



Foreword

A range of demographic groups are looking for more from their residential accommodation. Investors are capitalising on the opportunity

People of all ages are embracing flexible living and working. The rise of the gig economy, more sophisticated mobile technology and a drive for collaboration made co-working a global phenomenon. The residential sector is now undergoing a similar transformation. Happy to share office space with relative strangers, more people are now willing to adopt the same approach for living.

This comes as a global demographic shift is underway. While populations in much of the developed world are ageing, populations in much of Africa and parts of Asia are forecast to remain youthful. Even in ageing countries, certain cities remain attractive to young, mobile and well-educated professionals. This creates opportunity for providers of flexible forms of accommodation, for both the young and old. Understanding where the hotspots for such age groups are will be key to maximising this opportunity.

Changing attitudes to home ownership are reinforcing these demographic trends.

The Global Financial Crisis (GFC) was a turning point. In Spain, the recession changed homeownership from a symbol of stability and security to one of financial risk. In the UK and Ireland, first time buyers have been impacted by more stringent mortgage lending requirements. The aspiration for home ownership hasn't gone away, but the better quality purpose-built rental product on offer is making renting a desirable option, rather than a last resort.

Structural changes in demand, together with new purpose-built supply coming to market, have opened the sector to more investors than ever before. As management platforms develop, investor comfort with operational real estate has increased. Globally, investment into residential rose in the first part of 2019, at a time when investment into all other major asset classes declined, proving its resilience as global markets slow.

Contents

The drivers:	4
Demographics	
The world's most youthful and	
ageing cities in 10 years' time	
Housing affordability	6
Home ownership trends,	
affordability and the political	
response	
Lessons from	9
the workplace	
As the lines between	
living and working blur	
Investment	10
Residential investment	
continues to rise as the	
pool of investors deepens	
Residential	14
Investability index	
Identifying the countries with the	
strongest fundamentals, by sector	
Design and Operation	16
Achieving operational efficiencies	
in residential assets	
	10
Focus on Student Housing	18
Trends in enrolment and assessing	
sector growth prospects	
Focus on Senior Living	20
Will the senior housing rental	20
model translate into new markets?	
model translate into new markets:	
Outlook	23
Opportunities for providers	
of 'alternative' residential assets	
or alternative residential assets	

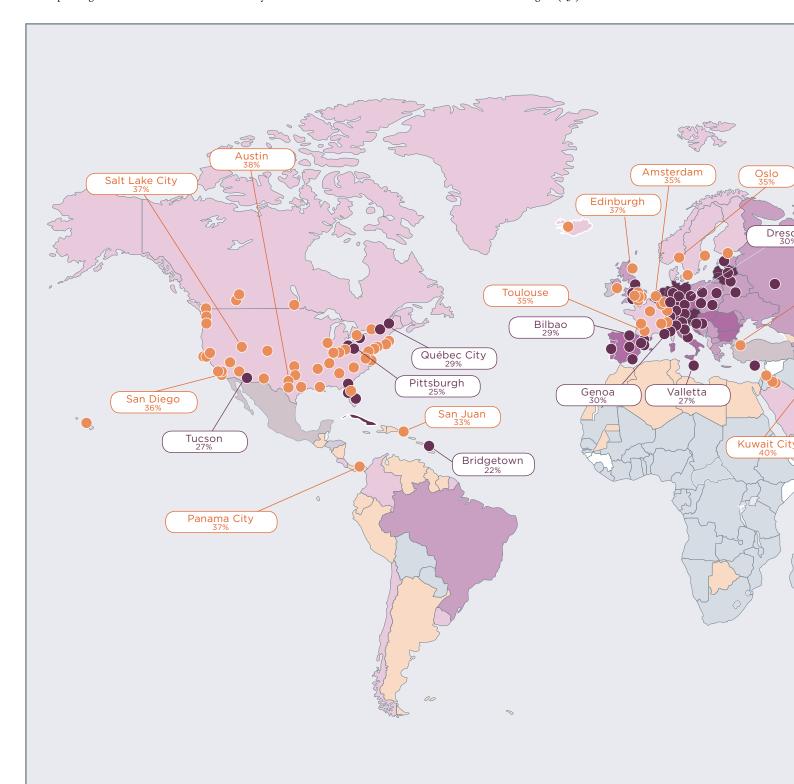
Cover: The Fizz, Hannover

Global demographics in 2029

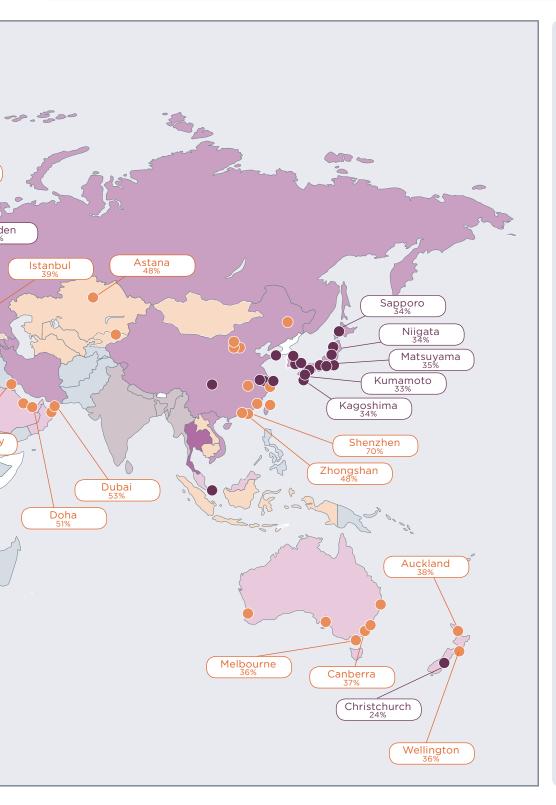
The young and the elderly are shaping demand for some of the industry's fastest growing asset classes

While much of the developed world ages, driving demand for senior housing, particular regions and cities are forecast to remain youthful, underpinning demand for student and multifamily accommodation.

