GREYSTAR™

Q4 2020

EUROPEAN RENTAL HOUSING:

an all-weather asset class

Whilst no part of the economy or capital markets remains untouched by the pandemic, some real estate sectors are more affected than others, whether that be through the normal course of the business cycle, the idiosyncrasies of social-distancing measures that weaken occupancy, or a shift in investor sentiment towards long-term prospects that undermines valuations.

We firmly believe that rental housing will continue to prove an 'all-weather' asset class, given the non-discretionary nature of housing (people need a roof over their heads), well-established secular trends support occupancy (demographics, chronic undersupply) and positive investor sentiment that supports valuations.

Executive Summary

- Demand for urban housing is driven by 'three gears' of population growth, urbanisation and household formation; with urban household growth at c.10% in Europe since 2010

- Most demographic growth accrues to rental housing, as home price affordability is a barrier to entry for first-time buyers. At the current rate, rental housing may overtake owner-occupation in Europe by 2024[1]

- European housing markets are chronically undersupplied with completions unable to keep pace with household formations. Permits are still two-thirds below the previous peak and a third below the long-term average

- Current rental housing stock is outdated, poorly configured and under-managed. Much of the existing stock was built pre-WWII; units are often too large and seldom institutionally owned or professionally managed

- Student housing offers defensive diversification with exposure to global demographic trends and local supply constraints. Students outnumber beds by five-to-one in the most developed markets and twenty-to-one in the least developed markets

- Rental housing is now the largest real estate sector in Europe. Institutional investor surveys and capital-flows suggest it will remain so for the foreseeable future

Greenford Quay | **United Kingdom**

[1]Refers to market rented compared to mortgaged owner-occupied. Excludes ownership without mortgages and social renters

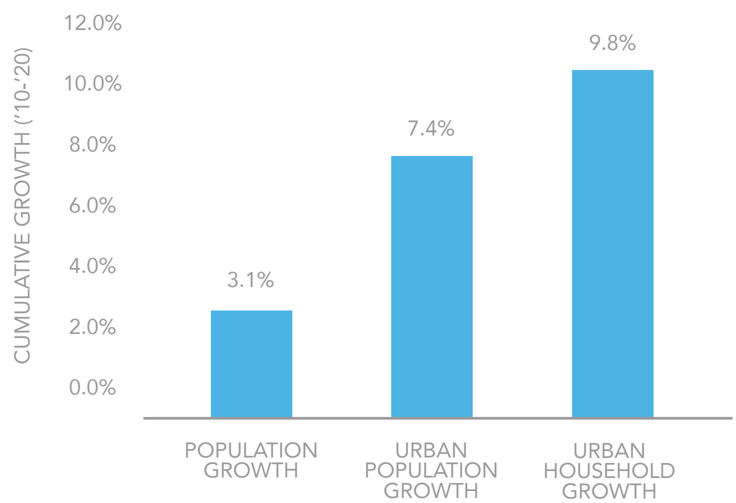
Greenford Quay | **United Kingdom**

Housing demand: 'three gears' of demographic-drivers

It is widely understood that demand for housing is driven by demographic trends; the more people there are, the more housing they need. However, a deeper analysis reveals that this is not simply population growth, but rather three distinct and interlinked 'gears of demand': population growth, urbanisation and household formation. Population growth is a 10,000-year trend that began with the agricultural revolution[2]. Urbanisation is a five-hundred-year trend in Europe that accelerated with the industrial revolution around 1800[3] (and has survived numerous pandemics during that time). Household growth is a post-war trend that is a consequence of manifold social trends i.e. more people living alone as they marry later, have children later and divorce more often[4]. These are extremely long-run secular trends and remain uninterrupted by cyclical factors.

The European population (EU incl. UK) has grown by 18.9 million since 2010, representing 3.1% growth (see below). The population of Europe's hundred largest cities has grown by 11.8 million over the same period, equivalent to 7.4% growth, and so it is growing 2.4 times faster than the rest of the continent[5]. The number of households in these 100 cities has grown by 6.5 million since 2010, representing 9.8% growth over the same period. These 'three gears' work together to drive demand for urban housing. First, an increase in the general population increases demand for housing at the country-level; second, urbanisation concentrates demand into urban areas; third, that demand is splintering into more (often single-person) urban households. The second trend leverages the first, and the third the second, such that the urban household growth is 3.1 times the broader rate of population growth[6].

