

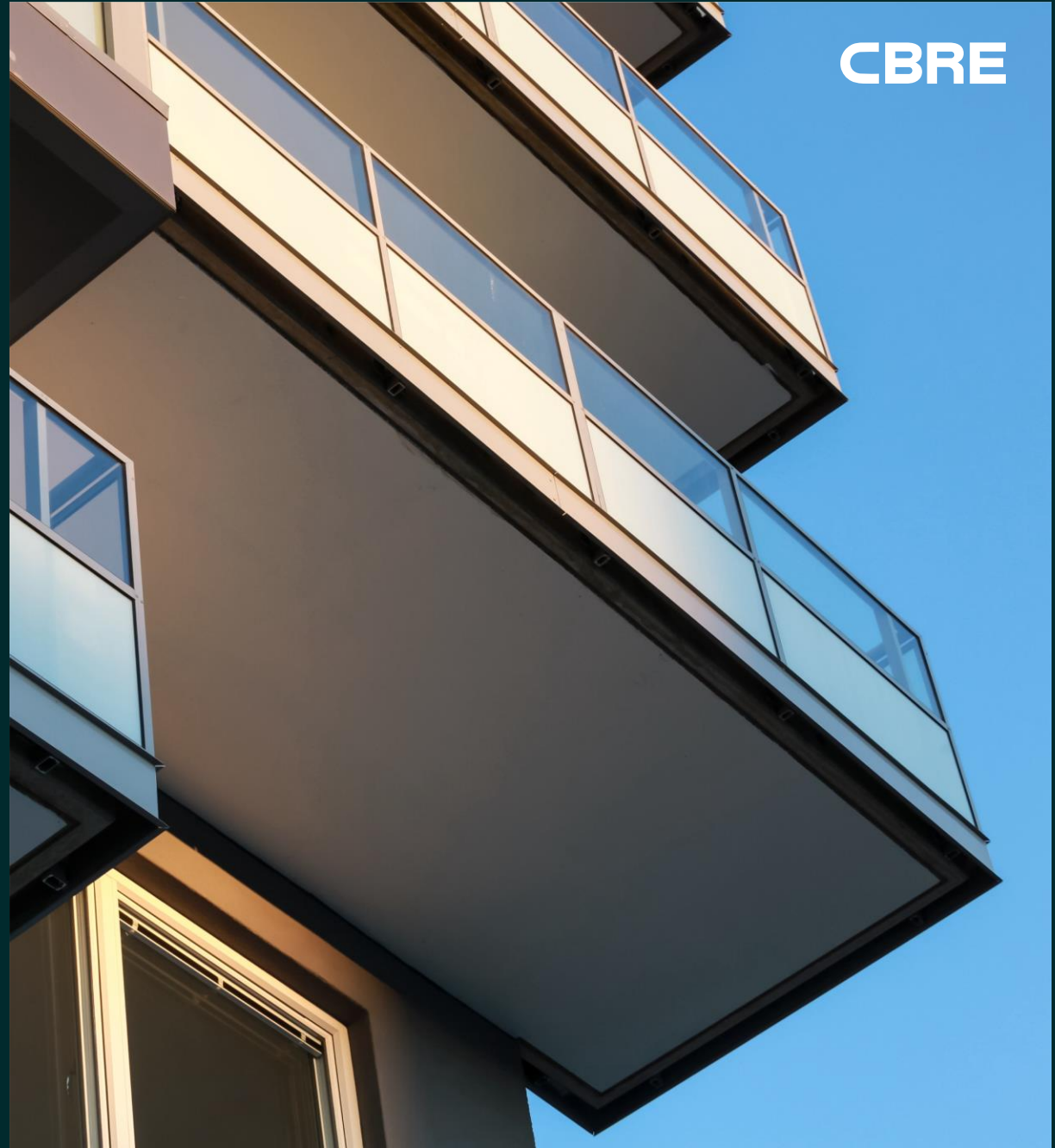
Investing in China Multifamily Real Estate

REPORT

CBRE
CHINA Research

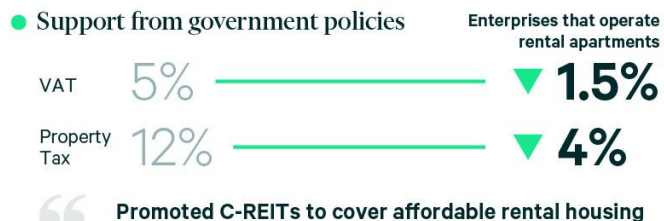
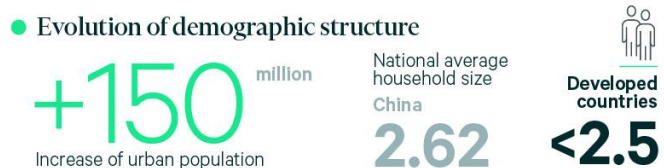
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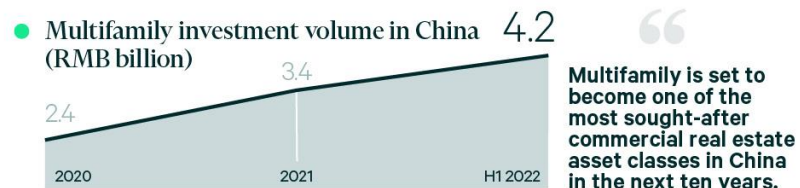
Investing in China Multifamily Real Estate

Leasing demand



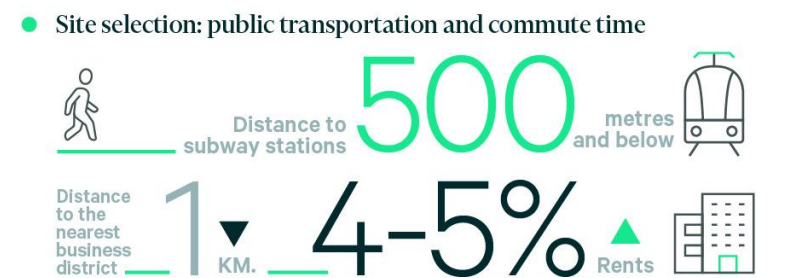
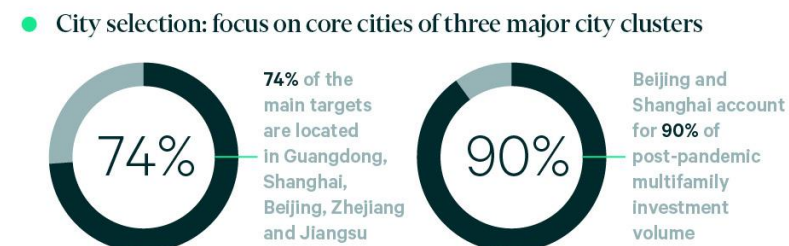
Source: Investing in China Multifamily Real Estate, CBRE Research, October 2022

Investment trends



* Shopping mall rents quoted for ground floors; leasing residence rents quoted for asking rental rates of private rental apartments.

Investment strategies



Executive summary

Although there were an estimated 150 million people living in rented accommodation in China in 2020, the country's penetration rate of multifamily rental apartments remained very low, standing at under 2%. However, the evolution of China's demographic structure; shift in housing consumption demand; and comprehensive government policy support are expected to drive an increase in the number of multifamily rental apartments to more than 12 million units by 2030.

CBRE believes that the sector's strong leasing fundamentals and potential for asset liquidity and scalability will ensure multifamily emerges as one of the most attractive commercial real estate investment asset classes in China in the next ten years.

With around three-quarters of China's target multifamily users located in Guangdong, Shanghai, Beijing, Zhejiang and Jiangsu, investors are recommended to target these core markets in the country's three major coastal city clusters. Site selection should also consider accessibility to public transportation and commute time to workplaces. The main investment approaches to multifamily rental apartments in China include acquisition and renovation of existing assets, greenfield development, and platform collaboration.

Affordable housing possesses both policy and market-oriented characteristics. Exit channels provided by C-REITs; regulatory approval for the conversion of non-residential housing into rental housing; and favourable taxation and credit policies will provide the sector with unique investment advantages.

On the operational side, CBRE recommends investors increase their investment returns through active management measures such as bulk procurement, digitalised leasing and operations systems, floor plan reconfiguration and value-added services.



Continued growth in demand
The size of China's multifamily market by 2030
> 12 million units

Significant potential for growth in multifamily penetration rate
The penetration rate of multifamily rental apartments
< 2%

Provides an attractive hedge against inflation
Rigid demand and short-term leases offer flexibility to combat inflation

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Introduction

With the central government now encouraging both housing purchasing and renting, China's rental housing market has entered an era of institutionalisation.

The Central Economic Work Conference's 2015 proposal to establish a housing system which encourages both housing purchases and rentals was widely regarded as marking the beginning of the institutionalisation of China's rental housing market.

The subsequent period has seen the multifamily market experience rapid growth, an increase in M&A activity, a boom in IPOs, a pandemic-led slowdown and a period of consolidation. Thanks to the advantages they offer in terms of concentrated ownership, standardised operations and management and well-equipped facilities and services, centralised ownership of multifamily apartments is rapidly gaining traction. While CBRE estimates that the number of centralised rental apartments in China totaled 950,000 units in H1 2022, this figure is insufficient to meet demand from the country's large number of renters.

Based on data included in the 2020 China Census Yearbook, CBRE estimates that **the proportion of renters in China's urban households is around 18%, equivalent to a rental population of more than 150 million**, excluding those in public rental housing. This translates to demand for nearly 60 million rental apartments, **indicating significant potential for growth in the penetration rate of multifamily rental apartments, which stands at less than 2%**¹. The penetration rate in mature markets such as the U.S. and Japan exceeds 50%.

Note 1. The penetration rate is 4.6% if dispersed rental apartments are included.



Leasing Demand

Driven by the evolution of China's demographic structure, shift in housing consumption demand and the comprehensive support of government policies, the number of centralised multifamily rental apartments in China is expected to exceed 12 million units by 2030.

