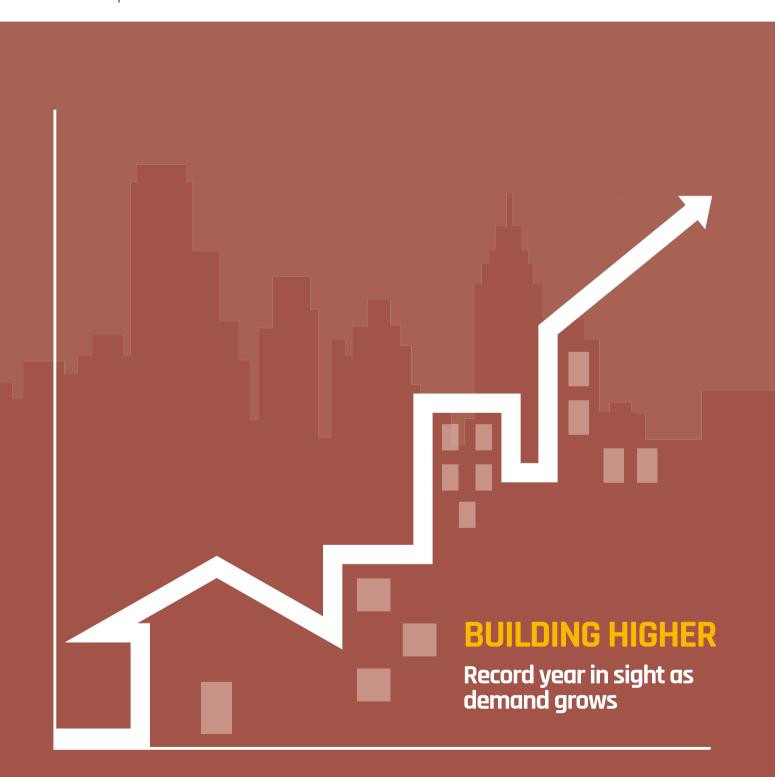
PERE

Residential

June 2022 • perenews.com







How to contact us

Senior Editor, Real Estate

Jonathan Brasse

jonathan.b@peimedia.com, +44 20 7566 4278

Editor

Evelyn Lee

evelyn.l@peimedia.com, +44 20 3640 7511

Head of Special Projects

Graeme Kerr

graeme.k@peimedia.com, +44 20 3862 7491

Senior Special Projects Editor

james.l@peimedia.com, +44 20 7566 5465

Magazine Editor

Jessica Nangle

jessica.n@peimedia.com, +44 17 5394 5604

Senior Reporters

Peter Benson

peter.b@peimedia.com, +44 113 733 0279

Christie Ou

christie.o@peimedia.com, +852 2153 3247

Contributors

Barclay Ballard, Stephanie Baxter, Thomas Brown, Keith Button, Mike Cobb, Mark Cooper, Ellie Duncan, Tom Higgins, Iris Lai, Doug Morrison, Michelle Phillips, Evie Rusman, Charles Waine

Managing Editor, Production: Mike Simlett

Production Manager: David Sharman

Senior Production Editors: Tim Kimber, Adam Koppeser

Adam Roppes

Production Editors: Nicholas Manderson,

Jeff Perlah

Copy Editors: Helen Burch, Eric Fish

Art Director: Mike Scorer

Head of Design: Miriam Vysna
Art Director - Americas: Allison Brown

Senior Designers: Denise Berjack, Lee Southey,

Rebecca Worrell

Designers: Pio Blanco, Ellie Dowsett

Global Business Development Director: Real Estate: **Nick Hayes**

nick.h@peimedia.com, +44 20 7566 5448

Business Development Manager: Real Estate

Annie Liu

annie.l@peimedia.com, + 852 2153 3843

Subscriptions and Reprints

subscriptions@peimedia.com

Customer Services

customerservices@peimedia.com

Editorial Director, US: Rich Melville

Editorial Director: Philip Borel

Director, Product: Amanda Janis

Director of Research and Analytics: Dan Gunner

Operations Director: Colm Gilmore

Managing Director, Asia: Chris Petersen

Chief Commercial Officer: Paul McLean

Chief Commercial Officer: Paul McLeal

Chief Executive Officer: Tim McLoughlin

For subscription information visit

perenews.com



PERE

Residential

ISSN 1558-7177 • JUNE 2022

Insight

2

Three key trends Residential fundraising continues to impress

EDITOR'S LETTER

10

27

Analysis

12

Top stories News from the last year **Residential's firm foundations**

Invesco's John German outlines solid return possibilities 14

SFR is set to grow Demographics and interest rates are positive **1**

Smart. Sustainable. Profitable?

Technology can unlock new profits and meet environmental goals 20

Smartened cities, not smart cities

PATRIZIA's Mahdi Mokrane on why a rethink is required **24**

Multifamily keeps on rising

A wall of investment has arrived

Reinventing rental

Macquarie on BTR in the UK and Australia **30**

Co-living in Hong Kong Conditions are right for entry into the market **33**

The right model for China

Funlive's Keith Chan considers
Chinese rental residential **35**

Co-living's western momentum

Young professionals in the UK and Europe are embracing co-living **38**

Senior's social focus

Aging populations are making senior living assets attractive 40

Student housing as an inflation

hedge Chua Tiow Chye of Mapletree on why student accommodation is a scalable opportunity42

School's in Blackstone's \$13 billion student housing deal is a sign of confidence in the sector **45**

Ringing the changes CBRE's Hannah Marshall sees affordable

Hannah Marshall sees affordable housing approaches evolving **48**

Innovation in affordable housing

Developers and investors are keen to see more product **51**

Going Dutch Bouwinvest's Michiel de Bruine says it pays to take the long view on affordable housing **53**



Changing rooms Distressed assets are candidates for conversion 56
Houses always win Brice Hoffer of UBS explains how the pandemic has accelerated demand 58
Emerging opportunities

Brazil and China are sparking interest once more **61**

Last word Expert insight on the world of residential

64

apital raised for residential-focused private real estate funds may have eclipsed all records last year, but if Q1 2022 was anything to go by, then even greater heights are in sight, writes Charles Waine. The first guarter ended \$1.23 billion higher than in 2021, with Pretium Partners' Q1 final close breaking into the top three largest residential funds over the past five years.

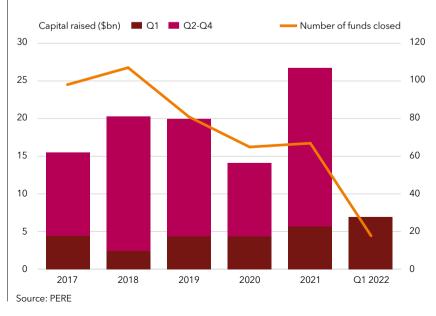
Capital raised in 2021 had already almost doubled the previous year's total of \$14.1 billion and

Three key trends **The pace of** residential fundraising continues to impress with a fourth consecutive year of Q1 growth

the dominance of North American focused funds shows no sign of slowing. Only one Europe-focused fund in Q1 made the top 15 largest residential funds by size on final close. Of the funds in market, however, the situation is slightly different, with an even split between European and North American regional focuses.

Residential fundraising, while growing in absolute terms, is accounting for a decreasing share of real estate fundraising overall, a trend that appears to be continuing for a fourth consecutive year, although the sector still bested industrial, hospitality and office segments with a 39 percent stake in the market.

2022 is on track for a record-setting amount of residential-focused capital raised



Multifamily in the ascendancy

Investment in multifamily real estate accelerated last year, exceeding previous records, as demand held strong in the face of the pandemic and changing consumer preferences. In the US, migration to the Sunbelt was a major driver of investment, particularly to cities such as Dallas, Atlanta, Phoenix and Houston, with occupancies at an all-time high.

"The US is underhoused, meaning that investment in multifamily, as well as single-family rental, build-to-rent





Because the best type of investment is where everyone gains.

Urbanisation, digitalisation and demographic shifts have combined with the pandemic to reshape the residential real estate sector.

That's why Macquarie Asset Management is establishing specialist real estate development and management businesses in the build-to-rent sector.

Find out how Macquarie Asset Management and its specialist real estate businesses are helping to design and deliver the next generation of sustainable rental communities.

Visit MIRAFunds.com

This information is a general description of the Macquarie Asset Management (MAM) Real Estate division of the Macquarie Group only. Before acting on any information, you should consider the appropriateness of it having regard to your particular objectives, financial situation and needs and seek advice. No information set out above constitutes advice, an advertisement, an invitation, an offer or a solicitation, to buy or sell any financial product or security or to engage in any investment activity, or an offer of any banking or financial service. None of the entities noted on this page is an authorized deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia). Their obligations do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542 (MBL). MBL does not guarantee or otherwise provide assurance in respect of the obligations of those entities.

and other specialty housing, such as senior and student, will remain investor favorites," says Colliers director of research, US capital markets, Aaron Jodka.

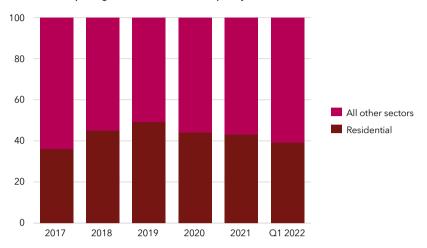
In Europe, record-breaking deal volumes across 2021 were driven mainly by large corporate transactions, including Vonovia's takeover of Deutsche Wohnen for €19.1 billion, and Heimstadan acquiring 599 German, Swedish and Danish properties for €9.1 billion.

"Germany continues to be a core investment market, but we are also seeing strong investor interest in Spain, Ireland and Scandinavia," says Richard Valentine-Selsey, director of residential research at real estate services firm Savills. "While Europe is growing, total volumes still lag behind the US, [which] reached \$352 billion in 2021, again driven by large portfolio trades."

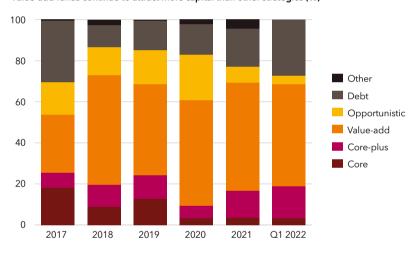
Brian Murphy, chief executive officer at real estate lending platform Veleta Capital, adds that several factors have converged over the past few years to contribute to the record run-up in multifamily. "An enormous amount of liquidity coupled with record low interest rates over the last few years have compressed cap rates and driven asset values to all-time highs," he says.

But whether demand and investment growth in multifamily can be maintained at the same level across 2022 and beyond will be touch and go. "The rapid rise in interest rates, coupled with supply chain issues, are significant challenges to further investment growth in the sector," warns Murphy. "Construction costs are up dramatically, deliveries are taking longer, and developers are having to recast their stabilized assumptions. There is some dislocation between sellers and buyers on asset values given the new rate environment and the fear of a potential recession."

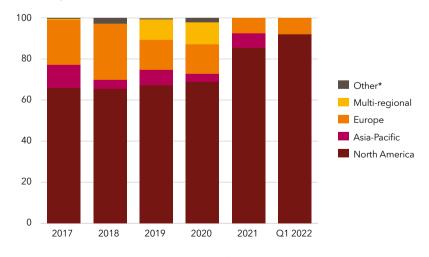
Residential funds were responsible for 39% of all real estate fundraising in Q1 2022, surpassing the likes of industrial, hospitality and office (%)



Value-add funds continue to attract more capital than other strategies (%)



92% of capital raised for residential funds in Q1 2022 was for North America (%)



*Includes MENA, Latin America and sub-Saharan Africa

Source: PERE





With USD 91.8 bn of assets under management, we are one of the world's largest real estate investment managers. Our global offering covers investment opportunities in the main commercial sectors as well as hotels and multifamily/residential. The sole focus of our 582 dedicated real estate staff in 21 regional offices is to deliver real estate strategies focussed on meeting clients' needs.*

For more information, please contact:

Doug Rowlands
Director – Client Portfolio Management
Invesco Real Estate
+44 208 538 4920
doug.rowlands@invesco.com

invesco.com

This advert is for Professional Clients (as specified below); for Institutional Investors only in The United States, Singapore, for Sophisticated/Professional Investors in Australia, for Professional Investors only in Hong Kong and for Qualified Institutional Investors only in Japan as defined under the Financial Instruments and Exchange Law of Japan. In Canada, the document is intended only for Accredited Investors as defined under National Instrument 45-106. It is not intended for and should not be distributed to, or relied upon by, the public or retail investors. By accepting this advertisement, you consent to communicate with us in English, unless you inform us otherwise. *Source: Invesco Real Estate as of 31 December 2021. As with all investments, there are associated inherent risks. The distribution of this communication may be restricted by law or regulation in certain jurisdictions. Accordingly, persons who come into possession of this document should inform themselves of and observe these restrictions. Telephone calls may be recorded. Australia by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia which holds an Australian Financial Services Licence number 239916; Professional clients in Andorra, Austria, Belgium, Croatia, Czech Republic, Denmark, Dubai, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovenia, Slovakia, Spain, Sweden, Switzerland, Ireland, UK by Invesco Asset Management Limited, Perpetual Park, Perpetual Park Drive, Henley-on-Thames, Oxfordshire RG9 1HH, UK. Authorised and regulated by the Financial Conduct Authority; Invesco Management S.A., President Building, 37A Avenue JF Kennedy, L-1855 Luxembourg, regulated by the Commission de Surveillance du Secteur Financier, Luxembourg; Invesco Asset Management Deutschland GmbH, An der Welle 5, 60322 Frankfurt am Main, Germany; Invesco Asset Management (Schweiz) AG, Talacker 34, 8001 Zurich, Switzerland; Canada by Invesco Canada Ltd., 120 Bloor Street East, Suite 700. Toronto, Ontario M4W 1B7, Canada; Hong Kong by Invesco Hong Kong Limited 景順投資管理有限公司, 41/F, Champion Tower, Three Garden Road, Central, Hong Kong; Japan by Invesco Asset Management (Japan) Limited, Roppongi Hills Mori Tower 14F, 6-10-1 Roppongi, Minato-ku, Tokyo 106-6114; Registration Number: The Director-General of Kanto Local Finance Bureau (Kin-sho) 306; Member of the Investment Trusts Association, Japan and the Japan Investment Advisers Association; Singapore by Invesco Asset Management Singapore Ltd, 9 Raffles Place, #18-01 Republic Plaza, Singapore 048619; The US by Invesco Advisers, Inc., Two Peachtree Pointe, 1555 Peachtree Street N.E., Atlanta, Georgia 30309, US. GL1873913/10-2021

From the cradle to the grave While the birth rate may be in freefall across many developed economies, aging populations in Europe and North America are only increasing the urgent need for quality housing to cater to the specific needs of senior citizens.

According to Savills, just 1 percent of people aged over 65 in the UK live in integrated retirement communities, or housing with care, against roughly 6.5 percent in the US and 5.5 percent in Australia.

Shortage of supply, combined with the growing 65-plus demographic, is creating the perfect opportunity set for private real estate investors. "Many active seniors don't want to be isolated in a traditional senior housing facility," explains Olli Fischer, investment director at Nordic Real Estate Partners. "They want to engage in a community, and they want to have meaningful activities and interactions with a lot of different people."

Colin Rees-Smith, a senior director at BNP Paribas Real Estate, however,

points out that retirees are often still hesitant to move out of family homes and into housing-with-care facilities. "It's important that the next generation of senior living continues to be in homes that are attractive, comfortable places to live and, critically, part of the social fabric of the wider community. A positive living experience that tenants will embrace, not fear."

To provide this, investors and developers need to consider the requirements of senior living. "We do have to be very careful to ensure

Of the top 10 residential funds to reach a final close in Q1 2022, only one had a European focus

Fund	Manager	Current size (\$m)	Strategy	Region focus
Pretium Residential Credit Fund II	Pretium Partners	1,700	Debt	North America
FPA Apartment Opportunity Fund VIII	FPA Multifamily	1,450	Value-add	North America
LMC/CPP Joint Venture	Lennar Corporation	979	Value-add	North America
KGAL Wohnen Core 3	KGAL	562	Core-plus	Europe
Fairfield/CalSTRS Suburban Development JV	Fairfield	510	Core-plus	North America
IEC Institutional Fund V	Interstate Equities Corporation	445	Value-add	North America
Bell Core Fund I	Bell Partners	230	Core	North America
Bouwinvest/Man Global Private Markets JV	Man Global Private Markets	200	Debt	North America
HPI Real Estate Fund IX	Hamilton Point Investments	195	Value-add	North America
2021 Grubb Qualified Opportunity Fund	Grubb Properties	152	Opportunistic	North America

Greystar's \$2bn 2019 fund leads the 10 largest residential funds to have closed in the last five years

Fund	Manager	Current size (\$bn)	Strategy	Region focus
Greystar Equity Partners X	Greystar Real Estate Partners	2.0	Value-add	Multi-regional
Berkshire Multifamily Debt Fund III	Berkshire Residential Investments	1.9	Debt	North America
Pretium Residential Credit Fund II	Pretium Partners	1.7	Debt	North America
Bridge Multifamily Fund IV	Bridge Investment Group	1.6	Value-add	North America
Empira Residential Invest	Empira	1.6	Value-add	Europe
Invesco Commercial Mortgage Income Fund	Invesco Real Estate	1.6	Debt	North America
SFR JV-2	Tricon Residential	1.6	Value-add	North America
Pretium Single-Family Rental Fund III	Pretium Partners	1.5	Core-plus	North America
Focus II Fund	Schroders Capital	1.5	Debt	Multi-regional
Waterton Residential Property Venture XIV	Waterton	1.5	Value-add	North America

Source: PERE

Realize new life

in your investment lifecycle.

Every phase of your investment is an opportunity for growth. Find out how we deliver sustainable real assets solutions that help you thrive.



The 10 largest residential funds in market as of the end of April were led by CDC Habitat's AMPÈRE Gestion Residential Fund

Fund	Manager	Target size (\$bn)	Strategy	Region focus
AMPÈRE Gestion Residential Fund	CDC Habitat	1.8	Core	Europe
Empira Residential Invest II	Empira	1.8	Value-add	Europe
HGI Multifamily Credit Fund	Harbor Group International	1.8	Debt	North America
AIG GRE US Real Estate Fund IV	AIG Global Real Estate	1.5	Opportunistic	North America
Bridge Workforce & Affordable Housing Fund II	Bridge Investment Group	1.5	Core-plus	North America
US Single Family Housing V	Man Global Private Markets	1.5	Core-plus	North America
DTZ Investors Co-Living Fund I	DTZ Investors	1.4	Core-plus	Europe
Greystar Europe Multifamily Venture I	Greystar Real Estate Partners	1.2	Value-add	Europe
AIG GRE Europe Real Estate Fund II	AIG Global Real Estate	1.0	Opportunistic	Europe
Black Impact Fund	SoLa Impact	1.0	Core	North America

we have all the correct mobility specifications in place," says Patrick Bone, a real estate fund manager at Schroders Capital. "Rooms must be a certain width, so that they can have wheelchair access. There are also walk-in showers. So, in terms of the design, a lot of consideration needs to go into the fact that some of the people living in these retirement apartments are often facing mobility issues."

The desire for community-style living is also not restricted to just senior living. Lockdowns through the pandemic period and affordability pressures have boosted the appeal of co-living spaces for young Western consumers, particularly in urban centers like London.

"Areas with significant higher education establishments with strong retention rates and high levels of inward migration and low unemployment are likely to be where co-living works best. However, many operators, particularly those focused on small to mid-size schemes, see the geographical demand being much wider," says Richard Stonehouse, head of residential investment at commercial real estate services firm Avison Young.

