



**2023 ULI ASIA PACIFIC
HOME ATTAINABILITY INDEX**



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Cover photo: A low-density residential neighbourhood in Jakarta.
Credit: Paixin

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About the Urban Land Institute

The Urban Land Institute is a global, member-driven organization comprising over 45,000 real estate and urban development professionals dedicated to advancing the Institute's mission of shaping the future of the built environment for transformative impact in communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers,

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About the ULI Asia Pacific Centre for Housing

The goal of the ULI Asia Pacific Centre for Housing is to advance best practices in residential development and to support ULI members and local communities in creating and sustaining a full spectrum of housing opportunities.

Established in 2022, the Centre for Housing integrates ULI's wide-ranging housing activities into a programme of work with three objectives: to catalyse the production of housing, provide thought leadership on the housing industry, and inspire a broader commitment to housing.

The Centre for Housing acts as a think tank and provides a forum to explore the latest trends and to address

housing issues relevant to the region. Our programme of work is delivered through events, research, education, and advisory services for government policy makers, developers, investors, occupiers, and communities at large.

In August 2022, the Centre for Housing published the inaugural *ULI Asia Pacific Home Attainability Index* report. Also in March 2023, the centre organized the inaugural ULI Asia Pacific Housing Conference in Manila, Philippines.

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A neighbourhood in downtown Seoul.
Credit: Paixin

Executive Summary

This year's report newly includes 17 cities in four developing countries – India, Indonesia, the Philippines, and Vietnam – in addition to the 28 cities in the five developed countries covered in last year's report, namely Australia, China, Japan, Singapore, and South Korea. The total population of the nine countries covered in this year's report is 3.5 billion, or about 45 percent of the world's population.

The report's key findings are based on the following: (1) analysis of data and relevant publications; (2) interviews conducted with housing experts in the region; and (3) information and insights gathered from the primary author's visit to Mumbai for the inaugural ULI India Summit and the inaugural ULI Asia Pacific Housing Conference in Manila, March 2023.

Compared with the countries covered in the 2022 report, the four newly added countries are substantially different in the following regards: (1) significantly lower median gross domestic product (GDP) per capita of around US\$3,600 versus roughly US\$40,000 for Australia, Japan, Singapore, and South Korea and US\$12,000 for mainland China; (2) lower urbanization rate of about 42 percent versus 65 percent for mainland China and over 90 percent for the four other developed countries; (3) a median age of 24 to 32 years versus 38 to 48 years for all five developed countries; and last, (4) limited availability of relevant public data for the cities in the developing countries.

In terms of relative home attainability, key trends are as follows: (1) gateway cities in general have lower home attainability for home purchase; (2) rental housing is relatively more affordable (less unaffordable) for the region compared to home purchase; and (3) while home prices and rents in developing countries are significantly lower than in developed countries, home attainability is severely low, especially in the Philippines and Vietnam.

In general, homeownership is considered unaffordable when the ratio of the median home price to median annual household income exceeds 5. By this standard, only Singapore's Housing Development Board (HDB) units and apartment units in Melbourne and Brisbane, Australia, are considered affordable. While home prices in the cities in the developing countries are substantially lower than those in developed countries, median home prices represent roughly

8 to 30 times median annual household income for the cities in Indonesia, the Philippines, and Vietnam, putting homeownership beyond the reach of average households. By comparison, the cities in India have much lower ratios of median home price to median annual household income, ranging from 7 to 11.

For rental homes, housing is considered affordable when the ratio of median monthly rent is less than 25 percent of monthly household income. By this measure, Japan's rental housing is most affordable with the ratio ranging from 14 to 21 percent. Rental homes can be considered relatively affordable for South Korea's regional cities and some of the second-tier cities in mainland China. The ratios of nearly or over 100 percent for the cities in the Philippines and Jakarta, Indonesia, may very well reflect a bias in data collection, given that institutional rental housing properties primarily cater to high-income local households and expatriates. It is also quite possible that the high rent to monthly income ratio results from limited rental housing stock relative to the demand from local households.

As explained in 2022's report, the housing markets in the region vary greatly in terms of types of housing stock, such as high-rise apartments versus single-family homes, formal housing versus informal housing, private-sector housing versus public housing, owned homes versus rental homes, and size of homes.

The following have been identified as critical factors that substantially affect housing demand and supply and largely determine home attainability and quality of housing in the cities covered in this year's report:

- Demographic trends;
- Land use-related government policies and density;
- Urban transportation infrastructure;
- Redevelopment of urban areas;
- Availability of financing for home purchase;
- Extent of government involvement in housing provision; and
- Interrupted supply chain for buildings materials and labour during the COVID era.

FIGURE 1 Cities Included in the Report



Notes:

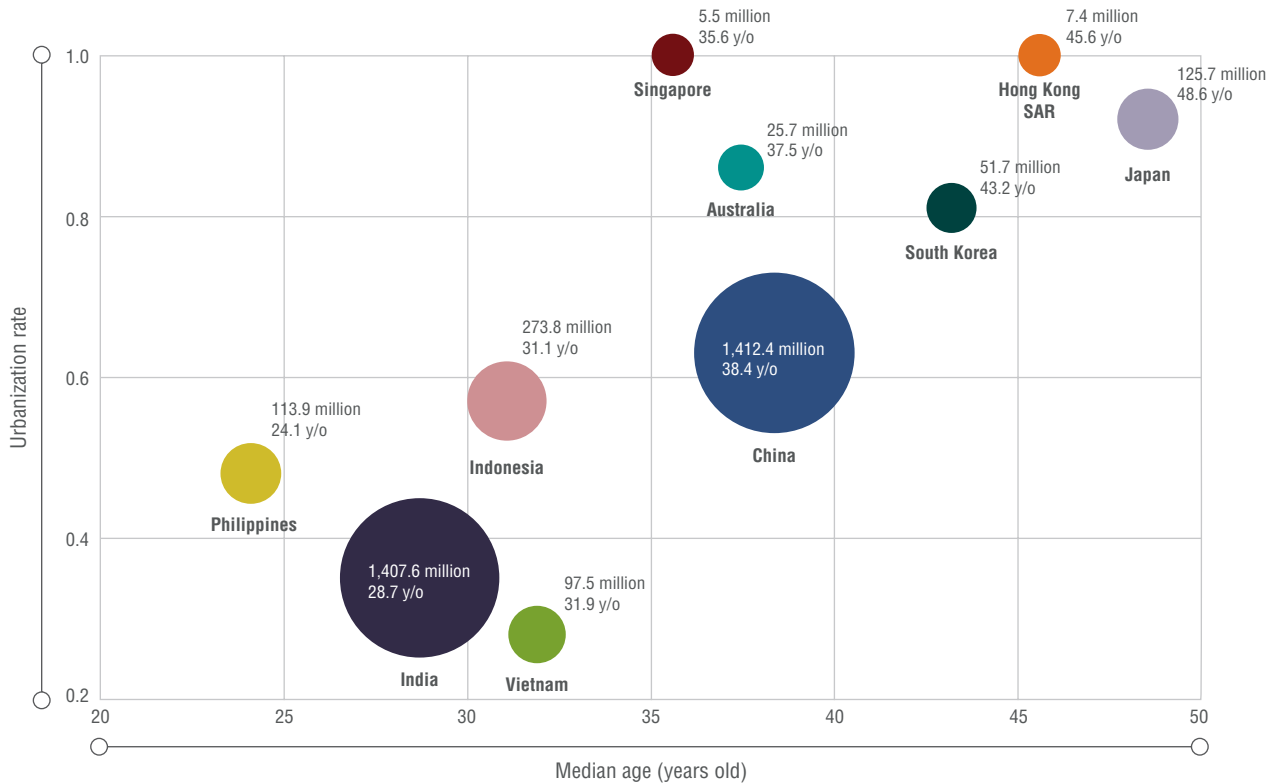
1. Tokyo Ku refers to the 23 special wards, or core areas in Tokyo.
2. Delhi NCR refers to the National Capital Region of India, also called the Metropolitan Area of Delhi.
3. Metro Cebu refers to City of Cebu, City of Mandaue, and City of Lapu-Lapu.
4. DKI Jakarta refers to Daerah Khusus Ibukota Jakarta, i.e. the Special Capital Region of Jakarta.

FIGURE 2 Urbanization rate, and urban and rural population breakdown by country (2021)



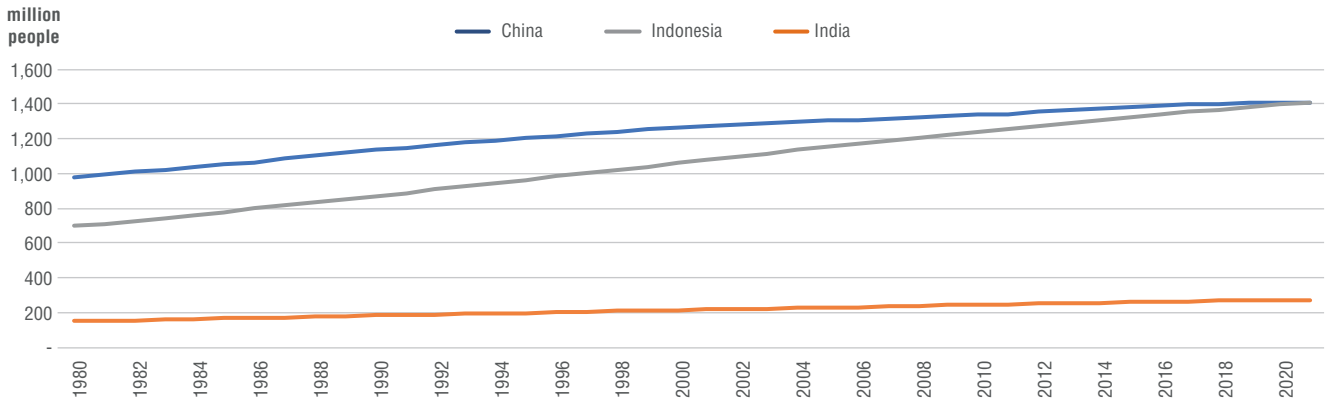
Sources: World Bank, CIA.

FIGURE 3 Total population, median age, and urbanization rate by country (2021)



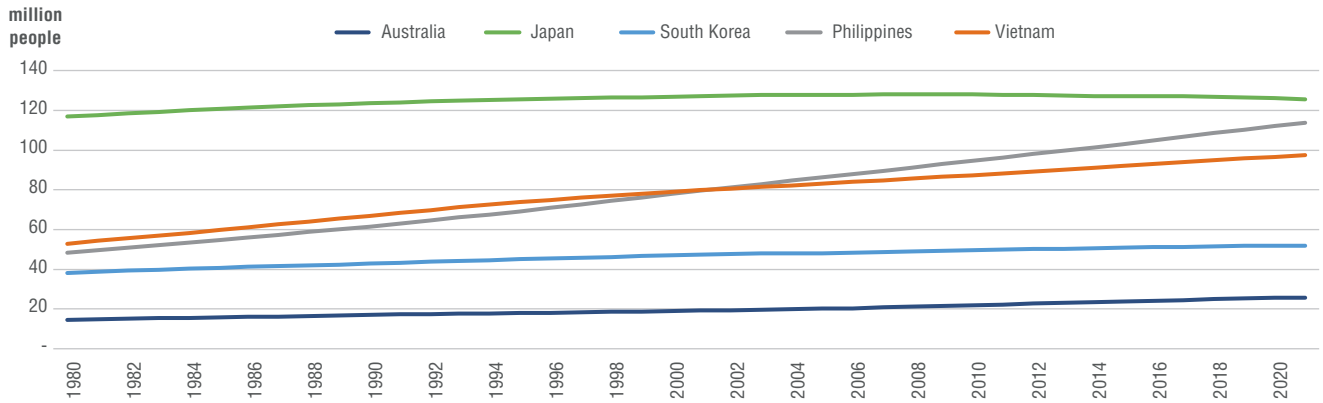
Sources: World Bank, CIA.

FIGURE 4 Population trajectory for China, India, and Indonesia (1980-2021)



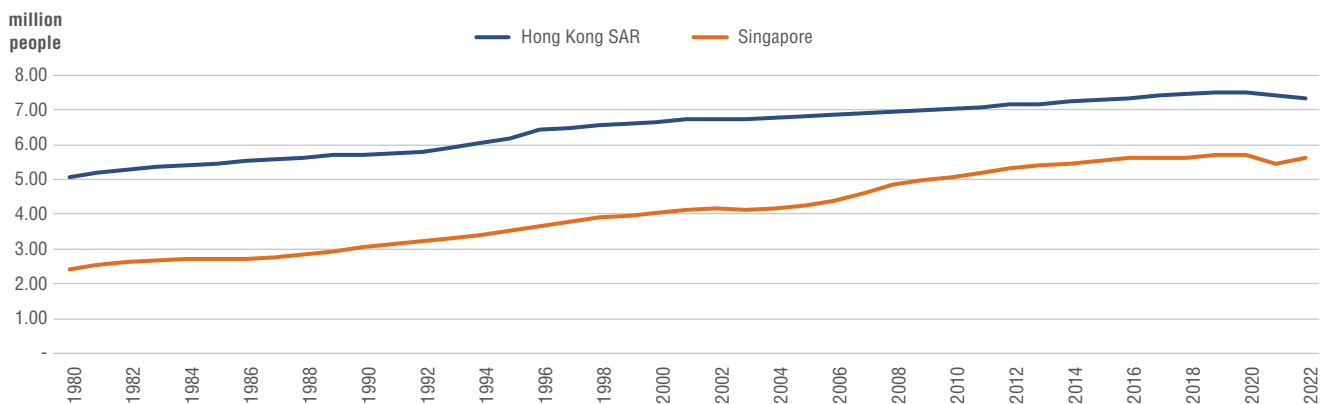
Source: World Bank.

FIGURE 5 Population trajectory for Australia, Japan, South Korea, Philippines, and Vietnam (1980-2021)



Source: World Bank.

FIGURE 6 Population trajectory for Hong Kong and Singapore (1980-2022)



Source: World Bank.

TABLE 1 Key supporting data and metrics

City	Population (thousand people)	Median/Average home price (US\$ per unit)	Median annual household income (US\$ per year)	Median/Average home price to median annual household income	Median/Average monthly rent (US\$ per unit per month)	Median/Average rent to median monthly household income
Sydney houses	5,260	980,209	81,664	12.0	1,958	29%
Sydney units		518,945		6.4	1,732	25%
Melbourne houses	4,976	716,200	77,216	9.3	1,446	22%
Melbourne units		389,310		5.0	1,356	21%
Brisbane houses	2,569	555,713	68,966	8.1	1,657	29%
Brisbane units		308,295		4.5	1,446	25%
Shanghai	24,759	487,889	20,240	24.1	657	39%
Beijing	21,843	573,271	19,597	29.3	819	50%
Shenzhen	17,682	626,964	17,930	35.0	576	39%
Guangzhou	18,811	376,761	17,360	21.7	392	27%
Chongqing	32,133	110,251	9,576	11.5	230	29%
Chengdu	21,268	227,111	13,083	17.4	319	29%
Tianjin	13,160	194,591	12,881	15.1	303	28%
Wuhan	13,739	237,180	14,610	16.2	389	32%
Suzhou	12,911	270,763	20,333	13.3	338	20%
Hangzhou	12,376	442,408	18,099	24.4	570	38%
Nanjing	9,491	445,346	18,763	23.7	483	31%
Hong Kong	7,333	1,155,760	43,674	26.5	1,686	46%
Mumbai	20,961	117,677	10,399	11.3	572	66%
Delhi NCR	32,066	89,053	12,518	7.1	318	30%
Bengaluru	13,193	95,414	8,595	11.1	343	48%
Hyderabad	10,534	101,775	9,996	10.2	280	34%
Ahmedabad	8,450	76,331	11,234	6.8	280	30%
Pune	6,987	89,371	9,283	9.6	254	33%
Chennai	11,503	82,374	8,931	9.2	197	26%
Kolkata	15,134	54,704	6,403	8.5	204	38%
DKI Jakarta single family	10,562	356,931	13,792	25.9	730	63%
DKI Jakarta apartments		114,487		8.3	539	47%
Metro Manila	13,484	181,058	7,301	24.8	1,009	166%
Metro Cebu	1,826	141,270	6,068	23.3	587	116%
Metro Davao	1,777	89,532	5,551	16.1	459	99%
Tokyo (Ku Area)	9,745	626,502	35,253	17.8	602	21%
Yokohama-shi	3,778	430,169	34,491	12.5	434	15%
Osaka-shi	2,755	356,230	25,730	13.8	348	16%
Fukuoka-shi	1,613	183,360	25,446	7.2	343	16%
Tachikawa-shi	187	262,285	30,572	8.6	365	14%
Singapore private	5,637	1,200,087	87,900	13.7	2,596	35%
Singapore HDB		409,095		4.7	n.a.	n.a.
Seoul	9,472	528,831	30,588	17.3	689	27%
Busan	3,324	206,796	26,284	7.9	395	18%
Incheon	2,957	210,728	27,763	7.6	526	23%
Daegu	2,388	212,907	26,573	8.0	525	24%
Daejeon	1,480	217,372	27,789	7.8	441	19%
Gwangju	1,475	163,809	28,403	5.8	392	17%
Ulsan	1,121	203,583	32,837	6.2	453	17%
Hanoi	8,331	182,290	9,967	18.3	592	71%
Ho Chi Minh City	9,167	296,063	9,120	32.5	592	78%
Da Nang	1,195	214,540	8,042	26.7	465	69%
Hai Phong	2,072	160,297	7,476	21.4	455	73%
Can Tho	1,247	139,361	8,510	16.4	338	48%

Source: 2023 ULI Asia Pacific Home Attainability Index report.