We have identified the cities around the world which in ten years' time will be the most 'youthful' (the largest share of people aged 15-39) and the cities which will be the most 'aged' (65+).



Largest national demographic group in 2029 Top 100 'Aged' cities in 2029 (by share of population aged 65+) Top 100 'Youthful' cities by 2029 (by share of papulation aged 15, 70) Top 100 'Youthful' cities by 2029 (by share of papulation aged 15, 70) Top 100 'Aged' cities in 2029 10-19 years 10-19 years 10-60-69 years 10-60-69 years 10-70 years 10-7



(by share of population aged 15-39)

Generation Z

Move over Millennials, Generation Z are today's major occupier of student accommodation and are already graduating into post-study accommodation

Generation Z, defined broadly as those born between 1995 and 2010, are now the major occupier of student accommodation and are moving into the workforce, making them a major target for multifamily product in the years to come. Understanding what makes this generation unique will be important for investors and operators of such products.

This generation was the first to be exposed to the internet from a very young age, including social networks and smartphones. True digital natives, they are hyperconnected and unforgiving of poorly designed online services. For living, app-based or seamless online services when renting and dealing with property management will be important for engaging this cohort.

Gen Z are also thought to be less brand conscious, very aware of mental health and to drink less than their predecessors. All of which have implications for the kind of amenity space on offer in the accommodation they occupy. Flexible, shared spaces may be more readily utilised than an onsite bar, for example.



In the last five years residential capital values across 40 major economies have risen by an average of 29%, while rents have grown by just 13%

Housing affordability

Affordability constraints in the sales market have driven more people to rent, but the flexibility renting offers has made it a lifestyle choice too

Housing affordability has become a major global issue since the GFC, partly because mortgage lending has been significantly curtailed by regulation. First time buyers, usually needing the highest loan to value and loan to income ratios, have been the most affected.

A decade of low interest rates, meanwhile, has meant that those who could access mortgages were able to borrow cheaply. This, together with undersupply of new dwellings in many countries, has fuelled price rises.

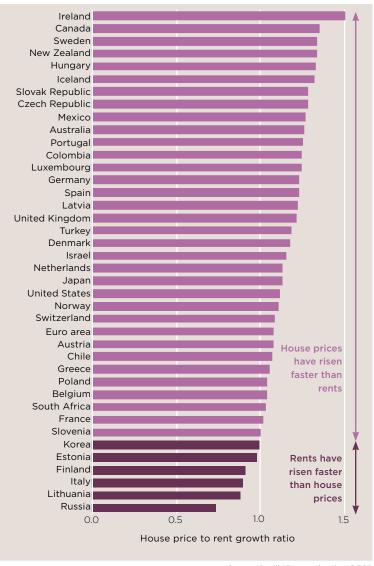
In the last five years residential capital values across 40 major economies have risen by an average of 29%, while rents have grown by just 13%. Ireland, Canada, Sweden and New Zealand saw the highest increases in capital values relative to rents. Only six countries, including Russia and Italy, saw rents rise faster than house prices over the same period (see chart).

As a consequence, more people are turning to the rental markets for their accommodation needs. For some, this is due to affordability constraints, but changing lifestyles are driving this too. City-living, globally-mobile young people are settling down later in life. Flexible rental models suit them well.

At the other end of the spectrum, the baby boomer generation is entering retirement age. Fitter for longer, they want many of the same things Generation Y and Z are looking for: quality accommodation in vibrant urban environments, access to amenities and a sense of community. Rental products are emerging to serve them too.

House price growth has outpaced rental growth

Ratio of house price to rent growth (2013 to 2018)



Source Savills Research using OECD

66 Across Europe, the home ownership rate has fallen from 77% to 75% in the last decade 99

These factors are contributing to declining levels of home ownership in much of the developed world. Across Europe, the home ownership rate has fallen from 77% to 75% in the last decade. Around one third of people in Anglophone countries now rent. The shift has been particularly marked in the UK and Ireland (see chart).

Some countries have bucked the trend though. France, for example, has seen significant levels of homebuilding in the last decade and homeownership rates have risen from 61% to 64% in the last ten years.

Rent controls: help or hindrance?

Housing affordability has become an increasingly politicised issue in the West. In response to rising accommodation costs, almost one in every two developed nations now employs some form of rent controls.

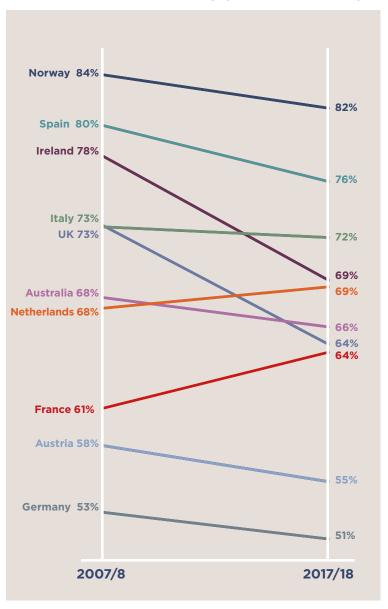
Investors in the sector are generally comfortable with modest caps on rent inflation. They can provide greater certainty of income while reducing perceived risk. Happy tenants are more likely to stay put for longer. Cities such as New York and Berlin, for example, are home to most highly regulated rental markets in the world, but they are still among the most institutionally invested.

There is, however, a balance to be struck. Rent controls can have the effect of deterring investment, whether into existing properties or the development of new ones, exacerbating the very shortages they aim to ameliorate. Ultimately, solutions to housing affordability should be focused on delivering more supply. Anything that impedes institutional investment, which has the ability to deliver stock at scale, is likely to be counter-productive.

Our case studies on page 8 illustrate three examples of rent regulations from around the world. Both the investment community and renters themselves will be watching these precedents keenly.

Home ownership rates: 10 year trend

Selected countries, includes mortgaged and owned outright



Source Savills Research using Eurostat and ABS

Housing affordability has become an increasingly politicised issue in the West



New York

Five year growth: Capital values 16% | Rental values 15%

New York is a city of renters. Some 63% of housing stock is rented, well above the national average. New York is also home to some of the longest standing rent regulations. There are approximately one million rentregulated properties in New York. These are divided into rent controlled properties (those built before 1947 and occupied continuously since 1971), and rent stabilised properties (those constructed before 1974).