As a case in point, Barings entered the Italian market in April, investing in co-living real estate in northern Milan. "The residential market in Italy has been very small historically by western standards, but increasingly that's changing," says Ben Pile, Barings head of residential investing and asset management, Europe. "Traditionally, people have bought in Italy, but house prices have got to a level where there's a certain level of unaffordability, and increasingly people are turning to the rental market."

3 Eyeing opportunities further afield

Investors may also increasingly turn to emerging markets. While those may have been slow to soak up capital in recent times, with investors largely favoring domestic real estate, that appears to be changing. "The argument is that in the past several years a US-based pension fund or endowment based in the northeast of the US could invest in almost any real estate in that region," says Ken Wainer, founding partner of Brazilian investment manager VBI Real Estate. "If they did so well over the past decade, then why would they go into a market they don't know?"

But for those willing to take the plunge, there are plenty of opportunities in Latin America and Asia-Pacific. Brazil hosts the largest residential market in Latin America, with São Paulo topping the list for real estate transactions.

"Brazil has a shortage of affordable housing - the most recent data shows a shortage of seven million affordable homes - and this is a consistent government problem of providing homes for low-income Brazilians," says Joao Teixeira, senior managing director at GTIS Partners. "We've seen very strong production. It's very dependent on the cost of land because there is a ceiling on the total price you can sell an apartment for."

In China, multifamily real estate has proved robust despite the pandemic and purchase restrictions. Beijing has also put in place favorable policies such as reduced tax rates for multifamily operators. "Throughout the pandemic, multifamily rental assets have been more resilient in terms of occupancy rates and rent collection compared to retail, hotel or office assets." explains Claire Tang, co-CIO for Asia-Pacific and head of Greater China at LaSalle Investment Management.



Founded in 2018, Funlive is one of China's largest and leading multifamily owner-operators, with vertically integrated capabilities across investment, development, operations and funds management. Leveraging on its competitive edges, Funlive specializes in creating purpose-built, quality and sustainable multifamily communities in China. Funlive has entered into 22 cities with nearly 40,000 rooms under management and a total AUM of more than US\$2.8 billion.

Editor's letter

Residential demand is building ever higher



James Linacre james.l@peimedia.com

rbanization, changing demographics and migration are transforming residential real estate. Last year's strong performance - with new multifamily records made in European investment as well as US rent growth and net absorption – has continued into this year. Meanwhile, PERE figures show record Q1 residential fundraising of more than \$6.9 billion, up from \$5.7 billion in Q1 2021.

The strong interest is unsurprising. Housing is a basic need that is not, in a

post-covid, inflationary environment, vulnerable to quite the same challenges as retail, for example. Occupancy rates and rent collection outperformed retail, hotel and office assets throughout the pandemic and continued strong rent growth can serve as an effective inflation hedge.

Occupancy rates and rent collection outperformed retail, hotel and office 77

The further institutionalization of the asset class has played a part in its increasing popularity, with single-family rental a case in point. While multifamily has a long history and remains dominant, SFR has plenty of scope to grow.

Man Global Private Markets' Anthony Cazazian says only 3 percent of SFR units in the US are owned by institutional investors. Considering the asset class saw rents rise 12.6 percent year-on-year in January, that figure is certain to grow.

Interest is also rising in previously overlooked jurisdictions. Emerging markets such as Brazil and China are coming into - or back into - investors' thinking. Brazilian student housing and Chinese multifamily are both attracting attention, for example.

Of course, there is a lot of real estate in between these emerging markets and asset classes aand the US and European rental assets which dominate the residential space. It is that wide world of investment opportunity that is generating so much excitement.

James Linacre



New York

130 West 42nd Street Suite 450 New York NY 10036 T: +1 212 633 1919

London

100 Wood Street London EC2V 7AN T: +44 20 7566 5444

Hong Kong

Room 1501-2, Level 15, Nexxus Building, No. 41 Connaught Road, Central, Hong Kong T: +852 2153 3240

Published 10 times a year by PEI Media. To find out more about PEI Media visit thisisPEI.com

© PEI Media 2022

No statement in this magazine is to be construed as a recommendation to buy or sell securities. Neither this publication nor any part of it may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage or retrieval system, without the prior permission of the publisher. Whilst every effort has been made to ensure its accuracy, the publisher and contributors accept no responsibility for the accuracy of the content in this magazine. Readers should also be aware that external contributors may represent firms that may have an interest in companies and/or their securities mentioned in their contributions herein.

Cancellation policy You can cancel your subscription at any time during the first three months of subscribing and you will receive a refund of 70 percent of the total annual subscription fee. Thereafter, no refund is available. Any cancellation request needs to be sent in writing to the subscriptions departments (subscriptionenquiries@peimedia. com) in either our London or New York offices.

Printed by Stephens & George Ltd stephensandgeorge.co.uk



mapletree

MAPLETREE GROUP'S
GLOBAL STUDENT ACCOMMODATION
PORTFOLIO

SERVING SOUGHT-AFTER UNIVERSITIES







ATTRACTIVE AMENITIES









>24,000 BEDS

57 PROPERTIES IN UK, US AND CANADA













MAPLETREE GROUP'S GLOBAL PRESENCE



\$\$78.7 BILLION

*as at 31 March 2022



13 MARKETS



7 PRIVATE FUNDS



4 LISTED REITS



A global real estate development, investment, capital and property management company, committed to sustainability.

A strong year for residential funds

The past 12 months saw a domino effect of private real estate heavyweights entering the residential market, with a particular focus on student housing



APG sells half-share in Spanish residential firm

Dutch pension manager APG sold half of its stake in Vivenio, a Spanish multifamily platform, to Australia's second-largest pension fund Aware Super for €400 million. The platform was launched by APG in partnership with Renta Corporation in 2017. At the time, the firm said proceeds from the half-exit were to be partly reinvested in the platform and partly in other real estate investments.

MAY 2021 JUN JUL **AUG SEP OCT**

Australian build-to-rent platform launches

Two former Mirvac executives teamed up with Australian real estate developer and investment manager Aliro Group to launch Novus, a multifamily platform, in Australia. The initial capitalization strategy was focused on the development of a A\$2 billion (\$1.6 billion; €1.3 billion) portfolio on a value on completion basis.



Multifamily preferred equity JV forms

Ivanhoé Cambridge and Mount Auburn Multifamily launched a programmatic joint venture to originate preferred equity and fill the gap between sponsor equity and senior mortgages. The venture enables Ivanhoé Cambridge to expand its roughly \$12 billion residential portfolio and helps the partners target conventional, groundup developments in the US Sunbelt.

Berkshire closes US multifamily debt fund

Berkshire Residential Investments closed its US residential-focused lending vehicle, Berkshire Multifamily Debt Fund III, on \$1.85 billion. The fund focuses primarily on Freddie Mac Capital Markets Execution B-pieces. It also makes opportunistic investments in preferred equity. mezzanine debt, B-notes and discounted notes.

ADIA in \$500m re-up to US student housing venture

The Abu Dhabi Investment Authority reaffirmed its commitment to the resurging US student accommodation sector with a further \$500 million equity to a joint venture partnership established in 2015. The capital went to Landmark Properties, the Athens, Georgiabased student housing specialist.

CPP Investments makes €1bn student housing bet with Round Hill

CPP Investments launched a new European student housing partnership with Round Hill Capital. The Canadian pension plan agreed to make an initial €475 million equity commitment to the partnership, which is targeting a portfolio size of more than €1 billion. The joint venture is one of the largest European purpose-built student accommodation partnerships.

NOV



Berkshire Residential holds final close for multifamily value fund

JAN 2022

Boston-based Berkshire Residential Investments held the final close for its fifth multifamily value fund, hitting its hard-cap of \$550 million. The fundraising for Berkshire Value Fund V marked an active year for the Boston-based investment management company, which, by the year's end, closed funds totaling more than \$4.5 billion to deploy into short- and long-term multifamily debt and equity investments across the US.

Blackstone takes student housing trust private

Blackstone announced it is taking specialist real estate investment trust American Campus Communities private in a \$12.8 billion transaction, its biggest deal in student housing yet. Capital for the deal was provided by its individual and institutional perpetual capital vehicles, BREIT and Blackstone Property Partners.

Oaktree targets multifamily, alternative assets with Veleta JV

Oaktree Capital Management inked a joint venture with Veleta Capital, taking a minority stake in the Los Angeles-based manager to expand its multifamily and alternative asset portfolio. The IV will offer short-term, senior secured loans on multifamily and alternative commercial assets.

APR

MAR

DEC

Azora launches Spanish residential fund

Spanish private real estate asset manager Azora signed an agreement with an unnamed global institutional investor to create BRISA, a new vehicle focused on build-to-rent residential developments across Spain. BRISA predicts an investment capacity of over €1 billion and will target the development of more than 8,000 units over the next five years.



Brookfield looks to sell Student Roost

FEB

Brookfield began the sale of its \$4.7 billion UK student accommodation business, Student Roost, which the Canadian manager began building in 2016 with the acquisition of a 13-property portfolio totaling 5,500 beds through its Brookfield Strategic Real Estate Partners II fund. Since then, Student Roost has grown to 20,500 units across more than 50 properties.



Bouwinvest makes US single-family rental debut

The Dutch pension investor entered the US single-family rental market through a \$200 million joint venture with with Man Global Private Markets, a London-based asset manager with roughly 5,200 rental homes throughout the US. The JV aims to deliver as many as 1,000 energy efficient build-to-rent homes in the coming years.

KEYNOTE INTERVIEW

Firm foundations for residential



Whether investors focus on tier-one, tier-two or tier-three locations, residential real estate represents an asset class offering potentially solid medium- to long-term returns, says Invesco's John German

The diversity of real estate as an asset class remains one of its greatest strengths. Alongside office, retail and industrial assets, residential real estate can potentially provide strong returns for institutional investors, particularly if they are looking to enhance their long-term portfolio diversification.

Invesco Real Estate, the global real estate investment management company, works directly with contractors and developers and is eager to use its experienced team to help clients navigate recent market challenges in the residential investment market, whether they stem from regulatory changes or from the covid-19 pandemic.

SPONSOR

INVESCO REAL ESTATE

John German, managing director of residential investments at the firm, considers some of the key trends and outstanding opportunities in the market.

How has the residential market developed in EMEA and the UK?

We have seen continued growth in investor appetite for residential investments across both EMEA and the UK. The largest sector continues to be rental residential, but we are also seeing strong activity in the purpose-built student accommodation (PBSA), senior living and co-living markets. These subsectors were challenged by the covid-19 pandemic, particularly the micro-apartment co-living space, but even here we are starting to see renewed activity.

If you look at residential as an asset class, it is probably the second-most traded in Europe after logistics. As mentioned, the pandemic did have an impact, but generally the value of residential assets remained flat. This was largely because rent collection was maintained at an incredibly high level

compared with the majority of other asset classes.

Beyond the pandemic, there has also been a growing number of investors looking to establish portfolios across a variety of markets beyond the established ones. So, it is an asset class that continues to attract investor interest. and we see no reduction in investor appetite – be that domestic or international.

Are you seeing any difference in the levels of residential investment between cities in EMEA?

Domestic investors will continue to invest across the entire spectrum of their respective markets. If we take a smaller market such as Denmark, international investors are largely comfortable sticking to the major cities - Copenhagen and Aarhus, for example.

The same is true of other markets. If you look at Spain, international investors may be happy to invest in Madrid, Barcelona or Valencia, but then beyond those the interest starts to thin out. This is a general theme. As you look at investment in smaller cities, which have smaller markets and potentially less liquidity, you start to see less interest - albeit with slightly higher capitalization rates.

This is perhaps not so surprising if you assess the balance of risk and return. The key question to ask is how tradable your asset in a tier-two or tierthree city is going to be; it is always easy to buy something, but it is not always easy to sell it. Plus, in terms of the differential between capitalization rates, for some markets we are starting to see very little difference, particularly for stabilized assets.

One market where you perhaps see a little more activity in tier-two cities is student housing. There are certainly strong universities outside capital cities and if the fundamentals of the university are strong and there is sufficient demand for PBSA, we are seeing significant investor activity.



Lammekær, Denmark: Invesco's 56-unit development outside Copenhagen offers affordable, high-quality family

Leveraging local knowledge

Investing creatively can unlock opportunities that may not occur to others

Leveraging its local knowledge, one of Invesco Real Estate's recent residential investment strategies looks to be a little more creative in terms of how it assesses new opportunities. The company has a small investment in a German town with a population of less than 20,000 called Wolfratshausen.

"The main advantage of Wolfratshausen, from an investment point of view, is that it is located on the S-Bahn, making it possible to be in the center of Munich in approximately 40 minutes. This means that the physical real estate is in a tier-three city in terms of size, but it is more accurate to think of the investment as being part of a tier-one catchment area," says Invesco's John German.

"Our residential investment in the French border town of Bossey, a 20-minute drive from Geneva, relies on similar principles. This is the benefit of local knowledge - leveraging the returns of a tier-one city, while investing in what is, conceptually, a tier-three market."

How are current price increases impacting the funding of residential developments and affecting overall residential strategies?

Price rises are certainly having an effect on new developments. It isn't necessarily making investments unsustainable, but it may mean a change of strategy. Having a partner that shares in this heightened construction cost risk is very important.

New developments can still take place, but the strategy may now be to review the market in a few years after completion. The great benefit of residential is that it gives you two options - you can sell the asset or lease it. You potentially have greater flexibility and optionality.

Choosing the right partner is important to mitigate price increases. We always look for an alignment of interests. We are seeing a slight move away from forward funding towards joint ventures.

For some projects, the developer's profit is not delivered at the end of the development but at a later date and is predicated on the asset performing well. Will there be a bigger risk premium for residential development projects? That hasn't materialized yet, but it is certainly something we are continuing to monitor.

Other developments that we are keeping an eye on include changes to tax and interest rates, and how these are changing in various markets. If we look again at Denmark, they recently introduced a mark-to-market tax on residential investments and also announced a change to how property tax will be calculated on an annualized basis for residential investment. This will have an impact on returns.

There also seems to be an understanding that governments will have to pay for the cost of covid over the last two years and the only way they can do this is through taxation. We are not seeing material increases in taxation across the board so fortunately it is not making investments uneconomic yet.

Interest rates may present a bigger challenge, and one that is not particular to the residential market. They impact any sector that needs to borrow to enhance returns. Also, as interest rates rise, this may put pressure on bond pricing and could lead to outward yield shifts, although we haven't seen this yet.

How are deals being structured today to avoid construction cost risk?

For the most part, deals are simply not being done. Depending on which market you are in, the concept of a fixedprice bill contract does not necessarily mean you won't have construction cost increases.

As soon as you become a landowner in Italy, for example, you have some degree of liability for increased construction costs - it is a function of the law in that market.

You can't completely avoid construction cost risk, but you can mitigate it by working with contractors that are thinking about methodologies of construction that don't necessarily replicate what has happened before. It is beneficial to work with partners who are more creative about where they are sourcing their product and, perhaps, accept that they may have to buy domestically at a slightly higher cost but from a more reliable supply chain.

In terms of joint ventures, we may also see more deals where the developer is further incentivized to keep construction costs down. Ultimately, although we are still witnessing deals being completed, fewer people are prepared to take construction cost risks at the moment.

What are the current similarities and differences across the EMEA region when investing in residential and its subsectors?

Every market is different. What works in one country won't necessarily work in another.

In the UK, for example, we are seeing the emergence of a multitude of amenities in residential buildings. In Germany, however, building tenants have to pay for building staff themselves, so you are likely to see a pushback when developers want to introduce, say, a concierge to a residential property. National regulations and

"The key question to ask is how tradable your asset in a tiertwo or tier-three city is going to be; it is always easy to buy something, but it is not always easy to sell it"

requirements will dictate how assets are created, built and managed.

If we compare residential with other real estate assets, it is performing better than some and not as well as others. In recent years, some asset classes, like hotels, have been hit hard by the impact of covid-19 and now potentially the war in the Ukraine, so residential outperformed those.

Overall, residential may have underperformed against asset classes that you would classify as "hot" but has consistently been "warm." It's a diversifier: a defensive, counter-cyclical asset class. On a medium to long-term basis, residential is probably one of the best asset classes you could consider.

How do you expect the market to develop from here?

We see residential as an important component of our offer to our investor base. It delivers some compelling opportunities as part of a balanced portfolio. We are continually seeing the market evolve, with different areas opening up. Rental residential isn't going away.

It is worth noting that residential, unlike other forms of real estate, is operational. You are operating for the tenant, so it is a lot more hands-on than other real estate asset classes.

The operations side is going to become an increasing focus area for us in the next few years. We brought in an operational director two years ago to bolster what we can offer our residential investors. Having the internal resources to understand residential operations is key to strong market performance. We are also seeing global investors moving into other markets. These investors generally have deeper pockets.

With everything going on in relation to interest rates and inflationary pressure, I think it is going to be hard to justify the continued compression of capitalization rates. And we are going to see the continuing growth of emerging markets, probably around tier-one locations.

Single-family rental is set to grow

Demographics, interest rates and a supply and demand imbalance favor growth for the sector, reports Keith Button

ecord rent increases and a rosy growth outlook have helped boost the appeal of US single-family rental (SFR) housing with institutional investors, while demographic trends, diversification advantages and rising interest rates are providing tailwinds for the sector.

Single-family rentals have enjoyed a steady stream of record rent increases. Rents for US SFR properties rose 12.6 percent in January, which was the largest year-on-year increase in more than 17 years, according to the CoreLogic Single-Family Rent Index.

January also marked 10 straight months of record rent growth for SFR properties. The increase was three times as large as the January 2021 yearon-year increase, and four times the January 2020 increase.

Institutional interest

SFR is still a fairly new asset class for institutional investors. With roughly 3 percent of the 16 million SFR units in the US owned by institutional investors, there is significant opportunity for investment expansion of SFR markets, says Anthony Cazazian, head of US



residential real estate for Man Global Private Markets.

"It's a highly fragmented young asset class from an institutional ownership perspective, akin to multifamily decades ago," Cazazian says. "We think we have a lot of opportunity and a long road ahead of us."

Large institutional investors once perceived SFR properties as too difficult to manage over a large, scattered portfolio, especially when compared with the relative ease of potentially managing several hundred units of multifamily in a single building, notes

Nishu Sood, head of real estate research at Pretium Partners. At that point in time, there were questions about whether owning SFR on a large scale - 10,000 units or more - could be profitable because of the property management issues.

But that perception changed with technology improvements and the evolution of large-scale management practices for communicating with tenants and executing lease renewals, performing repairs, standardizing renovations and identifying good properties in areas of high demand. "What has been proven out over the past decade is that it is possible to effectively manage assets that are scattered across an area, and to do it well," Sood says. "That's really the change in the industry in recent years."

SFR has also improved its appeal to institutional investors by showing resiliency in recent years, with occupancy and demand trends for SFR remaining steady even through covid-19, Sood adds.

Housing demand was strong entering the pandemic, and SFR gained strength during that time, Sood says. Even with the Fed interest rate hike earlier in May – its largest since 2000 – SFR demand has remained resilient.

"Going forward, I foresee that the demand for single-family homes in particular is going to remain strong; I don't think this was just a temporary phenomenon," Sood says.

US housing is the largest and most liquid real estate asset class in the world, and institutional investors that wanted direct exposure to rental properties had historically put 100 percent of that exposure with multifamily households, Cazazian says.

But today, with a track record of returns for more than a decade, SFR is viewed almost as a core real estate sector.

"Institutions realize they should really be diversifying their exposure across both single-family and multifamily – something that is more representative of the US housing market as a whole," Cazazian says.