Introduction

In this report, home attainability is measured as follows: (1) the ratio of median home price to median annual household income for homeownership, and (2) the ratio of median monthly rent to median monthly household income for home rental.

For the five developed countries previously considered – Australia, China, Japan, Singapore, and South Korea – relevant government agencies make much of the required data for the cities covered in the report available on an annual basis. In contrast, collecting the required data for the developing countries was quite challenging and required research into non-traditional sources for data. For all the cities in the four developing countries, an internet crawler was used to collect and analyse online listings of home sale and rental properties by reputable real estate agencies.

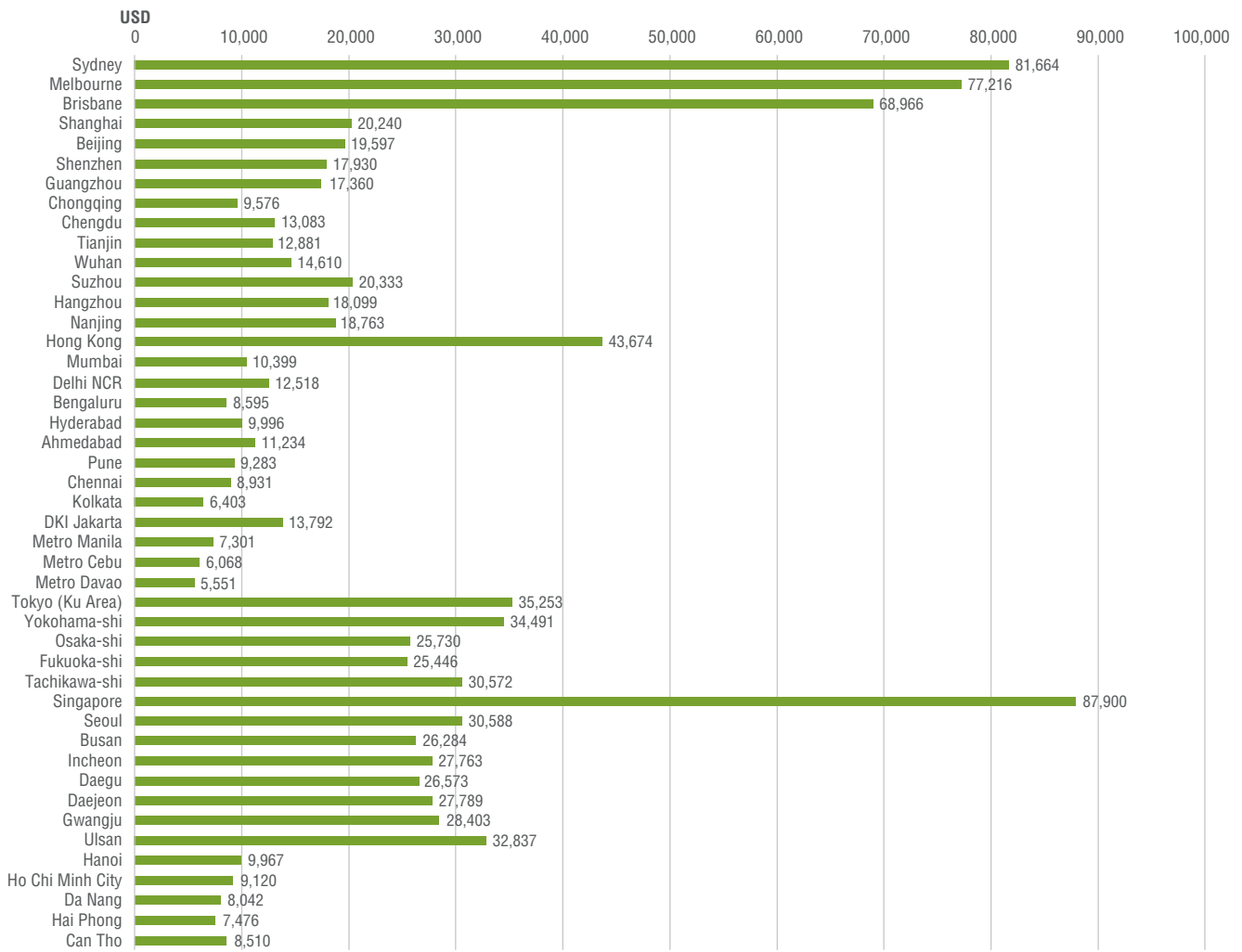
In addition, for the cities in India and DKI Jakarta (Jakarta Special Capital Province), to estimate median household income, the report uses available GDP per capita and size of households at city level, applying reasonable assumptions on the relationship between GDP and household income.

Analysis of home attainability for the developing countries is further challenged by the exclusion of “informal” housing stock and related data. In the case of India, it is widely understood that only 10 to 20 percent of homes have proper legal titles. Homes listed for sale or rent in online agencies tend to have proper legal titles. While the resulting home attainability ratios may not be representative of the total housing stock, the insights gained from the analysis should still be useful.



A residential compound in Pudong, Shanghai.
Credit: Paixin

FIGURE 7 Median household income (annual) 2022



Notes:

1. Australian Bureau of Statistics released 2019-2020 median gross household income for the capital cities. We apply the national GDP growth in 2021 and 2022 to derive the estimated median gross household income for 2022.
2. Median household income data for Mainland China, Japan and South Korea are calculated using the average household income and GINI coefficients. In the case of Chinese cities, we are applying a factor of 1.3567, which is the average of the average household income to median income ratios of Singapore and Australia (Mainland China's GINI coefficient is between Singapore and Australia).
3. Income data released by the government in Mainland China, Singapore and Hong Kong are in 2022.
4. Income data released by the government in Philippines and South Korea are in 2021 and we apply the national GDP growth in 2022 to derive the estimated median household income in 2022; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
5. Income data released by the government in Japan are in 2019 and we apply the national GDP growth in 2020-2022 to derive the estimated median household income in 2022.
6. Income data released by the government in Vietnam are in 2020 and we apply the national GDP growth in 2021 and 2022 to derive the estimated median household income in 2022.
7. We could not find the household income data for India and Indonesia. We come up with the estimated median household income by comparing the per capita GDP and the per capita disposal income of the other cities covered in this year's report. Since we have found the per capita GDP data for DKI Jakarta (National Statistics Bureau of Indonesia) and the Indian cities (Harvard University), we derive the estimated per capita disposable income. After applying the household size, we arrive at the average household disposable income. Finally, we adjust the average household disposable income into median household income by applying the GINI coefficients.

Home Attainability Analysis

For home attainability analysis, the two ratios used are as follows: (1) median home price to median annual household income for homeownership, and (2) median monthly rent to median monthly household income for home rental. However, basing home attainability solely on these ratios is ill advised because the size and quality of homes vary greatly among the cities in the region. Moreover, often the data do not represent the overall housing stock, as explained in the Introduction.

Home price comparison

This year, Singapore's private-sector homes have become the most expensive, overtaking those of Hong Kong. The median price of Singapore's private-sector homes stands at US\$1.20 million, compared with Hong Kong's US\$1.16 million. In the past year, Singapore's median private-sector home price increased over 8 percent, whereas Hong Kong's median home price decreased 8.7 percent. Sydney's single-family homes are the third most expensive with a median price of US\$980,000, a decrease of nearly 16 percent since last year. Median home prices in Tokyo Ku (central area) at US\$627,000 and Seoul at US\$528,000 also dropped 13 and 14 percent, respectively.

On a per square meter (sqm) basis, Hong Kong SAR's private-sector housing is the most expensive at US\$19,768, well over twice the median figures for the next city cluster

consisting of Singapore, Tokyo Ku, and Shenzhen, Beijing, and Shanghai. Median home prices per sqm for Metro Manila, Cebu, and Ho Chi Minh City are similar to those in Melbourne and Brisbane as well as some Tier 2 cities in mainland China. In contrast, the cities in India, excluding Mumbai, have the lowest median price per sqm of between US\$900 and US\$1,200.

Median home prices for the cities in mainland China were adjusted to reflect the latest available information on home size. In the 2022 report, which used only median home price per sqm and lacked home size data, median home prices were calculated assuming a median home size of 72 sqm for the mainland Chinese cities. For this year's report, however, data on median home size was acquired that showed home sizes of mid-50 sqm for Tier 1 cities and larger than 72 sqm for most Tier 2 cities.

Median home prices for the cities in the four developing countries are mainly between US\$100,000 and US\$200,000. Among the cities in the developing countries, Ho Chi Minh City has the highest median home price at US\$296,000, followed by Da Nang at US\$214,000 and Metro Manila at US\$181,000.

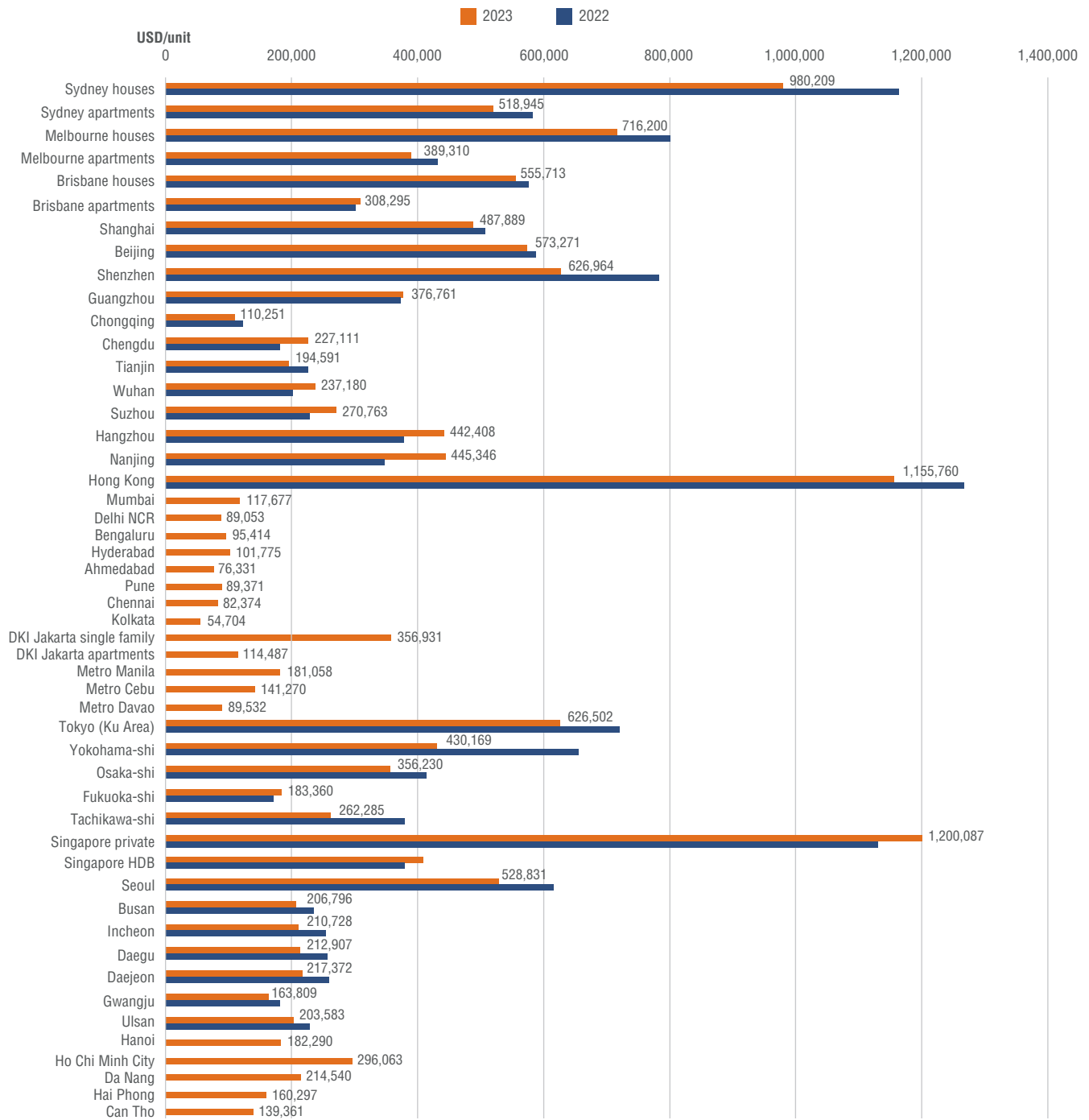
For India, Mumbai is the most expensive city for homes at US\$118,000 while the Delhi National Capital Region (NCR)'s median home price is US\$89,000. On a per sqm basis, Mumbai's median home price is US\$2,237, 140 percent higher than Delhi NCR's median home price of US\$934. Median home size for Mumbai is 59 sqm, substantially smaller than 98 sqm for Delhi NCR. Kolkata has the lowest median home price of US\$55,000.

TABLE 2 Use of online listing data for estimation of median home price and monthly rent for the developing countries

City	Number of listings		Notes	Source
	Homes for Sale	Homes for Rent		
Mumbai	1,499	1,468	flats only	Magicbricks
Delhi NCR	3,214	2,488	flats only	Magicbricks
Bengaluru	1,435	1,438	flats only	Magicbricks
Hyderabad	1,376	1,408	flats only	Magicbricks
Ahmedabad	1,847	1,388	flats only	Magicbricks
Pune	2,012	1,435	flats only	Magicbricks
Chennai	1,474	1,443	flats only	Magicbricks
Kolkata	1,419	1,453	flats only	Magicbricks
DKI Jakarta	3,497	1,927	apartments and single family	Rumah123
Metro Manila	2,645	2,942	condominiums only	Lamudi
Metro Cebu	2,232	1,964	condominiums only	Lamudi
City of Davao	324	111	condominiums only	Lamudi
Hanoi	4,651	6,832	apartments only	Batdongsan
Ho Chi Minh City	33,027	14,088	apartments only	Batdongsan
Da Nang	2,900	367	apartments only	Batdongsan
Hai Phong	1,509	230	apartments only	Batdongsan
Can Tho	324	22	apartments only	Batdongsan

Source: 2023 ULI Asia Pacific Home Attainability Index report.