In June 2018 the New York state legislature agreed on a package that would extend protections for tenants and limit landlords' ability to raise rents or remove units from regulation. Ownership of these properties is disproportionately in the hands of large landlords, and opponents argue the regulations limit investors' ability to raise rents and can disincentivise improvements in a rent-regulated unit.



Dublin

Five year growth: Capital values 37% | Rental values 52%

Dublin rents have risen by 52% in the last five years, outpacing capital value growth. Strict loan-to-value and loan-to-income ratios and minimum deposit requirements were implemented on buyers in response to Ireland's housing market boom and bust. These measures, coupled with a dearth of new supply have put pressure on the rental markets.

In response, rental market controls were introduced in 2016. Rent Pressure Zones (RPZs) were established, of which Dublin was among the first designated. Rents in RPZs can be increased by a maximum of 4% per year (2% for tenancies commencing before December 2016), and rents at the start of new tenancies must be set in reference to the local market. In spite of these measures, rents in Dublin have continued to rise well above the 4% cap.

With a lack of supply, there is significant opportunity for institutional investors. While the rent caps still apply, rents on newly built properties can be freely set in the first instance. Institutional investment is underway. In July 2019, Greystar acquired Ballymore and Oxley Holdings' Dublin Landings scheme, comprising 268 residential units, together with office and retail space.



Berlin

Five year growth: Capital values 50% | Rental values 26%

Some 85% of people in Berlin rent their homes. Asking rents have risen by 26% in the last five years, set against capital value growth of 50%. Berlin is by far Germany's most active market for institutional investors in the sector, and accounts for around one in six rental apartments owned by private companies in the country (despite having just 7% of its stock).

Under rules introduced in 2015, landlords cannot set rent for new tenants any higher than 10% above the local average of the previous four years. Following pressure from Berlin's residents, the city is planning a five-year rent freeze, to take effect in January 2020, backdated to June 2019. It is estimated to apply to 1.5 million properties. Newly-built apartments will be excluded. However, the final rules for the rent freeze are still under discussion between the different coalition parties, creating uncertainty in the market.

Shares in Deutsche Wohnen, which owns 115,000 apartments in the city, fell by a quarter in the wake of the latest announcement. A proposed referendum on banning large landlords from operating in the city and expropriating their stock captured global interest, but the courts of law would be unlikely to support such an initiative.



Some 54% of European office workers want to work in a town or city centre

Learning from the workplace

With the lines between living and working blurred, trends in the workplace are increasingly relevant to the home

People are expecting more from their homes and offices as space is being reimagined as a service. Savills *What Workers Want* survey asked 11,000 European office workers what they considered most important for the ideal workplace. Here's what the findings mean for living.

Location matters most

Some 54% of European office workers want to work in a town or city centre. This isn't the preserve of the young, the desire to work (and live) in vibrant urban environments with easy access to amenities is common across all age groups.

Length of commute was identified as the single most important factor for workers, with 86% of European office workers deeming it of high importance. This has implications for the residential sector as renters look to be as close as possible to their workplace.

As the chart below shows, how close exactly varies by city. In Lisbon 64% of renters commute for up to 30 minutes, and 31% for just 15 minutes. Relatively affordable city centre living means that purpose-built product rental needs to be centrally located to compete with existing stock. Madrid, meanwhile, has a very similar commute profile to London, where just over half of renters travel for more than half an hour. This suggests outer zones are likely to be as viable for dedicated product as city centre locations – at the right price point.

At the other end of the spectrum, more than half (61%) of Parisians have a commute of over half an hour. This reflects limited affordable rental stock in the city's historic core. Le Grand Paris, the largest infrastructure project in Europe, will reduce commutes and unlock opportunities in the outer suburbs for development at strategic transport nodes.

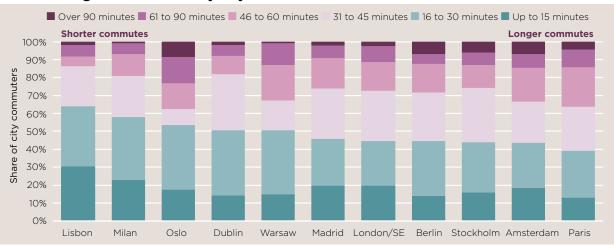
Seamless connectivity

The Savills survey identified quality of Wi-Fi as the second most important factor for workers, but this also featured in the top ten factors employees were most dissatisfied with. Mobile phone signal drew similar complaints.

Seamless connectivity at both work and home is now essential as digital life moves to the cloud, whether it be working with online applications or streaming media. Building certifications are emerging in response to help landlords improve their digital infrastructure and promote buildings to tenants. Wiredscore, a company that rates digital connectivity in office buildings, has launched Wiredscore Home, aimed at build to rent landlords.

With the rise of online retail, parcel collection was identified as a major gripe in the workplace. Over 50% of 18-24 year olds consider parcel delivery to be of high importance, against less than 30% of over 55 year olds. However, only 36% of Europe's workers are satisfied with parcel delivery and collection lockers. Better parcel collection facilities at home are a potential solution here, an area where rental buildings with dedicated concierge or lockers have a distinct advantage.

Renters' length of commute by city



Source Savills What Workers Want Survey



Investment in residential increased by 9% in the year to H1 2019, at a time when investment into all other major asset classes declined.

Investment

Investment into 'alternative' residential assets continues to increase, at a time when investment into other asset classes is declining. The sector is benefiting from investor focus on operational assets and favourable structural changes in demand

The global picture

Investment in commercial real estate declined in the first half of 2019, down by 10% compared to the same period a year prior. Global economic and political headwinds have impacted investor sentiment, while stock levels have generally remained low as investors buy to hold meaning less suitable assets are coming to market for purchase.

In the search for income producing assets, investors are shifting their focus towards operational-type assets. Student, senior and multifamily housing are key beneficiaries.

Investment in residential increased by 9% in the year to H1 2019, at a time when investment into all other major asset classes declined.