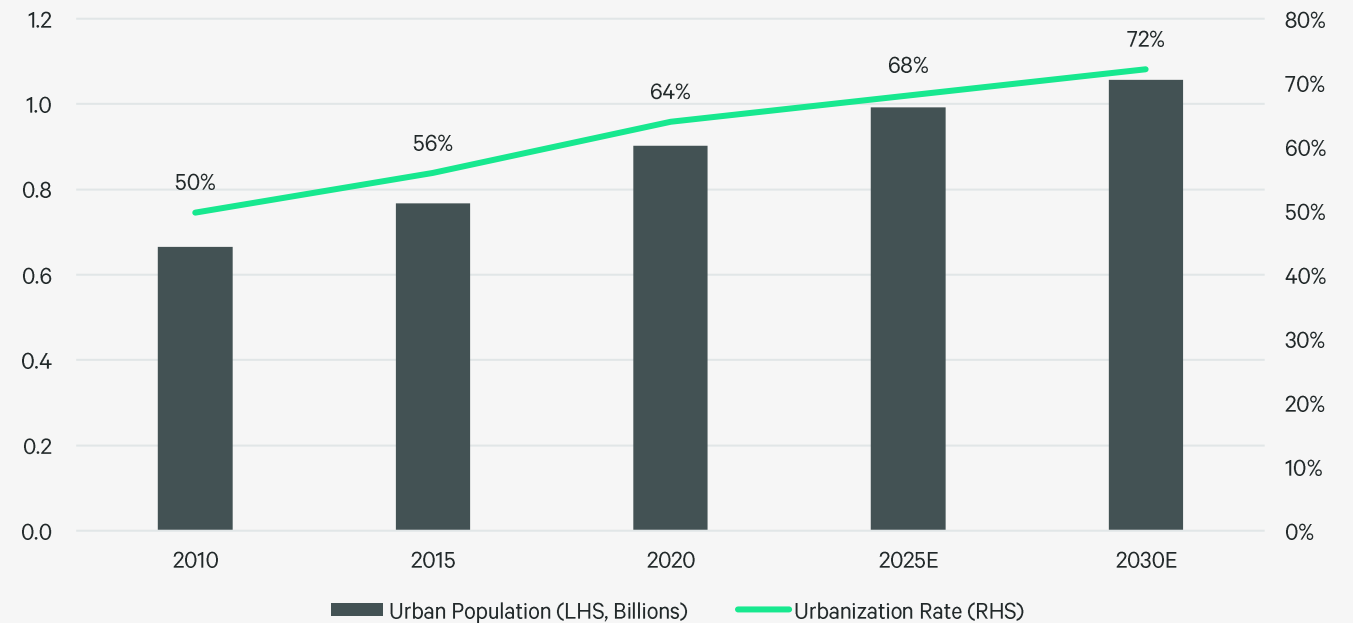
Demand drivers: evolution of demographic structure

China's urbanisation rate set to rise to 72% by 2030

China's Seventh National Census found that the urbanisation rate in 2020 was 63.9%, 14.2 pps higher than that in 2010. At the same time, the floating population reached 376 million, an increase of 70% from 2010.

According to the development path of major global economies, China will be at a stage of medium-to-high-speed urbanisation from 2020 to 2030. The Green Book of Population and Labour: Reports on China's Population and Labor released by the Chinese Academy of Social Sciences in 2021 forecasted that China's urbanisation rate would rise to 72.1% by 2030. Based on this data, CBRE estimates that **China's urban population will increase by about 150 million from 2020 to 2030.**

Chart 1: China urban population and urbanisation rate



Source: National Bureau of Statistics, Chinese Academy of Social Sciences, Oxford Economics, CBRE Research, October 2022

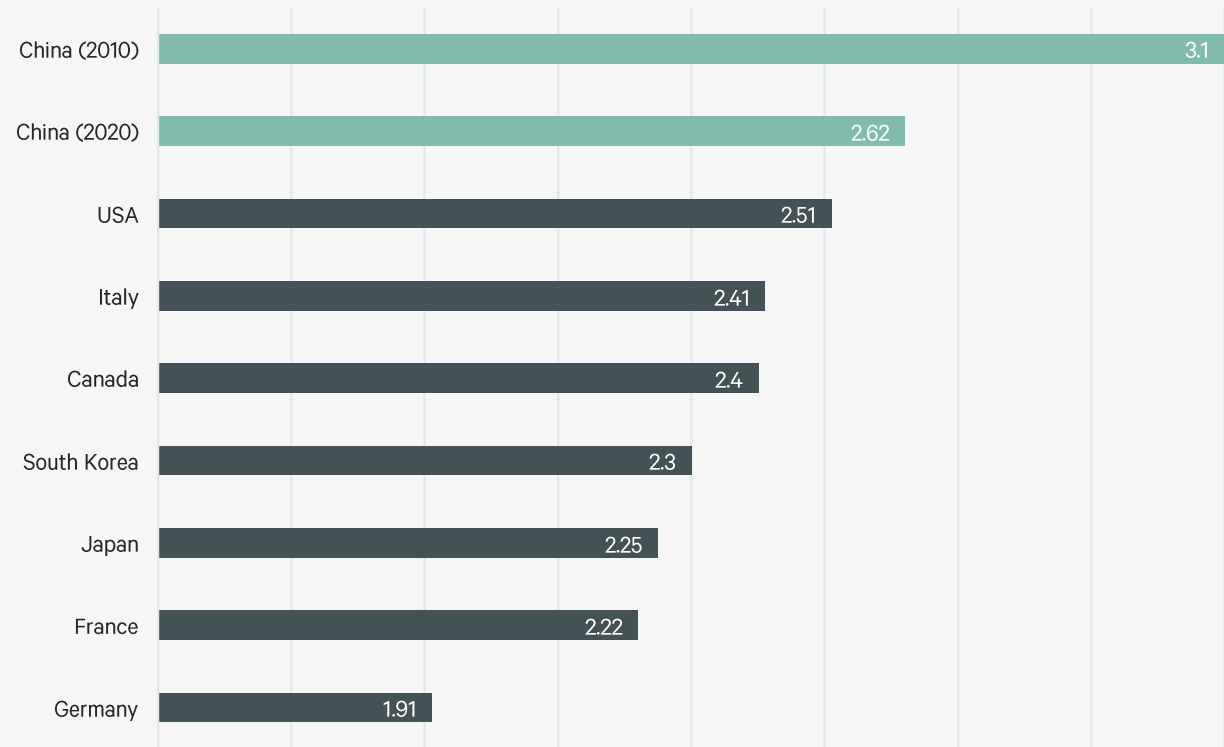
Shrinking Household Size

China's Seventh National Population Census found that the national average household size in 2020 was 2.62 persons. The average urban household size was 2.57 persons, a significant decrease from 2.85 persons in 2010, while the proportion of one-person households in total urban households increased by 9.8 pps to 26.2%. The average size of urban households in four province-level municipalities and the two economically developed provinces of Zhejiang and Guangdong are all lower than the national average.

According to patterns witnessed in developed countries, the stage of high-speed urbanisation typically brings a decline in household size along with improvements in the population's social and economic situation. Aided by factors such as a more mobile population, better living conditions, and changing attitudes towards marriage, the average family size in China will continue to shrink over the next five to 10 years, further boosting demand for rental accommodation.



Chart 2: Average household size in China and key developed countries²



Note 2. Except for China, data for other countries is the latest available.

Source: Statista, United Nations, CBRE Research, October 2022

Demand drivers: shift in housing consumption

Higher standards of living; rising inter-urban mobility; growth in independent consumption; changing attitudes towards marriage; and barriers to home ownership, especially in tier I and tier II cities, are compelling more young people in China to rent rather than buy.

A recent survey by Zillow found that in 2021, 51% of renters in tier I and new tier I cities would be willing to accept renting for more than five years, while 18% would be willing to accept renting for more than 10 years. 65% of renters preferred institutionalised rental apartments, reflecting increasing demand for high-quality living. In a separate survey³ of the rental housing consumption trends of Gen Z, 52.5% of respondents said that property quality was the most important consideration when they made leasing decisions.

Chart 3: Long-term rental intentions of renters in tier I and new tier I cities in 2021



Chart 4: Rental preference of renters in tier I and new tier I cities in 2021



Note 3. 2022 New Consumer Renting Trends Report, HCR, National Business Daily, March 2022

Source: 2021 Blue Book of China's Urban Rental Life, Zillow, November 2021

Demand drivers: comprehensive support from government policies

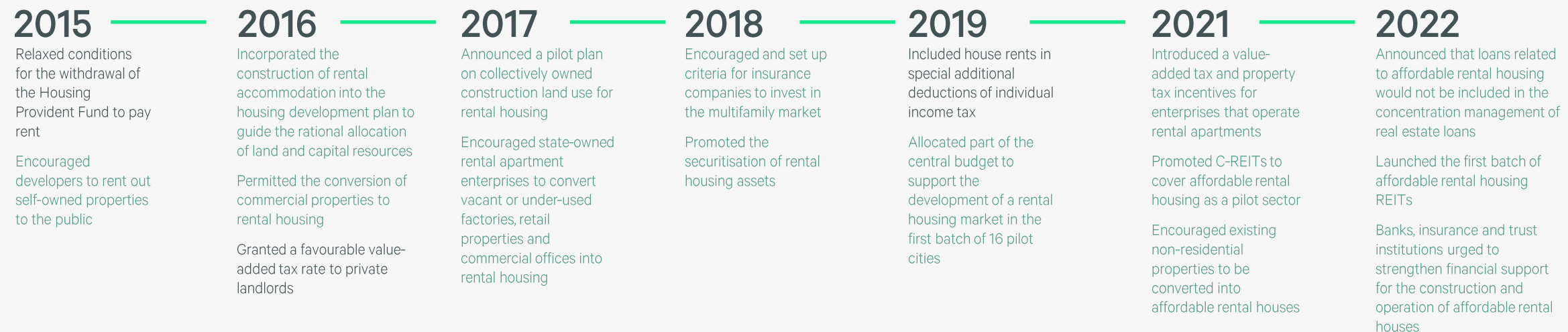
Since 2015, the central government has introduced extensive fiscal, taxation, finance, land, social security and other measures to promote the development of a national residential rental market. Policy support for institutionalised rental apartments has intensified since 2021, with a stronger focus **on revitalising existing assets, providing tax incentives, and spurring the growth of the financing and capital markets.**

Revitalising existing assets – In 2021, Opinions on Accelerating the Development of Affordable Rental Housing was issued by the General Office of the State Council. The document proposed for the first time at the national level to convert existing non-residential properties into affordable rental accommodation.

Tax incentives - In 2021, the Ministry of Finance, the State Administration of Taxation and the Ministry of Housing and Urban-Rural Development jointly announced the introduction of a favourable value-added tax rate and property tax rate for enterprises that operate rental apartments (see page 11 for details).

Financing and capital markets – In 2021, the National Development and Reform Commission introduced affordable rental housing as a pilot sector for C-REITs. China AMC Beijing Affordable Housing REIT, CICC Xiamen Affordable Rental Housing REIT and Hotland Innovation Shenzhen Talent Affordable Rental Housing REIT were successfully launched in August 2022. In addition, the central bank and the China Banking Regulatory Commission announced in early 2022 that loans related to affordable rental housing would not be included in the concentration management of real estate loans.