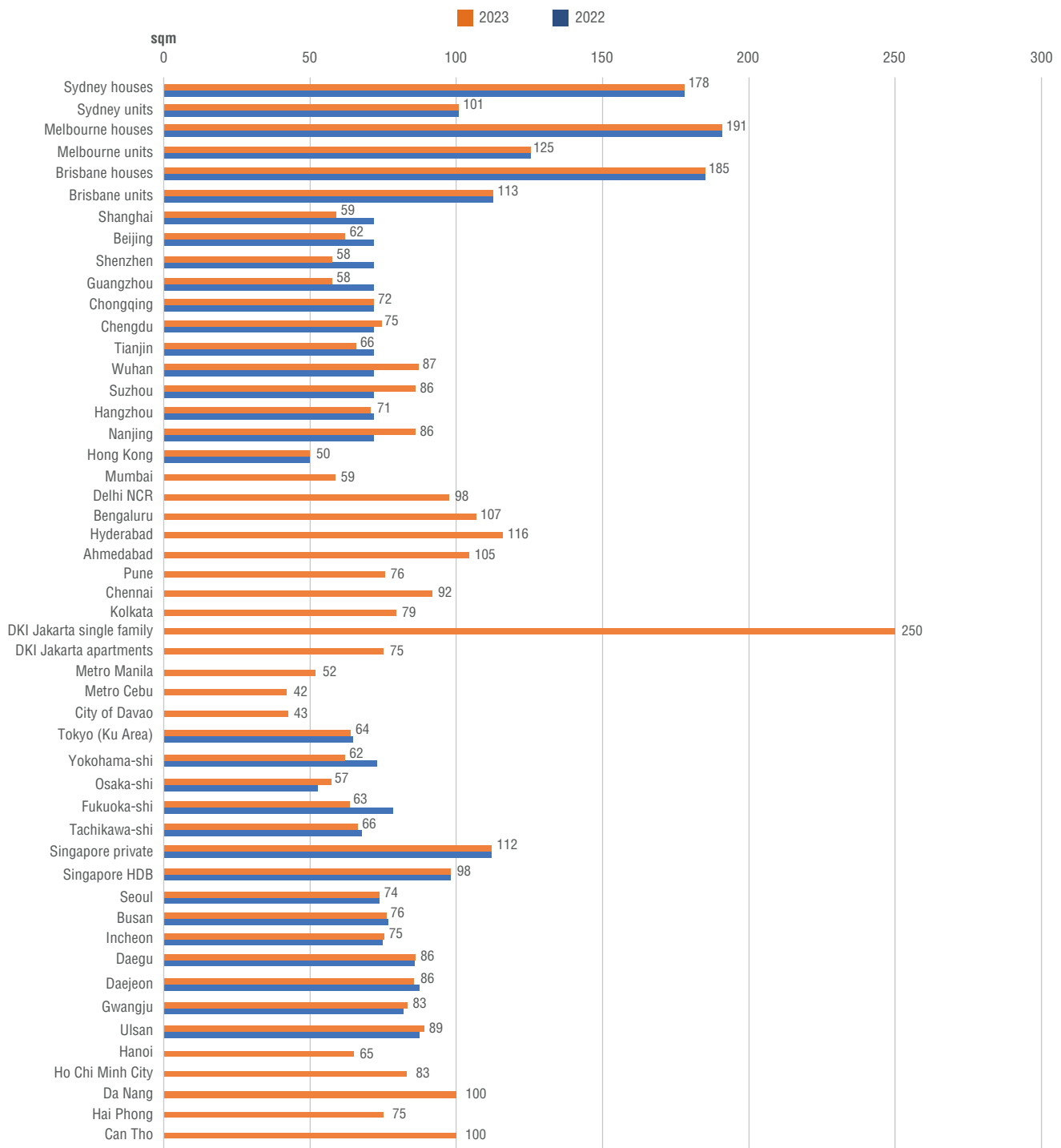
FIGURE 8 Median/average housing price per unit 2022



Notes:

1. Median housing price per unit in Australian cities released by Domain, 2022 data.
2. Average housing price per sqm for primary sales for 11 mainland Chinese cities (2022 data) times average living space per household (2020 Census results).
3. Average housing price per unit for both primary and resale residential properties in Hong Kong, 2022 data.
4. Median asking price per unit of resale flats listed on Magicbricks for Indian cities, April 2023 data.
5. Median asking price per unit of resale apartments and single family homes listed on Rumah123 for DKI Jakarta, April 2023 data.
6. Median asking price per unit of resale condos listed on Lamudi for Philippine cities, April 2023 data; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
7. Average housing price per unit for primary condos in Tokyo Ku Area, Yokohama-shi, and Osaka-shi; average housing price per unit for resale condos in Fukuoka-shi; average housing price per unit for both primary and resale condos in Tachikawa-shi; all 2022 data.
8. Median housing price per unit for private sales in Singapore (Urban Redevelopment Authority), 2022 data.
9. Average housing price per unit for Housing Development Board (HDB) resale flats in Singapore, 2022 data.
10. Median housing price per unit for private sales in South Korean cities, 2022 data.
11. Median asking price per unit of resale apartments listed on Batdongsan for Vietnamese cities, February 2023 data.

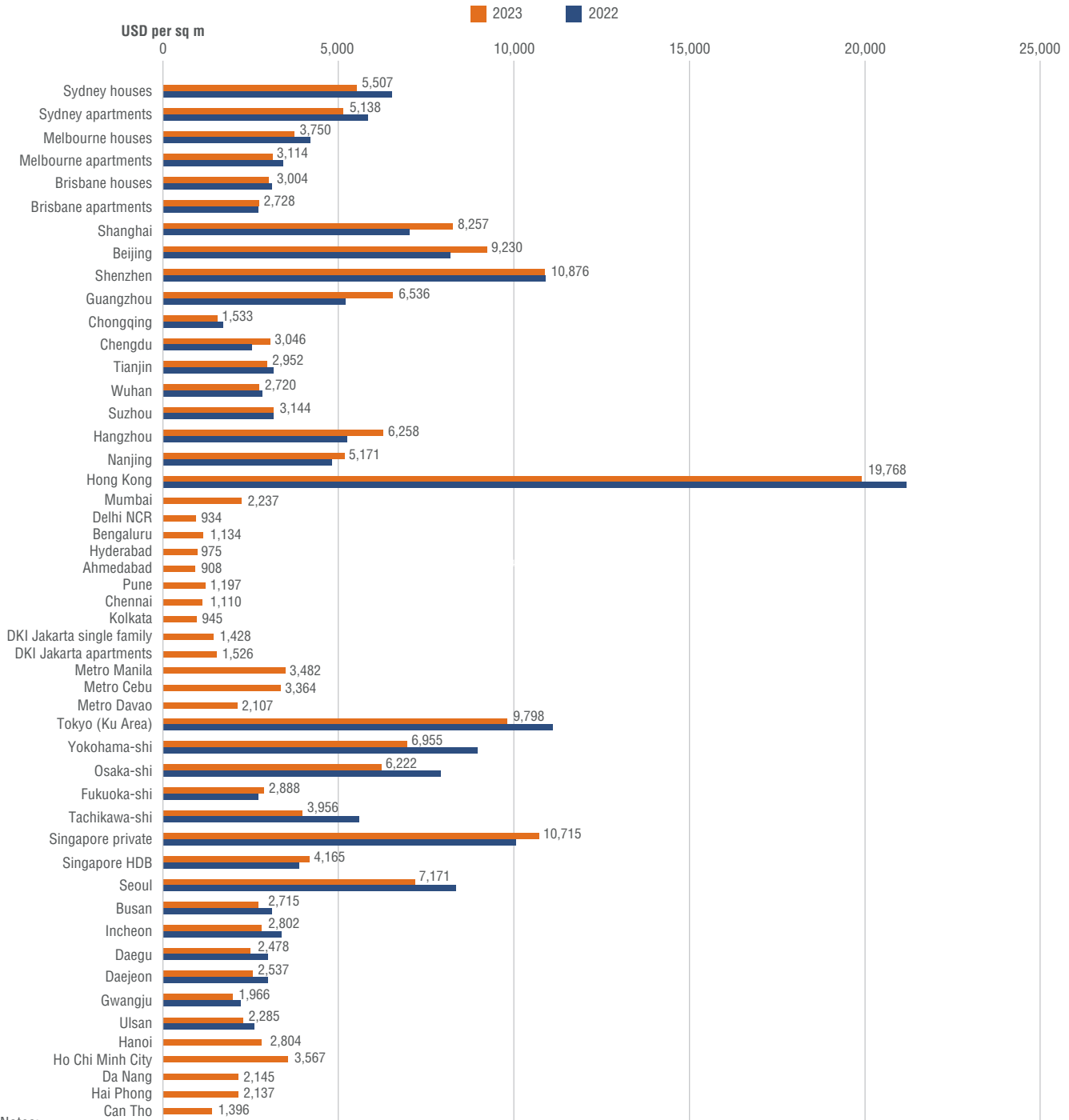
FIGURE 9 Median/average home size – owner-occupier



Notes:

1. We assume the average home sizes in Sydney, Melbourne and Brisbane are 80% of the average sizes of newly built houses and apartments (2020/21) in New South Wales, Victoria and Queensland (CommSec home size report 2021).
2. In last year's report, we assume the average home size for Chinese cities is 72 sqm usable area. In this year's report, we are using the average living space per household data for each province from the results of the 2020 Census released by the National Statistics Bureau of Mainland China in late 2022.
3. For Hong Kong, 2016 median home size of private owner-occupier housing (the latest 2021 Census does not subdivide private housing into owner-occupier and rental).
4. Median size of resale flats listed on Magicbricks for Indian cities, April 2023 data.
5. Median size of resale apartments and single family homes listed on Rumah123 for DKI Jakarta, April 2023 data.
6. Median size of resale condos listed on Lamudi for Philippine cities, April 2023 data; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
7. Median size of resale apartments listed on Batdongsan for Vietnamese cities, February 2023 data.
8. For other cities, median home size data from actual transactions, 2022 data.

FIGURE 10 Median/average housing price per sqm usable area 2022



Notes:

1. Median housing price per unit divided by estimated home size for both primary and resale residential properties in Australian cities, 2022 data.
2. Average housing price per sqm for primary sales for 11 mainland Chinese cities, 2022 data.
3. Local statistics bureaus have not released the 2022 average housing price for Shenzhen, Guangzhou and Suzhou. We applied the YoY growth rates for the three cities provided by CRTYRE DATA to 2021 average housing price.
4. Weighted average housing price per sqm based on housing price by district and home size and total housing stock in Hong Kong, 2022 data.
5. Median asking price per sqm of resale homes listed on Magicbricks for Indian cities, April 2023 data.
6. Median asking price per sqm of resale apartments and single family homes listed on Rumah123 for DKI Jakarta, April 2023 data.
7. Median asking price per sqm of resale condos listed on Lamudi for Philippine cities, April 2023 data; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
8. Average housing price per sqm for primary condos in Tokyo Ku Area, Yokohama-shi, and Osaka-shi; average housing price per sqm for resale condos in Fukuoka-shi; average housing price per sqm for both primary and resale condos in Tachikawa-shi; all 2022 data.
9. Median housing price per sqm for private sales in Singapore (Urban Redevelopment Authority), 2022 data.
10. Average housing price per sqm for Housing Development Board (HDB) resale flats in Singapore, 2022 data.
11. Median housing price per sqm for private sales in South Korean cities, 2022 data.
12. Median asking price per sqm of resale apartments listed on Batdongsan for Vietnamese cities, February 2023 data.

Home price affordability

Shenzhen continues to have the highest ratio of median home price to median household income at 35.0. For the remaining Tier 1 cities and leading Tier 2 cities in mainland China, the ratio ranges between 21 and 29. The top two cities in Vietnam, namely Ho Chi Minh City (32.5) and Da Nang (26.7), are among the least affordable in the region. Metro Manila and Cebu's ratios are 24.8 and 23.3.

Hong Kong's ratio of median home price to median annual household income is 26.5, considerably lower than last year's 30.5, due to a sharp price drop.

In Japan, Tokyo Ku has the highest ratio at 17.8, followed by Osaka (13.8) and Yokohama (12.5). The Tokyo suburb of Tachikawa (8.6) and the regional city of Fukuoka (7.2) have significantly better home attainability.

In South Korea, Seoul has the highest ratio at 17.3 while the regional cities' ratios range between 5.8 and 8.0.

The cities in India have ratios of between 6.8 and 11.3, relatively on the low side in the report. Mumbai has the highest ratio at 11.3, closely followed by Bengaluru at 11.1.

Australians enjoy the largest home size in the region, and as explained in the last year's report, the government has promoted higher-density apartment units over the years. Priced at around 60 percent of single-family homes, apartment units cater to low-income, young, and small-sized families, including retirees. Median single-family home prices are 12.0, 9.3, and 8.1 times median annual household income for Sydney, Melbourne, and Brisbane, respectively. The ratios are significantly lower for median apartment units. Median apartment prices are 6.4, 5.0, and 4.5 for Sydney, Melbourne, and Brisbane, respectively.

Singapore's HDB units continue to be affordable with a median price at 4.7 times median annual household income.

FIGURE 11 Ratio of median/average home price to median household income

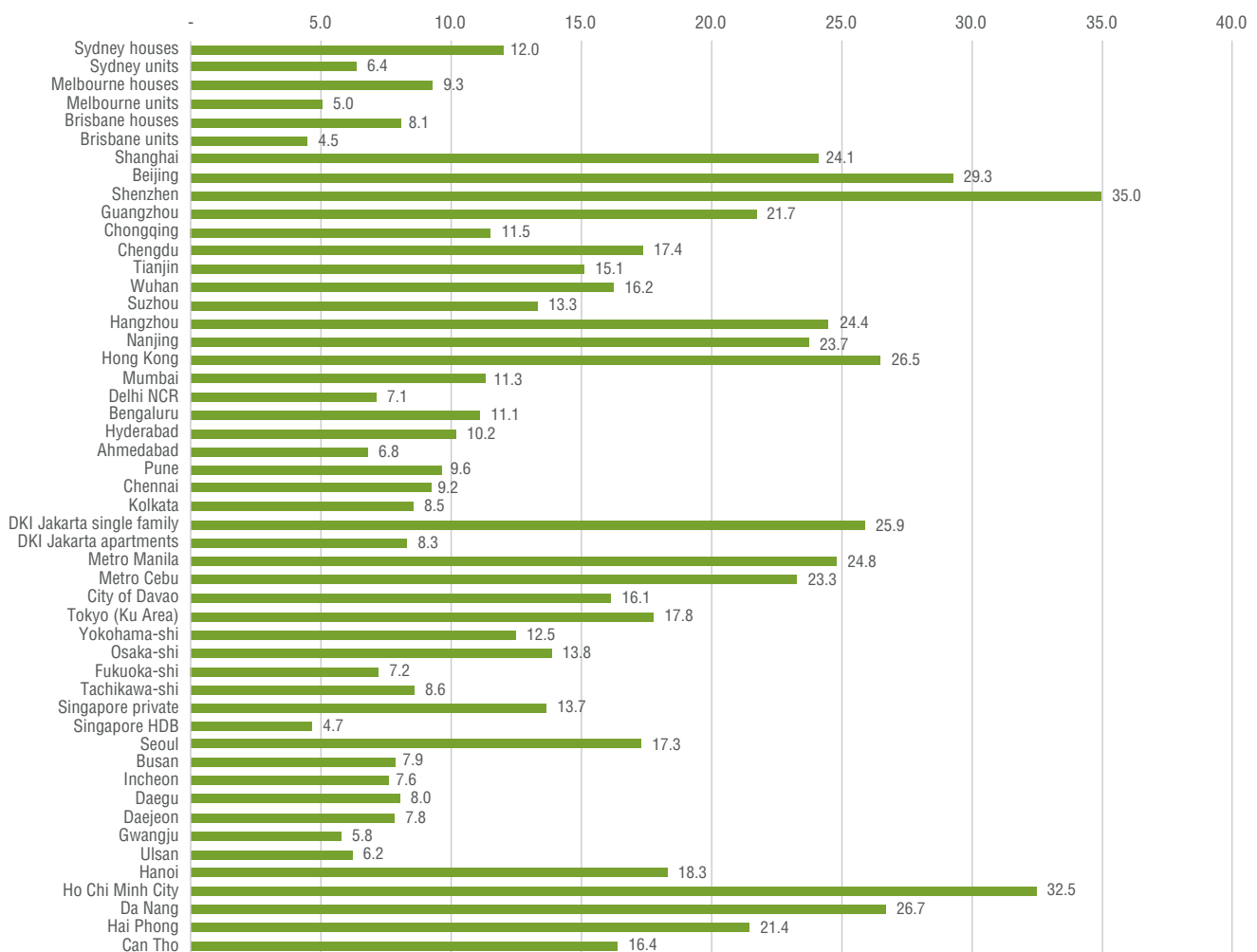


TABLE 3 Key housing data

City	Household size (people)	Median/Average home price (US\$ per unit)	Median/Average home size (sqm usable area)	Price per sqm (US\$ per sqm)	Median/Average monthly rent (US\$ per unit per month)	Median/Average rental home size (sqm usable area)	Rent per sqm per month (US\$ per sqm per month)
Sydney houses	2.6	980,209	178	5,507	1,958	142	13.8
Sydney units		518,945	101	5,138	1,732	81	21.4
Melbourne houses	2.5	716,200	191	3,750	1,446	153	9.5
Melbourne units		389,310	125	3,114	1,356	100	13.6
Brisbane houses	2.7	555,713	185	3,004	1,657	148	11.2
Brisbane units		308,295	113	2,728	1,446	93	15.6
Shanghai	2.3	487,889	59	8,257	657	35	18.5
Beijing	2.3	573,271	62	9,230	819	37	22.0
Shenzhen	2.3	626,964	58	10,876	576	35	16.6
Guangzhou	2.2	376,761	58	6,536	392	35	11.3
Chongqing	2.5	110,251	72	1,533	230	43	5.3
Chengdu	2.5	227,111	75	3,046	319	45	7.1
Tianjin	2.4	194,591	66	2,952	303	40	7.7
Wuhan	2.5	237,180	87	2,720	389	52	7.4
Suzhou	2.6	270,763	86	3,144	338	52	6.5
Hangzhou	2.4	442,408	71	6,258	570	42	13.4
Nanjing	2.5	445,346	86	5,171	483	52	9.4
Hong Kong	2.7	1,155,760	50	19,768	1,686	40	42.1
Mumbai	4.5	117,677	59	2,237	572	70	8.7
Delhi NCR	4.9	89,053	98	934	318	111	3.2
Bengaluru	4.0	95,414	107	1,134	343	111	2.9
Hyderabad	4.6	101,775	116	975	280	111	2.6
Ahmedabad	4.7	76,331	105	908	280	108	2.8
Pune	4.2	89,371	76	1,197	254	77	3.3
Chennai	4.0	82,374	92	1,110	197	86	2.5
Kolkata	4.4	54,704	79	945	204	80	2.6
DKI Jakarta single family	3.8	356,931	250	1,428	730	200	3.6
DKI Jakarta apartment		114,487	75	1,526	539	72	7.5
Metro Manila	3.8	181,058	52	3,482	1,009	63	16.0
Metro Cebu	3.8	141,270	42	3,364	587	45	13.0
City of Davao	3.9	89,532	43	2,107	459	36	12.7
Tokyo (Ku Area)	3.7	626,502	64	9,798	602	40	15.0
Yokohama-shi	1.9	430,169	62	6,955	434	44	9.8
Osaka-shi	2.2	356,230	57	6,222	348	40	8.8
Fukuoka-shi	1.9	183,360	63	2,888	343	44	7.7
Tachikawa-shi	2.0	262,285	66	3,956	365	42	8.8
Singapore private	3.1	1,200,087	112	10,715	2,596	72	36.1
Singapore HDB		409,095	98	4,165	n.a.	n.a.	n.a.
Seoul	3.1	528,831	74	7,171	689	49	14.0
Busan	2.3	206,796	76	2,715	395	55	7.2
Incheon	2.3	210,728	75	2,802	526	54	9.7
Daegu	2.4	212,907	86	2,478	525	59	9.0
Daejeon	2.4	217,372	86	2,537	441	55	8.0
Gwangju	2.3	163,809	83	1,966	392	58	6.8
Ulsan	2.4	203,583	89	2,285	453	62	7.3
Hanoi	3.8	182,290	65	2,804	592	80	7.4
Ho Chi Minh City	3.3	296,063	83	3,567	592	75	7.9
Da Nang	3.6	214,540	100	2,145	465	80	5.8
Hai Phong	3.4	160,297	75	2,137	455	63	7.2
Can Tho	4.0	139,361	100	1,396	338	77	4.4

Source: 2023 ULI Asia Pacific Home Attainability Index report.