Investment growth by asset class H1 2019 compared to H1 2018



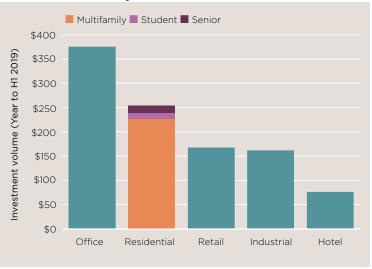
Source Savills Research using RCA

Quantifying residential investment

Total global residential investment volumes are second only to office investment. Investment into the sector has risen rapidly, increasing by 56% over the past five years. In the year to H1 2019, residential investment volumes were three times that of hotels, and 50% greater than retail and industrial.

Developer owner-operators still comprise a large share of total investment in the sector, accounting for over half of total volumes in 2018, while institutional investors accounted for around 40%.

Total investment by asset class Year to H1 2019



Source Savills Research using RCA

66 Total global residential investment volumes are second only to office investment 99

Multifamily

Multifamily is by far the largest of the three sub-asset classes. Global investment reached record levels in 2018, exceeding \$210bn, an increase of 14% over 2017 levels. Despite global headwinds, investment into multifamily has been sustained with \$97bn invested in the first half of 2019, a 13% increase from the same period in 2018.

The US is the largest market globally in terms of multifamily investment, but the asset class is also well-established in European markets such as Germany, Spain and the Netherlands.

According to Savills data, multifamily investment in 2018 reached over €40bn (around \$45bn) across eight core European markets (Denmark, France, Germany, Ireland, Netherlands, Sweden, UK and Spain) for the first time, representing a 27% increase from 2017. In half of the markets (Denmark, Sweden, Netherlands and Spain), multifamily investment was also greater than office investment for the first time.

Student housing

Investment into student accommodation globally totalled \$17.4bn in 2018, marginally down on 2017 volumes, but the third year in a row that volumes exceeded \$16bn. The US and the UK are the most mature markets for this sector, accounting for 63% and 23% of investment respectively in 2018, while Western Europe accounted for 12%.

Activity has slowed significantly in the first half of 2019, down 39% compared to H1 2018. Falls were recorded across all regions. Volumes in the US fell by 40%, in the UK by 39%, and by 32% in Western Europe. Full supply in some UK and US cities, together with fewer portfolios coming to market may account for this while stock shortages have restricted investment in Western Europe.

Senior housing

Investment volumes into senior housing neared \$15bn in 2018, a 17% decline from 2017. However, much like multifamily, interest in senior housing remained strong for the first half of the year, with volumes totalling \$7.6bn and a marginal (2%) increase from the first half of 2018.

The US is the largest market globally for senior housing, accounting for 66% of volumes in 2018. The UK and France were the second and third largest for the same year, accounting for 9% and 8% of investment respectively.

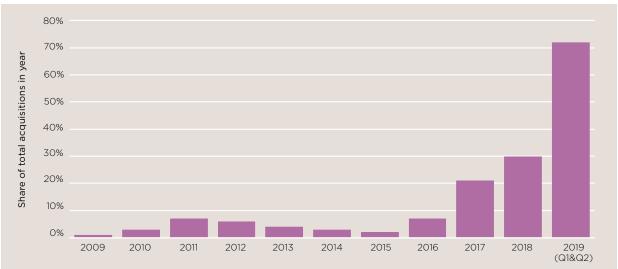
Funds and allocations to residential

As residential assets have moved from alternative to the mainstream, a growing number of investment funds are targeting the sector. Open-ended funds have allocated a growing share of their investment to residential assets, increasing their holdings from 7% in 2016 to 30% in 2018. For the first half of 2019, residential accounted for almost three-quarters (72%) in open-ended investments (see chart).

Much of this rise can be attributed to German fund manager Union Investment, which has allocated a much larger share of capital towards the residential sector. In the first two quarters of 2019, residential has accounted for 76% of Union Investment's open-ended investments, according to RCA, up from 12% just two years ago. This increase followed the launch of a residential fund in 2017 with a focus on apartments, student accommodation and micro apartments.

A number of these funds in Europe now operate across multiple countries. In April 2018, Aberdeen Standard Investments launched the first open-ended property fund of its kind to invest in the residential sector on a pan-European basis. German-based investment manager Catella launched its third open-ended pan-European residential fund in March 2019, focusing on multifamily as well as student and senior housing.

Open-ended funds, acquisitions of residential by year



Source Savills Research using RCA

Cross border investment

As interest in residential has grown, investors are looking across borders for new opportunities. Cross border investment in residential stood at \$51bn in 2018, accounting for 21% of total investment in the sector. This is up from \$22bn in 2013, when it accounted for 13% of total investment.

Student housing attracts the largest amount of cross border capital as a proportion of total investment. In 2018, it made up a quarter of total investment (the year prior it accounted for almost half). This is a higher share than seen even in the office sector (see chart).

Multifamily and senior housing are much more domestic by comparison: cross border investment accounted for just 16% and 15% of investment respectively in these sectors in the first half of 2019.

Where does the cross border capital come from?

A wide range of investors are involved in the buying and selling of these three asset classes. Major institutional players from the US and Canada have led the way in crossborder acquisitions. The United States and Canada have accounted for 44% of cross border investment alone in the last six years. The biggest players are Brookfield Asset Management (Canada), Blackstone (US), CPP Investment Board (Canada) and Cerberus (US).

Cross border investment into student and senior housing has been led by a smaller number of pioneering investors. Between 2013 and 2018, the top five players accounted for 59% and 37% of the total cross border investment respectively compared to 26% for multifamily in which a larger number of investors are active.

At a European level, Germany's Vonovia and Sweden's Heimstaden are actively purchasing assets in other European markets such as Austria and Denmark respectively.

In the case of student housing, a range of global players are active in the market, including large scale owner operators (such as Greystar), pension funds (led by CPPIB) and sovereign wealth funds (such as GIC) and large overseas investments are not uncommon as large portfolios have traded. Consequently, the composition of overseas investment can vary year-to-year. Investors from Singapore have played a much more active role since 2016, for example.