'Three gears' of demand for urban housing in Europe



Source: Oxford Economics

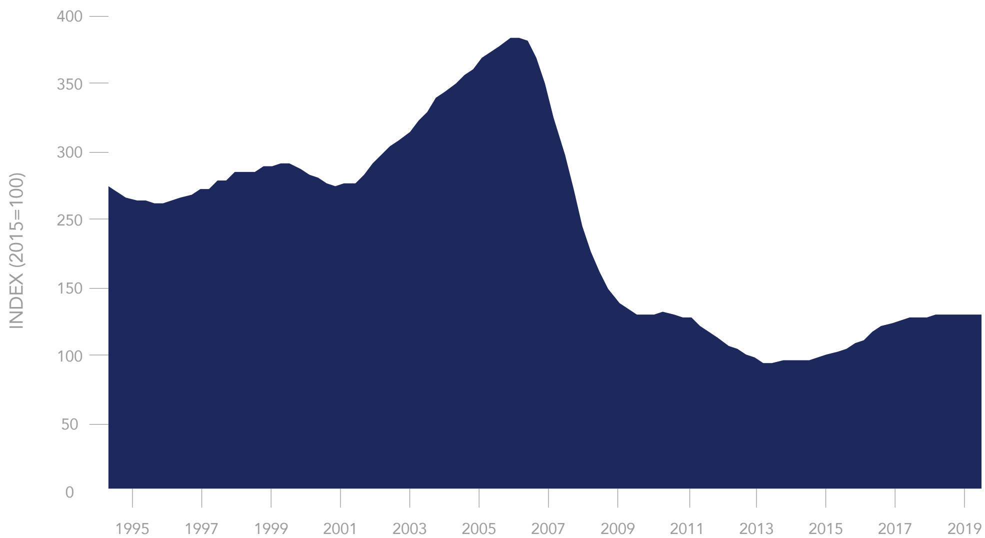
Housing tenure: the rise of rentership is driven by home price affordability

Independent of these demographic trends, we have seen a sharp rise in home prices around the world in recent years, driven largely by supply-side pressures and historically low interest rates. In Germany, with arguably Europe's most developed private rental sector, home prices have risen 20% faster than incomes and 25% faster than rents over the last five years[7]. The same trend can be seen across Europe and is even more extreme in major cities. London and Paris are amongst the most expensive housing markets in developed countries, in terms of home price-to-income ratios[8]. Along with increased deposit requirements, this has made home ownership increasingly out-of-reach for many, with renting being the only affordable option. For this reason, virtually all demographic growth is accruing to rental housing in Europe.

In 2010, 27.6% of the EU population were mortgaged owners, and by 2018 this had declined to 26.5%[9]. Over the same period, market renters increased from 17.4% to 22.0%[10]. At these rates of growth, market renters will overtake mortgaged-owners by 2024 – if not sooner as a result of Covid-19, vis-à-vis falling household savings and rising deposit requirements. As households continue to defer homeownership, the average age of renters will increase accordingly. In the UK, the average age of a first-time buyer in the UK is currently 34 years old - 6 years older than in 2007[11]. As aspirant homeowners rent for longer, they are more likely to have higher wages and the ability to write larger rent cheques.

[2] Our World in Data | [3] Id. | [4] Id. | [5] Oxford Economics | [6] Id. | [7] IMF | [8] Numbeo | [9] Eurostat | [10] The remaining 51.5% of the EU population in 2018 were either owner-occupiers without a mortgage (42.8%) or social renters (8.7%). The latter has ceded the largest share to market renters since 2010 falling from 12.0% | [11] Royal London

European residential construction permits



Source: Oxford Economics

Housing supply: public policy and the global financial crises have led to chronic shortages

Post-war Europe witnessed a surge in building activity, much of which was either social housing or government subsidised. However, in the 'big three' economies of UK, Germany and France, supply peaked in the late-60s, early-70s and mid-70s respectively[12], and has been in secular decline ever since. Across Europe, during the latter part of the 20th century, there was a general shift in housing policy away from supply-side measures (construction) to demand-side measures (welfare), along with price controls (rent regulation). However, as has been proven time and again, you cannot solve supply-side issues with price controls, and there is a wealth of academic studies to support this view[13]. The removal of fiscal support from construction and regulation of the rental market has only served to drastically tighten supply conditions.