Chart 5: Major supportive policies for China’s rental housing market



Source: Public information, CBRE Research, October 2022

Announcement on improving taxation policies for residential leasing

Ministry of Finance, State Administration of Taxation, Ministry of Housing and Urban-Rural Development

Implemented from October 1, 2021

Chart 6: Value-Added Tax and Property Tax Incentives for Enterprises Engaged in Residential Property Leasing

Tax Categories	Taxpayers	Tax Method	Original Rate	Current Rate	Applicable Parties	Applicable Projects			
						Affordable Rental Housing		Non-affordable Rental Housing	
						Residential Land	Non-residential Land	Residential Land	Non-residential Land
Value Added Tax	General Taxpayers	General Method	9%	9%	Residential leasing enterprises that rent residential units to individuals				
		Simplified Method	5%	1.5%					
	Small-scale Taxpayers	Simplified Method	5%	1.5%					
Property Tax	N.A	N.A	12%	4%	Enterprises, institutions, social organizations and other organisations that rent residential accommodation to individuals and specialised large-scale residential leasing enterprises⁴				

Note 4. Specialised large-scale house leasing enterprises are defined as enterprises that own or operate 1,000 or more rental housing units or with a GFA of 30,000 sq. m. or more in the city where the business opening report or filing is made. The Ministry of Housing and Urban-Rural Development of each province, autonomous region, and municipality may reduce the standard within a range of 50% for all or selected cities in the region according to the development of the local rental housing market.

Source: State Administration of Taxation, CBRE Research, October 2022



By 2030, demand for institutionalised rental accommodation in China will exceed 12 million units.

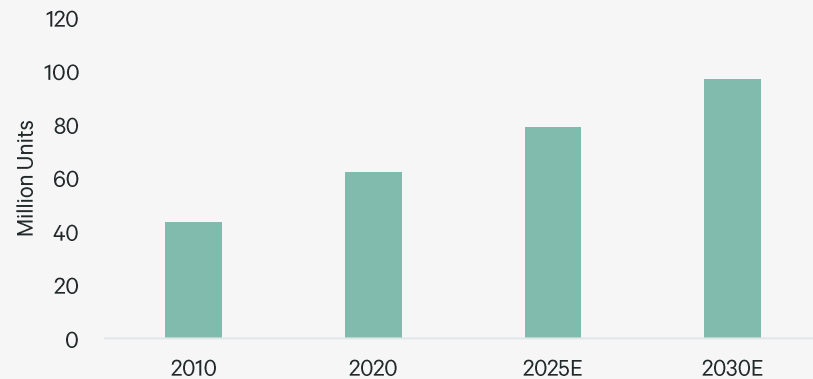
By 2030, demand for institutionalised rental accommodation in China will exceed 12 million units

Based on the current development trajectory of China’s urban population, household size and proportion of rental households, CBRE estimates that **by 2030, nationwide demand for residential rental apartments will reach 97 million units, a 56% increase from 2020.**

As major provinces and cities accelerate rental housing construction according to the 14th Five-Year Plan, state-owned and private capital is flowing into the multifamily rental apartment sector. Aided by policy support on the financial, fiscal and taxation front, **the penetration rate of multifamily rental apartments is forecasted to rise to 12% in 2030, reaching a size of more than 12 million units.**

Being the largest and most active rental housing markets in China, Shanghai and Beijing are attracting the bulk of investors’ attention.

Chart 7: Demand forecast for rental accommodation in China



Source: Oxford Economics, Chinese Academy of Social Sciences, National Bureau of Statistics, CBRE Research, October 2022

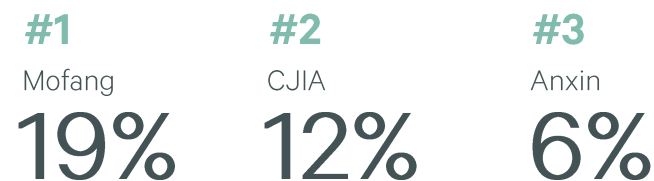




————— Target
Cities

Shanghai: strong demand and supply

Chart 8: Major multifamily operators⁵ and market share in Shanghai



4	Ziroom	5%
5	Umihome	5%
6	Goyoo	4%
7	Baoland	4%
8	Base	4%
9	Funlive	3%
10	Lefull	3%

Note 5. Other leading brands include Shangyu, Port Apartment, Vlinker, L HOME and Citywonder.

Note 6. Based on the assumption that the average area per unit is 65 sq. m.

Supply

Shanghai is China’s leading multifamily market. As of H1 2022, the city was home to 45 major operators with a total of 436 properties providing 157,000 apartment units.

Location: The location of multifamily properties in Shanghai is highly correlated with population distribution. Being the administrative districts with the largest proportion of permanent residents, Minhang, Pudong, Baoshan, and Songjiang host 59% of the city’s multifamily properties. In terms of ring lines, 41% of multifamily properties are located outside the outer ring, while only 15% are inside the inner ring.

Rental rates: Rents are highly correlated with ring lines. The average monthly per sq. m. rent for studios located inside the inner ring is RMB 239, nearly twice the rental rate of the same types of property located outside the outer ring. Rents for multifamily properties are also closely related to business and industrial maturity, with those for Jing’an, Pudong and Huangpu, all of which have core business districts, being the highest.

Apartment types: Shanghai is home to a variety of apartment types, ranging from studios to three-bedroom apartments. Studios and one-bedroom apartments are the most common. Studios and lofts command the highest average monthly per sq. m. rents.

Demand

CBRE estimates that **the target customer base for multifamily rental accommodation in Shanghai (urban households with a monthly rent of more than RMB 2,000) currently exceeds 1.4 million households, the highest of any city in China.**

Outlook

Based on land transaction records, new supply of multifamily apartments in Shanghai will reach 186,000 units in the period from 2022 and 2025. This figure includes 162,000 units with R4 land and 24,000 units with residential land⁶. Shanghai authorities also intend to promote the development of new supply through multiple sources to achieve their planned goal of providing about 400,000 units of affordable rental apartments during the 14th Five-Year Plan period. **CBRE therefore expects that the volume of new multifamily apartments (including affordable rental apartments) in Shanghai will reach about 600,000 units by the end of 2025.**

The number of target households for the multifamily rental market in Shanghai currently accounts for 47% of the total number of renter households in the city. Assuming this ratio remains unchanged; Shanghai’s urban population continues to grow; and the institutionalisation of the multifamily rental market continues, **CBRE expects demand for multifamily rental apartments to reach 970,000 units in 2025.**

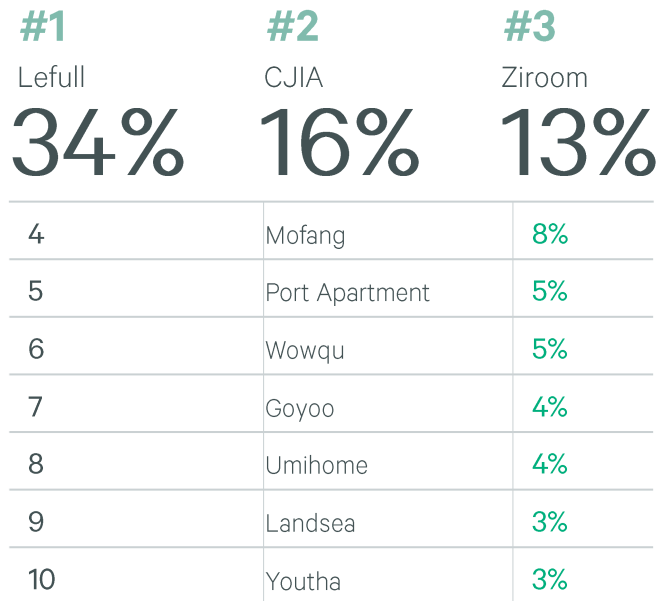
Shanghai multifamily market metrics



Note 7. Calculated according to the rental index of private apartments provided by Centaline Property Agency.
 Note 8. A studio is an apartment type with sleeping and living functions shared in the same space. A loft is an apartment type with sleeping and living functions distributed in separate upper and lower vertical spaces. The bedroom is usually located in the upper space, which has a height of less than 2.2 m. The apartment area is the projected area. A one-bedroom apartment has a bedroom that is independent from the living room, which can be understood as the conventional 1LDK. Two-bedroom and three-bedroom apartment types can be inferred likewise.
 Note 9. The range of the monthly rental rate excludes a 10% extreme value.
 Source: National Bureau of Statistics, Centaline Property Agency, CBRE Research, October 2022

Beijing: great potential for urban renewal and strong rental affordability

Chart 9: Major multifamily operators¹⁰ and market share in Beijing



Note 10. Other operators include: LiYeah, More, Building 9, Z-stay and Base

Note 11. Estimated based on the assumption that the average area per unit is 65 sq. m.

Supply

As of H1 2022, Beijing's major multifamily apartment operators had a total of 167 properties with 57,000 apartment units.

Location: Chaoyang, Fengtai and Haidian, which have a vibrant business environment, accessible public transportation and high living convenience, are the most sought-after districts for multifamily apartment operators. In terms of ring lines, properties located outside the fifth ring account for 34% of overall stock, and mainly serve surrounding industrial parks and universities. Properties inside the third ring account for the lowest proportion, at just 14%.

Rental rates: The average monthly rent per sq. m. for studios located between the second and third ring is RMB 241, much higher than that for studios located in the outer rings. Average rental rates for studios are highest in the Dongcheng district and Xicheng district, followed by the Haidian district, which is home to a large concentration of universities and several well-developed industries. Other areas commanding high rents are Chaoyang and Fengtai, which possess large-scale high-quality commercial buildings.

Apartment types: Multifamily rental apartments in Beijing primarily cater to single white-collar workers and small-size households. Studios and lofts are the most popular apartment types and also command higher rents per sq. m. than other formats.

Demand

CBRE estimates that the target customer base of multifamily rental apartments in Beijing (urban households capable of paying a monthly rent of more than RMB 2,000) is about 125 million households, ranking second to Shanghai. **With these households accounting for 51% of the total number of renter households in Beijing, the rental population has relatively strong rental affordability.**

Outlook

CBRE's analysis of recent transactions of collectively owned commercial construction land, green belt land and F3 land shows that new supply of multifamily apartments and affordable rental apartments¹¹ in Beijing will reach 14,000 units and 11,000 units, respectively, in the years between 2022 and 2024. According to the Beijing Housing Security Plan during the 14th Five-Year Plan Period, the city aims to provide 400,000 units (rooms) of affordable rental apartments during the 14th Five-Year Plan period. Assuming a completion rate of 90%, **CBRE estimates that the total number of multifamily apartments (including affordable rental apartments) will reach about 450,000 units by the end of 2025. Urban renewal properties will be an important part of rental housing supply in Beijing, especially in the city's core areas.**

Assuming the proportion of target households for the multifamily market in the total number of renter households remains unchanged, Beijing's urban population continues to grow, and the institutionalisation of the multifamily rental apartment market continues, **CBRE expects that demand for multifamily apartments will reach 870,000 units in 2025.**

Beijing multifamily market metrics

Overview of Beijing urban households		Indicators by apartment type				Future supply and demand forecast (by the end of 2025)	
2.50	30%	Apartment area (sq. m.)				450	870
Number of urban renter households (million)	Share of urban renter households of total urban households	15-45	20-62	21-57	24-80	Future supply (Thousand units)	Future demand (Thousand units)
Overall multifamily market indicators (as of June 2022)		Range of monthly rental rate per sq. m. (RMB/sq. m.) ¹³				Rental residential land ¹⁴ supply and location (2022-2024)	
167	57	76-297	77-260	79-228	90-200	New supply (Thousand units)	25
Multifamily properties	Apartment units (Thousand)	Proportion of the properties with this type				0%	22%
168	5.7%	99%	32%	21%	12%	Inside the third ring	Between third ring and fourth ring
Average monthly rental rate per studio per sq. m. (RMB/sq. m.)	Rental Rate y-o-y ¹²	Studio	Loft	1-Bedroom	2-Bedroom	0%	78%
Average monthly rental rate per studio per sq. m. by ring lines (RMB/sq. m.)						Between fourth ring and fifth ring	Outside the fifth ring
241	179						
Between second ring and third ring	Between third ring and fourth ring						
172	132						
Between fourth and fifth ring	Outside the fifth ring						

Note 12. Calculated according to the rental index of private apartments provided by Centaline Property Agency.
 Note 13. The range of monthly rental rate excludes a 10% extreme value.
 Note 14. Including collectively owned commercial construction land, green belt land and F3 land.
 Source: National Bureau of Statistics, Centaline Property Agency, CBRE Research, October 2022



Investment Trends

Benefiting from the sustainable growth of leasing demand and expected improvement in asset liquidity and scalability, multifamily is set to become one of the most sought-after commercial real estate asset classes in China in the next ten years.