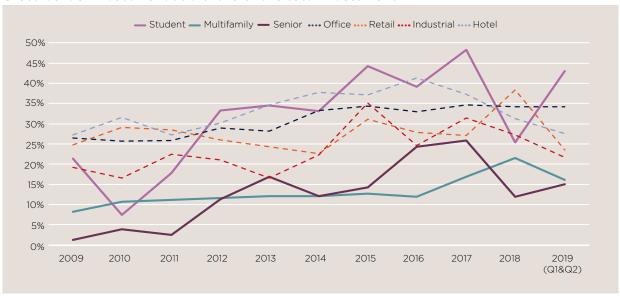
Investors from the US also make up a large share of overseas investment into senior housing, accounting for almost two-thirds of all overseas investment between 2012 and 2015. However, in recent years a wider range of cross border players have entered the market and large volumes have come from countries such as France and China.

These include France's Primonial REIM following their acquisition of the Panacea portfolio comprising of 68 assets across Germany, and China's Anbang Insurance Group who purchased a majority stake in Retirement Concepts, a provider of assisted and independent living across Canada. As much of the world's population ages, we can expect a greater range of global players to invest in the asset overseas.

Multifamily and Student Housing yields

For both multifamily and student housing, yields have generally moved in recent years as the residential asset classes have moved into the mainstream and now attract a wider range of investors. Student housing tends to yield greater returns across the majority of markets. On average, it yields 98 basis points higher across 13 countries globally.

Cross border investment as a share of the total investment



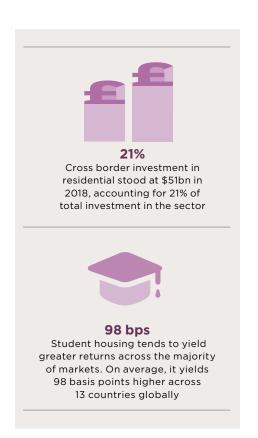
Source Savills Research using RCA

Top cross border investors by main destination of capital since 2016

Asset	From	То	Investor	Amount
Multifamily	US	Spain	Blackstone	\$8,400,000,000
Multifamily	US	Spain	Cerberus	\$7,300,000,000
Multifamily	Canada	US	Brookfield AM	\$7,500,000,000
Multifamily	Germany	Austria	Vonovia SE	\$3,600,000,000
Student	Singapore / Canada	US	GIC / CPPIB (JV)	\$3,400,000,000
Student	US	UK	Greystar	\$2,300,000,000
Student	Singapore	UK	GIC	\$1,100,000,000
Student	Singapore	US	Mapletree Investments	\$1,400,000,000
Senior	France	Germany	Primonial REIM	\$1,100,000,000
Senior	China	Canada	Anbang Insurance	\$750,000,000
Senior	Belgium	UK	Aedifica	\$570,000,000
Senior	China	US	Taikang Life Insurance	\$320,000,000

Source Savills Research using RCA

Multifamily and Student Housing yields



Q2 2019	Prime net multifamily yields	Prime net student housing yields
Australia	5.00%	6.00%
Denmark	4.00%	4.00%
Finland	3.50%	4.00%
France	3.00%	4.25%
Netherlands	3.00%	4.10%
Germany	2.60%	3.70%
Italy	N/A	5.00%
Ireland	3.75%	5.25%
Norway	3.50%	4.00%
Poland	5.00%	5.75%
Spain	2.75%	5.10%
Sweden	2.75%	4.25%
UK*	3.50%	4.50%
USA	5.43%	5.66%

 $^{{}^*\}mathsf{Blended}\ \mathsf{country}\ \mathsf{wide}\ \mathsf{average}\ \mathsf{yields}\ \mathsf{for}\ \mathsf{prime}\ \mathsf{assets}$

Source Savills Research



Residential Investability index

For each asset class, we have ranked the main global markets according to their attractiveness to investors across the three residential sectors

We have looked at a range of factors including demographics, migration, employment, affordability, home ownership, local legislation, housing delivery and university rankings and student numbers, weighting each factor according to its importance.

Student housing investability index

Australia ranks top as a market forecast to see strong growth in its student age population. Its institutions have a strong international standing and it is a top destination for foreign students. Canada, a market with similar characteristics,

ranks second – it also has the longest post-study visa length out of the markets considered. Austria scores well for its low tuition fees and very low provision of student accommodation, posing particular opportunity for developers.

Score: High Medium-High Medium Low-Medium Low			
Rank	1	2	3
Country	Australia	Canada	Austria
Demographics (forecast growth in university aged population)			
University students (domestic and international students)			
University rankings			
University fees			
PBSA Provision			
Post-study visa length			
Investability (ease of investor access)			
			Carres Carrilla Dagagnala

Multifamily investability index

As a mature and liquid multifamily market, the US ranks top, and scores well on employment and household income prospects. The UAE, which has a very high propensity to rent, does well as a migration hotspot with

a large share of high income households. The Netherlands, meanwhile, is a market where affordability in the for-sale market is squeezed and scores highly for forecast growth in employment.

Rank	1	2	3
Country	United States	UAE	Netherlands
Demographics (forecast population growth of those aged 25-39)			
Housing market affordability and propensity to rent			
Rental market regulation			
Household incomes			
Employment prospects			
Migration forecasts			
Competing supply in sales market)			
Investability			

Source Savills Research

Senior housing investability index

China ranks first for senior housing market prospects, helped by its huge and fast growing 70-79 year old population – although there are cultural barriers to overcome.

The United States, an established and liquid senior housing investment market, scores well across the board but Japan scores highly as an ageing and wealthy nation.

Score: High Medium-High Medium Low-Medium Low				
Rank	1	2	3	
Country	China	United States	Japan	
Demographics (number and forecast growth in 70-79 year olds)				
Rental market regulations				
Propensity to rent				
Household incomes and pensions				
Investability				

Source Savills Research

Design and Operation

Student housing, multifamily and senior rental housing all share the same basic principles, but each is tailored to their residents' requirement

A purpose-built residential building for rent is a very different proposition to a for-sale residential building. There is a greater emphasis on the provision of communal spaces and facilities. Fixtures and fittings need to be more durable to withstand tenant turnover. Proactive management is essential to the customer experience, and operational efficiencies are key.