For investors, SFR tends to offer diversification with larger homes, more suburban properties, higher monthly rents, slightly higher occupancy rates, more married couples, and more couples with children or pets than with multifamily properties, Cazazian says.

Rent growth and home price appreciation has been similar in SFR and multifamily over the last 30 years. But SFR historically has outperformed multifamily during economic downturns in rent growth, with SFR

enjoying "stickier" tenants who stay longer, Cazazian says. Generally, multifamily turnover is around 50 percent per year, compared with 25-33 percent for SFR.

Other growth drivers

Traditionally, home ownership has been the primary way for households to access single-family housing. In the mid-2000s, for example, home prices rose as the housing demand surge led to an increase in home purchases, but rents did not move much. Now, demand has increased and there is a

"What has been proven out over the past decade is that it is possible to effectively manage assets that are scattered across an area, and to do it well"

NISHU SOOD
Pretium Partners

shortage of supply across all housing – for purchased homes, multifamily and SFR. As professional management of SFR properties increases and as renovated rentals make up a larger part of SFR, growth will continue in the space, Sood predicts.

Demographics also favor SFR housing growth as millennials reach their early 30s, when households typically begin to favor single-family housing.

"You have the largest age groups in the US, generally represented by the millennial generation, who are coming of age and entering life's major milestone years and getting married, having children and needing more space," Cazazian says. "When you need more space in the US, you're typically looking for a single-family home, whether as an owner or as a renter."

Rising interest rates will push the cost of home ownership higher through higher mortgage rates, leading to increasing demand and increasing rents in both SFR and multifamily. "It's hard not to have some shifting of demand towards rentals if 30-year mortgage rates have gone up more than 200 basis points, as they have," Sood says.

SFR does well as an inflation hedge for investors because its leases reset every one to two years, plus home prices and rents have equaled or outpaced inflation over the last 30 years, Cazazian says.

Rising interest rates have started to have an impact across real estate sectors, with some of the demand and cap rates starting to soften in certain markets for certain assets, with lower valuations reflecting higher financing costs, he adds.

Trends to watch

According to Pretium, the SFR stock shrunk by 700,000 units over the four or five years to 2021. To address that historically low SFR inventory, more build-to-rent projects are moving ahead – that is, construction of single-family homes for rentals. Building new SFR inventory also opens opportunities for investing in energy efficient, sustainable, net-zero-carbon-emissions projects, Cazazian says.

Securitization is another area to watch, because of the Fed rate hike.

"The rapid rise in rates recently has impacted the securitization market very quickly and dramatically, and that is going to have a pretty meaningful impact on where some of the largest SFR operators acquire these portfolios," Cazazian says.

Cost of debt for the latest securitizations has been around 5 percent, compared to about 2 percent or 2.5 percent for securitizations in 2021. "That's a massive shift," Cazazian says.





Insight on how investors approach ESG & investment strategies in private markets



In-depth analysis & research on investor sentiment and capital flows



Deep dives & commentary on topics shaping the sustainable investing landscape



Find out more www.newprivatemarkets.com



Smart, sustainable and profitable residential?

Efforts to improve sustainability in residential real estate may not always offer the most attractive returns, writes Barclay Ballard. But technological innovation may unlock new profits and help meet environmental goals at the same time, even in older building stock

ustainability attracts a huge deal of interest from investors, as well as individuals with no interest in financial matters of any kind - so, too, does housing. However, these twin preoccupations are often in opposition with one another.

Collectively, homes generate 20 percent of the globe's carbon emissions, according to publisher TechNative. As much as we all need access to satisfactory housing, we also need a planet that remains inhabitable for a population of almost eight billion.

Increasingly, it has become clear that investing in sustainability and housing isn't necessarily counterproductive. The global smart home market is predicted to be worth \$622.6 billion by 2026, according to market researcher Fortune Business Insights, with growth driven by a rising tide of green projects. These projects are likely to gain additional financial backing, too, with research showing that properties with green certification yield a rental premium of 6 percent and a sales premium of 7.6 percent.

Technological innovation is ensuring that sustainable housing is no longer an oxymoron. Examples range from the pioneering to the prosaic. Dutch multinational firm Philips now offers Ultra Efficient light sources that consume 60 percent less energy than standard LED bulbs. In construction, electrochromic glass is being used to reduce a home's reliance on artificial lighting. Whether it concerns insulation or automation, smart tech is fast making the sustainable home a reality.

"Real estate investors are really focused on technology that helps us manage our assets more efficiently," says Sadie Malim, director at Moorfield Group, a leading UK real estate fund manager. "This includes technology built into the BMS [building management system], technology that gathers

"Energy efficiency is one driver of demand for new-build stock, especially in light of rising energy costs, but also given tighter government regulations coming in"

ANNA WARD Knight Frank

energy data remotely and analyzes how it is being used, and technology that oversees the customer journey."

But if the market for sustainable homes was already growing under its own steam, it has received added impetus from recent challenges. The war in Ukraine has resulted in significant energy price rises in many markets, with governments around the world attempting to reduce their reliance on Russian gas. Fossil fuels may not be going away just yet, but the market trajectory is clear.

Sustainable, smart homes have a bright future. For now, real estate investors have some decisions to make. Do they want to buy or build green? And will government regulations ultimately make up their mind for them?

Watch this space

The market for sustainable homes is not only flourishing due to the heightened prominence being given to environmental issues, but because they can offer good returns, too. While it is true that smart building technologies typically lead to a 30 percent reduction in energy usage, as per TechNative, they also deliver financial benefits for real estate investors and construction firms (not to mention cost savings for occupiers).

"We are seeing strong demand for new-build residential, with Knight Frank new home applicant volumes up 50 percent in the first quarter of 2022 compared with the five-year average," Anna Ward, Knight Frank senior residential analyst, explains. "Energy efficiency is one driver of demand for new-build stock, especially in light of rising energy costs but also given tighter government regulations coming in, which will eventually create additional cost pressures for owners of existing, older homes."

Some of the new homes Ward is referring to include the Moda, McEwan in Edinburgh, a new 476-home development that uses technology to prioritize environmental and personal wellbeing.

The £215 million (\$264 million; €251 million) build-to-rent property boasts wellness sensors in each home and communal space to collect real-time data on light, sound, temperature, and CO2 levels. It is the first residential scheme in Europe to receive a Fitwell three-star rating for its sustainable practices.

Outside of the UK, the regeneration of Paris' Clichy-Batignolles "eco-district" has recently been completed at a cost of €505.7 million. The implementation of solar photovoltaic roofs and smart grid technology demonstrates that smart, sustainable homes are not merely a UK phenomenon.

Simon Heawood, co-founder and

CEO at Bricklane, provider of the largest PropFinTech institutional investment platform in Europe, describes the market in stark terms. "Institutional demand for UK residential property is skyrocketing; institutional demand for unsustainable housing strategies is zero," he says. "Investment in residential property simply has to be sustainable, and ESG remains front of mind for investors."

While it may be too early to say with any certainty whether recent increases in energy prices will turbocharge the growth already being witnessed, residential real estate investors will no doubt be interested to see how this trend evolves over 2022 and beyond. Certainly, occupiers are already reacting to recent events, with figures from UK building society Nationwide suggesting 69 percent of households intend to make their homes greener. Eventually, this is likely to translate into a more pronounced shift in favor of energy-efficient new-build assets.

A smart evolution

The Coalition for Urban Transitions initiative estimated that 36.5 percent of emissions can be cut from residential buildings using proven technology alone. Many of these technologies, such as smart thermostats, are already well-known but have not achieved the necessary scale.

As of February 2020, the EU rated around 75 percent of its building stock as energy inefficient. Whether existing or novel technologies, more needs to be done to get them into homes.

"There's considerable excitement about new technologies coming through alongside this surge of interest in sustainable housing – from smart meters through to heat pumps," says Heawood.

"While the largest impact often comes from more traditional approaches, such as insulation and appliances, we see huge potential in these new technologies to improve the energy efficiency of properties."



Partnerships like the recently-announced collaboration between Samsung Electronics and multinational technology firm ABB should help make smart home innovations more common. The two companies have pledged to develop a one-stop shop for Internet of Things solutions, integrated with some of ABB's hardware portfolio, including renewable energy equipment like photovoltaic inverters and chargers.

Innovations that help developers and occupiers measure the sustainability of their properties are to be welcomed, but both parties also need access to solutions that can not only aggregate and analyze this information but also incentivize its use in tangible terms.

One example of the latter is the Carbonlite Challenge developed by Atelier Capital Partners together with the Royal Institute of British Architects. The pilot initiative encourages residential developers to build more sustainable homes by offering loans to qualifying developments where the greener the design, the more favorable the financial terms available. The scheme, which can potentially bring the annual cost of borrowing for residential development down to 4.99 percent, has already been employed for

the construction of six energy-efficient homes in south London, with developers set to receive a rebate of over £200,000 following the completion of a post-construction assessment.

If, as forecast by market data firm Statista, the number of smart homes is set to almost double by 2025, smart solutions – both hardware and software – will need deployment on a wider scale. With the sustainability agenda unlikely to disappear, the demand for sustainable homes will eventually reach a critical mass. Investors looking for decent returns would be wise to back smart home projects with strong ESG credentials before the prices of related assets become prohibitive.

The scale of the challenge

While sustainability may provide a significant impetus across many markets, there are unique challenges in the residential real estate sector. One is cost – particularly where it concerns retrofitting older buildings to meet relatively new environmental standards. In the UK, for example, the rate of retrofit needs to be seven times greater than its current level, with Energy Performance Certificates (EPC) data suggesting that this could cost as much as £330 billion.

A proptech partnership

Last year, Moorfield Group and Bricklane entered into a £600 million joint venture with sustainability as one of its central pillars.

Highlighting the in-roads that smart solutions have made into the residential housing market, Moorfield Group, a UK real estate fund manager, and Bricklane, a proptech residential investment platform, announced a collaboration last year targeting a £600 million (\$734 million; €698 million) UK portfolio of professionally managed homes for rent. The partnership claims to represent the "most significant technology-driven investment in the UK's residential market to date."

Both companies have strong sustainability credentials that are expected to be furthered through the joint venture. For example, Bricklane works with the California start-up Wren to ensure its entire property portfolio is carbonneutral, while Moorfield says it plans to be operationally net-zero by 2030.

"The core challenge to making sustainability improvements in housing at scale is access," Heawood notes. "In order to have a rapid, meaningful effect on the housing market, unlocking access to make improvements to the UK's 5.4 million private rented sector homes that are already built is critical. The fragmented nature of the housing market has historically made this difficult, but a technology-led approach can help crack this granularity issue, and enable the rollout of improvements at a scale that would otherwise be impossible."

As Heawood suggests, smart solutions can help facilitate the development of more sustainable homes but the returns for investors remain questionable. In the UK's private rental sector, there are indications that landlords will soon face tightening environmental standards that will place an additional financial burden on private investors. What is more, the returns for retrofitting sustainable improvements are already limited. The payback period for energy improvement projects costing £6,472 to take a home from EPC grade D to C could be as high as 36 years, according to some estimates.

Alongside regulatory changes, governments could also look more closely at the role taxation plays in encouraging sustainable real estate investment. Tax changes, whether they serve as more of a carrot or a stick for investors, can deliver the marginal improvement in returns that push investors to support sustainable projects, whether for greenfield or brownfield development.

"At present, it's hard to point at any evidence of tech-enabled sustainable assets securing any pricing premium specifically for that reason - it's too nascent," Malim acknowledges. "However, in our experience, the investors focused on future-proofing their assets are also the ones putting the most effort into the design, operations, and customer experience, so it's all in the mix when it comes to achieving the highest institutional valuations"

Looking back to move forward

Undoubtedly, there is a great deal of momentum behind sustainable housing, driven, at least in part, by the emergence of new smart technologies. Around the world, 28 major cities have signed up to the World Green Building Council's Net Zero Carbon Buildings Commitment but new builds alone will not be enough to reach their aims. "We

"Institutional demand for UK residential property is skyrocketing; institutional demand for unsustainable housing strategies is zero"

SIMON HEAWOOD Bricklane

expect to see increased institutional momentum behind the retrofitting of existing properties as a means of improving carbon and energy efficiency," Heawood concludes.

Retrofitting existing homes with more sustainable solutions is already underway in some markets, of course. In New York, the historic Waldorf Astoria hotel has had 5,300 windows replaced and upgraded to offer modern thermal performance. London-based Q-Bot, which received £3.6 million of Series A funding from French multinational Saint-Gobain in 2019, uses robots to scan underfloor spaces, create a 3D map, and spray insulation material where beneficial. Evidently, investment potential does exist around sustainable, smart homes - even for older properties.

Relying on new homes to make housing stock more energy efficient could take decades but tech-enabled institutional investment in upgrading existing residential property can drive greater improvements at a much faster rate. With the regulatory space continuously shifting around sustainability, investors in buildings old and new may want to incorporate ESG into their strategies soon - if they haven't already done so. ■

EXPERT COMMENTARY

Local, regional and central governments have spent heavily to create smart cities, says Mahdi Mokrane, PATRIZIA head of investment strategy and research. But a rethink is required



The future needs 'smartened up cities,' not smart cities

For the past two decades, governments have invested vast sums to create smart cities. These are urban environments that leverage information and communications technology to manage a city's assets and processes efficiently and provide connectivity and mobility to an ever-growing urban population.

The vision of a sleek, master-planned metropolis providing data-driven efficiencies, conveniences and new development opportunities is powerful. According to one count, the number of smart city projects announced annually worldwide rose from three in 2011 to 78 in 2019.

However, enthusiasm is waning for grand smart city visions. Part of this is due to covid. The rise of the pandemic SPONSOR

PATRIZIA

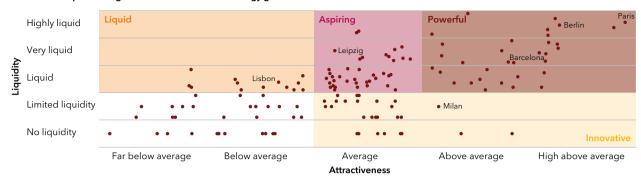
saw many initiatives pushed back or canceled. But there is also a growing litany of smart cities across the globe falling well short of the lofty aims proclaimed for them by developers and entrepreneurial city leaders.

Reprioritizing

One problem is the growing realization that places designed from scratch often fail to capture what makes a city successful in the first place: the history, culture, promise, vibrancy and people. Simply put, a lot of urban life simply 'does not compute.' Does this mean smart cities are a foolish idea? Currently, 56 percent of the world's 7.9 billion people live in existing cities, and the number of urban dwellers will only continue to swell in the coming decades. The alternative to constructing gleaming, data-driven cyber-cities on greenfield sites is to graft innovative technologies onto existing cities in ways that allow cities to reinvent themselves.

It is what successful cities, whose existence has spanned centuries or even millennia, have always done: incorporate the best innovations of the time – electric lighting, elevators, trains, sewage systems, viaducts – to enhance urban life.

The building components of smart



PATRIZIA European Living Cities Index: Investment strategy goals matrix

Source: PATRIZIA, October 2021

city concepts are sensors, cameras, communication networks, cloud infrastructure and the AI processes needed to process the ever-growing masses of data. Such solutions have already been successfully implemented in places like Barcelona, London, New York and Singapore - four cities that regularly feature on smart city lists.

At PATRIZIA, we consider the best use of innovative technologies is not in building smart e-topias but in 'smartening up' existing cities. Our legacy cities face immense challenges - overcrowding, traffic congestion, decarbonization, environmental degradation, resource scarcity and environmental threats. The key to addressing these is retrofitting our cities' infrastructure, buildings and services in an intelligent way so they remain secure, resilient and, above all, livable in the future.

Picking the right targets

From a real estate investment perspective, we believe residential will be one of the property types that will continue to deliver superior risk-adjusted returns. However, to maximize returns, capital needs to be deployed strategically, based on sound market research that also considers how cities are smartening up.

This is important because not all European cities present investment opportunities. Urbanization is a worldwide trend, but in Europe it has a significant demographic twist: the continent is also aging rapidly. This

decade, the long-term consequences of demographic drivers - increasing lifespans and fewer babies - will become a reality.

The number of employed people in the EU 27 peaked in 2020 and companies will increasingly find themselves competing for an ever-shrinking pool of young talents. Importantly, by the end of the 2020s, the last of the Baby Boomers will be entering retirement, which will also reshape aspects of society beyond the workforce.

For example, young people will continue to flock to successful cities. but adjusting healthcare, mobility services, public infrastructure, housing and social policy will severely burden many other cities.

These challenges will be exacerbated in countries with declining populations: Greece, Italy, Portugal and much of eastern Europe. Such long-term factors as demography, technology and social change mean investors need to be highly selective concerning European cities.

We have developed what we believe to be a market-leading approach to identifying investment opportunities. First, our focus is tightly urban - and with good reason. After all, Europe has been on the path toward ever greater urbanization since the 1950s. Then the share of people living in urban areas was 51.5 percent. Today, it is 75 percent and projected to rise to almost 84 percent in 2050.

Large European cities should see

growth continue, particularly the capitals. Such cities routinely outperform their national economies, sometimes to a quite staggering extent. Between 2005 and 2019, for instance, Oslo saw more than twice the GDP growth as Norway as a whole.

The economic strength of London and Paris is quite extraordinary. For example, London has a GDP of €801 billion, which, if it were a country, would see it ranked eighth in Europe above Switzerland, Sweden and Ireland. Paris, with a GDP of €685 billion, would place 10th.

Quite simply, cities are increasingly the engine rooms of economies worldwide, particularly in Europe. However, it is still essential that investors fully understand city dynamics to match locations to investment strategies. For example, when other capitals were booming, Brussels and Lisbon saw significantly lower growth than Belgium and Portugal. Then, too, many investment opportunities lay outside the city boundaries of the capitals.

Identifying opportunities

A key aspect of our approach to understanding the emerging issues and challenges confronting European cities is the PATRIZIA European Living Cities Index, which takes in a wide range of demographic and economic factors and each city's innovative capacity and connectivity to build a rich picture of individual cities and how they sit relative to each other. All these factors are used

to rate a city's attractiveness. The most recent update has enhanced the analysis on the fundamental side and in the attractiveness analysis to reflect smart city and sustainability aspects.

However, this is only part of the picture. The index also provides intelligence on how liquid the residential market is in the 142 cities examined. This is critical as liquidity dictates how quickly capital can be deployed and how active portfolio management activities can enhance property value while the fund matures.

The index then allows us to place cities into four quadrants: powerful, aspiring, liquid and innovative. All four sections are seen as investable as they provide different opportunities depending on fund strategy and, crucially, desired levels of risk and return. Inevitably, some are categorized as neither attractive nor liquid and are placed in a fifth section, which we view as un-investable but that we continue to monitor.

However, it should be said that cities move between segments with each iteration of the index. For instance, in the latest iteration, Luxembourg moved from innovative to powerful due to increased liquidity.

By building a powerful picture of individual city dynamics and how they compare to other locations, we can also target investments towards residential subsectors as appropriate. For instance, within multifamily housing, we have identified Dublin and Paris as leading locations for investment.

Dublin is currently benefiting from the fallout from Brexit, with both the financial and technology sectors continuing to attract well paid, relatively young people, thereby creating a growing demand for high-quality rental accommodation.

Meanwhile, in Paris, new opportunities are opening due to the improvements delivered by the Grand Paris Express. When finished in 2030, this infrastructure project will have created a 200km metro loop around Paris with

68 new stations and connections to the city's three airports.