Multifamily investment in China is increasing

Recent years have seen the emergence of multifamily as an increasingly popular commercial real estate investment. Growth in nationwide multifamily investment has accelerated especially sharply since 2020, with leading investment institutions such as Blackstone, KKR, Brookfield, Greystar and Ping An, either entering the market for the first time or increasing their allocations to the sector. A total of 13 transactions with a volume greater than RMB 10 billion have been completed since 2020, significantly exceeding total investment volume during 2015-2019.

Shanghai and Beijing are the top two active cities for multifamily investment, accounting for over 90% of all related deals since the onset of the COVID-19 pandemic.

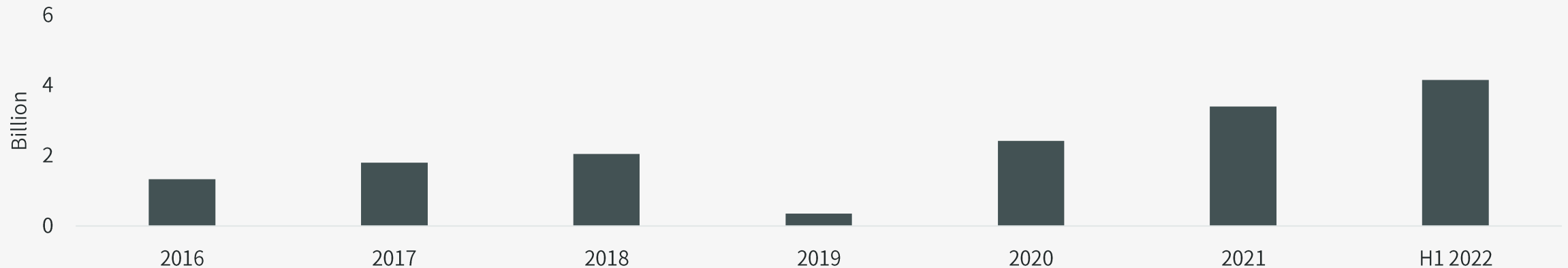
Post-pandemic multifamily investment volume in RMB

10 Billion

Beijing's and Shanghai's share of nationwide investment volume: more than

90%

Chart 10: Multifamily investment volume in China ¹⁵

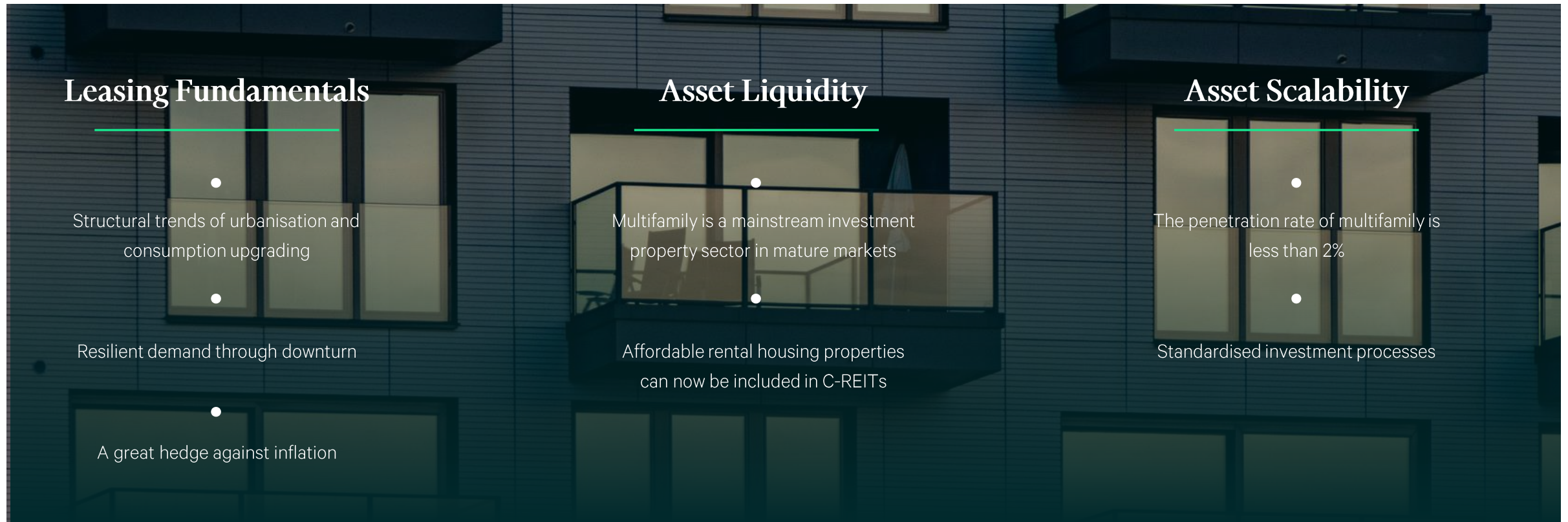


Note 15 Excluding transactions with a volume lower than US\$10 million and land transactions
 Source: CBRE Research, October 2022

CBRE's 2022 China Investor Intentions Survey included multifamily as a mainstream investment property sector for the first time.

While respondents to the survey acknowledged that factors such as asset pricing and exit channels constrain multifamily investment, the outlook is brightening. Following the successful exit of two value added investments, namely the Cohost West Bund deal in 2021 and the Real Apartment transaction this year, as well as the recent launch of three affordable rental property REITs, exit channels for multifamily investment are gradually becoming clear, which should attract a broader range of investors with different investment strategies and return requirements to the sector.

Multifamily's solid leasing fundamentals and asset liquidity and scalability should ensure the sector emerges as one of the most attractive commercial real estate asset classes in China in the next ten years.



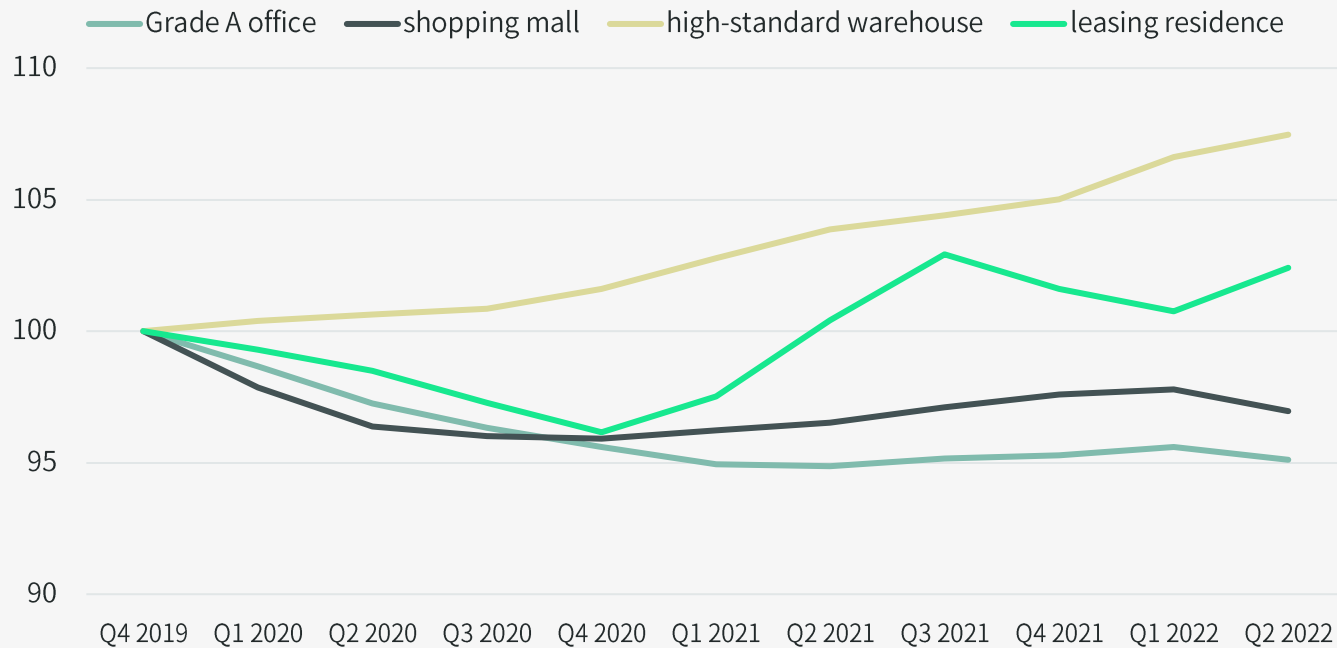


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Benefiting from the sustainable growth of leasing demand and expected improvement in asset liquidity and scalability, multifamily is set to become one of the most sought-after commercial real estate asset classes in China in the next ten years.

Multifamily has performed well throughout the pandemic

Chart 11: Rental Index for all types of properties in tier I cities since the onset of the COVID-19 pandemic (Q4 2019 =100)¹⁶



Note 16 Shopping mall rents are quoted for ground floors; leasing residence rents are quoted for asking rental rates of private rental apartments.
Source: Centaline Property Agency, CBRE Research, October 2022

In addition to the long-term benefits resulting from changes to China’s demographic structure and consumption upgrading, the onset of the COVID-19 pandemic and subsequent economic downturn have underscored the multifamily rental apartment sector’s strong leasing fundamentals.

Compared with offices, shopping malls and hotels, rental demand for multifamily apartments has been resilient throughout the pandemic. According to data from Port Apartment and Goyoo Apartment, the two leading multifamily operators have maintained occupancy above 90% since early 2020, while simultaneously accelerating the rate of new openings.

Rents have also performed well. **Between 2020 and H1 2022, the cumulative increase in the residential rental index in tier I cities was 2.4%, well above growth for Grade A offices and retail ground floors.**

In the medium to long term, robust demand and shorter leases will enable multifamily apartments to achieve stronger rental income growth in an inflationary environment.