Purpose-built residential buildings for rent share a number of core characteristics, regardless of who they are targeted at. They all feature communal spaces and shared amenities, together with residential units for rent. Here are the key distinctions:

Built to rent (multifamily)

For this type of building an appropriate mix of apartment sizes and types (with the local market in mind) are essential to support letting rates. Unit size and specification is more important than in the case of student housing. Larger units should be designed with sharers in mind, with bedrooms of equal size and positioned at opposite sides of the unit.

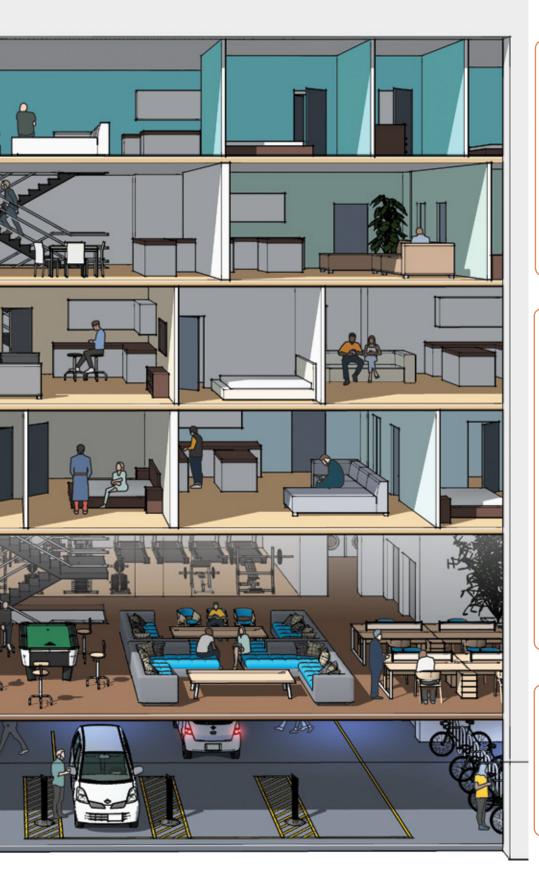
Senior housing

Senior housing usually offers larger communal areas, since these residents spend more time at the property. Extensive shared amenities and events programmes encourage social interaction. Additional services may be offered on an 'à la carte' basis. Aesthetically, individual units may look like any modern apartments, but with small adaptations to minimise risk from falls.

Student housing

Student housing unit sizes are smaller, usually in the form of cluster flats (ensuite bedrooms with access to a shared kitchen), or self-contained studios. Flexible study space is an important amenity, together with communal lounges, games rooms or gyms, depending on the price point. Large, well equipped kitchens available for rent at additional cost have been trialled in some buildings, though associated management must be factored in (cleaning costs have proved to be particularly high).





Upper floors

The highest rents are usually achieved on the upper floors, especially those units that offer good views. Communal space on these levels can add value for residents. This may take the form of shared living rooms, more private than spaces on the ground floor. Such spaces are especially important in co-living or student buildings where private spaces are smaller.

Ground

This is the building's shop front. This space matters and is particularly important for attracting prospective residents who are heavily influenced by the amenities on offer when making a decision to rent (even if they don't end up using them). Lounge areas, workspaces, gyms (of sufficient size) and leisure spaces are all common features. Flexible spaces that can be used for organised events or activities are important too. A cafe or bar may also be open to non-residents, improving viability and diversifying income streams.

Basement

Car and bicycle parking features here, although fewer spaces are required in comparison to a build to sell scheme, together with resident storage and associated building plant and servicing facilities.



Between 2012 and 2017 the total number of students in higher education has increased by 11% to exceed 220 million.

Focus on Student Housing

Many countries are experiencing a fall in their student-aged population, which makes international students particularly important. Improving higher education standards across the globe are broadening choice and making the competition for international students greater than ever

Growth in higher education enrolment

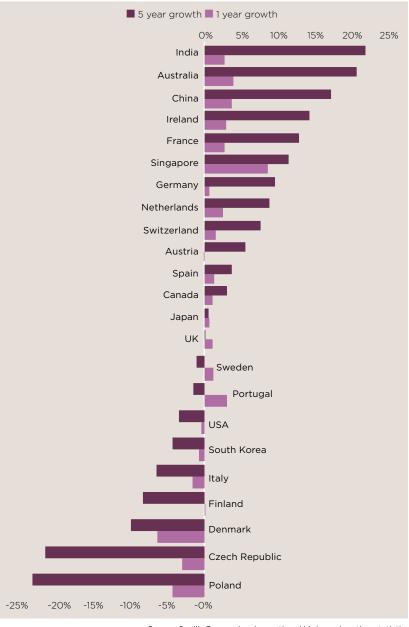
Between 2012 and 2017 the total number of students in higher education has increased by 11% to exceed 220 million. While favourable demographic shifts have driven growth in some markets, many nations are grappling with slowing growth or a declining student age population. In order to counteract this, a number of countries are actively increasing their appeal to international students.

Over the past five years, India has seen the strongest growth in higher education enrolment, increasing 22% over the past five years (see chart). India's university age population grew by a modest 3% over the same period, suggesting rising wealth is making university more accessible for a growing share of the population. By contrast, many major student markets, including the UK and US, have seen the size of their university-aged populations decline over the same period.

The number of students studying in Australia has also grown substantially over the last five years. Australia has benefited greatly from its geographic proximity to major Asian source markets such as China. The number of international students enrolled in higher education in Australia now accounts for a little under a third of total students.

The United States remains the largest market for international students, host to one million international students (but only 5% by share of total students). The UK is second largest market for international students by number with 460,000, closely followed by Australia, host to 430,000. Together, these three countries account for a third of all globally mobile students, according to UNESCO.