The price tag is nearly €40 billion, and the ambitious aim is to dramatically shift the way people think and move about the capital. Two million people a day will use the Grand Paris Express. Carbon emissions should also be slashed, primarily by eliminating the daily commute through the city heart, possible for many today only by car. The project uses both established and new technologies alike to increase the quality of life in one of Europe's most famed metropolises. Smart move!

Think beyond the capitals

Paris is an example of a successful European city using technology to smarten up its infrastructure. The design of the index also captures many of the institutional, human and technological vectors that help investors identify cities that are smartening up their urban environments. This gives investors a

"The alternative to constructing gleaming, data-driven cybercities on greenfield sites is to graft innovative technologies onto existing cities"

solid footing to build them into their investments in a forward-looking approach.

Importantly, investment opportunities do not stop at the city limits of the capital. Many second-tier European cities provide the conditions for sound investments and solid long-term returns. But as urbanization and demographic change are moving at different speeds and degrees, it requires a thorough understanding to benefit from the trends.

Some of the second-tier cities that rate highly in the index in terms of innovation are Grenoble, Lille, Lyon and Toulouse in France, and Eindhoven in the Netherlands. Espoo, the second-largest city in Finland, has a vibrant, innovative ecosystem.

Bordeaux, one of the world's famous wine centers, is busily smartening itself up. Since 1990, the city has restored its neoclassical architecture, introduced a high-tech public transport system, and turned the former industrial docks area into an emerging arts district. A project called Bordeaux Euratlantique also aims to transform Bordeaux by 2030, turning it into a leading European city, attracting a targeted 30,000 new jobs and housing for 50,000 people.

Bordeaux cannot currently be found in any of the world's top 10 (or even 30) most livable cities indexes. (On the PATRIZIA index, it ranks 54.) However, as it transforms itself from a city in decline into a future-looking city, its rankings are bound to rise, and opportunities abound as part of the right strategies.

In the end, cities of the future don't have to be 'smart,' well-engineered or cleverly designed. They need to be fair, green, sustainable, safe, healthy, affordable and resilient. The internet, the mobile cloud and clever buildings and infrastructure will contribute to this. We believe the best investment opportunities will be in places seeking to create livable communities that are humane environments that engage people and that work.

Multifamily residential keeps on rising

021 was a record-setting year for multifamily real estate. The pandemic may have triggered an exodus expensive urban centers, but demand for multifamily properties reached unprecedented levels, boosted by a combination of higher spendable income and historically low interest rates.

US government-sponsored mortgage provider Freddie Mac's multifamily unit estimates that investment in the country across the first nine months of 2021 alone hit \$179 billion, almost eclipsing the highest-ever annual total of \$193 billion, set in 2019, with three months to spare.

"Investors are looking to asset classes with the strongest rent growth potential as a means to offset inflation," says Aaron Jodka, director of research, US capital markets at real estate firm Colliers. "Multifamily and industrial are the best poised asset classes, along with alternative assets such as life science, to do that via rising rental rates."

Booming investment in the US showed up in two key areas. "The number of units sold in Q4 2021 alone accounted for 42 percent of the number traded over the past four quarters," says Matt Vance, Americas head of multifamily research for CBRE.

"But it is more than just the number of properties that sold. The price per unit has risen 24 percent in the two years from Q1 2020 to Q1 2022. Again, strong fundamentals and competition

Changing work practices and retail uncertainties have shifted a wall of investment to the asset class, writes Charles Waine, setting records in the US and surpassing the office sector in Europe



among buyers has put significant downward pressure on cap rates and boosted asset pricing."

In Europe, real estate firm JLL estimates that €22.5 billion real estate services firm was invested in forward-funding multifamily deals last year, accounting for 39 percent of total transaction volume in the sector and exceeding the office sector for the first time.

"There were several things contributing towards increased activity in the European sector, such as low interest rates, the resilience of the sector through covid lockdowns, as well as investor uncertainty around the future of office and retail," says Richard Valentine-Selsev, director of residential research at real estate services firm Savills.

Multifamily investment in Germany was the continent's main driver last year, topping 55 percent of total investment in the sector, mainly due to Vonovia's acquisition of Deutsche Wohnen, while Sweden and Denmark were also boosted by the Heimstaden-Akelius megadeal. Combined, Savills estimates that the two deals accounted for 40 percent of total European multifamily investment.

"Several factors have converged contributing to the record run-up in multifamily over the last few years," explains Brian Murphy, CEO at real estate lending platform Veleta Capital. "An enormous amount of liquidity coupled with record low interest rates

Analysis

over the last few years have compressed cap rates and driven asset values to all-time highs."

Murphy adds that the government stimulus and the global shift in the way people work has also contributed to surging rental growth in the US over recent years. Record rental growth in an already supply-constrained asset class has only fueled activity and favored sellers.

Strong appetite

While last year may have been truly exceptional, multifamily momentum appears to have kept pace across the first quarter of 2022. In the US, investment volumes hit \$63 billion, a 56.4 percent increase year-on-year and the highest Q1 on record. CBRE figures show that multifamily accounted for 37 percent of total commercial real estate investment volume, followed by office at 21 percent and industrial at 20 percent.

"Strong migration to the Sunbelt has supported incredible rent growth, while occupancies are at all-time highs across markets," highlights Jodka. "This has attracted capital to cities throughout the Southeast and

Southwest. That said, investment capital is chasing properties throughout the country, with strong volumes in the Northeast, Midwest, and West as well."

All 69 markets tracked by CBRE in the US recorded year-on-year rent growth in Q1, with 56 of them hitting double digit gains, up from 49 in Q4 last year. All Pacific markets achieved double digit growth, while the Southeast region reached rent growth of 22 percent.

"Although the overall market has seen increased investment, the Sunbelt markets on this list are the real 'hotspots' today," adds Vance. "Looking ahead, as rent growth responds positively to the tightening occupancies in major coastal cities, we expect buyers to expand their Sunbelt focus into the gateway cities and other large coastal markets like Seattle."

In Europe, Germany-based lending specialist Catella Real Estate describes the residential market as the most dynamic of all asset classes in Q1, but warns that the war in Ukraine, rising inflation and lingering effects from the pandemic are likely to slow economic recovery.



From the 63 European cities that Catella tracks, average monthly apartment rents increased by 3.82 percent year-on-year in Q1. The cheapest apartments were found in the Belgian city of Liège, followed by Brno in the Czech Republic and Malaga in Spain, while the most expensive rental market was still Geneva, Switzerland.

Many countries across Europe are seeing falling yields, according to Catella, with sideways movement



Dallas continues to dazzle

"Five of the top 10 multifamily investment markets [in the US] have seen a big jump in recent years. And investment activity is trending well above historical annual averages," says CBRE Americas head of multifamily research Matt Vance. These include Dallas/Fort Worth, Phoenix, Houston, Miami/South Florida and Atlanta.

Vance notes that renter demand and a healthy, but manageable, supply pipeline have pushed vacancies to a new record low of 2.3 percent. These strong fundamentals and the short-term nature of apartment leases have positioned the sector well to capture the persistent inflation and net operating income growth. Colliers director of research, US capital markets, Aaron Jodka, points to the strength of the Dallas market in particular. "Last year, Dallas had more sales volume (\$29.1 billion) than the entire region of the Mid-Atlantic, Midwest, or Northeast (individually, not all three combined). Dallas has been the top investment sales market since 2016."



notable in the UK, Poland and Switzerland. In the final quarter of last year, JLL pointed to strong capital pressures in Europe that were already turbo-charging yield compression.

Turning the page

The outlook may be positive for further investment, but there are still some looming challenges to consider. "The main headwinds are coming from inflation (cost of materials and labor), rising interest rates and their impact on borrowing costs and geopolitical factors," says Will Mathews, multifamily lead at the Colliers Capital Markets board of advisers.

Veleta Capital's Murphy adds that the rapid rise in interest rates, coupled with supply chain issues, are significant challenges to further investment growth in the sector. "Construction costs are up dramatically, deliveries are taking longer and developers are having to recast their stabilized assumptions," he explains. "The market is in price discovery, and we expect that to last another handful of months as investors weigh opportunities."

Vance says that in the US investment activity this year should come close to 2021, despite rising borrowing costs, but cautions that "we could see a deceleration next year."

"The price per unit has risen 24 percent in the two years from Q1 2020 to Q1 2022"

MATT VANCE

"Construction costs are up dramatically, deliveries are taking longer and developers are having to recast their stabilized assumptions"

BRIAN MURPHY Veleta Capital

Jodka emphasizes that "since 2021 set an all-time investment sales record, breaking 2019's previous peak by 82 percent, it will be hard to maintain that level of investment growth."

Before the war in Ukraine added inflationary pressures, JLL said that regulatory changes in Europe could also impact market activity and potentially deter further investment.

In February, the Spanish government passed the "Right to Housing Law" bill aimed at controlling rental prices and making housing more affordable. Landlords that leave houses unoccupied for more than two years will face higher municipal tax rates, while the new law also caps rental prices in areas deemed "stressed" because of high housing demand.

Last year, Germany's highest court ruled that the government's similar experiment with market intervention was illegal following the introduction of a rental cap in Berlin in February 2020. Real estate investors successfully argued that the move was unconstitutional on the grounds that the law could only be determined by the federal government rather than the state.

In 2022, the German federal court also denied a call for a referendum on rental freezes in Bavaria. Like Spain, Germany has struggled to solve its housing crisis, with supply failing to match spiralling demand.

Elsewhere in Europe, the Irish government has introduced tighter rent controls and a transfer tax surcharge on bulk purchases of single-family rental homes. In December, the rules were amended so that rent cannot exceed inflation or increase more than 2 percent annually, depending on which is lower.

Investors will be conscious of the impact further government regulations in 2022 and beyond may have on the market, but with a supply crunch in many countries rumbling on, authorities will also be wary of deterring private capital.

Building to reinvent rental





BTR is blossoming in the UK and Australia, observe Macquarie's Paul Checchin and James Bechely-Crundall, with both markets offering plenty of potential for growth

The UK and Australia are playing catch-up with the US in the world of purpose-built, professionally-managed rental accommodation. From a near standing start just a few years ago, the build-to-rent (BTR) sector in the two countries has continued to grow.

BTR developments have gone up in prime locations across Melbourne, Manchester, Sydney, Birmingham, Edinburgh and London. A growing market offers growing opportunities, both to continue to offer premium rental apartments but also to cater to a broader customer base.

Macquarie Asset Management has worked with experienced developers to form Local in Australia and Goodstone Living in the UK to create offerings that cater to a broader customer base

SPONSOR MACQUARIE ASSET MANAGEMENT

that has found it increasingly difficult to get onto the property ladder. Macquarie Asset Management managing director Paul Checchin and senior vice-president James Bechely-Crundall explain why the BTR sector is well placed in Australia and the UK, how the two markets differ and where their model fits into this increasingly competitive market.

How has the housing market changed over the last year?

James Bechely-Crundall: The story

in the UK has been the continuation of the well-documented narrative of stretched housing affordability. This has been around for some time and will not be solved anytime soon.

House prices have outstripped wage growth for over a decade now. Prices are up 12 percent over the past 12 months and London median prices now represent more than 13.5 times average incomes. Combining this with tighter credit conditions for first home buyers and growing cost-of-living pressures has created more and higher barriers to home ownership, although unlike in Australia, rents held up pretty well during the pandemic.

Paul Checchin: Low interest rates have been a key driver of house price growth in Australia, and in the calendar year of 2021 house prices were up 22 percent Australia-wide, which is obviously very strong.

Even before the recent appreciation in house prices, house price growth has outstripped wage growth in Australia. In the 20 years to 2021, house prices in Australia have grown at 6 percent per annum, whereas wage growth has only been 3 percent. It has resulted in the same dynamic as in the UK, where affordability has deteriorated to now be at very stretched levels.

From a rent perspective, following the onset of covid in 2020, rents generally initially fell, but it did differ between markets. In the past six months rents have begun to grow quite strongly, coinciding with the reopening of borders and fading fear of covid lockdowns.

One of the key factors for that is that vacancy rates have declined quite substantially. In Sydney, for example, the vacancy rate is currently 1.6 percent, down from 3.4 percent 12 months ago. In Melbourne it is 1.9 percent versus 4.4 percent last year. What we are seeing is a flattening of house price growth and an acceleration of rental growth.

Does this mean there is a growing trend towards rental in the future?

PC: The shift to renting is not new and has been happening for the past two decades. The proportion of renters has been growing and we expect this will continue, taking into account unaffordable housing and demographic trends in Australia. Collectively these factors provide a strong tailwind for growth in the rental market.

It starts with population growth. Australia has one of the highest rates of population growth in any developed economy. There has also been an especially large increase in the key 20-34-year-old demographic over the past decade, who are the main renter cohort. This cohort is now tending to place greater emphasis on flexibility and convenience, and the idea of renting gives them a greater freedom in that respect.

JB-C: Similar to Australia, favorable demographic and lifestyle changes have been postponing home ownership over the past two decades. The average first time buyer in the UK is now 34 years old versus 26 in the late 1990s, which further emphasizes that more people are renting for longer.

What makes BTR the best way to respond to these trends?

PC: In Australia, the existing rental offering has generally delivered a poor experience to the renter. The supply of high-quality, purpose-built accommodation that offers security of tenure, well thought-out and purposefully designed amenity and living spaces and service that is desired by consumers has a strong case in Australia.

JB-C: In the UK the story is almost exactly the same, except that the quality of the existing housing supply is generally much worse and, simply, often not fit for purpose. This is not surprising once you consider that the UK has the oldest housing stock in Europe, with around 40 percent of it having been built before the end of World War Two.

The pandemic has been a trend accelerator for the global build-to-rent sector. It has become the catalyst for residents to demand more from the space where they live, work and relax. This fundamental demand shift has created an opportunity for BTR groups, like Goodstone Living and Local, to develop new residential homes that leverage the latest in design, amenity, customer experience and sustainable building.

PC: In BTR it is also easier to deliver positive ESG outcomes relative to traditional build-to-sell apartments. For

Has working from home had an effect on the BTR market?

JB-C: Yes, certainly. Today's renter is demanding more flexibility from their home and the existing housing stock isn't conducive to home working. This provides an opportunity for new purpose-built rental homes that incorporate workspaces within the building to align with customer behavior.

PC: Working from home has certainly made people think more about what they want from their space. Renovation activity in Australia is high, with people seeking to enhance comfort and wellbeing in their homes whilst often also accommodating the ability to work remotely effectively.



example, investing in solar becomes viable, as the owner will benefit from reduced ongoing operating costs. It is similarly more feasible to invest in initiatives that deliver water and waste efficiencies.

In the specific case of Local, the platform will also deliver a positive social impact by providing specialized accommodation for people with disabilities, affordable housing for key workers and single women over the age of 55, a demographic which has been identified as particularly vulnerable to homelessness.

Is now the right time to enter the market?

IB-C: We think so. Customers are demanding more, and there is no shortage of them. What there is, however, is a severe lack of high quality, purpose-built rental homes.

To put it into context, the UK has 5.2 million private rental households, which is 19 percent of all households. On the supply side, there are fewer than 100,000 operational BTR units, which represents less than 2 percent market penetration. The sector is much more mature in the US, where market penetration is approximately 37 percent.

Our strategic approach to this sector has been to create and grow specialist developer/operator businesses to take

"In the 20 years to 2021, house prices in Australia have grown at 6 percent per annum, whereas wage growth has only been 3 percent"

PAUL CHECCHIN

advantage of this market displacement. We think this is the best way to play this early-stage growth market.

PC: In Australia the sector is still in its infancy but we believe it will institutionalize. We invested in a specialist BTR developer and operator - Local - founded by industry veterans Dan McLennan and Matt Berg, who have a lot of experience in the BTR sector in Australia.

Local is differentiated in that it is targeting a broader range of customers in a broader number of target markets than most of the other operators. This means that rather than focusing on the exclusive and premium end of the market, Local will deliver a very high-quality product catering to renters from diverse communities comprising all age groups and backgrounds. Ultimately this means that the addressable market is large, catering to the whole spectrum of the growing renter population.

JB-C: We recently established Goodstone Living, a specialist real estate platform focused on the UK's buildto-rent sector. Similar to Local, our investment is partnering with two developers, Darryl Flay and Martin Bellinger, 35-year veterans of the residential sector.

The business has been set up to create a better way to rent. This means designing, delivering and operating the next generation of rental communities designed around three core principles: better homes; bigger, better spaces; and better, simpler service.

Goodstone Living takes a highly analytical approach to its building locations and amenity offering, while also prioritizing customer wellbeing through enhanced access to open and green spaces. The team is currently delivering these next generation schemes across two sites - Camp Hill Gardens in Digbeth, Birmingham, and Skyliner in Leith, Edinburgh. Both are excellent projects and the business has a deep pipeline of development opportunities.

"The UK has the oldest housing stock in Europe, with around 40 percent of it having been built before the end of World War Tavo"

JAMES BECHELY-CRUNDALL

Additionally, Goodstone Living is focused on delivering its private units for long-term rental at an accessible price point. This means that at least half of its units are accessible to at least half the local community – providing its customers with a combination of the flexibility of renting and the certainty of homeownership.

What does the future hold for BTR?

PC: BTR is an exciting opportunity in Australia. We think the proposition for the consumer is compelling and superior to existing rental options. If you look at the US, multifamily accommodation accounts for about 11 percent of the total housing market. In Australia it is not far off zero, so if we transition to just 1 percent of housing stock to BTR it is a A\$90 billion (\$62 billion; €60 billion) opportunity.

JB-C: The UK market is still early stage and has a very bright future. The growth of this sector in the US is a useful gauge of scale and therefore potential; applying the US penetration rate to the UK implies a market for a further 2 million purpose-built and professionally managed rental homes. This has very much crafted our approach in focusing on earlier stage markets that exhibit strong underlying fundamentals.



Hong Kong conditions are right for co-living

Circumstances are right for entry into the Hong Kong market, writes Iris Lai

ong Kong's residential real estate market has fared better than many peers through the recent challenges of covid-19, US-China trade tensions and 2019 social unrest. The housing price index rose 6 percent from January 2019 to March 2022, according to the Hong Kong Rating and Valuation Department.

While economic headwinds and covid-19 have reduced corporate demand for offices and border closures have dampened the retail and hotel sectors, the residential market has held up quite well.

Asset manager Value Partners Group's head of real estate, Rachel Tong, notes that "there is still positive carry for most residential assets."

Investing in Hong Kong for sale residential through redevelopment is "in-line with the government's housing policy and healthy pricing outlook," says Joelin Ma, director of real estate, Asia-Pacific at Dutch pension investor APG Asset Management. It represents a "defensive asset class," supported by fundamental supply scarcity, strong purchasing liquidity and population inflow from the Greater Bay Area integration with China.

Lofter's Alvin Leung notes co-living redevelopment property can give core returns

Among the most attractive ways of investing in the market is in the co-living space, with plenty of opportunities to convert hotels into co-living properties. Multifamily is also always an option.

"The recent correction in both capital and rental values should make the entry proposition look more attractive," says Ingrid Chen, head of real estate Hong Kong at investment manager Schroders Capital. Rents are typically higher for serviced apartments, while co-living properties generally generate higher yields than other classes in traditional residential.

Supply and demand

JLL Hong Kong chairman Joseph Tsang says demand always outpaces supply in the city. The government changed the public to private housing supply ratio to 70:30 in 2018, slowing down new private housing construction since 2020 and lifting overall prices.

"There is very high pent-up demand for homes," says Samuel Chu, co-founder and chief investment officer at private equity real estate investment group Phoenix Property Investors. "This strong housing demand is driven by the fundamental growth of domestic needs for marriages/divorces but not led primarily by mainlanders."