Rental housing

The ratio of median monthly rent to median monthly household income is highest in Philippines, followed by Vietnam. The high ratios for Philippines and Vietnam may reflect that the rental properties captured in the data disproportionately cater to high-income local families and expatriates. In addition, more fundamentally, rental housing stock, especially in or near central business districts with high concentrations of office workers, may be severely limited relative to the growing demand from young professionals moving into the cities.

Singapore's private-sector rental homes have the highest monthly rent in the region at US\$2,600, far exceeding the next cluster consisting of Sydney, Melbourne, Brisbane, and Hong Kong SAR. In 2022, Singapore experienced a nearly 30 percent increase in monthly rent for private-sector homes because of a combination of factors, including a sudden surge in the number of migrants, a slowdown in building completion, and relatively limited stock of rental properties either institutionally or individually owned.

It is noteworthy that the median monthly rents in Tokyo Ku and Seoul at US\$602 and US\$689, respectively, are only around 25 percent of Singapore's median rent and 35 to 40 percent of Hong Kong's median rent. Second-tier cities in Japan and South Korea have the lowest ratio of monthly rent to income, ranging between 14 and 24 percent. Tokyo, long known for its high cost of living, has a ratio of 21 percent, while Seoul's ratio is 27 percent.

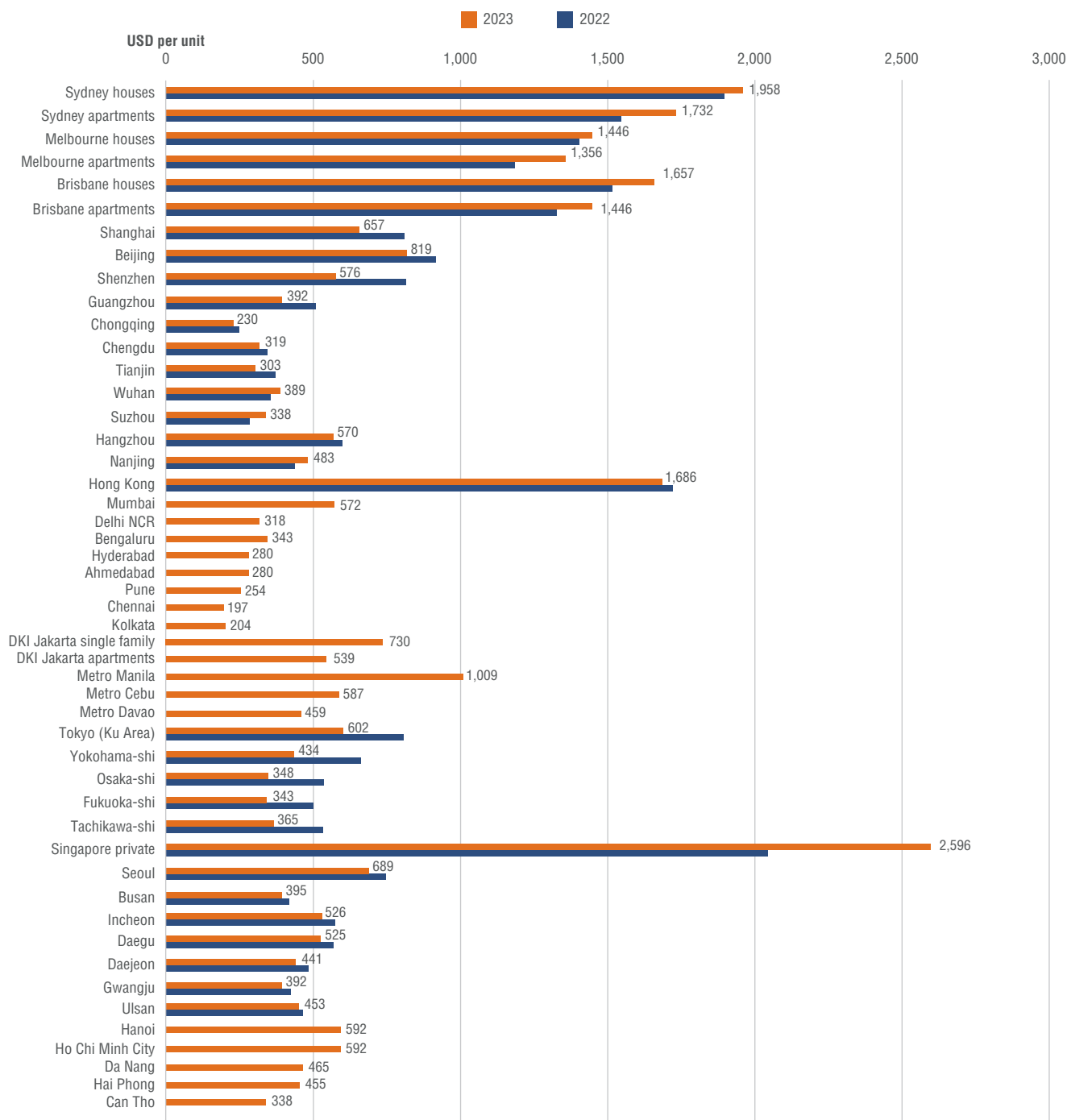
Among the cities in mainland China, Beijing is the least affordable at 50 percent, followed by Shanghai and Shenzhen at 39 percent, as well as Hangzhou at 37 percent. Guangzhou and the remaining Tier 2 cities range between 27 percent and 32 percent. Adjacent to Shanghai, Suzhou has the lowest ratio of median rent to income at 20 percent.

For the cities in India, Mumbai has the highest median monthly rent at US\$572, while Chennai and Kolkata have the lowest median monthly rent at about US\$200. Mumbai has the highest ratio of median monthly rent to monthly income at 66 percent, followed by Bangaluru at 48 percent. Delhi NCR's ratio is among the lowest at 30 percent.



Bonifacio Global City and nearby neighbourhood, Metro Manila.
Credit: Kenneth Rhee

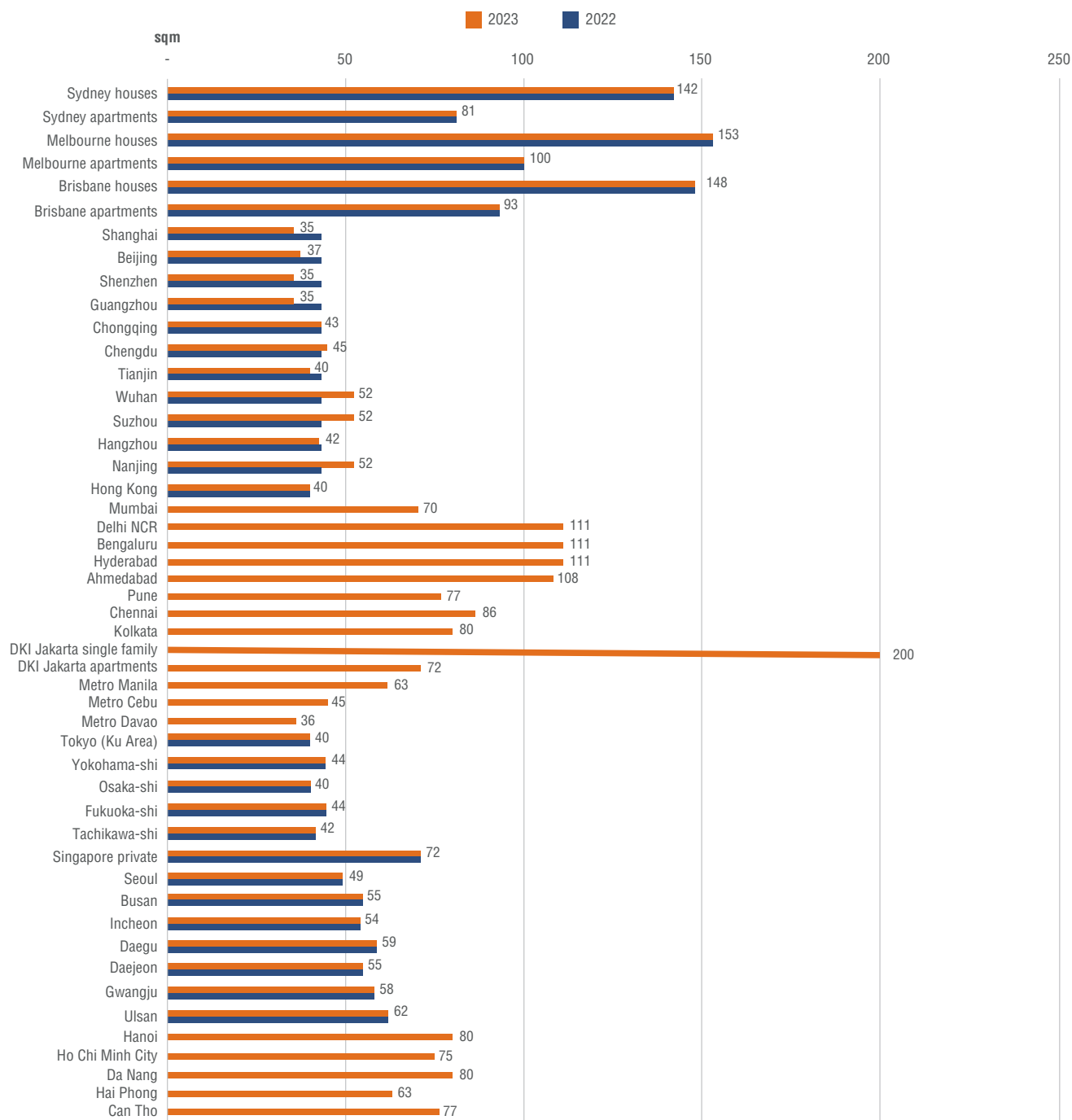
FIGURE 12 Median/average monthly rent per unit 2022



Notes:

1. Median monthly rent per unit for Australian cities released by Domain, 2022 data.
2. Average monthly rent per sqm in Chinese cities provided by CRTYRE DATA times average rental housing size.
3. Average monthly rent per unit for Hong Kong, 2022 data.
4. Median asking rent per unit of rental flats listed on Magicbricks for Indian cities, April 2023 data.
5. Median asking rent per unit of rental apartments and single family homes listed on Rumah123 for DKI Jakarta, February 2023 data.
6. Median asking rent per unit of rental condos listed on Lamudi for Philippine cities, April 2023 data; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
7. Average monthly rent per unit for Japanese cities listed on Suumo, April 2023 data.
8. Median monthly rent per unit for two-bedroom private rental apartments in Singapore, 2022 data.
9. Median monthly rent per unit of rental homes released by Korea ReAl Estate Board, 2022 data.
10. Median asking rent per unit of rental apartments listed on Batdongsan for Vietnamese cities, February 2023 data.

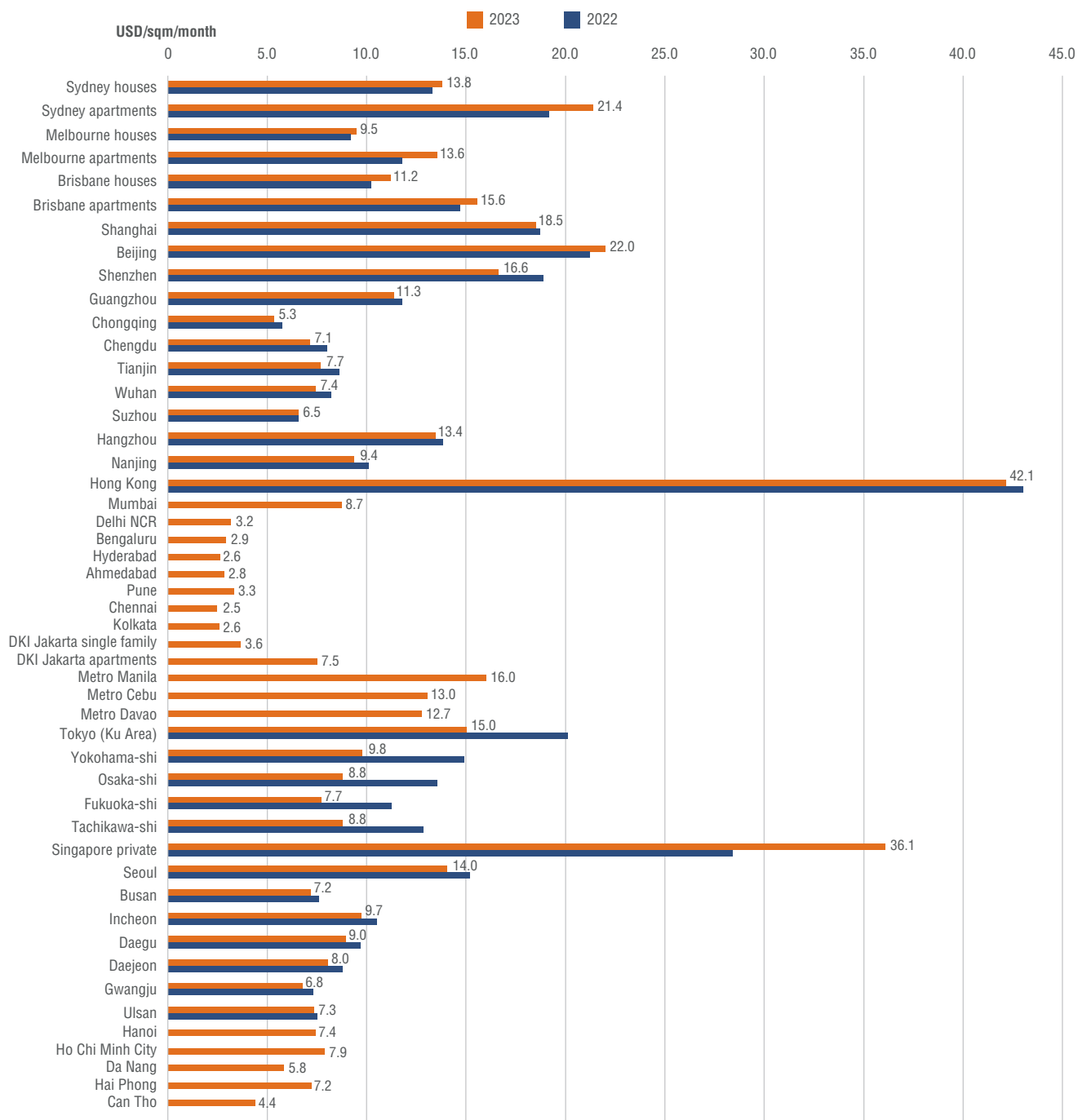
FIGURE 13 Median/average home size – rental housing



Notes:

1. We assume rental house and apartment sizes in Australian cities are 80% of owner-occupier home size.
2. We assume the average rental housing sizes for Chinese cities are 80% of average owner-occupier home size.
3. For Hong Kong, we are using 2016 median home size for private rental housing (the latest 2021 Census does not subdivide private housing into owner-occupier and rental).
4. Median size of rental flats listed on Magicbricks for Indian cities, April 2023 data.
5. Median size of rental apartments and single family homes listed on Rumah123 for DKI Jakarta, February 2023 data.
6. Median size of rental condos listed on Lamudi for Philippine cities, April 2023 data; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
7. Rental housing size data in Japanese cities are from 2018 Land and Housing Survey.
8. Median size for two-bedroom private rental apartments in Singapore, 2022 data.
9. HDB rental flat size is not available.
10. We assume rental housing size in South Korean cities are 80% of the average residential area per household, 2020 data.
11. Median size of rental apartments listed on Batdongsan for Vietnamese cities, February 2023 data.