Higher education enrolment across countries



Source Savills Research using national higher education statistics

ETBs by country



Source Savills Research using StudyPortals and ETER

The internationalisation of higher education

As the number of globally mobile students has grown, new countries have opened up to capture a share of the international market. Competition for international students has never been greater and institutions need to do more in order to attract students looking to study abroad.

One method universities across Europe have used to attract more international students has been to offer English Taught Programmes (ETPs). They are particularly beneficial in countries where the local student age population is declining or growth is slowing. ETPs also have the benefit of allowing the university to prepare its students for a global world and remain competitive on a global stage.

The number of ETPs being offered at European universities has surged over the past ten years or so, with the numbers of English Taught Bachelor (ETBs) degrees increasing to 2,900 in 2017 compared to just 55 in 2009.

The Netherlands has one of the highest offerings of ETPs in Europe. In the academic year 2017-18, 23% of all bachelor degree programmes and 74% of all masters degree programmes offered by Dutch universities were entirely in English.

Growth in the number of ETBs on offer has slowed in recent years. There is also concern that ETPs hinder native speakers from being able to participate in dual programmes, and they have also been accused of undermining native languages.

The Association of Universities in the Netherlands put out a plan to cap English-language student numbers to prevent Dutch speakers being squeezed out of dual programmes. In Denmark, the government cut around 1,000 English-language places at universities in 2019, claiming that too many international students leave the country after they graduate.

Beyond English, the opportunity to attract French and Spanish speakers should not be overlooked, as they are the fourth and fifth most spoken languages in the world (see chart).

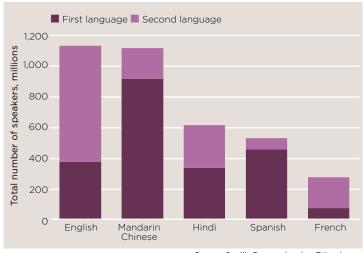
The top international source markets in Spain, after Italy and France, are Ecuador, Colombia and Mexico, all Spanish-speaking nations. In France, French-speaking Morocco is already the top international source market, and China, Algeria, Tunisia and Senegal round off the top five. In a global marketplace where more and more institutions are chasing the English-language market, the ability to cater to these fast-growing groups is an important point of diversification.

Forecasting the future major source markets

Asia, largely China but also other nations, have long been major sources of international students for market such as the UK, US and Australia. However, the growth in internationally mobile students has started to slow, with the total number of globally mobile students recording a marginal dip of -0.01% in 2017 compared to growth of 6.2% in 2016, according to UNESCO.

This slowdown can at least partially be attributed to a slowdown in outbound students from China, which remains by far the world's largest outbound student market. Some 870,000 globally mobile students came from China in 2017, an increase of 24% since 2012 but only a 0.4% increase from 2016. Meanwhile, the total number of domestic students studying in China reached over 40 million for the first time in 2017, a 4% increase from the year before.

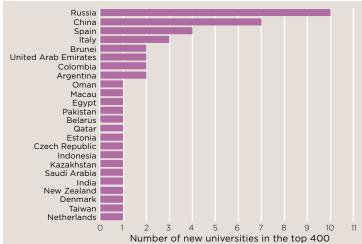
The world's most spoken languages



Source Savills Research using Ethnologue

Countries seeing the largest increase in institutions

in the top 400 rankings (2010-2020)



Source Savills Research using QS World University Rankings

India is likely to rise in importance in the future. The country is already the second largest outbound market for students and is forecast to overtake China as the world's most populous country in the next five years, with a population of more than 1.4 billion people.

By 2024 India will be home to 251 million 15-24 year olds, compared to China's 159 million. Established markets for international students such as the US, UK and Australia are likely to benefit from this growth, as they already attract a high number of Indian students. But, other countries such as the UAE also stand to benefit as a study destination which is popular among Indian students, but less so the Chinese.

Countries such as China are improving their domestic offering for higher education. Between 2010 and 2020, a number of countries have increased their number of institutions within the QS University Rankings top 400. Russia has seen the largest

increase, with 13 institutions within the top 400 in 2020 compared to just three in 2010. Mainland China is second best improved, almost doubling their number of institutions in the top 400 with a total of 15 in 2020 compared to eight in 2010.

The US and the UK still remain by far the top two countries globally for universities within the top 400, with 75 and 45 respectively in 2020, followed by Germany (23) and Australia (22). But both the US and UK have seen a decline in the number of institutions within the top 400 since 2010, down from 86 and 47 respectively. Germany has also seen a decline and Australia has remained the same. This highlights how institutions in Asia, Latin America, the Middle East and Europe are improving their degree offerings. Many of the countries with an increase in highly ranked institutions are also major source markets for international students, giving students from these markets less incentive to study abroad.

Canadian student housing market:

Untapped potential

Canada is home to just over 1.3 million students, of whom 14% are international. Enrolment has risen by 5% in the last five years. The Canadian student housing investment market is relatively undeveloped but rising fast, having been all but non-existent five years ago. Total transaction volumes stood at CAD\$360m (US\$270m) in the first half of 2019, more than the total volume transacted in all of 2018.

Canadian players dominate the market. Alignvest has been the largest investor in the last two years, in which they operate a REIT. Student assets typically trade at 200bps over multifamily, reflecting the relatively slim pool of investors in the country. At present, the market lacks sufficient scale for major Canadian outbound investors such as CPPIB. who have been active in international student housing markets

Dominated by on-campus, university-provided housing, there are an estimated 150,000 beds in Canada, a provision rate of 15%, based on full-time students.

Parallels can be drawn with Australia, which has a similar sized student population (but a higher share of international students). While Canada has fewer top ranking universities than Australia, Canada offers extremely generous post study work visas, and is an open and multicultural society. It is a major tech market (notably Toronto) and at lower cost than the US, making it attractive to international employers.

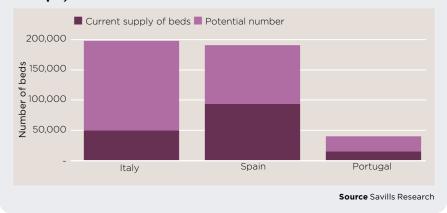
Quantifying market potential

The UK is the most established market for student accommodation in Europe, and together with the US it is one of the most mature globally. The UK has a provision rate of around 34% (defined as the number of beds to full time students), the highest of any European country, and considered to be relatively fully supplied (though this does vary significantly at a local level).