Despite strong demand growth throughout the last cycle (see above household growth), there has been a further structural-shift downwards in new supply. Across Europe, annual housing supply is down 63% from the peak of 2006 and remains 30% below the long-term average (since 1995, see above)[14]. These supply-side pressures are largely owing to tighter credit conditions and planning constraints in many markets and show no signs of abating. Our analysis suggests that there is a structural deficit in housing supply, with annual completions anywhere from 11% to 25% below household formations[15]. The fact that construction was halted during lock-down will only serve to widen this deficit.

Rental housing stock: outdated, poorly configured and under-managed

Not only is there insufficient new supply, in absolute terms, but the stock of existing housing is outdated, poorly configured and under-managed. In London and Paris, most of the housing stock was built pre-WWII; across the rest of Western Europe, most of the stock was built pre-1980. Across capital cities, Dublin has the most modern stock, but with only 18% built in the last twenty years. Many of these buildings may be dilapidated, with deferred capex on M&E/ HVAC[16]. Moreover, many of these older buildings will be poorly configured, with too many large units and not enough small units. Often, this may be owing to the age of the stock where the original development was built for a different society in a different time i.e. the red-brick mansion blocks of West London were built largely for families rather than single-person households or flat-shares.

Moreover, these properties are often under-managed by non-professional landlords. Even in the US, which has the most developed multifamily housing market, only 37% of privately rented units are institutionally owned, and by implication are professionally managed[17]. Germany has arguably the most developed private rented sector in Europe, and yet only 18% of the private-rented stock is institutionally owned. In the UK this falls to 2%, meaning that 98% are not professionally managed and unlikely to offer residents any amenity, to say nothing of building maintenance or security of tenure. We expect that coming out of the pandemic, a shift towards working from home and an emphasis on wellbeing will increase space requirements generally and demand for amenitized space in particular.

[12] Housing Policy in Europe, Gavin McCrone, Routledge
[13] Brookings Institute | [14] Eurostat | [15] Oxford Economics, Greystar
[16] Mechanical & Electrical/Heating, Ventilation and Air Conditioning
[17] Green Street Advisors

Residencia Universitaria San Mamés | **Bilbao, Spain**

Student housing: offering defensive diversification by exposure to global demographics

Similarly to multifamily, demand for student housing is driven by demographic factors. However, they are different demographics and thus student housing can offer diversification benefits to a rental housing portfolio. The rise of student housing is a global phenomenon, driven by global demographics. The global population of students in higher education, including both foreign and domestic, currently stands at 250 million and this is expected to double over the next 15-20 years[18]. Again, this is driven by secular trends rather than cyclical factors, notably the rise of the middle class in emerging markets. China is expected to add one billion citizens to its middle class between 2005 and 2030[19], which may help explain why Chinese students have become such a dominant force amongst UK universities. Similarly, Latin American students now account for 36% and 52% of international students in Spain and Portugal respectively[20].

As no area of the economy remains unaffected by the pandemic, the 2020/21 academic year has certainly been disrupted by the pandemic, with many complications for entrance exams, student visas and flights. However, the UK saw a record number of applications this year, which is somewhat remarkable given that 2020 is the year that the number of 18-year olds is estimated to trough. Applications from China also hit a record high and were more than double those of five years ago[21]. The UK, Germany, France, Spain, Ireland and The Netherlands are all issuing student visas and allowing students to return to campus.[22]. In these same countries, at least 70% of flights have resumed and many universities are adopting a 'hybrid' (online/ on-campus) model, whereby students can study on campus whilst managing the utilization of physical space in order to observe social distancing requirements.

[18] RMIT University | [19] World Bank | [20] JLL | [21] UCAS | [22] Bonard | [23] Id.

As with multifamily, supply has been unable to keep pace with demand and provision rates (the ratio of beds to students) remain low. London and Amsterdam are the most developed markets and yet provision rates are only 21%; equivalent to one bed for every five students[23]. In Southern Europe this falls significantly, with provision rates of only 4%, 5% and 6% in Lisbon, Barcelona and Madrid respectively. Moreover, as with other real estate sectors, the pandemic has disrupted the construction pipeline, with completions pushed out a matter of months in many markets.