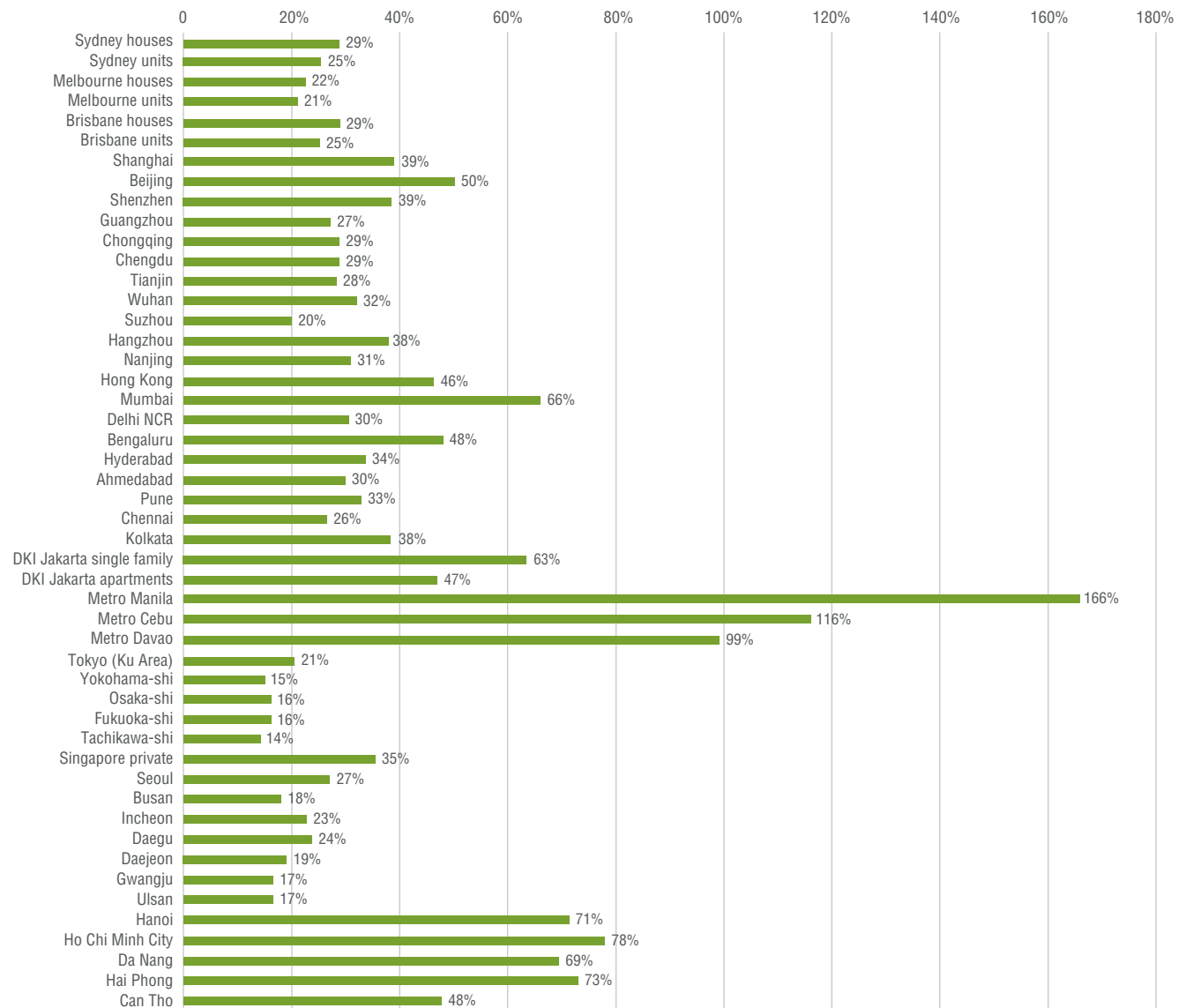
FIGURE 14 Median/average monthly rent per sqm usable area 2022



Notes:

1. Median monthly rent per unit divided by estimated home size of private rental housing in Australian cities, 2022 data.
2. Average monthly rent per sqm in Chinese cities (adjusted to usable area), 2022 data provided by CRTYPE DATA.
3. Average monthly rent per unit divided by 2016 median home size of private rental housing stock in Hong Kong, 2022 data .
4. Median asking rent per sqm of rental flats listed on Magicbricks for Indian cities, April 2023 data.
5. Median asking rent per sqm of rental apartments and single family homes listed on Rumah123 for DKI Jakarta, February 2023 data.
6. Median asking rent per sqm of rental condos listed on Lamudi for Philippine cities, April 2023 data; Metro Cebu includes City of Cebu, City of Mandaue and City of Lapu-Lapu.
7. Average monthly rent per unit (listed on Suumo, April 2023) divided by average home size of rental housing in Japanese cities (2018 Housing and Land Survey).
8. Median monthly rent per sqm for two-bedroom private rental apartments in Singapore, 2022 data.
9. HDB releases rental flat fee arrangements for two low income categories (monthly rent arranging from US\$ 20-200 for monthly household income below US\$ 580 and 580-1,090 SGD), based on the rates, monthly HDB flat rents account for 4-11% of eligible low-income households' monthly income, 2022 data.
10. Median monthly rent per unit of rental homes released by Korea ReaL Estate Board (2022 data) divided by the average rental housing size (80% of average residential area per household, 2020 data).
11. Median asking rent per sqm of rental apartments listed on Batdongsan for Vietnamese cities, February 2023 data.

FIGURE 15 Ratio of median/average monthly rent to median monthly household income



Homeownership

Homeownership varies significantly in the region, often as a function of government policies and population migration. Singapore continues to have the highest homeownership rate of nearly 90 percent, thanks to the government's decision and consistent commitment to enable its citizens to own homes at reasonable price from the early years of the country's independence in the 1960s.

For the cities in mainland China, we have substantially adjusted the homeownership rates from the last year's report, which reflected the 2012 data from a survey by two leading universities. Recently published census data for Hangzhou showed a homeownership rate of 57.9 percent, well below the 79.2 percent for the city from the 2012 survey. This report applies the same rate of decrease for the homeownership rates for the other Tier 1 and Tier 2 cities. The true homeownership rates for Tier 1 and Tier 2 mainland Chinese cities are likely between 50 and 60 percent rather than 70 to 80 percent as reported in the 2012 survey data. The homeownership rate in Tier 1 cities is the lowest at between 50 and 53 percent, and it is close to 60 percent for most Tier 2 cities.

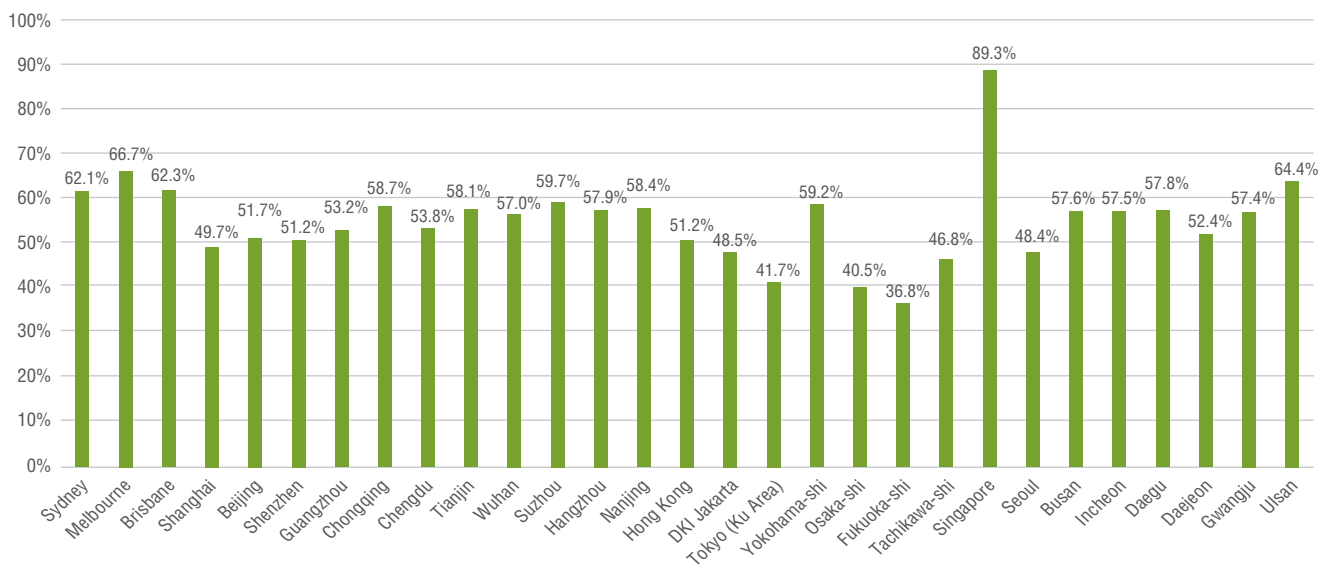
In the past few decades, Chinese cities have rapidly grown in population primarily because of migrants moving into cities. With most migrant families unable to afford to purchase homes, it is only logical that homeownership rate has declined substantially in the past 10 years. While migrants from rural areas often build homes in their hometowns or buy apartments in cities near their hometowns for their remaining family members or their eventual return home, homeownership in cities where people do not reside is not included in the homeownership rates.

Homeownership rates in Japanese cities are substantially below 50 percent, except for Yokohama at 59.2 percent. A main satellite city of Tokyo, Yokohama's median household income is on par with Tokyo Ku while median home price is 30 percent lower than in Tokyo Ku.

Overall, gateway cities tend to have lower homeownership rates. Shanghai, Tokyo, and Seoul have homeownership rates significantly lower than that of regional cities, reflecting high home prices and the more migratory nature of populations in gateway cities.

Among the newly added cities, we were able to obtain homeownership rate only for Jakarta, which is 48.5 percent.

FIGURE 16 Homeownership



Notes:

1. Data for Sydney, Melbourne and Brisbane are for 2017-2018.
2. The homeownership figures for the cities in mainland China are estimates based on the 2012 survey by Tsinghua University and Zhejiang University and a 2020 Census data on homeownership for Hangzhou. According to 2020 Census data for Hangzhou, homeownership rate for the city was 57.9%, considerably lower than 79.2% in the 2012 survey results. We applied the same percentage of decrease for the other mainland Chinese cities to estimate the current homeownership rates.
3. Data for cities in Japan are calculated as ratios between the number of owner-occupied houses and the total number of houses in each city, released by 2018 Housing and Land Survey.
4. Data for Singapore and Hong Kong are for 2021.
5. Homeownership rate for DKI Jakarta is from Jakarta Property Institute, 2021 data.
6. Data for cities in South Korea are for 2020.
7. Homeownership data for other cities are generally not available from public websites.

Ease of home purchase

Factors affecting homeownership include home price, availability of financing for equity and debt, and related transaction costs including brokerage fees and taxes.

As suggested by its high homeownership, Singapore has made buying a home and getting on the property ladder easy. Thanks to the government's commitment to support homeownership, HDB units are priced at subsidized prices compared to market price. Moreover, homebuyers can use the funds in their retirement funds to for a downpayment. Including transaction costs, one needs to come up with only about US\$8,000 to buy a typical HDB unit in Singapore.

The costs of borrowing and minimum downpayment amounts reflect the government's economic policies. High required downpayment and mortgage interest rates in Korea, Hong Kong, and mainland China reflect the governments' policy goal of preventing home prices from further

increasing. In contrast, low required downpayment in Japan reflects the government's policy to support current home price and stimulate the economy by providing more credits to the real estate sector.

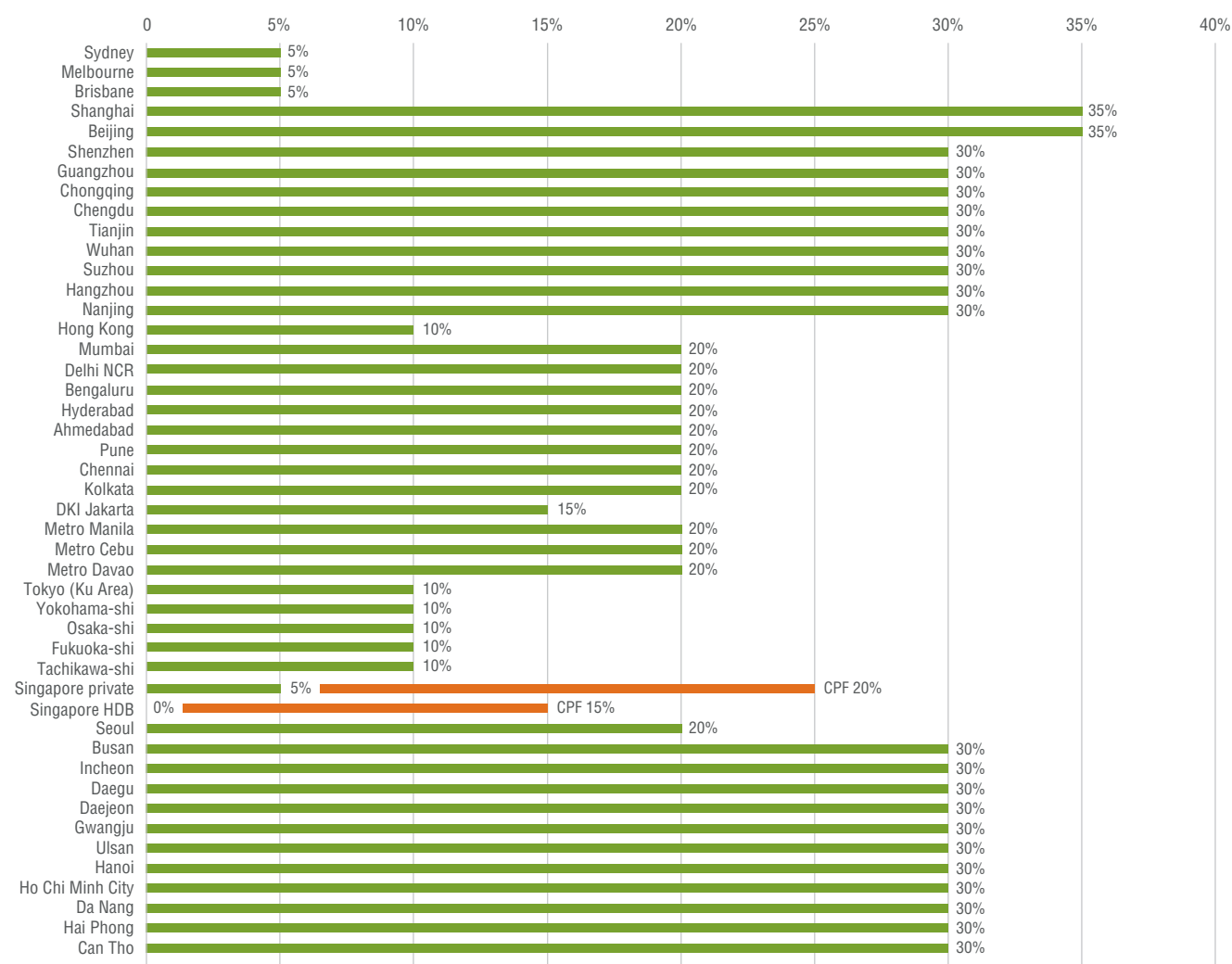
Transaction-related costs such as brokerage fees and taxes can vary widely. Brokerage fees can be as low as 0.4 percent in Korea and as high as 3.0 percent in Japan. Purchase tax is highest in India at 6 percent and lowest in Vietnam at 0.5 percent and 0 percent for low-price apartment units in Australia.