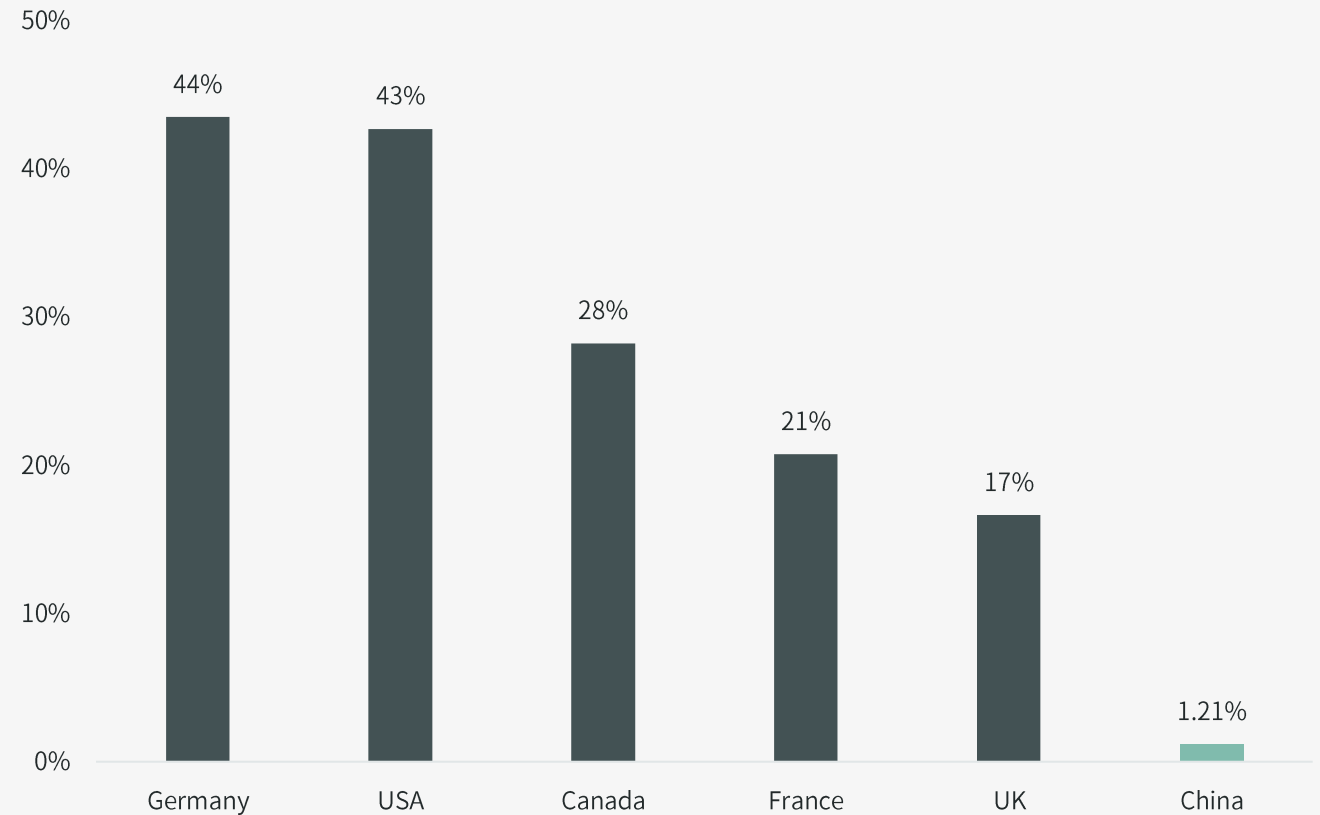
China multifamily offers significantly more growth potential than developed markets

Multifamily is the most actively traded property type in mature commercial property investment markets such as Europe and the U.S. CBRE data show **that multifamily accounted for more than 15% of total investment volume in all major European and American markets in 2021.** Multifamily investment in the U.S. reached nearly US\$350 billion in 2021, ranking first worldwide and reaching a record high.

In contrast, multifamily investment volume in China accounted for just 1.2% of overall investment volume in 2021. However, with the gradual maturity of China’s rental housing market and increasing institutionalisation of the sector, multifamily investment is poised for rapid growth in the coming years.



Chart 12: Multifamily’s share of total commercial property investment in major markets (2021)



Source: RCA, CBRE Research, October 2022

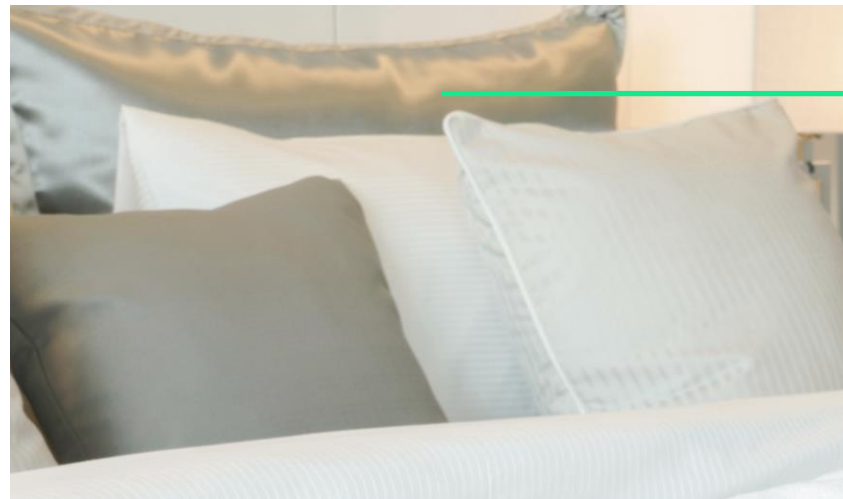
The first batch of affordable rental housing REITs in China were successfully launched at the end of August 2022. All three newly launched REITs were more than 100 times oversubscribed, with gross yields ranging from 5.6% to 6.2% based on the valuation of their underlying asset portfolios (See Appendix for details). In September 2022, China Resources Land filed an application for an affordable rental housing REIT, making it the first affordable rental housing REIT initiated by a market-oriented institution.

In contrast with the public rental housing segment, in which the government assumes the responsibility of general protection and urban households with difficulties in income and housing are strictly catered to, affordable rental housing is a system for a wider range of customers including new citizens and younger generations. The sector features participation by multiple entities with government’s support, giving it both policy and market-oriented characteristics (See Appendix for details).

CBRE believes that despite constraints regarding room size and rental rates, the development of exit channels for affordable rental housing investment, the government’s support for the conversion of existing non-residential properties into rental properties and the clarification of the criteria and processes for the recognition of affordable rental apartments will further enhance the liquidity of multifamily in the commercial property investment market.

Constraints on affordable rental apartment investment

<p>Room Size</p> <p>Small size apartments with an area under 70 sqm. are the mainstream.</p>	<p>Rental Rates</p> <p>Rental rates are lower than those for market-oriented rental properties in the same location and of the same quality.</p>
<p>Rental Rate Growth</p> <p>Some cities mandate annual increases of no more than 5%.</p>	<p>Rental Period</p> <p>A few cities require a lease term of no less than one year.</p>



Advantages of affordable rental apartment investment

<p>Taxation</p> <p>Preferential value-added tax rate and property tax rate.</p>	<p>Loans</p> <p>Loans related to affordable rental housing are not included in the concentration management of real estate loans.</p>
<p>Utilities</p> <p>Existing non-residential properties that are converted into rental properties can enjoy civil utility prices.</p>	<p>Investment</p> <p>Exit through public REITs.</p>

Source: Government documents, CBRE Research, October 2022

The creation of exit channels for affordable rental housing and government support for the conversion of existing non-residential properties into affordable rental houses will further enhance the liquidity of multifamily in the commercial property investment market.

Standardisation of investment processes to accelerate the development of multifamily investment

Scalability is an important criteria for investors to judge the investment potential of a particular asset class and make asset allocations. With **the volume of rental apartment units in China standing at nearly 60 million, and the penetration rate of institutionalized multifamily apartments just 2%**, the sector boasts huge growth potential. Following the rapid growth witnessed in recent years, multifamily is now entering a period of more mature and stable development. **CBRE believes that a replicable and standardised investment approach from site selection, product design, development and construction to operational management will help investors assemble scalable portfolios, achieve economies of scale, and create compelling brands.**

Chart 13: Investment process of multifamily investment and multifamily market metrics

Investment phase	Construction phase	Operation phase
<div data-bbox="657 554 777 682" data-label="Image"> </div> <p>Site selection</p> <ul style="list-style-type: none"> • Prime indicator: distance to subway stations • Focus on the growth potential of business districts along subways within commute distance • Surrounding amenities: restaurants, convenience stores, etc. <p>Property conditions</p> <ul style="list-style-type: none"> • Focus on building depth: affecting the apportioned area and effective area per apartment • Independence of property facilities and equipment (e.g. air conditioning) • Ascertain split of management interface between property managers <p>Investment projections</p> <ul style="list-style-type: none"> • Future supply: land available for sale/replacement cost of renovation • Future demand: industry radiation, growth potential of business district • Rental forecast: surrounding institutionalised apartment rents • Policy benefits of being certified as affordable rental housing properties (“Nabao”): utilities, taxes, loans (See Appendix for details.) 	<div data-bbox="1388 549 1574 682" data-label="Image"> </div> <p>Floor plan configuration & room design</p> <ul style="list-style-type: none"> • Studios and one-bedroom apartments as main products • Room design should consider functional partitioning • Areas without room arrangement to be used as common area <p>Construction cost</p> <ul style="list-style-type: none"> • Decoration standards (excluding building costs, such as structure reinforcement, facade adjustment, etc.) Monthly rental rate RMB 3~5K: RMB 50-100 thousand / room, RMB 1,500~2,000 / sq. m. Monthly rental rate RMB 6~8K: RMB 100~150 thousand / room, RMB 2,000~3,000 / sq. m. <p>Construction period</p> <ul style="list-style-type: none"> • Usually 6-12 months for renovated properties • About 24-36 months for development properties 	<div data-bbox="2216 554 2356 682" data-label="Image"> </div> <p>Rental rates</p> <ul style="list-style-type: none"> • Pricing: one room one price • Lease term: usually no more than one year (lease period for affordable rental apartments as stipulated by relevant regulations) • Rental rates per sq. m. of multifamily apartments are usually 30% higher than those for surrounding private rental apartments <p>Occupancy</p> <ul style="list-style-type: none"> • Lease-up period: usually three to six months for properties with less than 300 rooms • Average annual occupancy rate: usually above 90% for stabilized projects; possible to achieve above 97% for operators with channel advantage (after considering the void period for leasing replacement) • Lease renewal rate: about 40%-60% <p>Operating cost</p> <ul style="list-style-type: none"> • Overnight cost per apartment: 10%-15% of revenue • Marketing expenses: affected by differences in channels and self-built private traffic; wide discrepancy in marketing expenses as a percentage of revenue (0~15%)