Housing supply is not expected to keep up with demand in either the short or medium term. It is constrained not least by increasing material costs and labor shortages, which have made it more expensive to build. That lack of supply makes the market attractive even despite the current high prices.

In the wake of covid's fifth wave with stricter social measures, home rents held up well in the first quarter and the prevailing price correction "will only be short-lived," says Keith Chan, director and head of research at real estate services firm Cushman & Wakefield Hong Kong.

Residential prices are projected "to go up by 3 percent to 5 percent" in 2022, says Martin Wong, head of research and consultancy Greater China at property consultancy Knight Frank, with relaxed mortgage rules set to "certainly speed up the recovery."

However, An Chen, assistant portfolio manager of Asia-Pacific at real estate manager AEW Real Estate Securities, notes that potential interest rate hikes could be a headwind in the second half of the year.

The call of co-living

The pandemic has prompted a rising proportion of institutional funds to enter Hong Kong residential. With borrowing costs set to increase, Chan at Cushman & Wakefield says, "cash-rich investors are welcomed by local players as an alternative source of capital."

"Recent correction in both capital and rental values should make the entry proposition look more attractive"

INGRID CHEN Schroders Capital

"We haven't seen such active investment for a long while"

CAROL CHOW Lofter Group

Hong Kong's connectivity with China "should continue to buttress the city's appeal to institutional capital," notes Chen of Schroders Capital. Institutional and private equity funds are seeking to allocate capital in Hong Kong, primarily in alternative investment classes like co-living, senior living and – beyond residential – data centers for risk diversification.

Phoenix Property's Chu says some funds have targeted co-living, including through hotel conversions. This is something that Carol Chow, founder and chairperson of local developer Lofter Group, has also seen.

Pandemic-stricken hotels have attracted investors for conversion into co-living properties, Chow says. Central-located tenement buildings with attractive prices offered by distressed landlords also lure investors. For example, Lofter has teamed up with Singapore-based SC Capital Partners to acquire such aging buildings for HK\$418 million (\$53 million; €50 million) for residential conversion.

Co-living's stable rental income and high occupancy rate of over 95 percent have driven private equity funds' interest for value-add opportunity. Last November recorded three deals by foreign funds. Chow comments: "We haven't seen such active investment for a long while."

With long-term income yield of about 3.5-4 percent, co-living redevelopment property is "core" for private fund investors as part of asset diversification in Asia-Pacific, says Alvin Leung, director of investment management at Lofter. A number of co-living operators have partnered with foreign funds for investment aiming at long-term stable cashflows, instead of short-to-medium term capital gain.

Competition is seen for hotel co-living conversions, with a handful of private equity funds seeking targets for potential conversion, says Alan Yau, head of real estate in Hong Kong at KPMG China. These include insurance and pension-backed funds from the US and Europe.

Co-living suits a high-density city like Hong Kong, where affordable housing options with good amenities in convenient locations catering to young professionals remain scarce. High occupancy during the pandemic "is a testament to the strength of this sector," says David Fassbender, head of Southeast Asia at PGIM Real Estate.

The 'right model' for China multifamily



China rental residential is supported by government and demographics, but Funlive's Keith Chan notes it needs the right model to thrive

Multifamily residential has been one of the most popular asset classes for global investors in recent years, and China offers enormous potential due to its size, government support and the demand for quality rental assets from migrant workers and those who cannot afford to buy. Keith Chan, chief executive of Funlive, a vertically integrated multifamily operator and investment manager, says the right business model is crucial in capitalizing on the opportunity and bringing increasing institutional investment to a rapidly growing and developing sector.

What is driving the multifamily residential market in China?

SPONSOR

FUNLIVE

The dynamics of the multifamily sector in China are straightforward, and the fundamentals for the tier one cities and the top tier two cities are driven by three major factors.

Firstly, China's urbanization rate has been consistently rising and converging to the world average's 80 percent. As a result, the urban population of these cities is huge and can be treated as metropolises by world standards -25 million for Shanghai and close to 10 million for Nanjing, for example.

Secondly, following the development of these urban metropolises, there has been an explosion in the migrant work population, which has expanded 2.5x nationally relative to 20 years ago. This translates into a need for these cities to consistently provide quality housing - a key urban infrastructure to keep high value-adding talent to drive the development of these metropolises.

Thirdly, the capital value of residential properties in these cities is high and has been outpacing rental. This has led to an overall lower affordability for home purchases and pushed young professionals and families into renting. We are of the view that if these three trends stack up for a city, then the fundamentals are robust.

Adding to this, the government has been supporting the residential

Analysis

sector since 2014-15, and promoting the idea that residential units are not for speculation, but accommodation, which supports a professionally managed multifamily sector. In fact, it has been pushing state owned enterprises (SOEs) into the rental and affordable housing sector; however, progress has been slow.

The government also introduced tax breaks for multifamily in 2021: VAT has gone down from 9 percent to 1.5 percent, while real estate tax has decreased from 12 percent to 4 percent. While this does not make a huge difference on the bottom line, it does boost yield given the buy-to-hold, operating nature of this asset class.

Multifamily is a preferred asset class within real estate, following overall government support. In China, multifamily has been classified differently compared to for-sale lending for major banks as an "encouraged sector" with favorable terms.

For example, we secured bank lending for one of our platforms and the bank has since been proactive in looking to work with us more in the multifamily projects, even in the second half of 2021, standing in contrast to the attitude towards single-family residential for-sale projects amongst the capital markets. We are confident that this is not only because of the sound fundamentals of the multifamily sector, but also an echo following positive government support, where banks see it as a safe investment with a smaller

Finally, the multifamily sector is in a process of institutionalization, with a clear best model emerging and strong interest from sources of long-term institutional capital both internationally and here in China.

How is the multifamily residential investment and operating model developing?

A couple of years ago, the multifamily sector in China was fairly distinct from that of the US or Japan. Initially, all



Has your view on the best cities for investment changed

There are eight cities where we think we will focus for the time being. The first five would be the priority: these are the tier-one cities of Beijing, Shanghai, Guangzhou, Shenzhen and also Hangzhou, which is an important tech and manufacturing center. However, we would also look at three other cities which have very good potential: Wuhan, Chengdu and Nanjing.

the operators tried to adopt the master lease model, where they would take long-term leases over properties and then rent short term to tenants. So, back in 2018-19, a number of players tried to get into the industry by adopting this model because it would allow them to scale up very quickly.

However, to scale up, they took on too many projects at low margins or even making a loss, and a lot of these platforms went bankrupt, even those that had received private equity backing. Now, operators looking to go down an asset-light model need to either choose to be more like a hotel operator, managing the assets and generating fees, or turning to revenue-sharing with the owners rather

than having a fixed cost through the master leases.

The alternative to this is a more asset-heavy business, where you build to rent. You can buy land and develop, or buy existing assets and convert to multifamily. Of course, this requires development skills and is capital intensive.

Chinese developers tend not to be keen on this as most do not want to be long-term owners of the assets, even where a section of a development has been reserved for rental housing. To meet the challenges of this model, you need to be a fund manager in order to build the capital for these projects.

This is what we do at Funlive: we are the developer and operator of the assets and also a fund manager for vehicles that will own them in the long term.

I believe this operating and asset management model is the best way to go in this sector - like GLP and ESR in the logistics sector, that is where we want to be in the multifamily space. We have a first mover advantage in this space given we launched in 2018 and the competitive landscape in multifamily funds management in China is not so crowded, yet investors have been supportive because this model has been proven in other markets and asset classes globally.

Is investor interest in the sector still growing?

Yes, we continue to see more and more investors coming into the space. Traditionally, the multifamily sector all over the world has been popular due to its resilience and stable cashflows, and we note that this is increasingly the case post-covid. Since 2018, we have been able to establish investment ventures with Proprium Capital, Gaw Capital Partners and various sovereign funds. We also are managing a conversion project for Blackstone Group - their first China multifamily investment.

Last year, we teamed up with KKR, which invested in a 3,000-unit multifamily development that we will operate in Beijing. So, that interest from global investors in the sector and in this fund manager/operator model remains strong.

Furthermore, we are seeing more interest from Chinese institutional investors. Going back a year or 18 months, insurers were still in the process of working out the policy angle to multifamily given its residential nature. However, that attitude has changed a lot in favor of multifamily since then.

Through active conversations, we have noticed that major insurance companies have enlisted multifamily as one of their strategic focuses if they have a real estate allocation. Given the stable and resilient nature of multifamily, this should fit well into the long-term

"Investors have been supportive because this model has been proven in other markets and asset classes globally"

investment profiles of insurance capital, and to this end we are hopeful that we can add Chinese insurance companies as our investors.

One more thing that is supporting investor interest and the institutionalization of the sector is industry consolidation. In the past, there were many failed operators due to missteps in business models. Now there is a smaller number of better and more stable players in the market, which is good because the whole sector will be more healthy and more appealing to both investors and renters.

How has the ongoing pandemic affected the multifamily residential market in China?

When covid first emerged in Q1 2020, site visits to projects by potential renters were largely limited by the government. This has coincided with the Lunar New Year, where most residents have returned to their home cities and, as a result, new leasing activities were challenging.

Once we got to late April 2020, however, things recovered quickly, our occupancy rebounded from low 80s to an average of 92 percent and has stayed at a high level since then. For 2022, the omicron outbreak is having a similar impact on occupancy and leasing, yet key metrics including rental collection rates have been strong and we are positive multifamily will remain one of the less affected asset classes and business

We also note that residents are increasingly appreciative of the fact that a professionally managed multifamily building offers more support during lockdown, because there are staff there to help. Our staff have been working very hard during this period. This is something I experienced myself in a modern, professionally managed residential complex in Shanghai; organizing supplies and other things is much easier than for people in older buildings without proactive management.

Analysis

he pandemic, skyrocketing house prices and a desirable style of living are reshaping what young professionals seek from their living arrangements. But for gen Zs, in particular, the prospect of leaving university and moving into a house in multiple occupation (HMO) is, like, so last year. Enter co-living.

Co-living takes the idea of shared living spaces to a new level. While a prior generation of renters may have shared kitchens, bathrooms and utility rooms with their housemates, co-living seeks to promote community and convenience with on-site gyms, service staff and the prospect of connecting with a like-minded community.

What emerged as a response to an affordability crisis in Asian tech hubs is now seeping into the western market, with both investors and potential residents eyeing up attractive opportunities from this new way of living.

Young, employed, lonely

Global investment in co-living developments increased threefold each year between 2015 and 2019, according to JLL, but the pandemic "amplified" the motivations for western consumers to be drawn further to co-living, says Richard Stonehouse, head of residential investment at commercial real estate services firm Avison Young.

The allure of urban locations runs parallel to issues of loneliness and affordability for young professionals. Meanwhile, the premium end of the build-to-rent (BTR) market is demonstrating the "ambitious rental levels" that the millennial demographic tenants are willing to pay for a quality home with excellent service, amenities and community, adds Stonehouse.

"The co-living market focuses on these qualities while appealing to a broad, aspirational and transient demographic that may be unable to pay the levels [these BTR] schemes are achieving," he says.



Co-living's western momentum

Social forces are driving more young professionals in Europe and the UK to embrace co-living, and it is also strengthening the investment case for these assets, writes Tom Higgins

Similarly, Ben Pile, manager Barings' head of residential investing and asset management, Europe, says that "affordable, good-quality alternative accommodation" is emerging in cities where "living is expensive and will become increasingly so as the cost of living crisis hits everybody."

In London – a city that retains 47 percent of its graduates and attracts one in four of all other graduates in the

UK, according to CBRE – the co-living boom is already maturing.

Co-living on the continent

The Co-Liv Fund, launched as a joint venture between co-living provider The Collective and DTZ Investors in 2019, became the UK's first dedicated co-living fund and has a target gross asset value of £1 billion (\$1.23 billion; €1.17 billion).



Elsewhere in Europe, the same economic and social drivers are creating similar investment opportunities. In April, Barings announced its entrance into the Italian residential BTR market with the acquisition of a development opportunity in northern Milan, complete with co-living offerings.

"The residential market in Italy has been very small historically by western standards, but increasingly that's changing," Pile says. "Traditionally, people have bought in Italy, but house prices have got to a level where there's a certain level of unaffordability, and increasingly people are turning to the rental market as an alternative because they can't afford to buy where they want to live."

Across Europe, the response to this widespread trend is "the most advanced" in Spain, but Italy, Germany and France are also close behind, notes Pile.

Stonehouse says there is some debate as to where co-living will grow in the years ahead, but he views urban environments as likely locations attracting gen Z and millennial occupants.

"Areas with significant higher education establishments with strong retention rates and high levels of inward migration and low unemployment are likely to be where co-living works best. However, many operators, particularly those focused on small to mid-size

schemes, see the geographical demand being much wider," he adds.

Back in the UK, and looking beyond London, co-living schemes in Reading, Manchester and Leeds already have been completed. But in Liverpool, the city council signed off on a planning advice note in March that placed co-living developments, which had not previously fallen within a particular planning class, under the umbrella of existing residential policies. This means facilities must adhere to minimum space standards and be easily converted into regular accommodation, raising questions about the feasibility of the co-living approach. Similar regulatory moves elsewhere could create additional hurdles for co-living.

Investor interest

For investors and developers, the attraction to co-living in Europe comes in the form of "lower amounts of competition generated by a nascent market," says Stonehouse. Alongside this comes the opportunity for "considerable

"Areas with significant higher education establishments with strong retention rates and high levels of inward migration and low unemployment are likely to be where co-living works best"

RICHARD STONEHOUSE Avison Young

growth" and a perception that a larger rent roll can be "created through smaller unit types and a payment in lieu of affordable housing."

The softer factors are important, too. Community, which is one of the "principal drivers of the growth of the BTR market," according to Stonehouse, is also at the heart of co-living. Meanwhile, the provision of "support to individuals' lifestyles and well-being, as well as a natural affordability" means investors can create social value, enabling a thematic integration of ESG factors.

Pile points to the "health and well-being of the ultimate customer," as a social factor considered by investors, whether that is "the receptionist or concierge being there" or the classes you put on in the gym - "yoga or Pilates, whatever it might be."

While some may view this as a superficial add-on to a tenancy, Pile points out that modern tenants are "much more focused on the environment than historic occupiers" and they are looking in earnest at how the landlord or developer is "taking that into account for how the site is operated."

That includes generating as little waste as possible, minimizing plastic on-site, assessing how energy efficient the building is or whether it is using renewable energies, among other factors. "This feeds into the end consumer's decision-making process much more than it did five years ago," Pile adds.

As such, private equity has "raced toward the sector, seeing the ability to create scale and rental outperformance as the market matures," explains Stonehouse. "Inevitably delivering a scaled, operational platform over time will prove extremely attractive to more institutional capital, affording the opportunity to create very significant capital appreciation."

Co-living has gathered momentum over recent years, and as the number of renters across Europe increases, there is an opportunity for investors to diversify their real estate portfolio while creating attractive forms of alternative living.

A social focus for senior living

An aging population is making senior living assets an increasingly attractive investment proposition, and a good play for capital with a social impact agenda, writes Christopher Marchant



here is a growing number of retirees and senior citizens the world over. An October 2021 World Health Organization report on aging and health estimates that by 2030, one in six people worldwide will be aged 60 years or over. In the UK, a 2021 government brief, Housing an ageing population, reported that in 2019, the 65-plus age group increased by 23 percent between 2009 and 2019, at a time when the whole UK population only increased by 7 percent.

The covid-19 pandemic has served as a reminder that society's oldest members are also often the most vulnerable. And with an aging population in many Western markets, there is an urgent requirement for more housing that caters to the unique needs of this demographic.

Indeed, the pandemic has reinforced the view that quality housing for senior citizens should be a priority of governments. And from an investment perspective, capitalizing the endeavor can be a boon to any institution's ESG credentials.

Olli Fischer and Carl-Adam von Schéele are investment directors at Nordic Real Estate Partners (NREP) with the remit of developing 'future-proof' senior housing, care homes and social infrastructure. NREP, the largest investment manager in the Nordics, has a strong ESG ethos, including committing to net zero by 2028. And the firm's approach to the provision of senior housing is to ensure these assets, and their tenants, remain fully integrated into the wider community.

"Many active seniors don't want to be isolated in a traditional senior housing facility," explains Fischer. "They want to engage in a community, and they want to have meaningful activities and interactions with a lot of different people.

"So, NREP has developed a model for active seniors where their housing is mixed with families and younger people, so they become a valuable part of a community. These relationships with other people are extremely important for their health and well-being."

Holistic approach

Basil Demeroutis is the managing partner of property investment and development firm FORE Partnership, which recently submitted plans for a sustainable integrated retirement community in Bristol, England, alongside operator partners Amicala. St Christopher's Square aims to be one of the first net-zero communities in the UK, sitting on a five-acre site and providing 122 homes for seniors and a range of community benefits.

When creating senior living spaces, Demeroutis says ESG must be considered holistically. "There is a false division we have created in our industry. You can't separate health and well-being from low-carbon solutions or governance and social. If you see them as interconnected, you can create an authentic place that people want to live and gather in."

There are also very specific requirements for senior living spaces, which developers and investors must factor in to cater to the health and wellness needs of their tenants. This can range from increased provisions for mobility to increased capacity for ventilation.

These are considerations highlighted by Patrick Bone, real estate fund manager at Schroders Capital, which is creating a new retirement village in Southampton, England.

"We do have to be very careful to ensure we have all the correct mobility specifications in place," says Bone.



"It's important that the next generation of senior living continues to be in homes that are attractive, comfortable places to live"

COLIN REES-SMITH BNP Paribas Real Estate

"Rooms must be a certain width, so that they can have wheelchair access. There are also walk-in showers. So, in terms of the design, a lot of consideration needs to go into the fact that some of the people living in these retirement apartments are often facing mobility issues."

However, there is shortage of supply in many markets, the UK being a case in point. According to a February 2022 Savills report, UK Senior Living - the Inflection Point, just 1 percent of people aged over 65 in the UK live in integrated retirement communities ('housing-with-care'), compared to approximately 6.5 percent in the US and 5.5 percent in Australia.

Andrew Fyfe is associate director within the BNP Paribas Real Estate healthcare and senior living team. He is also founder and chair of the Scottish Housing with Care Taskforce, a body established by retirement community operators, investors and local authorities to establish why Scotland, and the UK as a whole, is lagging behind comparable countries when it comes to providing housing-with-care.

"Historically, some funders have seen senior living as a real estate play and others as operational or

"[Many seniors] want to engage in a community, and they want to have meaningful activities and interactions with a lot of different people"

OLLI FISCHER NREP

care-related. As such, it can fall between two stools. For some, the term on which the debt would typically be offered would be too tight to build and sell all the apartments within [a development]."

However, this shortage also signals the future opportunity for capital and some are spotting it. "There are a number of funds targeting the sector," notes Fyfe, highlighting the example of Cheyne Capital, which has just agreed to fund senior residence developers Lifestory.

Positive living

There is also something of a marketing exercise required to make these assets attractive to prospective tenants. As Colin Rees-Smith, a senior director at BNP Paribas Real Estate, observes, many older people are reluctant to move out of the family home and into housing-with-care facilities.

"So, it's important that the next generation of senior living continues to be in homes that are attractive, comfortable places to live and, critically, part of the social fabric of the wider community. A positive living experience that tenants will embrace, not fear," he says.

On this aspect, NREP's Fischer points to his firm's focus on providing communal areas to combat loneliness among seniors while Schroder's Patrick Bone highlights that those senior citizens with a decreased sense of isolation make fewer calls to their doctor, reducing pressures on healthcare provisions in the wider community.