Overall, the most financial burden on new homebuyers is found in Tier 1 cities in mainland China. New homebuyers in Shanghai, Beijing, and Shenzhen need to come up with around US\$200,000 to get on the property ladder, followed by Hong Kong SAR at US\$162,000 and Hangzhou and Nanjing at nearly US\$150,000. Unless young people receive financial support from their parents or they are highly paid, it is extremely challenging to buy a home in Tier 1 and Tier 2 cities in mainland China and Hong Kong SAR.



A slum area in Mumbai with high-rise buildings in the background.
Credit: Paixin

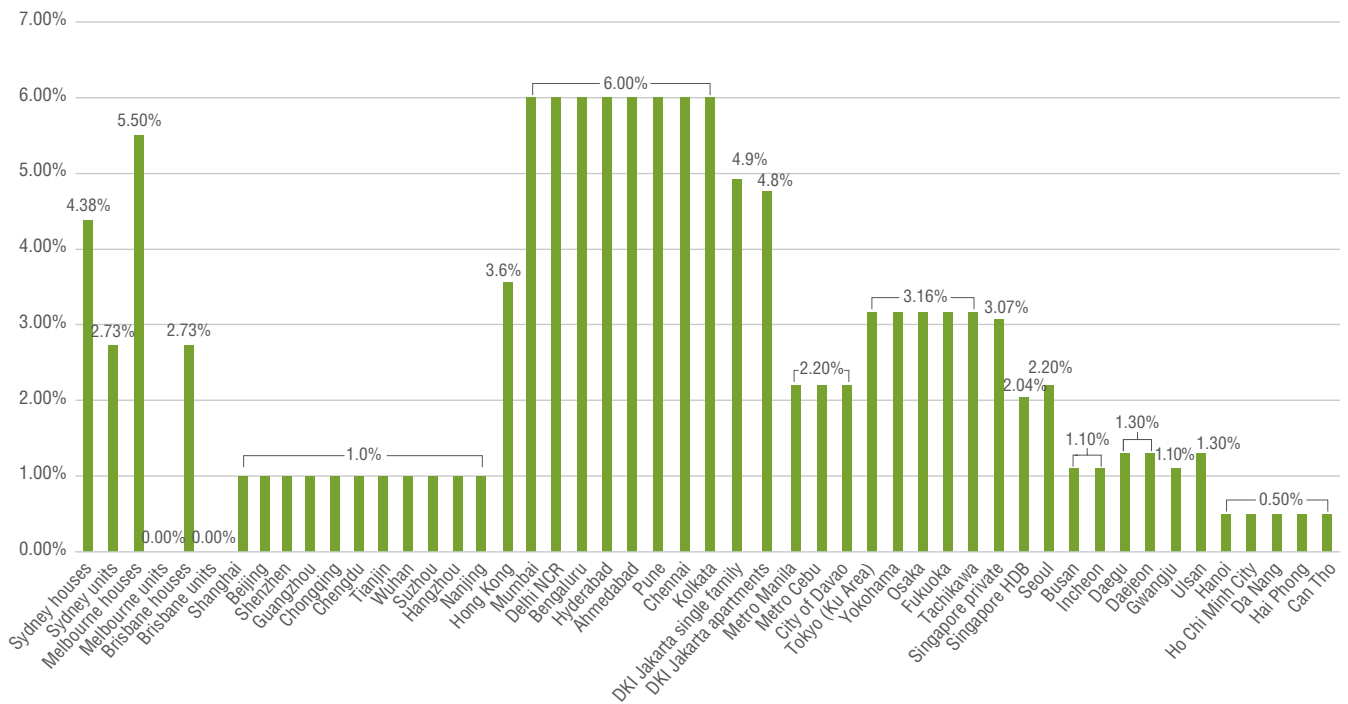
FIGURE 17 Minimum downpayment % of home price



Notes:

1. In Australia, home buyers can borrow as much as 95% of the home value. In the case that LTV is north of 80%, buyers are required to purchase the lenders mortgage insurance. In addition, local governments provided government-backed mortgage guarantees to bring forward homeownership access for young adults with moderate incomes but low savings. The low-deposit mortgage schemes enhance affordability through the avoidance of expensive lenders mortgage insurance.
2. In Mainland China, first home buyers have to put up at least 30-35% of the home value as downpayment. Second home buyers have to put up at least 50% of the home value as downpayment.
3. In Hong Kong, though the government requires 40% downpayment, first home buyers are allowed to borrow extra through the mortgage insurance program, up to 90%.
4. In Japan, per the guidance of the government, the minimum downpayment is 10% of purchase price, however, commercial lenders are able to accommodate with 5% and even lower downpayment.
5. In Singapore, buyers purchasing private housing units are required to put down 25% downpayment, in which at least 5% in cash and the rest 20% out of their Central Provident Fund (CPF) account.
6. HDB flat buyers are required to put down 15% downpayment, which can be paid in full through their CPF account.

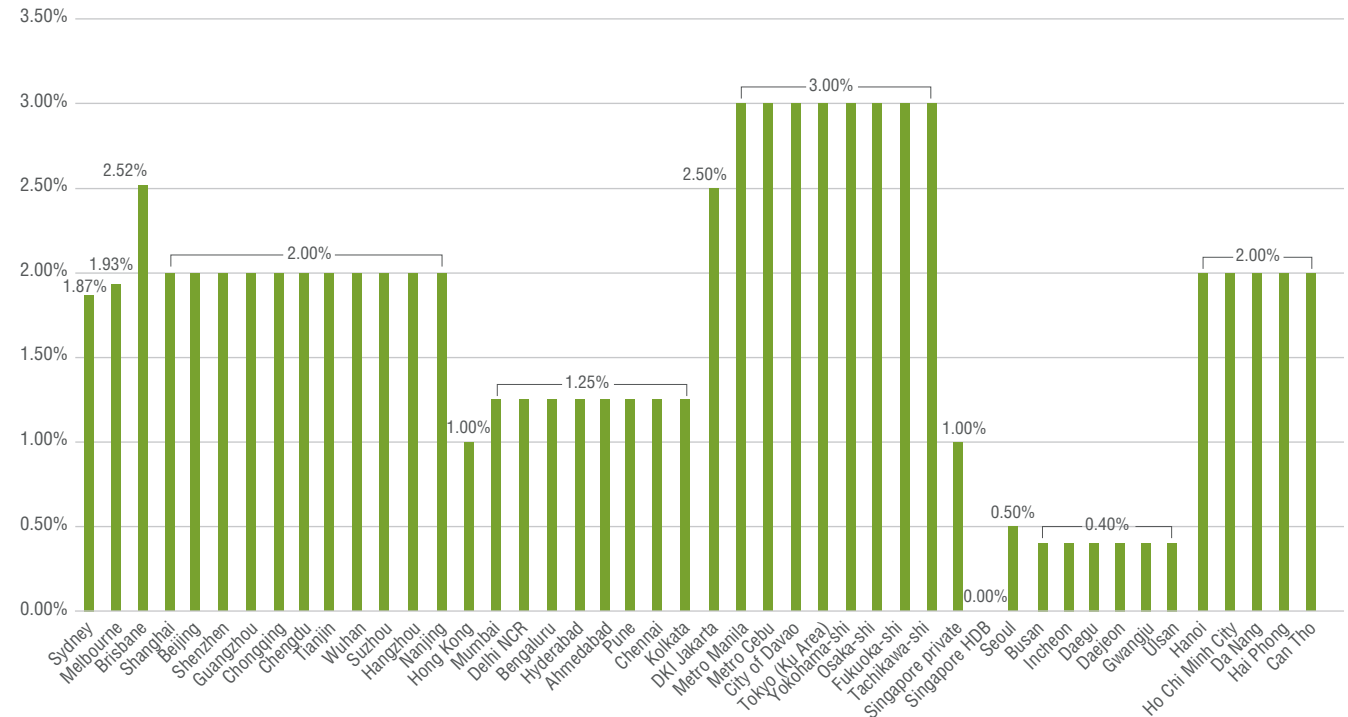
FIGURE 18 Purchase tax % based on median/average home price



Notes:

1. Median apartment prices in Melbourne and Brisbane meet the local transaction duty exempt requirements.
2. In Singapore, there is no stamp duty for first home buyers for Singapore citizens. The stamp duty for first home buyers for permanent residents (non-Singapore citizens) is 5%. However, for second home buyers, there is a 20% stamp duty for Singaporean citizens and 30% for permanent residents to clamp down upon home market speculations.

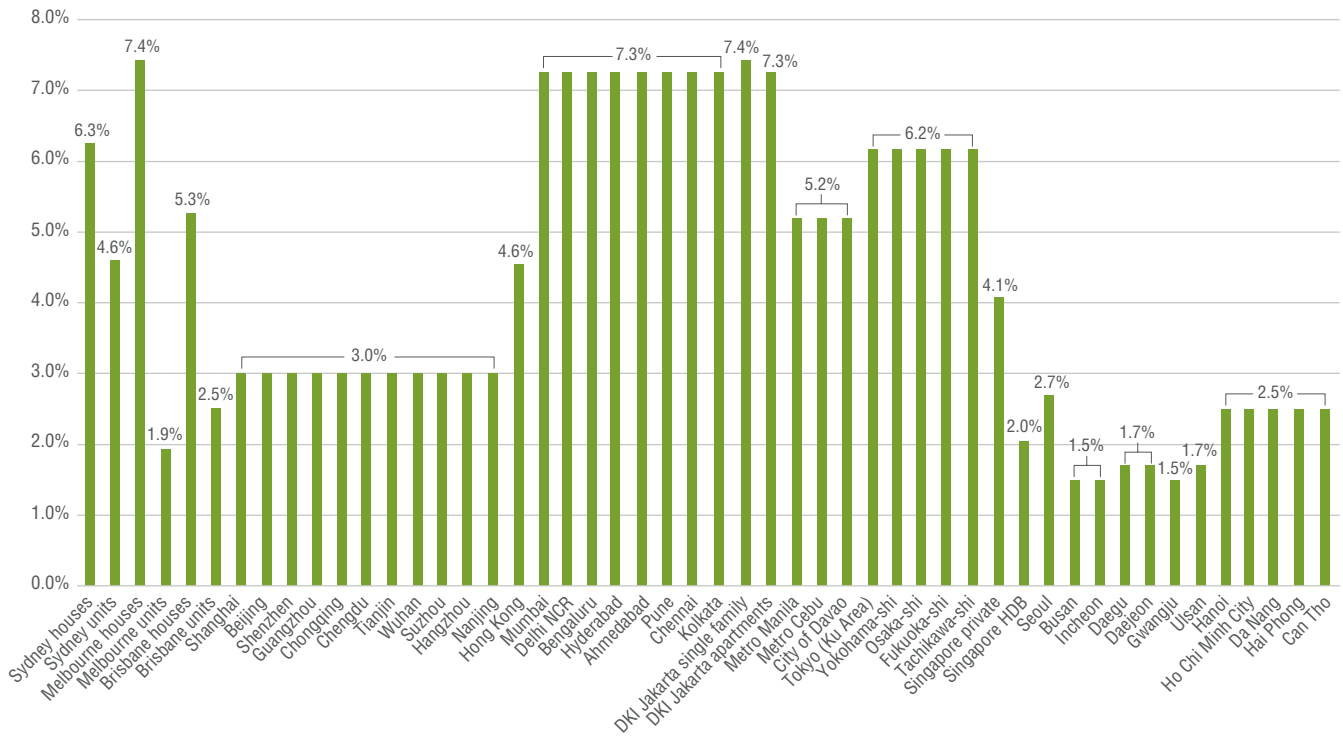
FIGURE 19 Brokerage fee %



Notes:

1. In Japan, in addition to the standard 3% brokerage fee, buyers are required to pay 60,000 JPY (US\$ 460) of consumption tax for receiving brokerage services.
2. In Singapore, buyers of private housing units usually don't pay brokerage fee.

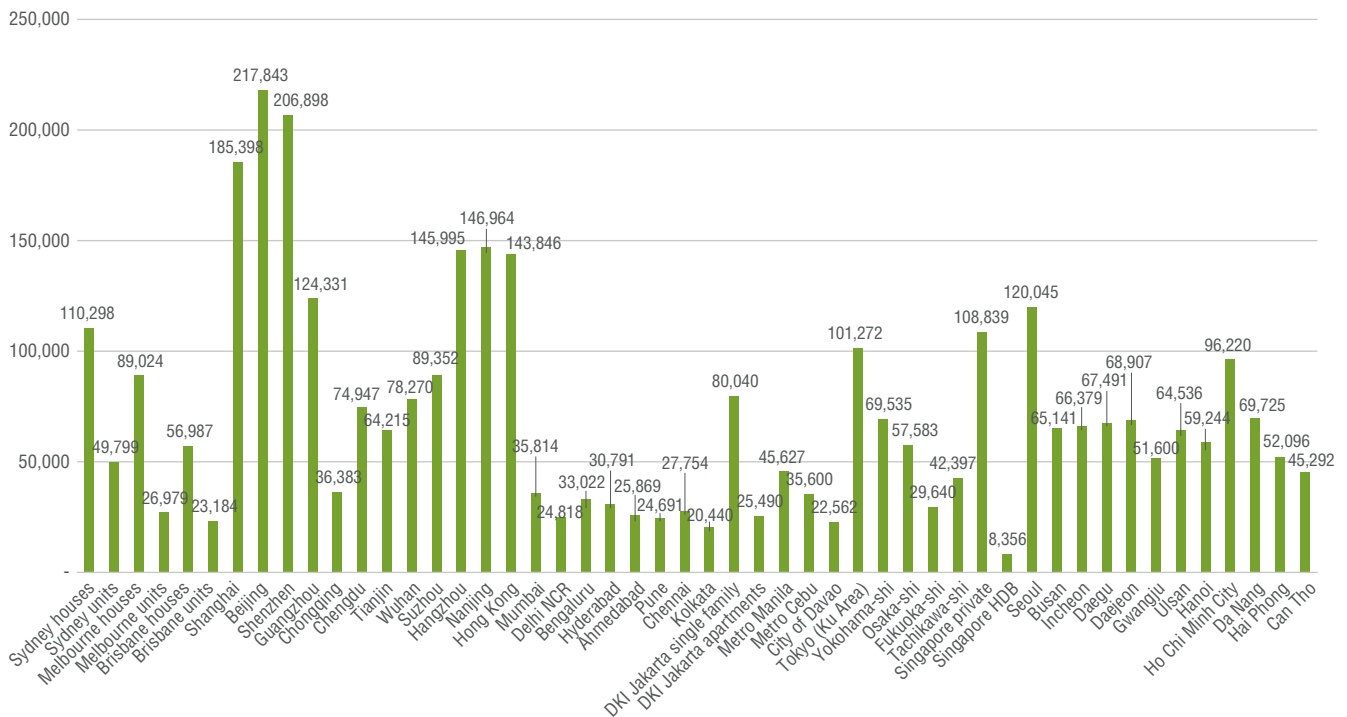
FIGURE 20 Transaction costs (brokerage fee plus purchase tax) borne by buyers as % of home purchase price (median-priced home)



Notes:

1. Upfront transaction costs borne by buyers include purchase tax and brokerage fee.

FIGURE 21 Minimum upfront payments for home purchase, including downpayment, purchase tax, and brokerage fee



Notes:

1. In Japan, in addition to the standard 3% brokerage fee, buyers are required to pay 60,000 JPY (US\$ 460) of consumption tax for receiving brokerage services.
2. In Singapore, buyers of private housing units usually don't pay brokerage fee.

Analysis of Key Factors Affecting Home Attainability

As mentioned in the Executive Summary, based on the works from the past year and interviews and research work for this year's report, the following factors have been identified as critical factors for influencing home attainability in the cities covered in this year's report. For each factor, more supporting facts and anecdotes are provided.

Demographic trends

The newly added cities in the four developing countries generally have poor and severely limited housing stock compared to the fast-growing demand from both existing residents aspiring to improve their housing conditions and new migrants who need to secure at least the most basic housing.

With a median age of 24 to 32 years, population growth and household formation are occurring at a much higher rate for the cities in the developing countries. Also, as the developing countries generally experience a faster economic growth rate, household income and purchasing power should increase at a much faster rate and create significant demand for new homes. Especially in high-growth cities, high home price relative to current income may be caused by fast-growing demand for homes based on the expectation of income growth and the limited pool of modern housing stock.

Because long-term city dwellers generally own homes, and unmarried children tend to stay with their parents until marriage (often even after marriage), it is young migrant workers who are most affected by high home prices and rents.

For the developed countries with ageing population, such as Japan and South Korea, declining home demand overall should put downward pressure on home prices and rents. Japan has the lowest ratio of monthly rent to income, followed by Korea. Also, home purchase is much more affordable in Japan and Korea than in mainland China and the four developing countries.