Source: CBRE Research, October 2022



Investment Strategy

City selection, site selection and investment approaches

City selection: focus on core cities of three major city clusters

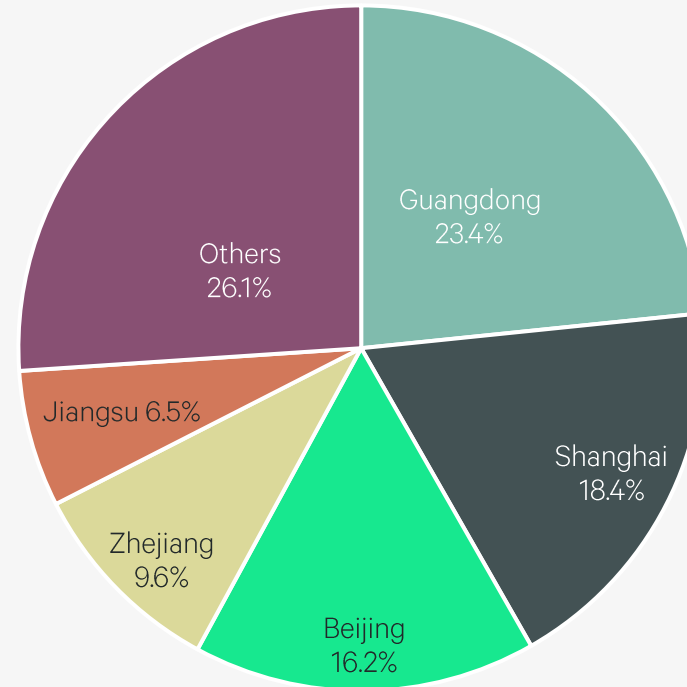
CBRE suggests that multifamily investors focus on core tier I and tier II cities in major city clusters, such as the Yangtze River Delta Area, Pearl River Delta Area and Beijing-Tianjin-Hebei Region.

Based on an analysis of the geographical distribution of urban households able to afford of monthly rental rate above RMB 2,000 in China, CBRE found that 74% of them are located in Guangdong, Shanghai, Beijing, Zhejiang and Jiangsu. From the perspective of rental rates, these households are the main target customers of the multifamily market.

74%

of the main target customers of the multifamily market are located in Guangdong, Shanghai, Beijing, Zhejiang and Jiangsu.

Chart 14: Geographical distribution of target customers¹⁷ of multifamily properties in China



Note 17: Urban households able to pay a monthly rental rate of above RMB 2,000

Source: National Statistics Bureau, CBRE Research, October 2022

CBRE's analysis of population mobility in China further underlines the need for investors to focus on core tier I and tier II cities in major city clusters.

An analysis of the number of permanent residents and the economic scale of 24 cities included in a central government pilot scheme for the development of a rental housing market shows that except for Nanning, Shijiazhuang and Changchun, the share of GDP of all cities was higher than its share of permanent residents, indicating that these cities' superior economic resources will continue to attract large population inflows, aided by the relaxation of 'hukou' restrictions.

Beijing, Shanghai, Shenzhen, Guangzhou, Hangzhou and Nanjing possess the greatest demand potential for multifamily rental apartments:

Share of GDP / Share of permanent residents

House price / Income

> 1.8

> 15

National rank of disposable income per capita of urban households

Preferred city for college graduates' employment¹⁸

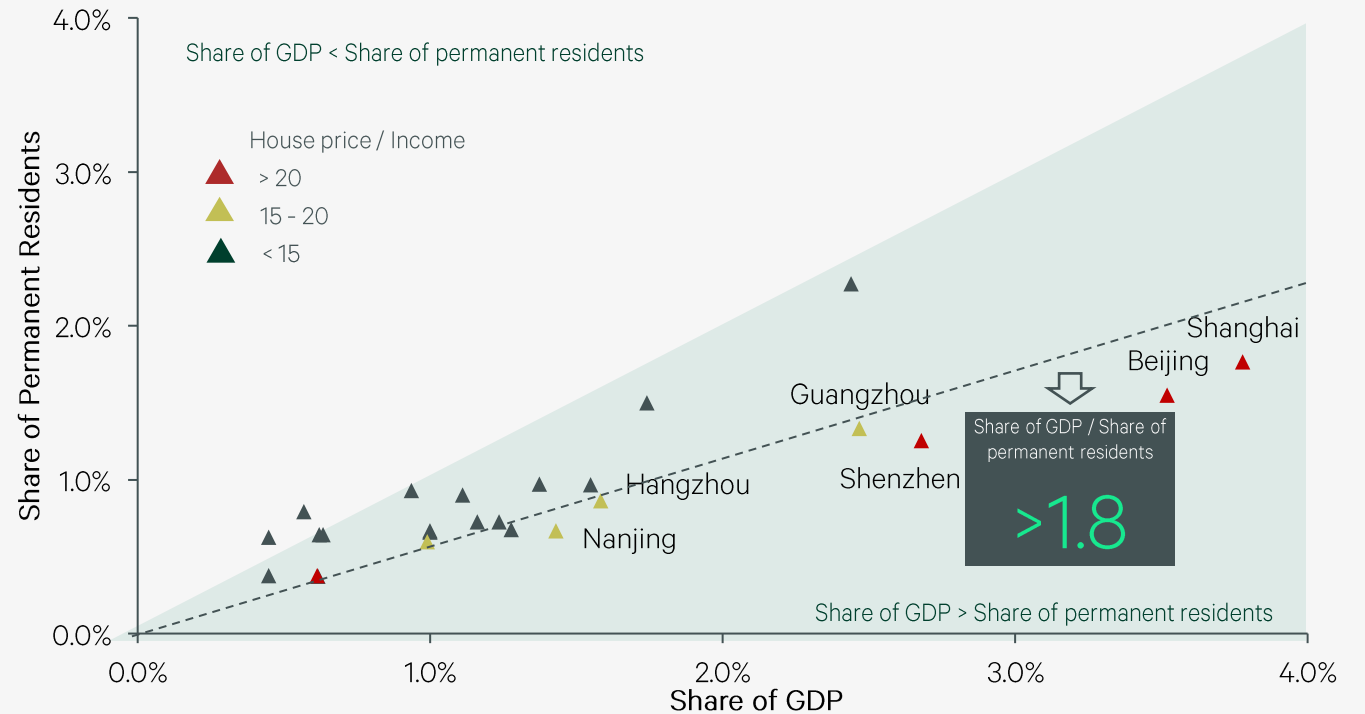
Top 10

Top 10

Note 18: 2021 National Employment Report of College Graduates, 58.com

Note 19: Beijing, Shanghai, Shenzhen, Guangzhou, Changchun, Shenyang, Tianjin, Shijiazhuang, Jinan, Qingdao, Hefei, Nanjing, Hangzhou, Ningbo, Fuzhou, Xiamen, Nanning, Taiyuan, Xi'an, Zhengzhou, Wuhan, Changsha, Chengdu, Chongqing

Chart 15: Share of permanent residents and share of GDP of 24 pilot cities¹⁹ for the development of rental housing market (2021)



Source: WIND, Local Statistics Bureau, CBRE Research, October 2022

Site selection: public transportation and commute time

As commute time and public transportation are the primary considerations when renters select accommodation, these factors exert a strong influence on site selection and rental rates of multifamily properties. CBRE data show that 65% and 50% of multifamily properties in Shanghai and Beijing, respectively, are located within 1,000 m. or 10 minutes' walk of subway stations.

CBRE's analysis of the rental rates for studio apartments in Beijing and Shanghai shows that there is a negative correlation between rental rates and the distance to subway stations. Among properties owned by the same multifamily operator, **rents for those within 500 m. of subway stations command a premium of 10-30% over average rental rates. When the distance from a property to a subway station exceeds 1,500 m, rents are typically 20% below the average.**

The distance to offices also has a direct impact on multifamily rents. In Beijing, the average distance of multifamily properties to the nearest business district is about 4.4 km. 68% of multifamily properties are located within 5 km. of business districts. CBRE's analysis of the correlation between the monthly rental rates for major multifamily properties and their distance to the nearest business district shows that **rents are 4%-5% higher for every 1 km. closer a property is to a business district.**

Chart 16: Distance to subway stations and monthly rental rates of studios of major multifamily operators in Beijing and Shanghai

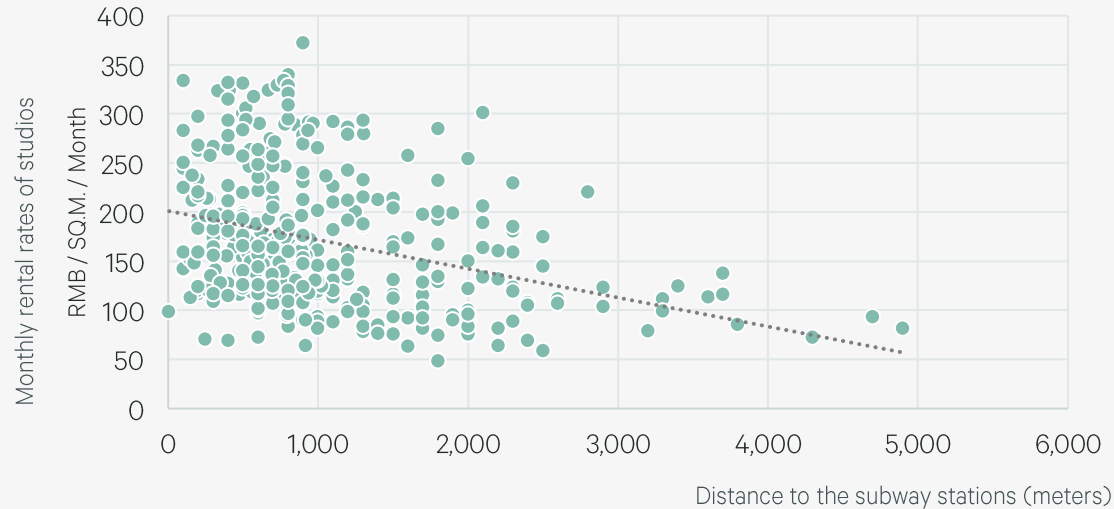
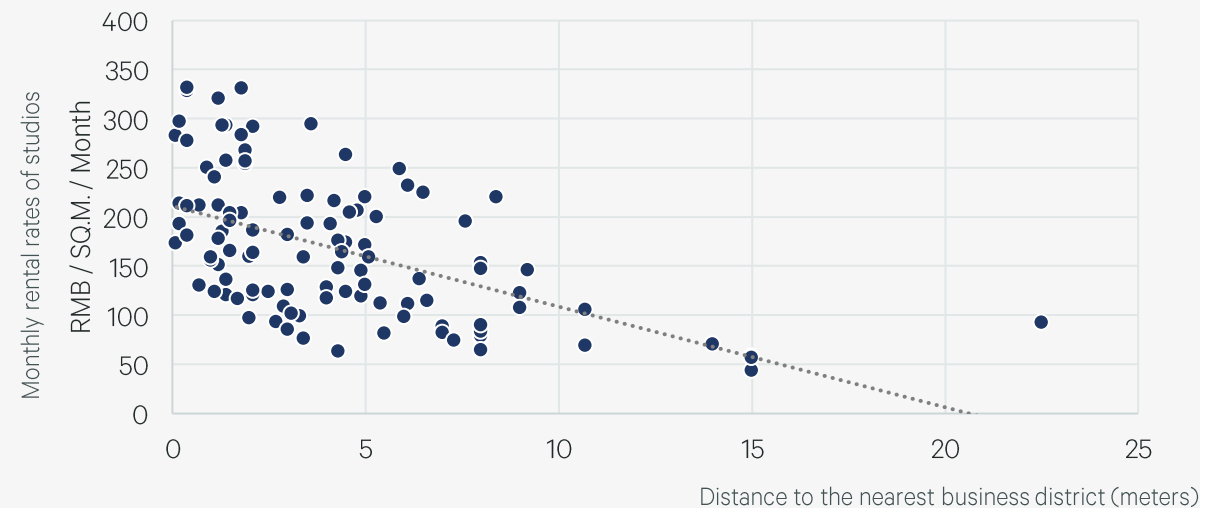


Chart 17: Distance to nearest business district and monthly rental rates of major multifamily properties in Beijing



Source: CBRE Research, October 2022

Major investment approaches

With multifamily investment in China still at an initial stage, most investors are pursuing opportunistic and value-added strategies, which typically involve the acquisition and renovation of existing assets, greenfield development, and platform collaboration.