A current shortage of housing-forcare and senior living assets that appeal to a more discerning older demographic coupled with their desire to remain fully active citizens of the communities where they reside can inform investors of the type of developments most likely to provide performance in the years to come. It can also outline the opportunity to make a valuable social impact a part of their own sustainable investing journeys.

KEYNOTE INTERVIEW

Hedging inflation with student accommodation



Student accommodation is a scalable opportunity with inflationhedged cashflows, says Mapletree deputy group CEO Chua Tiow Chye

Student accommodation has come a long way since the gloomy halls and shabby, sparsely furnished flats many will remember, and has become an attractive asset class backed by strong underlying counter-cyclical fundamentals.

Singaporean developer and investment manager Mapletree has been investing in the sector since 2016 and now has a portfolio of more than 24,000 beds across 38 cities. It also has a private real estate fund with 35 assets and is targeting to grow its student housing assets to \$10 billion over the next five years. Deputy group chief executive officer Chua Tiow Chye considers the sector's unique qualities.

SPONSOR

MAPLETREE INVESTMENTS

Why is the student housing sector attracting interest from real estate investors?

The student housing sector has gained strong interest, especially from institutional investors, as it has stable and secure income streams. This is underpinned by strong underlying fundamentals with attractive student demographics and a relatively low stock of high-quality student housing, not only in the main markets of the US and UK, but also in several higher education markets around the world.

We see the immense opportunities

of diversifying our portfolio as well as the potential for scale. Student accommodation used to be largely a 'mom and pop' business with a few private investors involved. Students also used to stay in typically older, unamenitized, sparsely furnished dorms on campus. More student housing specialists have entered the market in the UK and US, but most markets are still undersupplied with student housing, and especially so with high-quality, well-managed accommodation.

This reinforces the demand for high-quality student housing operated and managed professionally as a separate, specialized asset class. As an indication, the student-to-bed ratio in the US and UK markets is around 2.5x.

There has been a great increase in the number of investors and operators since we became involved in the business, and this has compressed yields. When we first entered the UK, capitalization rates were as high as 6-7 percent, but have since dropped to sub-4 percent in London and slightly higher than 4 percent in the UK regions.

In 2021, student housing experienced a near-record transaction year, exceeding \$10 billion in investment sales volume, according to CBRE. This more than doubled from 2020.

The student housing sector's resilience during downturns has proven to be one of its main attractions to investors. Student accommodation has a track record of being relatively recession-proof when compared with office or retail asset classes, as well as being an inflationary hedge in periods of rising inflation due to the dynamic pricing of rates (with tiers) and shorter-term leases to tie in with the academic periods. This sector has also since seen a strong rebound post-pandemic, given higher student application numbers, driven by both deferred admissions and a successful rollout of vaccination programs.

Over the medium-to-long term, the outlook for the student accommodation sector continues to remain fundamentally attractive due to demographic growth, rising participation rates for higher education and supportive government policy to grow enrolment levels. Another aspect is that international students are a critical source of funding for universities.

Why is the cashflow profile of student accommodation unique?

Unlike commercial real estate sectors, the student accommodation properties lease to students who sign shorter leases in tandem with the academic year. This means a shorter weighted average lease expiry compared with the office or industrial sectors.

However, the sector starts marketing the beds as early as one academic year before, so with renewals, there is good visibility of pre-leased cashflow for the coming academic year. There is also greater certainty to a steady cashflow as it is supported by parental guarantees or the government and, in the case of international students in the UK, usually paid upfront and in advance.

The nature of the cashflow has an inflationary hedge in-built, where in periods of rising inflation the dynamic pricing of rates can be used to offset this impact.

For student accommodation, rates can be adjusted each year, or over even shorter time periods, to account for rising costs, while balancing affordability for students and parents. It is more dynamic and flexible in taking inflation and rising costs into account. In the current global inflationary environment, this will be even more valuable.

Which markets are of the most interest to investors?

The two main markets we are targeting are the US and the UK, because these are the top choices for overseas students as they have the most top-ranked universities. The US has a huge domestic market, so overseas students are a relatively smaller percentage of our residents as compared with the UK.

What particular factors are involved in being a manager of student accommodation?

Compared with other real estate sectors such as offices or logistics, there is a far greater operational element involved in managing student accommodation. Hence, we need a responsive and experienced operational team. If operations are well executed, this will ensure that residents are satisfied. There is a peculiar challenge in dealing with our residents, as they are typically young adults and have very different needs from a corporate

This was very apparent during the covid-19 pandemic, which was a tough time for our property management staff. We had to quarantine residents in the buildings and frequently checked in to make sure everyone was doing okay. However, having this arrangement was a comfort for the residents and their parents. Hence, the health and safety needs of our residents are of the utmost importance. Aside from buying or building well, we need to manage and operate our assets even better.



The Chestnut at University City: the Philadelphia building's property management team rolled out a slew of measures to ensure the health and safety of residents during the pandemic

The US and UK continue to be the largest and most liquid markets we operate in and where we will look to scale up, because of the strength of our platform and the opportunities we see there. We can buy small or large portfolios, as well as individual assets. On top of these, we are also able to undertake greenfield developments.

To tap these opportunities, we have developed local teams and management with the right operational knowledge. The US and UK have accounted for more than two-thirds of global transactions per annum since 2011.

At the same time, continental Europe is very interesting. Previously, many European students studied in the UK, but this has somewhat declined due to Brexit. Furthermore, European universities are trying to attract more overseas students by offering courses in English. Overseas students are more inclined to seek purpose-built and professionally managed student accommodation as they are less familiar with the cities and markets.

The other two markets where we see opportunities are Canada, which has many good universities teaching in English, and Australia, which is the prime choice for many prospective students in Asia. Unfortunately for Australia, over the last two years the sector has underperformed, driven by covid lockdowns, but is now gradually reopening. We are therefore putting in a concerted push to enter that market.

What are the options for an investor looking to expand in this sector?

There is greater competition for existing assets and the cap rates have compressed substantially, but there are also development opportunities. There is still a shortage of specialized, high-quality accommodation so development is a good option to bring better stocks at higher return to the market.

In the UK, the planning regulations for new student housing developments are very restrictive. Demand for better "The outlook
for the student
accommodation sector
continues to remain
fundamentally
attractive due to
demographic growth,
rising participation
rates for higher
education and
supportive government
policy"

design and specifications as well as the need to provide more amenities are also drivers for new development.

Whereas in the US, the development market is different as there is more land available and selecting sites within walking distances to the university campuses is critical. Of course, developing the assets by ourselves means that we get the higher yield on cost rather than acquiring existing assets from the market.

How important is ESG in this sector?

ESG is very important; we are fully committed to our ESG journey and will finalize our net-zero carbon plan for the business over the next few months. There will also be individual plans for our business lines to address the ESG factors.

For this particular sector, we will carry out environmental due diligence when acquiring assets, understand the building's energy performance, set up plans for improvement and compliance with energy standards, and attain green building certifications. This will be part and parcel of each asset plan.

Everyone needs to play their part in ESG. While we will carry out work to, for example, add sensors and LED lights, install solar PV panels and plant trees, we need the property managers to keep an eye on energy efficiency and encourage more environmentally-conscious conduct in our residents, eg, turning off the heating and air-conditioning when they leave their rooms. To supplement this, we are looking at technology solutions to help us.

There are also more opportunities in this sector to work on the 'S' in ESG, which we have been doing through our corporate social responsibility program, including community work and projects that benefit residents and the wider community. This ties in with the work our ground teams put in during covid to ensure our residents were well looked after from the health and safety aspects.

Student housing proves resilient

The sector's outlook is rosy despite the shrinking student population, writes Keith Button

emand for student housing remains high, rents are rising and institutional investors have returned to the space in earnest, despite an overall decline in undergraduate enrollment. Transaction volume in the student housing sector reached more than \$10 billion in 2021, the second-highest level ever recorded and more than double the sales in 2020, according to CBRE figures.

One reason for the near-record sales volume was investor flight to student housing driven by a yield spread that was the widest it has been since 2013, says Jaclyn Fitts, CBRE executive vice-president and co-leader of the firm's national student housing team.

The average delta between multifamily and student housing cap rates in 2021 was 56 basis points. The gap was at its widest in the second quarter of 2021, when the student housing cap rate average was 5.3 percent, compared with 4.7 percent for multifamily housing, according to CBRE.

There is another reason behind the 2021 transaction volume: for the 2020-21 school year, student housing occupancy rates had declined 4 percent, but for the 2021-22 school year occupancy rates rebounded to a level that was even higher than pre-covid levels. That, along with increases in average



"Consolidation actually means that as an investment it can continue to grow even in the face of the overall decline in the school age population"

JEFF ADLER Yardi Matrix rents, showed investors that the sector was resilient. "The industry as a whole held up very well," Fitts observes.

Institutional capital and some large non-US investors had waited on the sidelines to see how student housing would perform through the pandemic. And as the sector proved it was recession-resilient, those investors returned in late 2021 with several large transactions, Fitts says.

Growth despite enrollment fall

Despite an overall decline in the undergraduate student population in the US and the closing of smaller colleges, the investable student housing market is growing, says Jeff Adler, vice-president and general manager of Yardi Matrix, which tracks student housing data. The firm compiles data for the Yardi 200, a listing of the 200 largest public and private universities by student population, which represents 90 percent of all off-campus student housing in the US.

The overall number of undergraduate students is declining, because of demographic changes. National Student Clearinghouse Research Center numbers show that overall undergraduate enrollment dropped 3.1 percent in fall 2021, compared to one year earlier. Enrollment has dropped by more than one million over the past two years.

But Adler says he has a positive outlook for the off-campus student housing market because enrollment at the largest schools is growing. The higher education industry is consolidating, with smaller private liberal arts schools and some smaller state schools closing, but 90 percent of all off-campus student housing in the US is concentrated in the 200 largest public and private universities.

"In an environment where total enrollment is headed down, consolidation is a big story," Adler says. "If you just look at the broad numbers of school-age kids, you say, 'Oh, my gosh, the sector is not going to do that well because it's got fewer people.' But the consolidation actually means that as an investment it can continue to grow even in the face of the overall decline in the school age population. And that's a huge thing."

Tailwinds for student housing

The enrollment decline bears watching, but the student housing market has several other factors working in its favor, Adler says. A college education remains valuable, and students value the in-person experience of attending college. Larger school endowments are still doing well. Off-campus student housing tends to focus on the top 30 to 40 percent of students, socioeconomically.

Also, student housing is generally viewed as a defensive sector: When there are downturns, its performance remains steady. During the 2008 global financial crisis, enrollment increased, for example.

"Even in the scrambled eggs of covid, the sector actually performed fine," Adler says. Student housing rent growth was limited to 1 or 2 percent, but it was generally full. "The kids wanted a place to go to that wasn't at home."

Student housing behaves like a submarket of multifamily, but it has less volatility than conventional multifamily and a slightly higher return, based on its capitalization rate. The sector has benefited

from Freddie Mac and Fannie Mae financing.

One of the defining features of student housing is that it is rented by the bed, so the student and their parents aren't on the hook for the roommates' rents. Also, it tends to have a more upscale amenity package compared to multifamily alternatives.

"It is a unique niche within multifamily," and it runs off a different set of dynamics than with multifamily, Adler says. "You don't look at job growth; you don't really look at migration patterns. You look at what's happening at that school: Is its enrollment growing? Is there a need for dedicated student housing?"

The student housing sector is also beginning to transition from a purely development-led sector to one that also has enough mass for sales of existing properties, which is playing a larger role in the sector as the housing stock grows. "It's a brand-new product; it didn't exist 20 years ago," Adler says.

Rent increases coming

In 2022, the sector is performing extremely well, based on rents and preleasing figures - what students have agreed to rent when the next school year begins. Both measures were even better than in 2019, before covid. "Within the investable universe, the segment is growing and the fundamentals this year are fantastic," Adler says.

"We're starting to see the rental increases that the multifamily sector has already experienced"

JACLYN FITTS CBRE

As of the end of April, the Yardi 200 had preleased 72.7 percent for fall off-campus move-ins, up 12.9 percentage points from one year earlier and up 8.1 percentage points from April 2019. As of March, average rents for the Yardi 200 were \$777 per bed, up 2.9 percent from one year earlier and up 0.5 percent from the month before.

Rent growth accelerated significantly in April, driven by the limited supply of student housing and owner confidence in the lease-up, Adler says: "You only have so many units left to rent, you might as well start pumping the rents up." Student housing is also boosted as a derivative effect from the rapid rise in rents for multifamily. "[For] the schools that are in cities where multifamily is also doing really well, they're doing exceptionally well," he says.

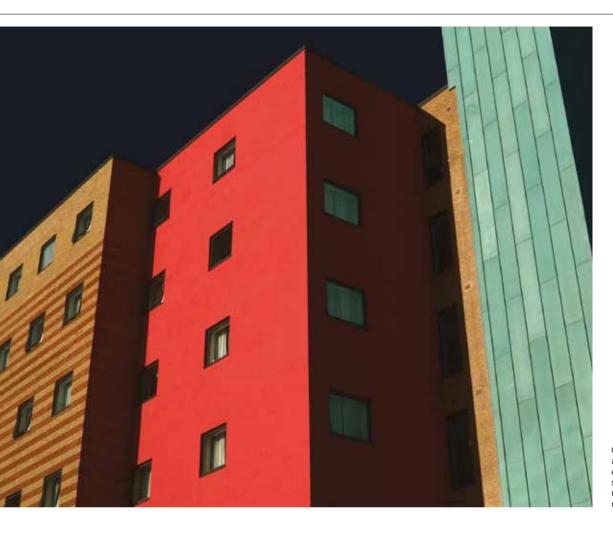
Within the Yardi 200, the larger schools that have lower acceptance rates, modest student housing supply and higher capture opportunities are also performing even better than their

CBRE's Fitts says that anecdotally, student housing rents are expected to increase by 5 to 10 percent in the coming year. When the pandemic hit in March 2020, multifamily rents started dropping while student housing rents held steady because many leases for the 2020-21 school year were locked in. Then, multifamily rents rebounded and grew significantly through 2021 while student rents did not, because rents are adjusted only once a year.

Now, student housing rents are expected to grow similarly to multifamily increases, Fitts says. "We're starting to see the rental increases that the multifamily sector has already experienced, and that's really just been the delay associated with us only leasing once a vear."

Empty pipeline

The lack of new student housing developments in the pipeline - substantially less than past levels of planned



Good digs: despite a drop in overall enrollment numbers student housing remains an attractive

development - will also strengthen individual student housing markets. "That will drive future rent growth in those markets as well, because we've continued to see really strong occupancies across the sector," Fitts says.

Many university areas have simply run out of land available for new pedestrian student housing - housing within walking distance to campus, defined by CBRE as within a half mile, Fitts says. Pedestrian housing is the most attractive type of student housing for institutional investors.

For the non-profit Provident Resources Group, the 10th largest owner of US student housing, the goal is to keep rents as low as possible. That is becoming increasingly difficult with rising interest rates and global supply-chain issues driving up the cost of construction materials, says Steve Hicks, Provident's chairman and chief executive officer.

"We're seeing a lot fewer potential housing projects, certainly than what we saw on an annual basis pre-covid," Hicks says. Nearly all of Provident's student housing inventory is on campus, owned in partnership with a university, while private equity investment in the space is primarily in off-campus housing.

Investor interest in student housing was spurred by Blackstone's big bet: its \$12.8 billion acquisition of American Campus Communities in April, which made the behemoth investment manager the largest owner of student housing. That deal has been viewed by other investors as a vote of confidence in student housing, Fitts says.

The Blackstone deal is "an indication of what the private equity markets think about the student housing; they're strong believers in it," Hicks says. Another indicator is the willingness of some PE investors to buy student housing with cap rates of around 4 percent, or even sub-4 percent cap rates, or to pay \$150,000 or more per bed for a student housing project, he

"That's huge," he says. "It's reflecting the long-term value that the institutional investors see in student housing." And, it reflects an understanding that state universities and non-profit private universities likely won't be able to finance student housing projects of their own to handle all of their students' housing demand, he says.

KEYNOTE INTERVIEW

Affordable housing is ringing the changes



Affordable housing approaches are evolving as investors seek both impact and profit, CBRE Investment Management's Hannah Marshall observes

Perhaps like no other area of investing, affordable housing has a direct, long-term impact on quality of life for families and their communities, and the current geopolitical and economic pressures have only heightened that. Hannah Marshall, fund manager for a European residential impact strategy at CBRE Investment Management, discusses how to achieve both impact and financial returns in this area.

How can you satisfy institutional investors' demands for social impact without sacrificing financial returns?

SPONSOR RE INVESTM

CBRE INVESTMENT MANAGEMENT

You need to keep in mind the definition of impact investing: investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return, and that last part is really important. It has been our experience that impact investments lead to superior risk-adjusted returns.

In the context of residential real estate, the investments are sustainable over the longer run, so the capital expenditures are reduced. If the rents are affordable and the well-being of the tenants is at the center of your impact strategy, then that should translate into lower void periods and lower expenditures, and that in turn improves the financial performance of the investment.

Different investors are in different stages of what they are seeking from this investment space. Dutch investors are probably at the forefront of impact investing, as a generalization. There are exceptions to that rule, and I am not suggesting that capital hasn't come from elsewhere, but I think it is becoming more widespread, and there is a desire by investors to have an impact

within the region or country in which they operate.

We have been having conversations with investors to think about that, and about how they develop an impact strategy for what they want to do. It is probably one of the areas that we have seen the most interest in over the last couple of years, because it is sustainable for the long term in every sense: sustainable returns, sustainable building, sustainable solutions.

Four years ago, we still had to do some educational work with some institutional investors in explaining the concept of investing for impact plus the financial return. But now, most investors are up to speed.

How can you measure the social impact of your investments?

The starting point for successful impact investing is clearly defining your intentions at the outset. You need to be fairly specific about the type of impact that the investor wishes to focus on. Start by thinking about the market context; the challenge that has been identified or what you are trying to address.

In a residential sense we are thinking about shelter, so what is the solution that you are trying to provide to that challenge? Then, it is really important to develop a robust impact framework: the intention with specific, objective, target metrics. How are you going to hold yourself to account and what are the portfolio outcomes that you're looking to achieve?

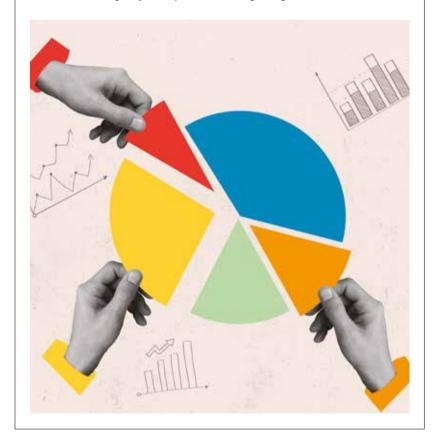
Once you have set those objectives, it is really important to measure all stages of that process. In a real estate sense, that starts with the sourcing, the underwriting, the acquisition and then the ongoing portfolio monitoring.

At a very early stage, we made the decision to engage with an independent impact advisory firm and they have really helped us to develop that impact framework and then continually reset the challenges, because everyone is still learning and this is still evolving. We

What role should institutional capital play in increasing the supply of affordable homes?

These are long-term problems. Political cycles, as we all know, are pretty short in nature, every four to five years. Institutional capital and not just government policy needs to be at the heart of these solutions if we are going to address the longer term.