In the past few years, COVID has caused many people to move to new locations. Singapore saw its migrant population increase by approximately 100,000 in 2022. Partly as a result, the resale price for HDB flats increased by 10.4 percent, and average price and rent for private-sector homes increased 8.6 percent and 29.7 percent, respectively. In Australia, people

looking for more space who are able to work remotely have migrated from Sydney to smaller regional cities. This has created a housing shortage in the regional cities, worsening home attainability for the existing residents.

Land use-related government policies and density

The 2022 report highlighted that in Hong Kong SAR only about 4 percent of the territory is available for urban housing use, which is significantly lower than the rate in other comparable cities such as Singapore, Tokyo, and Seoul.

Density or floor/area ratio (FAR) varies greatly among the cities in the region. In mainland China, the lower cost of housing in Guangzhou can be partly attributed to the higher density in the city compared to Shanghai or Beijing. In the case of Manila, for residential projects, FAR can be as high as 16 with a possibility of further increasing to 17 or 18. By comparison, FAR in Mumbai is around 5 or 6. In Shanghai FAR for residential buildings is generally capped at 2.5 in the central urban area, and the government has stopped approving new single-family residential development projects. In the case of Seoul, the new administration has allowed a higher FAR for redevelopment of existing old apartment buildings.

In Jakarta, the majority of homes are "landed homes", meaning single-family homes. Apparently, people in Jakarta prefer landed homes over apartment units; however, the resulting urban sprawl has led to heavy traffic congestion and subsidence of the land as landed homes depend on ground water for drinking and other daily living needs.

Urban transportation infrastructure

Poor mass transportation infrastructure, especially for fast-growing cities like Manila and Jakarta, puts a limit on how far people can live from their work. In the case of Manila, workers who are from areas about 20 kilometres from the city centre may face a two-hour or even longer daily commute each direction. It is quite common for such workers to stay in a dormitory-like rental housing unit near their workplace with roommates and avoid the long commute on weekdays, returning to their family home only on weekends. Monthly rent can be around 20 to 25 percent of their income.

In Shanghai, the extensive subway network and high-speed train lines to nearby cities have expanded the geographic areas where people can live and still commute to work with less than a one-hour commute each direction. The significantly higher rent in Beijing may be due to the relatively

inconvenient mass transportation system and the limited variety of housing options near where people work owing to the historical urban planning practice of favouring single-purpose office-only use with limited housing.

In Hong Kong SAR, homes shared by more than one family, also known as “subdivided units”, are mostly in the central areas of the city where people can often walk to work. Improved urban transportation linking the city centre to outlying areas of the city that have cheaper and more spacious housing options can help alleviate the housing situation for those living in subdivided units.

Redevelopment of urban areas

Cities tend to grow outward partly because it is almost always easier to develop on greenfields than to regenerate or redevelop existing urban neighbourhoods. It is quite common to see urban neighbourhoods in decay with little signs of any imminent redevelopment. The slow pace of redevelopment of urban neighbourhoods may be caused by any of the following: (1) unclear policy objectives and lack of regulatory framework for regeneration or redevelopment; (2) inability to reach a consensus and secure support for a redevelopment plan from the interested parties such as building owners, businesses, and residents in the affected neighbourhoods; and (3) limited experience of government officials and developers.

Often urban neighbourhoods in decay provide inexpensive housing for low-income residents, often migrant workers and their families. Examples include urban villages in Shenzhen, neighbourhoods adjacent to Makati and Bonifacio Global City in Manila, and Dharavi in Mumbai, the largest urban slum in India and the background of the movie *Slumdog Millionaire*. As these areas are centrally located near many jobs and with good access to transportation, these areas generally command some of the highest rent prices per sqm in the city despite poor living conditions.

Availability of financing for home purchase

Availability of equity and mortgage financing for home purchase varies greatly among the countries in the region, which affects how early in life people can purchase a home and start building home equity.

To buy HDB units, Singapore residents need to put up 15 percent of the home purchase price, but as they can borrow up to 15 percent of the home price from their Central Provident Fund account managed by the government, they may not need to put up any cash of their own. This policy

has helped increase the city-state’s homeownership to approximately 90 percent, the highest in the Asia Pacific region.

In Japan, banks normally extend 90 percent of the home purchase price; however, for high-end condominiums in central Tokyo, banks may lend up to 110 percent of the home purchase price, which is sufficient to cover all transaction-related costs such as brokerage fees and taxes. However, to qualify, the borrower needs to have a stable job with a major corporation, have a sound balance sheet, use the condominium as primary residence, and provide recourse.

In Australia, the national government in collaboration with a selection of mainstream Australian banks has been offering a capped number of loans under the first-homebuyer scheme (FHBS), which allows borrowers to provide a 5 percent downpayment for some apartment units – but under strict lending conditions that preclude using the scheme for many apartments. Most lending is still 20 percent for single-family homes. The aim of the FHBS is to enable a portion of young and low-income families to get on the property ladder. Apartment units generally cost about 60 percent of single-family homes.

The highest downpayment requirements are found in mainland China, South Korea, and Hong Kong SAR, where governments try to reduce demand for home purchase and keep home prices down.

Government involvement in housing provision

The two best-known examples of government provision of housing are Singapore’s HDB programme and Hong Kong SAR’s public rental housing programme. Singapore’s HDB programme is designed for households to own their own homes while Hong Kong’s public housing programme primarily provides subsidized rental housing to low-income families. HDB covers around 90 percent of the population while Hong Kong’s public housing programme provides subsidized rental housing to roughly 35 percent of the population, and another 15 percent have purchased subsidized homes from the government. Hong Kong has a long waiting list for public rental housing units with an expected waiting period of more than six years.

In recent months, the Hong Kong SAR government announced its plan to build “light housing units” to house people living in “subdivided units”. Built using modular construction technologies, light housing units are meant to be temporary units lasting five to 10 years, filling the gap in “permanent housing units”.

For mainland China, the national government has been promoting increasing the stock of rental properties. As part of this policy, local governments have been selling land plots for rental housing use, primarily purchased by stated-owned enterprises.

In Japan, the Urban Renaissance Agency is a semi-government organization that builds large-scale housing projects, including rental housing projects for low-income households. Prefecture and city governments also have agencies that build and provide subsidized rental housing. In South Korea, LH Corporation builds large-scale housing projects for sale and rent for low-income households, and major cities and provinces also develop housing projects for low-income households through their own development arms.

In Indonesia, the national government has been running the One Million Houses programme to build 1 million units each year to meet the pent-up housing demand. The Philippine government has also recently announced a shortfall of 6 million units and set a target of building 1 million units per year. However, the goal will need to be achieved primarily by the private sector.

Interrupted supply chain during COVID

Although research for this report could not find specific data on building material cost increases for the region, the global supply chain for almost all industries over the past three years was significantly disrupted by work stoppages caused by COVID-induced quarantines, shortage of components or raw materials, and sharp increases in shipping costs. According to the Urban Development Institute of Australia (UDIA), Australia experienced an approximately 30 percent increase in costs of construction materials for housing construction in the past three years.

In addition, Singapore experienced a sharp drop in new housing supply from the disruption to the global supply chain of building materials and labour shortage caused by COVID. In 2020 and 2021, newly completed HDB units totalled about 9,000 and 13,000, respectively, whereas the average in the preceding three years was about 20,000 units annually. The drop in new supply has contributed to the recent sharp increase in home price and rent.



Kembangan private and public residential area in Singapore at early morning dawn panorama.
Credit: Shutterstock

Key Markets

For this year's report, four developing countries – India, Indonesia, the Philippines, and Vietnam – were added. These countries have a combined population of 1.8 billion, approximately 24 percent of the world's total population.

In this section, the report presents statistics that provide a high-level overview of each country's housing market and home attainability and highlights key recent market trends that affect home attainability.

Australia

The most obvious and defining characteristic of the Australian housing market is the size of its homes, whether single-family houses or apartment units. Median single-family houses range between 178 sqm for Sydney and 191 sqm for Melbourne while median apartment units range between 101 sqm for Sydney and 125 sqm for Melbourne.

In the past decade or so, a general trend has been to build more apartment units. Reversing the trend, in the past few years since the start of COVID, more single-family homes have been approved for construction than apartment units, reflecting people's preference for single-family homes for more space and direct access to outdoor space.

Overall, in the past year, home prices have declined in Australia's top two cities, Sydney and Melbourne. In Sydney, the median single-family house price declined 15 percent from US\$1.16 million to US\$980,000 while median apartment unit price declined 11 percent from US\$583,000 to US\$519,000. Similarly, in Melbourne, median single-family

home price declined 10 percent from US\$801,000 to US\$716,000, and median apartment unit price declined 9.7 percent from US\$431,000 to US\$389,000. In contrast, in Brisbane, median single-family home price has stayed relatively stable as it decreased 3.5 percent from US\$576,000 to US\$556,000 while median apartment unit price has slightly increased from US\$302,000 to US\$308,000. The home price decline in Sydney and Melbourne has resulted from a temporary slowdown of overseas inbound migration due to COVID-induced travel restrictions and a migration trend out of the top two cities to regional cities, plus an unprecedented 11 interest rate hikes in 12 months, the largest number since the 1990s.

Median monthly rent for rental housing has increased for both house and apartment units in all three cities, with the largest increases occurring for apartment units. In Sydney, median monthly rent for apartment units increased 12 percent from US\$1,548 to US\$1,732, an increase of 11.9 percent; in Melbourne, it increased from US\$1,184 to US\$1,356, an increase of 14.5 percent; and in Brisbane, it increased by approximately 9 percent from US\$1,327 to US\$1,446.

In the coming years, the housing situation for low-to-middle-income Australians is expected to worsen. A rebound in inbound migration of wealthy individuals and skilled workers ("key workers"), such as medical professionals who are generally well paid, will create more demand for housing and crowd out low-to-middle-income Australians unless a substantial surge occurs in the supply of new homes that target low-to-middle-income families.



Leading streets and residential suburbs from Port Melbourne via Southbank to Melbourne city CBD.
Credit: Shutterstock

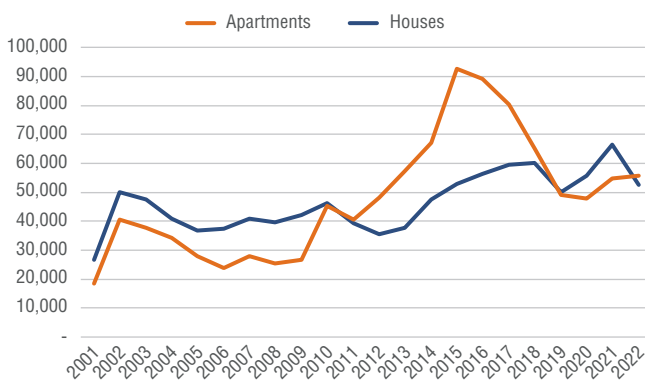
According to an interview with Connie Kirk, a Sydney-based housing expert, the homeless situation in Australian cities has deteriorated significantly in the past two years with approximately 450,000 homeless people, nearly 2 percent of the country's population of 25 million.

Kirk also highlighted that the migration from capital cities to regional cities during the COVID years has created a huge increase in housing demand in regional cities, pushing home prices and rents to levels that make housing unaffordable for both locals and new migrants. Since the end of COVID in 2022, there has been a reversal of population movement back to capital cities.

UDIA's *2023 State of the Land Report* listed the following top nine factors shaping forward housing market performance:

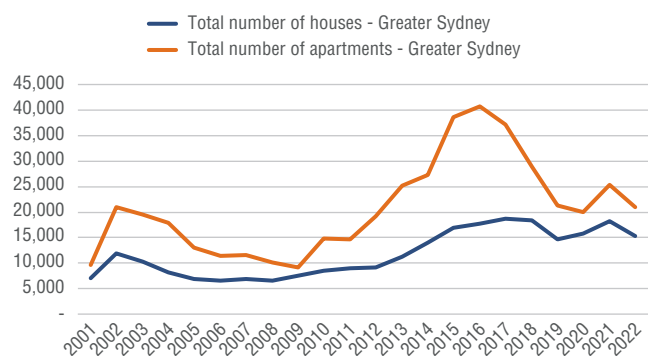
1. New dwelling growth not keeping pace with population growth;
2. Population growth and net overseas migration;
3. Tightest rental market in recent history;
4. Reduction in housing credit;
5. Robust but softening employment outlook;
6. Slight easing of housing affordability pressure;
7. Construction cost escalation;
8. Housing diversity; and
9. Forward dwelling supply pipeline.

FIGURE 22 Annual dwelling units approved in Greater Sydney, Greater Melbourne, and Greater Brisbane (2001–2022)



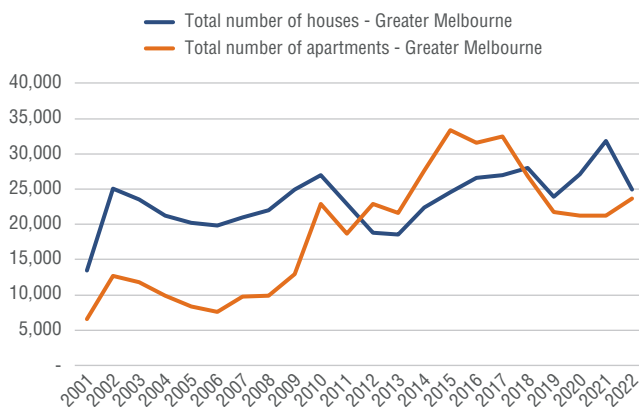
Source: Australian Bureau of Statistics.

FIGURE 23 Annual dwelling units approved in Greater Sydney (2001–2022)



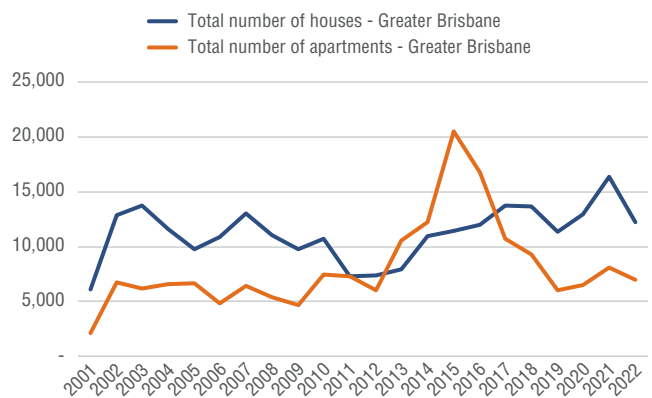
Source: Australian Bureau of Statistics.

FIGURE 24 Annual dwelling units approved in Greater Melbourne (2001–2022)



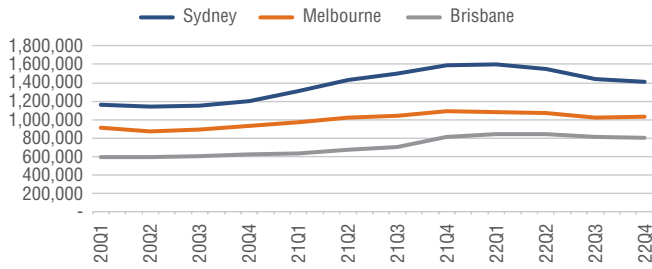
Source: Australian Bureau of Statistics.

FIGURE 25 Annual dwelling units approved in Greater Brisbane (2001–2022)



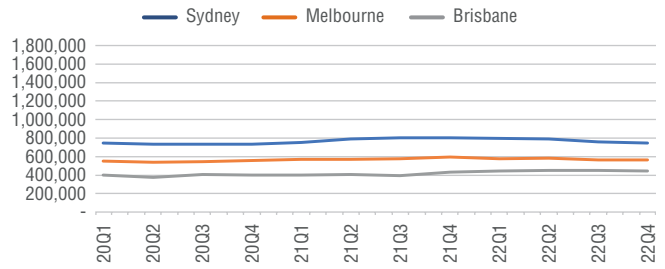
Source: Australian Bureau of Statistics.

FIGURE 26 Median selling price of houses in Sydney, Melbourne, and Brisbane in Australia (AUS\$ per unit)



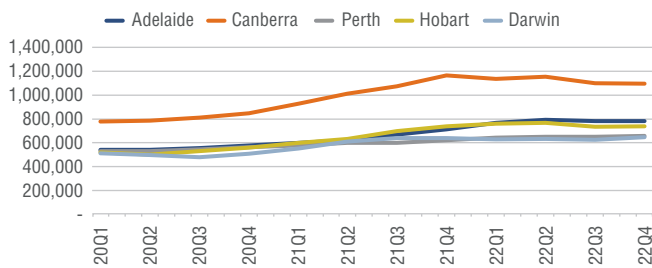
Source: Domain.