Recent years have seen the emergence of opportunities to acquire mature assets, which is facilitating market entry by investors such as insurance companies who typically pursue core strategies involving the pursuit of long-term stable income streams.

As more Chinese enterprises such as Huawei and Bilibili build dormitories for employees, CBRE expects a far more diverse range of multifamily investment opportunities to become available in the coming years, with enterprise customization and sale leasebacks set to emerge as viable options.

Chart 18: Main investment approaches to multifamily in China



Acquisition and renovation of existing assets

Greenfield development

Platform collaboration

Focus

- Renovation and conversion of non-residential properties such as offices, retails, hotels, and industrial assets
- Prime locations in core cities
- Need to obtain administrative licenses including “Nabao”, “Naguan” and special permits, and evaluate the resulting impact (See Appendix for details)

- Obtain and develop land for rental housing or apply for conversion of land use according to government regulations
- Long payback period. Could apply to become affordable rental properties and exit through publicly traded REITs to speed up the capital turnover

- Institutional investors, multifamily developers and operators set up collaboration platforms
- Focus on property acquisition and asset management capabilities of developers and operators

Representative cases / investors

- In 2021, Jingrui and LaSalle acquired Shanghai Hongqiao Lianghua Shopping Plaza (West Zone).
- In 2022, Golden Union Assets acquired Beijing Royal Phoenix Hotel.

- Domestic key multifamily developers and operators including Vanke, Longfor, and China Resources, etc.

- In 2020, Cifi Holdings and GIC announced a China multifamily property investment platform worth US\$570 million.
- In 2021, Golden Union Group and Warburg Pincus jointly announced the establishment of Golden Union Assets, a new platform aiming to invest in serviced apartments, creative offices, and mixed-use commercial projects in core locations of Shanghai and Beijing

Source: CBRE Research, October 2022



Asset operation

Improving investment performance through active
management

Improving investment performance through active management

From the perspective of asset operation, multifamily investment can be summarised as follows: **return on investment per room = (operating revenues – operating expenses) / (investment per sq. m * area per room)**. CBRE advises investors and operators to promote cost reduction and operating efficiency through standardised management processes, bulk procurement and active management. For example, costs can be controlled by adopting standardised design and bulk procurement; traffic and management capabilities can be enhanced by establishing digital systems; tenants' experience can be promoted by introducing public amenities such as fitness centres and e-sports clubs; and apartment functionality can be optimised by improving design methods. CBRE's analysis shows that the optimal allocation of functional areas has a greater impact on rents than apartment size. **Of those properties with similar functionality, the relationship between rents and size was less noticeable.**

Chart 19: Improving return on multifamily investment



Operating revenues

Rental revenues

- Set specific rental rates for each apartment and utilising dynamic pricing to maximise the revenue per apartment
- Occupancy rate management: Lease renewals and striking a balance between occupancy rate stability and rental rate growth
- Generate rental revenue from amenities including retail and parking areas

Value-added services

- Revenue from moving, cleaning and maintenance services
- Public facilities with social attributes such as fitness centres and e-sports clubs to improve renters' experience and retention



Operating expenses

Marketing expenses

- Self-built private traffic systems: online traffic redirection
- Shared marketing teams across multiple apartments

Overnight cost per apartment

- Cost advantage of bulk procurement
- Economies of scale achieved by operating a large number of apartments
- Benefit from favourable tax policies as affordable rental properties



Investment per sq. m.

Acquisition cost

- Directly purchasing R4 land or purchase of industrial/commercial land and conversion of land use type
- Acquire inefficiently operated non-residential properties for conversion into rental properties

Construction and renovation cost

- Standardised design
- Bulk procurement



Area per room

Effective area and floor layout

- Effective area of building plane
- Optimise area and functionality of apartments when designing and arranging rooms

Public amenities

- Take full advantage of dark rooms and underground areas

Source: CBRE Research, October 2022

Amenities and value-added services can aid differentiation and increase operating income

Providing specialised amenities and value-added services commensurate with rental rates and tailored to end-users' specific needs is conducive to creating a competitive advantage, enhancing tenant retention, and increasing operating income.

CBRE's analysis of comparable multifamily properties in Shanghai Xinzhuang shows that those providing fitness centres, public kitchens, public laundry rooms and other facilities with social attributes command rental premiums when transportation infrastructure, apartment layout, and basic amenities are similar. Similar trends were observed for properties in other areas such as Gucun and Baoshan in Shanghai.

The provision of retail and parking facilities and services such as cleaning, maintenance and moving can increase operating income. For affordable rental properties with constraints on rent levels and increments, generating operating income from alternative sources is key to improving return on investment.

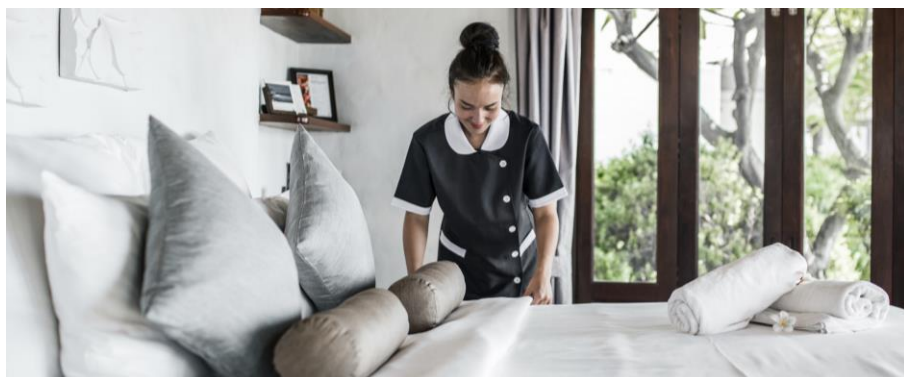


Chart 20: Comparable multifamily properties in Shanghai Xinzhuang

	Property A	Property B	Property C
Subway	5-10 minutes' walk	5-10 minutes' walk	5-10 minutes' walk
Security	24-hour security Private housekeeping Security monitoring	24-hour security Private housekeeping Security monitoring	24-hour security Private housekeeping Security monitoring
Service	Parking area Delivery lockers Vending machines Public kitchen Public laundry room	Parking area Delivery lockers Vending machines Public kitchen	Parking area Delivery lockers
Entertainment and Social Networking	Leisure and reception area Fitness centres	Leisure and reception area	Activity area
Area	30 sq. m	30 sq. m	25 sq. m
Floor	5th	7th	2nd to 6th
Monthly Rental Rate per sq. m.	RMB 149	RMB 130	RMB 134

- Amenities with social attributes

Source: CBRE Research, October 2022




Case study: EQR

EQR, which is the largest listed apartment property manager in the U.S., operates via an asset-heavy business model. As of H1 2022, the company owned 310 properties containing over 80,000 apartment units.

EQR follows an investment strategy of "buy, build and sell". The firm maintains sustainable cash flows with strong asset management and improves return on investment by taking advantage of the real estate cycle.

EQR key operating metrics (as of Q2 2022)	
# of properties	310
# of apartment units	80,227
Occupancy rate	96.7%
Renewal rate	56%
Same store rent growth y-o-y	13.2%
NOI margin	69%

Chart 21: EQR's investment strategies and operating advantages

 Site selection	<table border="1"> <tr> <td>Focus on core cities</td> <td> <ul style="list-style-type: none"> Over 90% of the firm's properties are located in Boston, New York, Washington, D.C., Seattle, San Francisco and Southern California </td> </tr> <tr> <td>Locations with mature supporting facilities</td> <td> <ul style="list-style-type: none"> All properties have independent scores in Walk Score </td> </tr> </table>	Focus on core cities	<ul style="list-style-type: none"> Over 90% of the firm's properties are located in Boston, New York, Washington, D.C., Seattle, San Francisco and Southern California 	Locations with mature supporting facilities	<ul style="list-style-type: none"> All properties have independent scores in Walk Score 		
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Locations with mature supporting facilities	<ul style="list-style-type: none"> All properties have independent scores in Walk Score 						
 Operational management	<table border="1"> <tr> <td>Online leasing</td> <td> <ul style="list-style-type: none"> Whole-process online services from 3D apartment viewing to online check-in Transparent property information: location, amenities and facilities; apartment availability, lease start date, apartment layout, rental rate, leasing terms, etc. Digital platform to reduce marketing and labour costs </td> </tr> <tr> <td>Rental rate</td> <td> <ul style="list-style-type: none"> Balance rental rate with occupancy rate Set specific rental rate for each apartment by use of market data and forecast of supply and demand </td> </tr> <tr> <td>Value-added services</td> <td> <ul style="list-style-type: none"> Cooperation with Zipcar and Cort Furniture Transfer Programme and Rent with Equity Rewards </td> </tr> </table>	Online leasing	<ul style="list-style-type: none"> Whole-process online services from 3D apartment viewing to online check-in Transparent property information: location, amenities and facilities; apartment availability, lease start date, apartment layout, rental rate, leasing terms, etc. Digital platform to reduce marketing and labour costs 	Rental rate	<ul style="list-style-type: none"> Balance rental rate with occupancy rate Set specific rental rate for each apartment by use of market data and forecast of supply and demand 	Value-added services	<ul style="list-style-type: none"> Cooperation with Zipcar and Cort Furniture Transfer Programme and Rent with Equity Rewards
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Source: EQR annual reports, CBRE Research, October 2022



Conclusion

Conclusion

Thanks to the evolution of China's demographic structure; a shift in housing consumption patterns; and comprehensive government policy support, CBRE expects the institutionalisation of the country's multifamily rental apartment market to accelerate in the coming years. Demand for multifamily apartments in China is forecasted to exceed 12 million units by 2030. Strong growth in demand; increasing asset liquidity; and the potential for scalability will ensure multifamily emerges as one of the most attractive commercial real estate asset classes for investment over the next ten years.