Institutional capital needs to be working with and alongside government policy, and potentially finance. It is a partnership, and it shouldn't be the expectation that institutional capital alone solves the problems. You are always going to have government regulation and intervention for these more vulnerable groups, but you are working alongside to find a solution.



wanted to develop something that was future-proofed and was independently verified in the absence of an industry standard benchmark, which we don't have at the moment.

If you compare it to environmental measurement standards, in the beginning there wasn't a globally accepted benchmark. Now you have GRESB, which, particularly in a real estate funds context, is the accepted benchmark. But there isn't a social impact global benchmark that exists.

That will develop over time. What we have done is develop a framework so that we have a more long-sighted approach, which enables us to adapt and be robust in the face of new benchmarks.

What impact targets do you set?

We began investing in affordable housing to respond to the affordability crisis in the UK - a very specific challenge that was primarily driven by a longterm systematic demand/supply imbalance within that part of the market. Essentially, demand was outstripping supply over the long run. We felt strongly that there was an opportunity for private sector investment to fill some of that gap and address that long-standing undersupply of affordable housing.

Our pan-European strategy is similar; it is responding to an affordability crisis in the housing market for middle-income households. We clearly define what we mean by a middle-income household and then set the affordability criteria that we are working to.

We developed a proprietary impact investment framework built on five impact pillars: social need, affordability, funding sustainable developments, providing quality services and increasing supply. They form the basis of all of our investment decisions, so we look at each individual investment and score them against that

Each investment is different, but that enables us to ensure that any asset that goes into the portfolio fulfills that specific impact criteria that we have identified and the need that we are trying to address.

It also means impact can be measured and then, importantly, communicated to our investors. Transparency is a very important piece of impact investing as well - the transparency of reporting those metrics and sharing them with the investors.

As an example, if we are looking at an individual investment, as part of our due diligence we would commission an impact due diligence report, the same as if you get a building survey or an environmental report on that particular investment. And then each quarter we would do a portfolio-level audit, and then every year our impact adviser conducts a review of all of our investments.

The review evaluates our approach and assesses our effectiveness against that impact intention that we had identified. Then that is published in an independent report and shared with our investors. So, alongside the set financial statements that are standard every year, we also have a standalone impact report.

How have best practices evolved for impact residential investing and where do you see the greatest need for improved practices?

No one has all the answers on this, and the area is still evolving. You need to be open to that evolution and continually develop, but I think through actual investing, our understanding of impact is much more practical. We can move from that theoretical piece to the reality of implementing it, and then to owning it for the longer term.

Sometimes having a positive impact in one area can create issues in another area, so there is always that balance.

"There is a desire by investors to have an impact within the region or country in which they operate"

You need to take it all into account and look at it in a very holistic sense.

In the relationship between sustainability in an environmental sense and impact management, you might have a high-level amenity - a community swimming pool, for example - and a build-to-rent scheme could conflict with affordability. Someone has to pay the service charge for that amenity. So, in this case, the amenity could be positive in that it helps create community and well-being, but you have to balance it against the cost.

As for the need for improved practices, the greatest need is the environmental space and getting each stakeholder in each part of the process to understand what is needed from a sustainability perspective and how that interacts with the impact intention. By stakeholders, I mean developers, funders, and the individuals and families who make these places their homes.

For example, consider heating solutions - they are not practical to change in the future. If you are developing something, you need to think about things like heating solutions upfront, but also how the choice of heating interacts with affordability: the ongoing cost of utilities, maintenance and other housing costs.

So, choosing a certain heating solution can have a positive impact on the environment, but does it have an impact in terms of affordability for that tenant? When we are preparing for the net-zero agenda, how do we collect data from individuals? How do we encourage individual behavior? It is all of those things.

There also needs to be more work done on setting standards for measuring and evaluating various types of impact against each other. And we need universally accepted measurements - common metrics - to make it easier for investors to evaluate different strategies, to judge one opportunity over another and, importantly, hold the managers they are investing with to account.



Despite massive on-the-ground demand for affordable housing in the US, there is surprisingly little available available. Developers and investors are looking to innovate in response, writes Michelle Phillips

first impression, the affordable and low-income/workforce housing markets in the US seem to be struggling. On the one hand, ordinary housing prices across the country have risen drastically (10.4 percent in 2020 and 19 percent in 2021, according to the S&P Core-Logic Case-Shiller US National Home Price Index), drawing attention away from the less sexy "affordable" alternatives. On the other hand, no state in the US has enough affordable housing units for its population, with some only meeting 18 percent of need, according to the National Low Income Housing Coalition's Gap Report.

On the investment side of the market, things don't appear that much better in terms of equity. There are only four commingled funds dedicated to affordable housing in the market, and only one closed in the last year: TruAmerica Family's debut fund, with \$575 million raised.

At this point, some are calling the affordable housing shortage a crisis, with the National Low Income Housing Coalition citing a gap of 6.8 million affordable housing units - and that is only in the extremely low-income families sector.

However, Angela Kelcher, senior managing director at JLL, says that this cursory picture of the market does not indicate investor disinterest in the sector. In reality, she explains, investors are chomping at the bit to get into the affordable housing space; they just aren't making big headlines because the deals tend to be smaller in nature.

Unmatched demand

The fundamentals for the affordable housing market remain very good, Kelcher explains. Rent growth has outpaced wage growth for many years, driving more people to seek more affordable rent; the pandemic's economic crisis has only exacerbated that trend. The subsidies and leverage coming from the public sector have also been increasing. Fannie Mae and Freddie Mac must still dedicate at least half of their budgets specifically to affordable housing products, and states like California are also dedicating funds to the sector.

The long-term outlook for affordable housing has always been good, as demand for it has never wavered. Over the next few years, even decades, experts expect demand to increase.

"We're seeing the financial bottom line being pursued because the long-term outlook for this segment, the need, is unlimited," Kelcher says. "There is such an undersupply relative to the demand of affordable housing, and those fundamentals aren't going to change for some time."

Of course, returns may not be as high as some of the more traditional sectors, but Kelcher sees many investors quite happy to take a 20 percent reduction in their financial bottom line in exchange for the stability the sector offers. Furthermore, these investors often want a "double bottom line," using their capital to further their corporate responsibility aspirations or ESG goals.

"Historically, low-income and affordable housing are very low-risk sectors," agrees Jim Mullin, founder and chief executive of Arizona-based developer American Resort Communities. "People need housing; it's a fact of life."

More than money

Mullin has also been impressed by the generous terms a few select sellers and investors will offer to developers, because they believe so strongly in giving back to the community tangibly. "I think what we do strikes a soft spot in their hearts," he says.

In the end, the disconnect between the need and investor capital is not a lack of interest or a liquidity, Kelcher explains, but rather a lack of supply.

"There is a massive lack of product for affordable housing, while developers and investors are facing other headwinds like increased construction costs," she explains. While there is supply coming online in affordable housing, it is not getting completed fast enough to meet demand. Redevelopment is also difficult, both Kelcher and Mullin add, as landlords often want to hold out for a higher price.

"The lack of housing and deals isn't necessarily holding developers and investors back from raising capital, but maybe it's holding them back from deploying it," Kelcher says. Investors have capital that they want to commit to affordable housing, but deals are harder to come by and smaller in nature, often clinched on a case-by-case basis rather than compiled into in a single large fund.

"When landlords get excited about higher prices, it pushes developers farther out from the main cities, and restricts dealflow," Mullin confirms.

That being said, the affordable housing and workforce housing markets are far from stagnant. The capital stack is just more varied.



"The long-term outlook for this segment, the need, is unlimited"

ANGELA KELCHER JLL

According to data from JLL Research, the 2021 affordable debt market was \$44 billion. When expanded to include workforce housing, that roughly doubles to \$98 billion. Although equity is harder to track across deals without commingled funds, the Low-Income Housing Tax Credit is one of the equity drivers, and placed roughly \$22.5 billion of equity in the market.

New approaches

Affordable housing has historically been considered a niche market, given the tight restrictions and requirements placed on it by government regulations. Tenants have to meet certain criteria, and developers have to meet many requirements to get their assets approved for subsidies.

"You have to be sure that companies understand the risks and complexities that come with affordable housing," Kelcher explains. "They either understand this segment or they don't."

However, with need rising, affordable and workforce housing are becoming more mainstream - more investors are coming to understand this segment. Kelcher notes that a decade ago, she would never have expected as much interest in the sector, with investors like Blackstone forming affordable housing-dedicated branches like April Housing. Yet large players like Amazon are doing just that.

With increased interest, Kelcher says she is excited to see creative innovations in investment and development models coming through the pipeline. "In this space, the challenges do present the opportunities."

Developers like Mullin are already banking on innovation being the solution to the affordable housing crisis. His firm, American Resort Communities, has come up with a model where homeowners buy the house, but not the land - instead leasing the land from investors. This provides a steady stream of income to investors beyond the initial sale of a home and allows them to add extra amenities to the neighborhood that can make the assets appreciate in value.

"There are so many investors on the sidelines wanting this kind of asset-backed investment and returns, and so many people on the sidelines who want to own a home," Mullin says. "And I think the key to cracking the code of the affordable housing and attainable living gridlock is to separate the house from the land."

Mullin's model is in fact so effective that they do not even need the government subsidies to turn a profit for investors, he says. Kelcher adds that she is seeing more and more innovations like this, successful and profitable even outside the government pipeline.

"Innovation and creativity have become a necessity, and I'm looking forward to seeing how we can meet these challenges head-on," Kelcher says. ■

Going Dutch for affordable housing



Bouwinvest's Michiel de Bruine outlines why it pays to take the long view on affordable housing investing

There is a notable housing shortage in the Netherlands, illustrated not least by last year's pledge by one group of 34 organizations to build one million new homes in the country within a decade. Michiel de Bruine, director, Dutch residential investments for Amsterdam-headquartered Bouwinvest Real Estate Investors, believes that target will be difficult to reach with costs rising, but that institutional investment can play a significant role in addressing the nation's supply shortage.

How might the goal of one million new homes in the Netherlands translate into investment opportunities?

In the Netherlands, the population

SPONSOR

BOUWINVEST REAL ESTATE INVESTORS

and number of households is increasing. That, coupled with construction stopping during the financial crisis, and the changing needs of the aging population, has resulted in a housing shortage.

As a result, prices have risen dramatically over the past few years and made it very hard, especially for first-time renters or buyers or for young families, to find an attainable home. There is really a lack of affordable rental or owner-occupied homes in the Netherlands, particularly in the larger cities.

To change this, we think more housing should be built and that institutional investors can help solve this problem, along with investments from pension funds, which are highly interested in this area.

We want to invest in the affordable segment especially as it is the one where the demand is the highest and the supply is the lowest. This makes it a great opportunity for institutional investors.

Beyond addressing the housing shortage, these investments also help to improve and make cities more livable, and they align with our strategy of creating inclusive spaces where people want to live, both now and in the future.

Should institutional investors make any concessions to help solve the housing shortage?

The only way to solve the problem is to work together with local governments, housing corporations and development companies. The mentality of working together fits institutional investors very well - they are used to working together to solve a problem. This fits very naturally with the long-term investment character of our investment strategy.

However, working together also means that you have to make concessions; when the different parties understand each other, these concessions can be balanced. The concession that institutional investors make is not focusing on a maximum return, for example, but rather accepting a more stable income-generating return, making moderate rent increases instead of the highest increases possible. Investing in affordable homes generates stable returns as the supply shortage as well as the demand remains high.

We also want to keep our homes really up to date technically, so we do that constantly, and not only when tenants are calling us about it and they are unhappy in their home! It is a more proactive way of managing the real estate.

Institutional investors also need to accept a long-term investment horizon, which in our case is 20 to 30 years. The average age of properties held in our portfolio is 18 years, and we invest €200 million-€300 million per year. By keeping properties for a long time, it behooves us to manage those properties in a more resident-friendly manner.

How will rising construction costs and a labor shortage affect residential construction and investment in the future?

What we do see now is that we are confronted by increasing construction costs. This is really worrying, as

Besides standard financial metrics, how do you measure ESG impact with housing investments?

We have a Paris-proof roadmap and a green portfolio, with all our assets having a green label. We want at least 60 percent of our acquisitions to be affordable housing.

On the social side, we also have other indicators in place. One example is our "Home for Life," which will be a label that shows how suitable a home is for aging people or people with a disability, much like an energy performance label for a house.

As people grow old, more and more of them want a home where they can live for as long as possible. Almost 20 percent of our tenants are older than 60, but it is difficult to gain insights into how suitable a home is for continued living.

With our partners, we developed a methodology to make it possible for our tenants to gain insight into how lifecycle-proof a home is: how accessible a home is; how close it is to shops or bus stops; those things that make it possible for elderly people to stay longer and live longer in their homes. That is one of our social goals within an ESG framework.

the ambition to add one million new homes in the Netherlands is getting more and more difficult when the construction costs of homes are rocketing.

In the past few years, the government has also increased its regulation of the rental market. There is a social pressure to act to counter rising rents and house prices, and we see that the government and politicians are tempted to take measures in the short term. Along with new sustainability measures, this makes the development of new housing quite an ambitious feat. It is getting more and more difficult to buy the right products at the right location.

What are some of the key risks to consider when investing in new housing?

Unfortunately, as described above, there are a few key risks at this moment.

But on the other hand, we have a new housing minister who has acknowledged the importance of institutional investors. And I must say I have good hopes he will really take our view on the market into account: that regulation is fine, but you shouldn't overregulate, and they should listen to institutional investors as we are the ones who can really help solve this problem.

For us, one of the biggest risks we have our biggest focus on is the climate. The real estate business has a huge climate footprint at this moment, but it also has the opportunity to pull all the plugs to really decrease the footprint and make real estate climate positive.

When I look at our company, I believe that we are very well equipped to operate in this challenging environment. We are a Dutch housing market specialist, with the right network and have people in the market who enable us to offer low-risk, sustainable investments. Our company started in 1952, and up until 15 years ago we were building the houses ourselves, so we can speak the language of a development company when we are negotiating with them.

How will climate change and carbon footprint concerns affect future investment in new housing?

One of our fundamental strategy pillars is sustainability. We have a Paris-proof roadmap ready and we are already implementing it, meaning that by 2045 our entire portfolio will meet the Paris Agreement's net-zero carbon emission goals for 2050.

When we acquire new properties, these have to be Paris-proof. But we also see these sustainability goals from another perspective: energy-efficient, carbon-neutral buildings keep their value longer and in the long run deliver higher returns.

Climate change measures may be expensive to implement in the short term, but over the long term their benefits will provide a greater return on investment. So, there is a benefit for investors and for society as a whole. Users benefit from the low energy cost and greater comfort, and we benefit from creating environments where people want to live, work and be. This also gives us a greater guarantee that our income for our clients will be stable.

Sustainability is an intrinsic part of our DNA. I see so much enthusiasm within our team to do our utmost and reach our sustainability goals. That really gives inspiration to walk an extra mile.

Last year, for example, we ran a climate risk scan on our entire portfolio as a first step toward making it climate resilient. For all our assets, we mapped out exposures to physical risks such as flooding, heat stress, sea level rises and droughts. This is a very good starting point to reach our goal to have a portfolio that is resistant to all these changes.

What role can institutional investors play in increasing housing mobility?

Housing mobility allows people to move from one home to another as they move through the different phases of life. We invest in the mid-rental segment, which is between the regulated and the more expensive segment.

There is huge demand for mid-rental homes and a huge shortage. Many



State Amsterdam: Bouwinvest's sustainable residential tower has 160 rental apartments on the banks of the Amstel

"The ambition to add one million new homes in the Netherlands is getting more and more difficult when the construction costs of homes are rocketing"

people who start out in regulated housing and then advance in their careers and want to move into a mid-rental home can't because it is too expensive. That is why we focus on that segment.

Once people who are in the mid-rental segment start earning more money, they can go up the ladder to more expensive rental homes or the owner-occupied homes. Or they get in a relationship or have kids and they want to move to a bigger home.

Elderly people may end up in a family home with a lot of extra space because their children left, and some of them might want to go back to a smaller home in the city, to be closer to shops, museums and theaters. This is just an example of how a housing career can go, and if these people want to move, those homes should be available. Pension funds and other institutional investors can play a crucial role in filling this gap. ■

t the height of the covid-19 pandemic, homes became not only places to eat and sleep, but they also had to quickly convert to remote workspaces. Kitchen counters became desks, spare bedrooms transformed into Zoom meeting rooms.

Houses became many peoples' high streets as shops remained closed, playing further to the shift to online shopping. Many homes resembled retail warehouses, as they received deliveries of grocery orders, while bedrooms became fitting rooms.

The upshot is a growing trend for developers, and capital providers, to look to distressed property assets, such as office and retail buildings, for conversion to residential use. This solves two problems: making use of obsolete commercial space and addressing the undersupply of housing.

As Nick Whitten, head of UK residential and living research at JLL, says: "There are places to live, places to work and places to play. What the pandemic showed - and, in fact, history has repeatedly demonstrated - is that we might change the way we work, we might change the way we play, but the one certainty is that we need places to live."

The shortage of housing is a global issue. In the US, research by Freddie Mac estimates that as of Q4 2020, there was a housing supply deficit of 3.8 million units, up from 2.5 million units in 2018. In its Australian Residential Market Update published in May 2022, Knight Frank refers to a NHFIC forecast that the country will be 163,400 homes short of demand between 2025 and 2032.

From retail to residence

Adam Cradick, executive director, residential land at CBRE, has witnessed a trend in London in recent years to repurpose retail warehousing and shopping centers into residential property. This has been driven by changes in the retail sector.

"Going back 12 to 24 months, there were a number of retailers experiencing challenging circumstances, and that meant some retail assets were struggling," Cradick says.

Whitten says the move from a high street to an "i-street" - alluding to the e-commerce boom - means some retail assets are now obsolete. He observes that retail outlets in central high-street locations "more naturally lend themselves" to being converted into housing. But shopping malls and out-of-town retail parks might require a bit more vision from a developer and will certainly be a longer-term project.

"It's a bit harder to see how those immediately convert and they, perhaps, become the seed of a larger new town or regeneration scheme, rather than an easy conversion," Whitten says. He describes these redevelopment opportunities as "a new kind of mixed-use community," which will include some retail, but on a much smaller scale than the type of retail that previously

Changing rooms

Empty office blocks, struggling retail parks and even former prisons are plugging the housing shortfall. But Ellie Duncan finds converting these distressed assets to residential comes with challenges, particularly amid rising build costs



existed, as well as access to other amenities, such as schools and health services, and additional infrastructure to accommodate residents.

It is not just retail assets that have been given a new lease of life. Many developers have identified buildings that were originally designed and used as offices that could be better suited for residential.

Pieter Akkerman, co-head of Schroders Capital Real Estate Netherlands, says the shortage of homes in the Netherlands means more than 300,000 residential units must be built "over the next [few] years at least, and it's only increasing."

He observes that in the aftermath of the global financial crisis in 2008, offices were being bought by developers to convert into flats and apartments. "In the Netherlands, during the last four to five years, 10-12 percent of newly created residential was coming from conversion from offices," Akkerman says.

In the UK, developers have been incentivized by the government to buy and convert vacant office space into homes. "Offices-to-residential has been the big one in the UK, over a period

"We might change the way we work, we might change the way we play, but the one certainty is that we need places to live"

NICK WHITTEN JLL

of about 10 years now. Permitted Development Rights were put in place to allow owners of vacant office space to automatically get planning permission to convert that into a new use for housing," says Whitten. "It would be fair to say it's been a useful policy in terms of increasing supply."

Bringing buildings up to standard

Cradick says that growing interest in redeveloping secondary office stock over the coming years will be predominantly driven by sustainability requirements.

