limit the rent according to housing quality.

In these instances, we would still apply an affordability screen. This is on the basis that market regulation is present to address an issue of unaffordability, and investment in affordable housing in these markets is still necessary.

Conclusion

In developing a framework to measure affordability, it is possible to deploy capital in the residential market with a view to adding to the supply of accommodation that residents can afford to rent. In addition, keeping rents affordable is likely to support long term occupancy rates and a stable income return throughout market cycles. Hence, institutional investors can be part of the solution to the problems of affordability in Europe's major cities while realising investment objectives.

[12] Oxford Economics, September 2021

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