Acquisition and renovation of existing assets, greenfield development and platform collaboration will be the main entry routes for investors seeking to access the multifamily market. In view of the geographical distribution of target consumers and the development of multifamily operators in mature markets, investors are advised to focus on core tier I and tier II cities in major city clusters, such as the Yangtze River Delta Area, Pearl River Delta Area and Beijing-Tianjin-Hebei Region. Site selection should be informed by commute time to major business districts and walking distance to subway stations.

Affordable housing will comprise a key component of China's institutionalised rental housing market. Investors are recommended to measure the sector's policy and market-oriented characteristics and comprehensively evaluate the risks and benefits of market entry.

CBRE suggests that investors improve asset performance through measures including bulk procurement, digitalised operations and optimising apartment configuration. Generating income from value-added services and amenities will be especially important for increasing revenues from affordable rental housing investments.





Appendix

Chart 22: Major indicators of China's first batch of affordable rental housing REITs

REIT Name	Underlying Assets	GFA (sq.m.)	Apartment Units	Average occupancy rate	Average rental rate (RMB/sq. m./month)	Asset valuation (RMB million)	Unit price (RMB/sq. m.)	Gross yield	2022 Estimated dividend yield
Hotland Innovation Shenzhen Talent Affordable Rental Housing REIT	Baiquan Pavilion	53,607	594	99%	59.74	576	10,747	6.6%	4.24%
	Jinyuan	35,131	360	99%	44.38	301	8,554	6.2%	
	Poly Champagne Garden	16,457	210	100%	14.52	68	4,150	4.2%	
	Phoenix Mansion	51,554	666	98%	17.23	213	4,134	4.9%	
	Total	156,749	1,830	98.75%	34.79	1,158	7,388	5.6%	
CICC Xiamen Affordable Rental Housing REIT	Garden Expo Apartment	112,875	2,614	99.42%	32.35	704	6,237	6.2%	4.33%
	Hengqi Apartment	85,679	2,051	99.11%	30.52	51	5,952	6.1%	
	Total	198,554	4,665	99.29%	31.56	1,214	6,114	6.2%	
China AMC Beijing Affordable Rental Housing REIT	Wenlong Homestead	76,565	1,396	94.8%	52	732	9,561	6.2%	3.95%
	Xiyueshang County	36,232	772	94.3%	60	419	11,564	5.9%	
	Total	112,796	2,168	94.7%	54.56	1,151	10,204	6.1%	

Source: Prospectus, CBRE Research, October 2022

Chart 23: Criteria for affordable rental housing in major cities

	Beijing	Shanghai	Guangzhou	Hangzhou
Target population	New citizens, new youths and other groups who have no houses or do not have houses in specific areas, or have housing difficulties, especially personnel guaranteeing urban operation and newly graduated college students	Population with legal employment and housing difficulties (in principle the area standard is a GFA per capita of less than 15 sq. m. within a certain area of the city); priority given to those who meet access conditions, with the remainder able to be rented in the market;	New citizens, new youths and other groups with housing difficulties who work or live in the city	Houseless new citizens, new youths and other groups
Room size	Consists largely of small apartments with an area of no more than 70 sq. m. Residential type: multi-bedroom refined suite design; Dormitory type: usable area per capita shall not be less than 4 sq. m.; Apartment type: Usable area per capita shall not be less than 5 sq. m.	Proportion of apartments with area below 70 sq. m. should not be less than 70% of total apartments of the property	Consist largely of small apartments with an area of no more than 70 sq. m.; adopt a centralised leasing method, and in principle, the size of the rental apartments should not be less than 10 units	Residential type: in principle, should not exceed 70 sq. m., and 100 sq. m. maximum; dormitory type: apartments with area of 20-45 sq. m. not less than 80% of the total number of units, and generally no more than 50 sq. m.
Rental rate	Rental rates should be lower than those of market-oriented rental apartments with the same quality in the same location; affordable rental apartments built on the self-owned land of enterprises and institutions should be priced at a discount of more than 10% compared with market-oriented rental apartments with the same quality in the same location	Rental rates should be quoted at a discount of more than 10% compared with those of market-oriented rental apartments with the same quality in the same location, and the annual increase should not be higher than 5%; the rental rate of specific properties for employees of the business park, the institution and the system can be quoted lower	Rental rates should be quoted lower than those of market-oriented rental apartments with the same quality in the same location; the annual increase shall not exceed 5% and shall not be higher than the rental growth rate of market-oriented rental apartments with the same quality in the same location over the same period.	Rental rates should be quoted lower than the assessed rental rates of market-oriented rental apartments with the same quality in the same location.
Land source	Land for rental housing, proportion of residential land sites allocated for rental housing use, collectively owned commercial construction land, conversion of existing non-residential properties, land for supporting facilities of industrial parks, self-owned land of enterprises and institutions, renovation of existing residential properties, etc.			

Source: Local government documents, CBRE Research, October 2022

Regulatory approval of the conversion of non-residential housing into rental housing will channel more institutional capital into the multifamily sector

Chart 24: Definitions and requirements for the conversion of existing non-residential properties into rental properties in Shanghai

	Nabao	Naguan	Special Permit
Concepts and Definitions	<ul style="list-style-type: none"> "Nabao" refers to being included in the affordable rental housing management. Existing non-residential properties converted into rental properties shall be reviewed and certified by the government as affordable rental properties and shall be rented out within a certain period to those who meet the access conditions of affordable rental properties. Since 2022, conversion of non-residential properties has basically been managed by "Nabao". 	<ul style="list-style-type: none"> "Naguan" refers to being included in the rental housing management. Existing non-residential properties converted into rental properties shall be reviewed and identified by the government as rental properties and shall be rented out to the market within a certain period. 	<ul style="list-style-type: none"> "Special Permit" refers to special permits for the hotel industry. Before starting the hotel business, a Special Permit issued by the Ministry of Public Security should be obtained
Housing Requirements	<ul style="list-style-type: none"> Existing non-residential properties whose use type on property ownership certificates includes offices, retails, hotels, industrial assets, etc. 	<ul style="list-style-type: none"> Existing non-residential properties whose use type on property ownership certificates includes offices, retails, hotels, industrial assets, etc. with a certain scale; in principle, no less than 50 units 	<ul style="list-style-type: none"> Mainly commercial properties with hotel use Properties with office/industrial use usually cannot obtain the Special Permit
Lease term Requirements	<ul style="list-style-type: none"> Long-term lease only, generally not less than one year 	<ul style="list-style-type: none"> Long-term lease only, generally not less than 30 days 	<ul style="list-style-type: none"> Flexible lease term, both short-term and long-term lease (properties with a Special permit belong to the accommodation industry and can be rented out on a short-term basis)
Rent Control	<ul style="list-style-type: none"> Rental rates should be quoted at a discount of more than 10% compared with those for market-oriented rental apartments with the same quality in the same location. The annual increase should be no more than 5% 	<ul style="list-style-type: none"> No relevant regulations, and could be quoted according to the market 	<ul style="list-style-type: none"> No relevant regulations, and could be quoted according to the market
Management Period	<ul style="list-style-type: none"> If conversion is implemented by the owner of the property, the validity period of the "Affordable Rental Housing Property Certification" is the same as the land use period. If conversion is implemented by a third party other than the owner of the property, the validity period shall not exceed the lease and operation period stipulated in the relevant lease agreement 	<ul style="list-style-type: none"> The validity period for renovation projects is usually five years²⁰ 	<ul style="list-style-type: none"> No relevant requirement
Investment Implications	<ul style="list-style-type: none"> Rental rates and lease period shall comply with relevant regulations Tax incentives for rental properties; civil water and electricity charges; loans will not be included in the concentration management of real estate loans 	<ul style="list-style-type: none"> Market rental pricing Necessary to communicate with the authority for renewal at the end of the validity period 	<ul style="list-style-type: none"> Daily rent acceptable to enhance income especially during void period of long leases Market rental pricing

To hasten the development of the rental housing market, central and local authorities have introduced measures to encourage the renovation and conversion of non-residential properties such as offices, retails, hotels, and industrial assets into rental properties. CBRE expects this to encourage the participation of more institutional investors in the rental housing investment market.

Chart 24 uses Shanghai as an example and summarizes the differences between the three non-residential conversion modes of "Nabao", "Naguan" and "Special Permit", and their corresponding investment implications.

Note 20. Different districts have different policies. Some districts have a period of less than five years, and re-application is required on the expiration date.

Source: "Guiding Opinions on the Reconstruction and Conversion of Existing Non-residential Properties (Trial)", "Measures for the Certification of Affordable Rental Properties in Shanghai (Trial)", Shanghai Municipal Committee of Housing and Urban-Rural Development, Shanghai Housing Administration Bureau, CBRE Research, October 2022

Projection of operating cash flows of multifamily properties

Based on the example of a renovated multifamily property near the outer ring in Shanghai

Chart 25: Basic parameters

Property parameters		
Location		Outer ring, Shanghai
GFA	sq. m.	10,000
Units		300
Affordable rental housing or not		Yes
Decoration cost	RMB/unit	100,000
Operating metrics during stabilization period		
Annual rental growth	%	5.0%
Annual operating cost growth	%	3.0%
Number of operating staff		8
Value-added tax rate	%	1.5%
Property tax rate	%	4.0%

Chart 26: Projected operating cash flow table

Cash Flow Projection		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Monthly average rental rate	RMB/unit/month	5,000	5,250	5,513	5,788	6,078	6,381	6,700	7,036	7,387	7,757
Growth rate			5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Average occupancy rate		74%	95%	95%	95%	95%	95%	95%	95%	95%	95%
Rental revenue	RMB/unit/year	44,250	59,850	62,843	65,985	69,284	72,748	76,385	80,205	84,215	88,426
Operating cost	RMB/unit/year	7,665	7,895	8,132	8,376	8,627	8,886	9,152	9,427	9,710	10,001
VAT (1.5%)	RMB/unit/year	664	898	943	990	1,039	1,091	1,146	1,203	1,263	1,326
Property Tax (4.0%)	RMB/unit/year	1,770	2,394	2,514	2,639	2,771	2,910	3,055	3,208	3,369	3,537
Net operating income	RMB/unit/year	34,151	48,663	51,254	53,980	56,846	59,861	63,032	66,366	69,873	73,561
NOI Margin		77%	81%	82%	82%	82%	82%	83%	83%	83%	83%
Rent per unit area	RMB/sq.m./day	5.00	5.25	5.51	5.79	6.08	6.38	6.7	7.04	7.39	7.76

Source: CBRE Research, October 2022

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