Finally, notwithstanding the pandemic, student housing remains a counter-cyclical asset class. We expect occupancy to take a near-term hit, but rental rates are likely to remain resilient. As occupancy recovers, we expect to see continued rental growth with few risks from a weak economy and labour market, as student numbers tend to rise with unemployment as graduate students 'retool' for the recovery phase of the cycle.

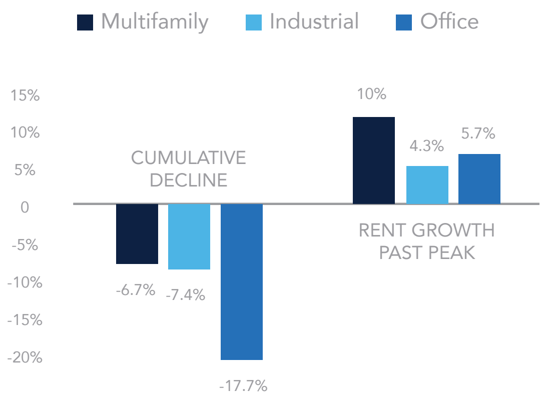
OurDomain | **Amsterdam, Netherlands**

Capital markets: the rise of rental housing as an institutional asset class in Europe

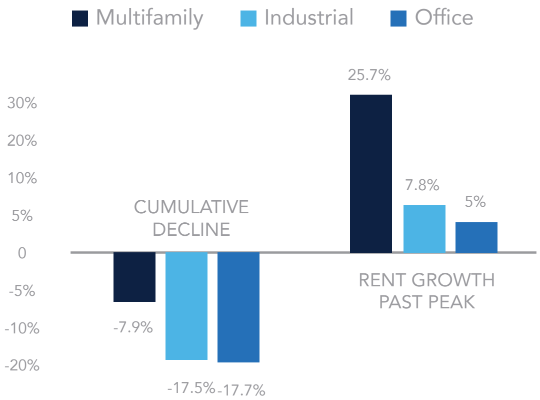
Quayside Quarter at Dublin Landings | **Dublin, Ireland**

Rental housing is now the largest real estate sector in Europe, accounting for €19.8 billion of transactions in the second quarter of 2020[24]. Post-pandemic, multifamily investment volumes have proven more resilient than office and retail, and the sector has continued to increase its market share. This is not surprising given global investors experience in the US, where multifamily has outperformed all other sectors in each of the last two cycles, in terms of the least rental decline during the recession phase and the most rental growth during the recovery phase[25]. Even in the depths of the global financial crisis, occupancy rates never fell below 93%[26]. Since the outbreak of Covid-19, rent collection rates have not fallen below c.95%[27] for institutional-grade product. It is therefore no surprise that global investors are trying to replicate the success of this strategy in Europe, with housing accounting for seven out of ten of preferred sectors, according to the ULI's bellwether investor survey[28]. During Q2'20 rental housing emerged to become the largest sector in Europe, ahead of office, accounting for 41% and 29% of transaction volume respectively[29]. Moreover, in the immediate aftermath of the outbreak of Covid-19, rental housing and offices accounted for 7% and 27% of broken deals respectively[30].

Cumulative effects on rent during & after 2001



Cumulative effects on rent during & after great financial crisis



Source: CBRE

Conclusion: European rental housing is an all-weather asset class

Demand for housing in Europe is driven by well-established demographic trends that have prevailed during previous pandemics, and housing markets remain chronically undersupplied because of public policy and credit conditions that remain in-place today. Further, we expect the deficit will only be exacerbated by the effect on construction under lockdown. Home price affordability has pushed demand towards rental housing, and this will likely be exacerbated by the pandemic's effect on savings and credit conditions. Lastly, the current housing stock and service offering is no longer fit for purpose, especially with a shift towards working from home and an increased emphasis on wellbeing[31]. For the aforementioned reasons, we firmly believe that rental housing is an all-weather asset class and fully expect it to emerge as the preferred real estate sector coming out of the pandemic.

[24] RCA Capital Trends Europe, Q2'20 | [25] CBRE | [26] Greystar | [27] Id. | [28] ULI Emerging Trends Europe 2020 | [29] RCA, European Capital Trends Q2'20 | [30] Id. | [31] Knight Frank

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