"Investors holding secondary and tertiary office space that is moving towards obsolescence will be aware of the significant investment they're going to have to spend in order to bring those up to standard in regard to ESG. Those assets may well then be perceived as opportunities for alternative use, such as residential," he says.

Research published earlier this year by JLL shows that more sustainable buildings can have increased rental value of between 6 and 11 percent, and lower void periods.

Schroders Capital Netherlands is part of a consortium working on a redevelopment project in Amsterdam to convert a former prison site into a mixed-use neighborhood of around 1,350 dwellings. At completion in 2026-27, the site will be part of a car-free district of Amsterdam, the buildings will be 100 percent energy neutral, and 98 percent of the materials from the demolition of the former prison will be re-used, either for this project or others.

Akkerman calls it a new model for "urban healthy living," which will provide a blueprint for other, similar developments in the country. However, he adds: "One of the main challenges is the sustainability ambitions that we had and realizing them in practice. We are working with a lot of very skilled parties - from universities to engineering parties - to realize these aspects."

High rise or rising costs?

Like many residential developers and investors, Akkerman is wary of build cost inflation.

"The combination of rising construction costs, with higher interest rates is going to be a big challenge for residential developments, not only in the Netherlands but all over Europe. Also, because municipalities still want to get the highest price for the land they provide to developers for new residential development," he says.

While land values remain buoyant, so too have the prices at which residential dwellings sell for, mainly driven by the global shortage. Whitten says: "[Globally] we've been seeing values rising at circa 10 percent per annum, to a certain extent shielding some of this build cost inflation.

"There's still a widely held view that this spike in build cost inflation will begin to normalize at some point - it's just peaking at a higher level and lasting for longer than most forecasters had imagined at the outset, which is the challenge."



KEYNOTE INTERVIEW

The houses always win



The pandemic has accelerated demand growth for rental residential, notes Brice Hoffer, with mature and frontier markets each offering compelling opportunities

The rented residential sector has been a magnet for global institutional capital for years, first as a sound diversification play for commercial real estate investors but increasingly as a source of stable income that can ride out the ups and downs of the economic cycle. If anything, the pandemic has reinforced the long-term trend of investors looking for resilient income from residential – in all its forms – that is seen to benefit from strong demographic drivers.

With real estate investment now being played out against a backdrop of geopolitical uncertainty and above-average inflation, the residential sector is still proving its worth, according to Brice Hoffer, head of real estate research and strategy for the DACH region at UBS Asset Management. But as Hoffer mentions, residential is usually SPONSOR

UBS ASSET MANAGEMENT

more asset management intensive than commercial property, regulatory aspects have to be accounted for and investors must adapt their strategies between mature and "frontier" markets.

There has been a longterm shift of capital into private rented residential - an accelerating trend during the pandemic. What is driving this increasing investor interest in the sector?

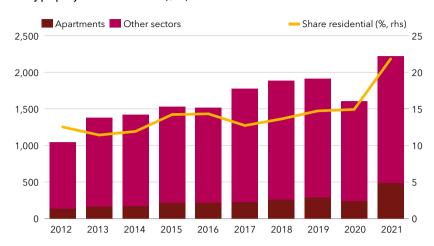
More institutional capital started flowing into this asset class way before the pandemic. If you look at global property transaction volumes by sector, 10 years back rental residential accounted for about 12 percent of total volume and now it is at least one out of five transactions. This growth is mostly supported by very long-term structural and demographic trends.

Despite discussions about an aging society, most developed economies continue to grow resulting in more inhabitants. Another important factor in demand – both for rental and owner-occupied-housing – is that the average size of households is decreasing.

Even if the population is stagnating or not growing as much as it used to do – in Germany, for instance – the overall trend of decreasing household sizes is creating more demand for residential.

It is true, however, that institutional investment in residential, as well as industrial, has really increased as a result

Yearly property transaction volume (\$bn)



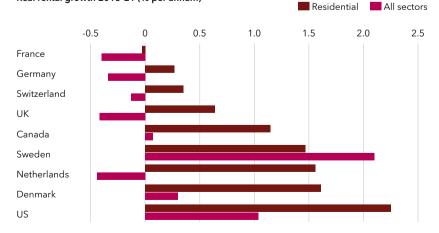
Data includes development projects Source: Real Capital Analytics; ÚBS Asset Management, Real Estate & Private Markets (REPM), May 2022

of the uncertainty created by the pandemic. During the pandemic, it was not such a concern to collect your rent from the residential and industrial sectors. Also, if you would acquire an industrial property, especially logistics or in the case of residential, multifamily assets - there was no question about convincing investors that it would perform even in this troubled time. This pandemic boost has been a bit of a reactive play, but it is ongoing now because there is still uncertainty in the market.

Equally important, however, is the fact that the private rented sector is growing at a faster pace than housing overall and for good reasons. Younger generations are not attracted to big mortgages anymore. Flexibility and mobility are more important for this generation. They see real estate as a product, rather than a long-term commitment. Lifestyle is an important aspect for the continuous growth of the sector.

In this year's economic environment of aboveaverage inflation and rising interest rates, will the residential growth trend continue?

Real rental growth 2013-21 (% per annum)



Source: MSCI, NCREIF, Oxford Economics; UBS Asset Management, Real Estate & Private Markets (REPM), May 2022

We will still have growth in most developed economies, albeit lower than forecast before the outbreak of the war in Ukraine. Inflation is skyrocketing, and we think this will continue at least for a few months before it reaches a peak because we have additional pressure on prices of fuel and basic goods coming from the war.

There is clearly more downside risk for real estate values than before, although we don't foresee a major correction as of today. The other central element driving real estate performance is income return, which is very stable in residential and not highly correlated with the economic cycle. In this respect, it remains a good diversification away from commercial property.

As for inflation, the best way of mitigating risk is through rental growth. Residential demand is very strong in most markets, while supply isn't because it has been relatively difficult to secure third-party financing for development since the global financial crisis. In addition, building land availability is becoming scarce in growing urban regions. If we compare the track record of all property rents in the long run, the residential rental sector has usually been the best inflation hedge in most markets.

One consequence of covid has been greater scrutiny of lifestyles and the enduring appeal of big cities. How will residential investment influence this debate?

The US has been an interesting case to observe during the pandemic, as we saw people moving towards the suburbs and secondary cities (particularly in the Sunbelt states), with housing affordability and quality of life among the drivers. But large cities will still be sought-after living destinations, as they will remain at the center of the job market as well as the education and entertainment sectors. That will not change post-covid, in our view.

For young people in the early steps

of their career, New York, London, Paris or other big cities around the world will always be attractive. And we think the demand for residential units in the rental sector will still be important coming from this client segment.

The question is whether the digitalization of the work environment with allow a long-term dilution of this demand toward more secondary cities and agglomeration areas. But we think that we will still have many people commuting to and from city centers to work onsite.

I don't think that we will be working fully remotely. Even twice or three times a week in the office might be enough of a reason for some people to be willing to move outside central areas.

We believe the concentration of industries and activities will increase in selected secondary cities where, in the US for example, some large corporates are expanding and therefore fueling housing demand. The structure of residential demand is also changing. By the time people are at the household formation stage they may be looking for larger-sized housing outside city centers but still in commuting distance to the office location.

This means there are two main client segments for rental property, requiring different products, and investors can be successful in both. If you are going to the suburbs, you can target larger multifamily units. Also, single-family housing rentals are increasing in popularity, particularly in the US. However, for the younger client segment, micro-apartments, co-living or smaller-sized units in multifamily schemes in the big cities will be in demand now that we are coming out of covid.

What are the key opportunities, challenges and barriers to entry?

It depends on the markets you are targeting. In areas with established, institutionalized markets, capital can be deployed very quickly - for instance,

"Large cities will still be sought-after living destinations, as they will remain at the center of the job market"

the US, Germany, the Netherlands and the Nordics. In Asia Pacific, we see this trend only in Japan at the moment.

Many other markets are just in the process of becoming institutionalized - Canada, the UK, France and southern Europe as well as Australia - which makes them more complicated to access. Capital can't be deployed at scale in these frontier markets and there is often the need of a local partner. The high turnover of tenants, requiring more local market expertise than commercial real estate, makes residential more intense and granular to manage.

There is also regulation, which is seen as a big issue for residential investment. In our view, regulation is not problematic when clear rules about rental growth and tenants' rights are set and these are stable over time; regulation becomes more of a problem when you have regulatory volatility - when some rules of the game become unpredictable and could change over time.

Overall, we spend a lot of time looking at the agglomeration areas and attractive secondary cities, where you tend to face less political pressure and uncertainty. But, nowadays, I would say that regulatory risk applies across Europe. You really need to monitor it closely and work with thorough local expertise.

In my view, the growth of residential investment has really been lifted by structural trends and we believe this will continue to be the case. But there remains the question of how we will tackle all the social and affordability issues around housing.

It will be interesting to see how government and private institutions will manage to work together in the coming years to solve those challenges in a constructive way. If we have too much regulation and not enough cooperation between private and public sectors, the risk is that supply will continue to undershoot demand in many local markets. And that is not helpful for anybody.

How should investors adapt their investment strategies between mature and frontier markets?

In many mature markets, capital can be deployed rather quickly and in a number of locations across the country. In Germany for instance, this is particularly true in the agglomeration areas. This doesn't mean city centers won't be in demand anymore; but their current high price is tied to a higher regulatory risk and lower affordability for most tenant segments.

That is why we think in terms of entry price and rental growth prospects. For some investors, certain secondary cities and commuting locations in the agglomerations are more interesting now than the really prime big city mar-

With frontier markets that are not so institutionalized, such as the UK or Australia, you have the opportunity to be a front runner and capture a niche vield that does not exist anymore in established markets. However, you will need to take on more market risk and may need to find a local developer, which can result in a higher yield. But that is not for everyone; it is really for investors with more appetite for risk and a very active approach in terms of asset management.

Finding emerging opportunities

Emerging markets have been less of a focus for US and European residential investors of late, but there are pockets of opportunities in Brazil and China sparking interest again, writes Stephanie Baxter

nstitutional capital has been making good money investing in residential in developed markets over the past decade, so the argument for moving into emerging markets has not been hugely compelling. Add political tensions in markets like Brazil, China and Russia into the mix and it is perhaps understandable that investors have approached with caution.

Adam Alari, head of European residential research at Savills Investment Management, says this is a factor but also points out that there are other challenges.

"The scale of opportunity is so large in our own backyard," he says. "I believe that in the context of Europe, including the UK, the scale of the issues affecting or forming directly out of the lack of residential are so enormous that the opportunity is significant enough that you needn't be concerned with emerging markets. There is a huge need for affordable housing in Europe."

That is not to say emerging markets do not present very compelling opportunities, caveats Alari, but it will take time for the wider market to really acknowledge that.

Fewer foreign investors in Brazil

Joao Teixeira, senior managing director at GTIS Partners and the person

responsible for the firm's Brazilian investments, says GTIS has not been attracting the same level of European and US institutional investment that it used to in the Brazilian residential market. There is a problem of governance where there has been a lot of political friction under President Jair Bolsonaro.

"To a certain extent, I think European investors have been in 'wait and see' mode when it comes to investing in the local residential market," says Teixeira.

Also, Brazil lost its investment-grade rating in 2014/15, which eliminates a lot of institutional capital. There has also been a lot of currency volatility.

Teixeira says some Chinese and Middle Eastern investors have invested



in the real estate segment recently, but "they are not enough to replace the European and American investors that used to be in our markets, and in real estate specifically," he says.

"We have also been facing difficulties because the scenario in the last two years during the pandemic was not easy. Most of the companies were shrinking and capital markets were not very easy to access."

For VBI Real Estate, which invests solely in Brazilian residential, capital flowing into the sector has been domestic rather than global. The firm's founding partner Ken Wainer says: "The argument is that in the past several years a US-based pension fund or endowment based in the northeast of the US could invest in almost any real estate in that region.

"If they did so well over the past decade, then why would they go into a market they don't know where there's a different rule of law, currency risk – that explains why it hasn't been that compelling to invest in an emerging market like Brazil."

Bright future for affordable housing

Looking forward, however, GTIS's Teixeira believes opportunities for foreign capital in Brazil residential space are good. São Paulo is the biggest and deepest market in South America in terms of residential development and real estate transactions in general, while Rio de Janeiro is the second biggest market in Brazil for residential development.

Teixeira says there is a strong development of new projects in affordable housing segments in São Paulo and across Brazil. "We're now seeing a development in a kind of barbell strategy, meaning that the most promising areas for residential development are in the high-end and affordable housing projects." he notes.

Under the Casa Verde e Amarela program, the affordable housing market has an incentive from the government to homebuilders to produce homes providing mortgage credit with a special level of interest rate for affordable housing. Teixeira says this is boosting the activity and production of affordable housing nationwide.

"Brazil has a shortage of affordable housing – the most recent data shows a shortage of seven million affordable homes – and this is a consistent government problem of providing homes for low-income Brazilians. Demand is nationwide and we've seen very strong production. It's very dependent on the cost of land because there is a ceiling on the total price you can sell an apartment for."

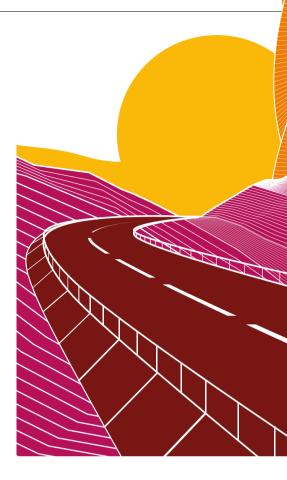
In the Northern regions, it is easier to buy land for affordable housing in the urban areas, Teixeira explains. "Whereas in the Southeast of the country, it is much more difficult to produce this type of affordable housing due to the cost of the land, especially in areas such as São Paulo and Rio de Janeiro, even though the production has increased materially in recent years."

In São Paulo, 40 percent of residential units offered in the market last year were in the affordable housing segment, Teixeira says, adding that affordable housing projects can deliver returns in the range of 20 to 25 percent IRRs.

"Affordable housing has been attracting foreign investment through direct partnerships allocating equity to local developers at project level, or specifically institutional investors providing equity as shareholders at the entity level of private and public traded homebuilders," he adds.

Student housing in Brazil

The student housing market also provides opportunities for institutional investors to make residential allocations. Brazil is the fourth-largest university market in the world with nine million students.



"The most promising areas for residential development [in Brazil] are in the high-end and affordable housing projects"

JOAO TEIXEIRA GTIS Partners



VBI Real Estate started investing in Brazilian student housing about three years ago, making its first investment with UK-based property giant Grosvenor Group, which created some of the first purpose-built student housing in Brazil. VBI's Wainer says the residential real estate market is being forced to find new ways to add value, particularly in this segment.

"Universities do not provide housing and the Brazilian real estate players, apart from the shopping mall owners, are generally not used to managing real estate," says Wainer. "Brazilian developers know how to sell real estate and how to rent on a triple net-basis on office and industrial, but gross renting and operating is not something this market is very familiar with. We built the whole property management operation from the ground up and we looked to the UK and US as references."

One of the attractions for an investor such as Grosvenor in the Brazilian residential market is that in very few markets is it possible to put \$50 million to \$60 million to work and be the number one market player.

"In Brazil, because there's a lag and new ideas evolving, they could put \$60 million to \$70 million to work. Along with VBI's money, they're now the enabler of the number one player in market share for Brazilian student housing, so that's going to be exciting for them," says Wainer.

Some recent student housing projects are delivering 10-12 percent stabilized annual yield on cost, according to Teixeira.

Multifamily prospects in China

There are also opportunities in the multifamily residential sector in Asia-Pacific, which is a nascent asset class across many parts of the region. Claire Tang, co-chief investment officer for Asia-Pacific and head of Greater China, both at LaSalle Investment Management, says the demand is driven by investors that view the sector as relatively resilient through the pandemic and investors seeking to diversify after over allocating to the office and retail sectors.

"In China, for example, various purchase restrictions in tier one markets, such as Beijing and Shanghai, have contributed to delays in home purchases among younger white-collar workers, creating strong appetite for well-located, institutionally managed rental properties in these locations," Tang says.

"With rental housing identified as a solution to combat prevailing housing issues, the government has put in place favorable policies such as reduced tax rates for multifamily operators and owners. This has led to the growth of multifamily rentals in recent vears."

In addition, the new pilot program for domestic multifamily REITs will also improve overall liquidity and supply longer-term capital to the asset class, she adds.

Multifamily is a key asset class for LaSalle in Asia-Pacific, and Tang says that in China, with limited land available for development - especially in Beijing and Shanghai - she is seeing more opportunities to convert existing hotels or offices to apartments with attractive margins. "Throughout the pandemic, multifamily rental assets have also been more resilient in terms of occupancy rates and rent collection compared to retail, hotel or office assets," she says.

There are clearly several prospects in residential real estate in emerging markets such as Brazil and China. While there are various reasons why developed market investors are focusing less on emerging markets right now, there are pockets of opportunities worth exploring.

Last word

"You can't separate health and well-being from low-carbon solutions or governance and social. If you see them as interconnected, you can create an authentic place that people want to live and gather in"

Basil Demeroutis FORE Partnership "Investors holding secondary and tertiary office space that is moving towards obsolescence will be aware of... opportunities for alternative use, such as residential"

Adam Cradick

"Throughout the pandemic, multifamily rental assets have also been more resilient in terms of occupancy rates and rent collection compared to retail, hotel or office assets"

Claire Tang LaSalle Investment Management

Final thoughts

Expert insight on the world of residential

"Inevitably delivering a scaled, operational platform over time will prove extremely attractive to more institutional capital, affording the opportunity to create very significant capital appreciation"

Richard Stonehouse Avison Young

"Investors are looking to asset classes with the strongest rent growth potential as a means to offset inflation"

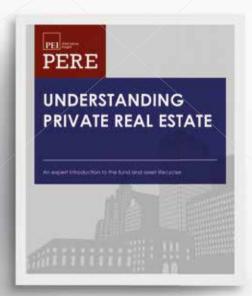
Aaron Jodka Colliers "Investment in residential property simply has to be sustainable, and ESG remains front of mind for investors"

Simon Heawood

"There is such an undersupply relative to the demand of affordable housing, and those fundamentals aren't going to change for some time"

Angela Kelcher JLL

PERE



Understanding Private Real Estate

An expert introduction to the fund and asset lifecycles

This publication will help you:

- Optimise your firm's investment management with leading investment styles and risk management
- Successfully source capital from investors and raise a private real estate fund
- Understand how to structure the capital stack to engage investor appetite
- Understand the process and methodology of valuing real estate assets; plus much more

AVAILABLE NOW

Order this essential title today at:

privateequityinternational.com/understanding-private-real-estate

Special offer to subscribers:

Order your copy today quoting SUBBK15 and receive a 15% discount







www.patrizia.ag/nextnow

Join us as we build tomorrow.

future and offers smart city solutions today.

The information contained herein is directed only at professional clients and intended solely for use by the recipient. No part of this document or the information herein may be distributed, copied or reproduced in any manner, in whole or in part, without our prior written consent. This document is for information and illustrative purposes only. It does not constitute advice, a recommendation, or a solicitation of an offer to buy or sell shares or other interests, financial instruments or the underlying assets, nor does this document contain any commitment by PATRIZIA AG or any of its affiliates. Whist prepared to the best of our knowledge, the information contained in this document does not purport to be comprehensive. PATRIZIA AG and its affiliates provide no warranty or guarantee in relation to the information provided herein and accept no liability for any loss or damage of any kind whatsoever relating to this material. The information herein is subject to change without notice. June 2022 PATRIZIA AG