To assess the potential of other European markets, we have applied the UK's 34% provision rate to other countries to evaluate their potential scale. By this measure, both Italy and Germany have the potential to reach half a million students beds. Spain and Poland could reach 400,000 and 300,000 beds respectively, while the Netherlands could double the current supply to reach 240,000, based on a provision rate of 34%.

These figures are based on the number of full-time students. Domestic students in Southern Europe have a greater tendency to study in their hometown and live at home. Taking into account mobile students only, Italy has the potential to almost quadruple the current supply of beds while Spain could double the current number (see chart).

Potential size of student housing markets in Southern Europe, based on mobile students





Focus on Senior Living

The senior housing rental model brings amenity-rich rental housing to older generations. Will it translate into new markets?

Healthier for longer

People are living longer, and are healthier in their old age than ever before. In developed nations, global life expectancy is 82 years of age, and it is forecast to reach 85 by 2040. Emerging markets are catching up, forecast to reach a life expectancy of 80 by the same date.

In the West, turning 65 once marked the beginning of old age. Careers come to an end, subsidised travel begins. But better health, greater wealth and active lifestyles mean this group is still very much physically and economically active. Average life expectancy at 65 stands at 21 years in the West. Japan, France and Spain have the longest life expectancy for 65 year olds, at over 23 years. Turkey has seen the life expectancy of its over 65s increase by nearly three years over the last decade alone (see chart on page 22).

Rental housing for seniors

This growing demographic group is starting to embrace new ways of living. Like their children, today's older generations want flexible, quality accommodation with accesses to amenities, and a sense of community. Increasingly, they will be seeking rental options, either through choice or necessity.

The senior housing rental model adapts the student and build to rent model for older generations. Targeted at independent seniors, it offers the flexibility of rental accommodation in a senior community setting.

Since older residents tend to spend much more time in their homes than younger occupiers, communal spaces are larger. Extensive, optional bolt-on services are usually offered, ranging from meal plans and cleaning services to activities. Such properties are also occupied for much longer than assisted living or nursing care homes, which people tend to enter through necessity, meaning lower levels of turnover.

In Europe, the model is growing fastest in France, where there are more than 47,000 units across 620 schemes. Domitys is the market leader, and it has plans to expand into Spain, Portugal, the Netherlands, Germany, Switzerland, and Italy.

In the United States, this type of senior rental housing is also well established, accounting for 66% of global volumes. The homes provided are sometimes part of larger 'Continuing care retirement communities' in a campus style set-up that allows residents to move into more specialised accommodation as their needs change over time.

Global life expectancy to continue to rise

Historic and forecast life expectancy in developed and emerging markets





Today's Baby Boomers and Generation X will take their preferences and expectations into old age

Overcoming cultural challenges

National cultural norms are one of the challenges to overcome as this type of senior living enters new markets.

In the UK, senior housing has traditionally been focused on the sale model, with a price premium to reflect the added cost of providing communal facilities. Here, a preference for home ownership over renting is something to overcome. It is no coincidence that in the UK urbanite retirees are being targeted first, with early rental models focused on London and the luxury end of the market.

In much of Asia, elderly care is traditionally undertaken by younger generations. Multiple generations live together under one roof, with older generations caring for grandchildren, and in turn children caring for ageing parents.

Reflecting these cultural norms, China has adopted a policy whereby 90% of elder care is expected to be provided in the family home. Nonetheless, with 92 million over 70s, rising to 147 million in the next decade, the remaining 10% represents a substantial market. There are already various forms of senior housing being developed by domestic and international players. Lendlease, for example, is developing an 850 unit resort-style senior living community near Shanghai (for sale rather than rent).

But today's Baby Boomers and Generation X will take their preferences and expectations into old age. For a generation used to their independence and with experience of flexible living, senior rental housing models will become a more natural fit. Providing services, amenities and a fit out more akin to clubs and high-end residential developments will further boost the attractiveness of the tenure to this cohort.

As the sector grows and international investors become more active, we can expect a growing number of operators to also operate across different countries. Hence, understanding these cultural norms will be important to do so effectively. Additionally, we are now seeing operators who are active across the different residential asset classes, an example being France's Reside Etudes. For these operators, understanding the local cultural attitudes will also be important to meet their residents' requirements.

Life expectancy at 65 years

And change in the last decade



Source Savills World Research using OECD

Global Living: Outlook

People of all ages are embracing more flexible forms of living, creating opportunity for providers of 'alternative' residential rental assets

Demographic trends are working in investors' favour. By 2050, the global population of student age is estimated to reach 1.3 billion, those aged 25-39 (a key demographic target for multifamily housing) will reach 2 billion and the over 65 population will reach 1.6 billion, according to UN forecasts. This represents growth of 11%, 13% and 113% respectively, presenting a huge opportunity, particularly for the senior sector where growth is expected to greatly outpace that of younger generations.

Identifying the future demographic hotspots which will drive demand for each form of accommodation will be key. Many markets are undersupplied. Australia's student population has seen significant growth in recent years, its student housing market is growing and prospects are positive. Canada, with similar characteristics, is positioned for growth in its student housing sector too.

Meanwhile in Europe, Spain and Portugal have the potential to double their purpose built student housing stock, while Italy could quadruple its stock before becoming fully supplied.

China's large and ageing population also presents opportunity for providers of senior housing. The UAE, which has a very high propensity to rent, is a migration hotspot with a large share of high income households, and offers potential for multifamily.

For each form of accommodation, tailoring the assets' features to meet the residents' requirements and proactive management will be essential to achieve operational efficiencies. Investors' search for secure income streams will continue to underpin interest across 'alternative' residential assets. Pioneer investor-developers will be integral to delivering new supply, securing tomorrow's investment stock.

Savills World Research

We monitor global real estate markets and the forces that shape them. Working with our teams across the globe, and drawing on market intelligence and published data, we produce a range of market-leading publications, as well as providing bespoke research to our clients.

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