FIGURE 27 Median selling price of units in Sydney, Melbourne, and Brisbane in Australia (AUS\$ per unit)



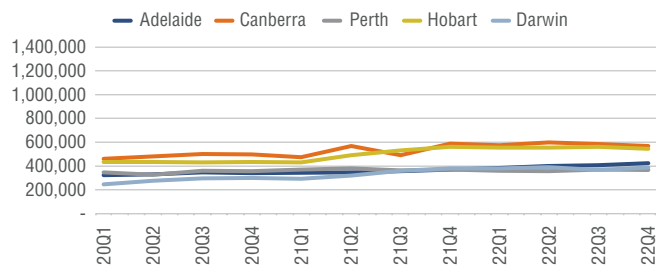
Source: Domain.

FIGURE 28 Median selling price of houses in other capital cities in Australia (AUS\$ per unit)



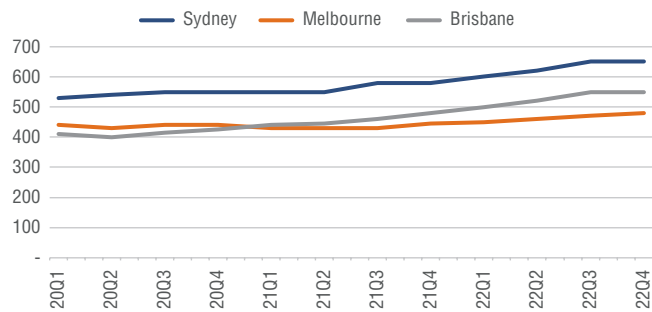
Source: Domain.

FIGURE 29 Median selling price of units in other capital cities in Australia (AUS\$ per unit)



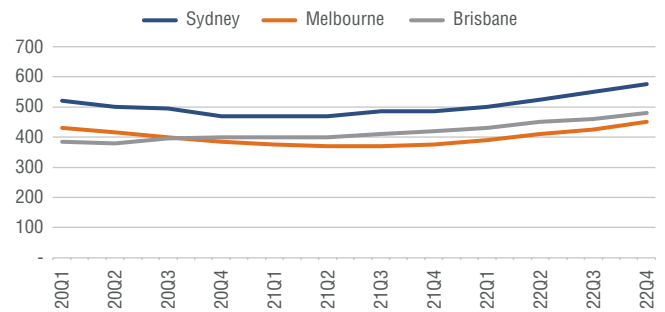
Source: Domain.

FIGURE 30 Median monthly rent for houses in Sydney, Melbourne, and Brisbane in Australia (AUS\$ per unit per month)



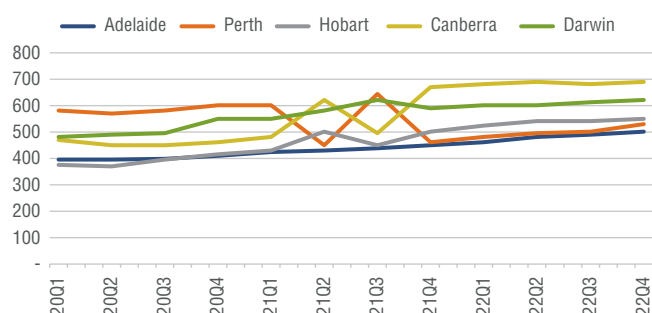
Source: Domain.

FIGURE 31 Median monthly rent for units in Sydney, Melbourne, and Brisbane in Australia (AUS\$ per unit per month)



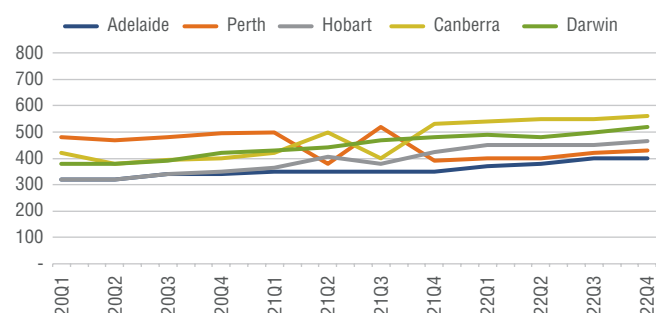
Source: Domain.

FIGURE 32 Median monthly rent for houses in other capital cities in Australia (AUS\$ per unit per month)



Source: Domain.

FIGURE 33 Median monthly rent of units in other capital cities in Australia (AUS\$ per unit per month)



Source: Domain.

China

The same as the last year, mainland Chinese cities have among the lowest ranks in terms of home attainability. Shenzhen's ratio of median home price to median annual household income is 35, the highest of all the cities in this year's report. Beijing, Shanghai, and Guangzhou also rank among the top with ratios of 29.3, 24.3 and 21.7, respectively.

The cities' home attainability is directly tied to the amount of new housing supply relative to increase in population. For Shenzhen, its population increased by more than 7 million in the 12-year period from 2010 to 2022, the largest increase of all the cities in mainland China covered in the report, yet its new housing stock increased by only 31 million sqm, the smallest increase during the same period.

In terms of median unit home price, Tier 1 mainland Chinese cities' median home prices are equivalent to or lower than a half of Hong Kong's and Singapore's private-sector homes. For Tier 2 mainland Chinese cities, median prices are similar to those in regional cities in South Korea while Tier 1.5 cities like Hangzhou and Nanjing have median prices of mid-US\$400,000, similar to Yokohama, Singapore HDB, and apartment units in Melbourne.

Historical resale and primary home sale data show a changing mix of both resale and primary sale homes. As the cities started developing modern housing properties in the 1990s and 2000s, the areas in or near the city centre



Vlinker Youth Rental Apartment in Pujiang Town, Shanghai.
Credit: Kenneth Rhee

were first developed, and as such, primary sale prices were substantially higher than resale prices, primarily consisting of old homes. However, since 2013 or so, the average price of resale homes overtook the average price of primary sales as homes in or near the city centre started transacting in the resale market and primary sale units were increasingly further removed from the city centre. As such, while primary sale prices stayed stable or dropped in 2022 for Tier 1 cities, it may be because of an increasing portion of the primary homes sold that are located in suburbs away from city centres.

TABLE 4 New housing supply and population increase for key cities in Mainland China

City	2022 permanent residents	Urbanization rate	2010 permanent residents	2010-2022 population increase	2002-2009 new housing completion		2010-2021 new housing completion	
	(mm ppl)		(mm ppl)		Total GFA (mm sqm)	Per capita (2010) (sqm)	Total GFA (mm sqm)	Per capita (2022) (sqm)
Beijing	21.8	87.6%	19.6	2.2	162.5	8.3	141.1	6.5
Tianjin	13.2	88.1%	13.0	0.2	94.9	7.3	206.3	15.7
Shanghai	24.8	89.8%	23.0	1.7	184.3	8.0	188.2	7.6
Nanjing	9.5	87.0%	8.0	1.5	52.2	6.5	108.7	11.5
Hangzhou	12.4	84.0%	8.7	3.7	50.1	5.8	110.8	9.0
Wuhan	13.7	84.7%	9.8	4.0	56.3	5.8	76.1	5.5
Guangzhou	18.8	86.5%	12.7	6.1	63.4	5.0	110.8	5.9
Shenzhen	17.7	99.5%	10.4	7.3	44.8	4.3	30.5	1.7
Chongqing	32.1	71.0%	28.8	3.3	129.7	4.5	351.1	10.9
Chengdu	21.3	79.9%	15.1	6.1	73.1	4.8	142.7	6.7

Source: National Bureau of Statistics, Mainland China.

Note: mm ppl = million people.

Guangzhou and Shenzhen: permanent population and urbanization rates in 2021.

Overall, median monthly rent has stayed stable or increased somewhat in the past two years. The largest increases in rent were seen in Beijing, Hangzhou, and Shanghai. Beijing has the highest ratio of median monthly rent to income at 50 percent, far ahead of Shanghai and Shenzhen at 39 percent and Hangzhou at 38 percent. Suzhou has the lowest ratio at 20 percent.

While no accurate data are available, vacancy rates for homes vary significantly between top-tier cities and lower-tier cities.

In Tier 1 cities, the vacancy rate is estimated at around 10 percent while it is estimated at around 20 percent for Tier 2 cities, and around 30 percent for Tier 3 cities.

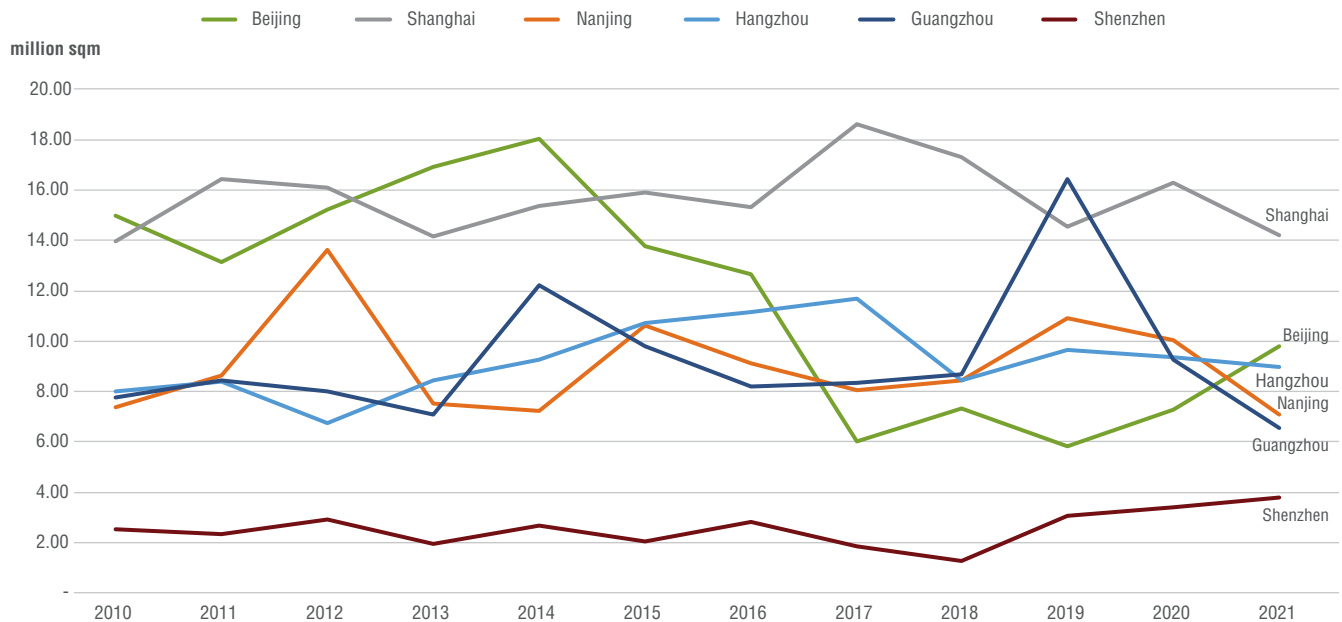
The historical ratio of home price to average household income for mainland China since 2000 shows that home attainability gradually improved until 2014 and has since then become slightly less affordable as home price increase has outpaced household income growth.

FIGURE 34 Population change in key cities in Mainland China (2010-2022)



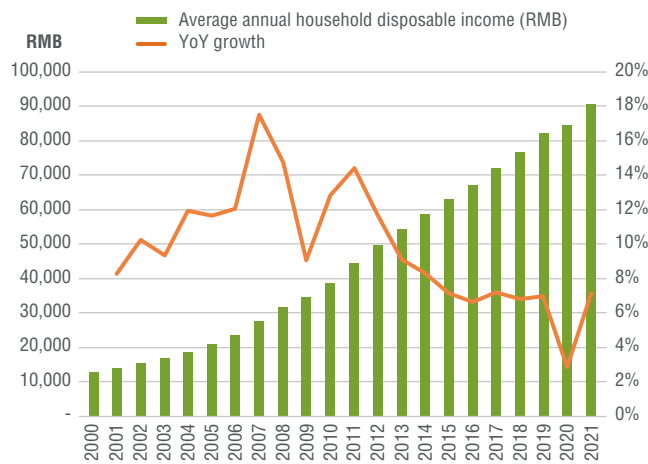
Source: National Bureau of Statistics, Mainland China.

FIGURE 35 New construction completion of residential properties by developers (2010-2021) (million sqm gross floor area)



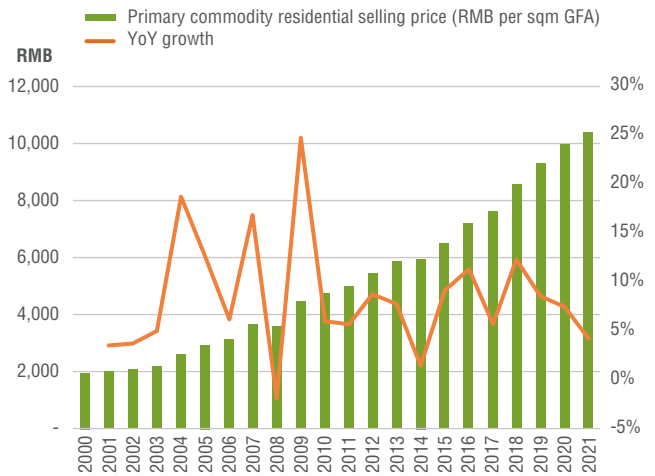
Source: National Bureau of Statistics, Mainland China.

FIGURE 36 Average annual household disposable income in Mainland China (2000-2021) (RMB)



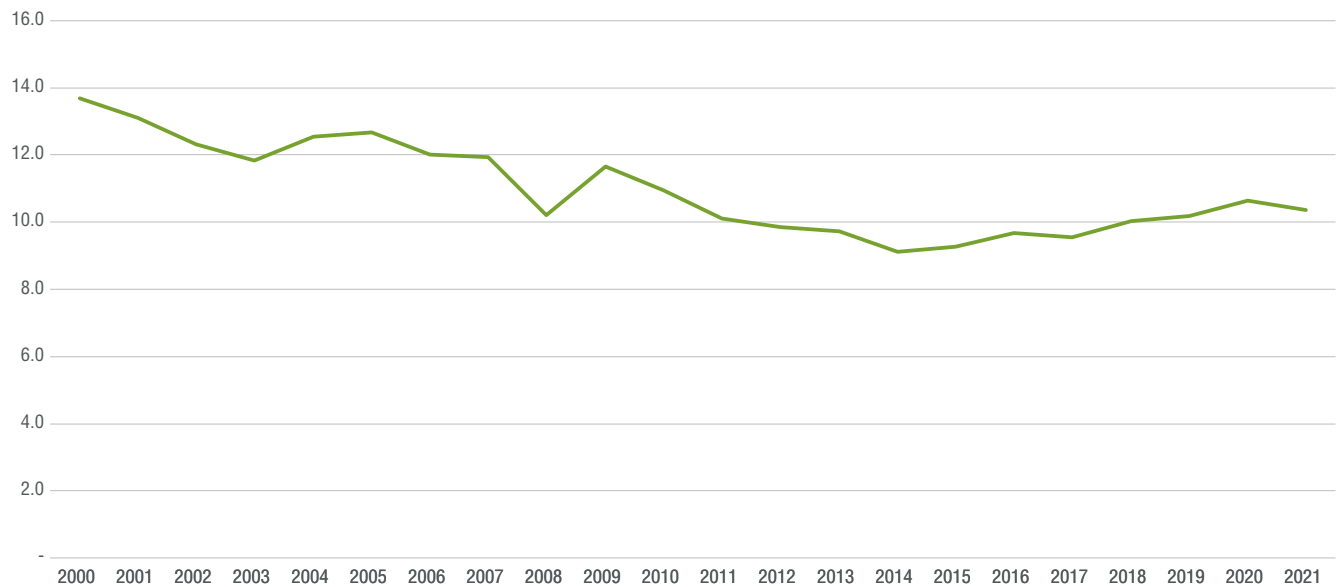
Source: National Bureau of Statistics, Mainland China.

FIGURE 37 Average selling price for primary commodity residential properties in Mainland China (2000-2021) (RMB per sqm gross floor area)



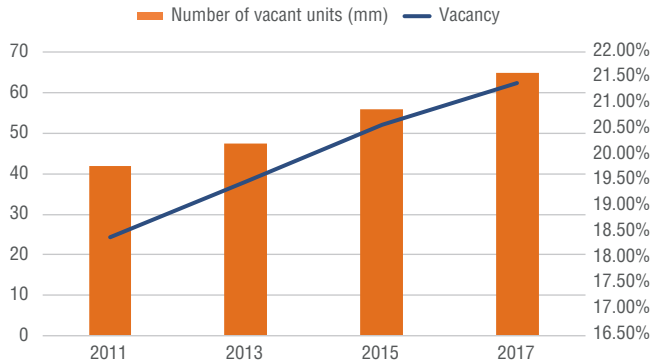
Source: National Bureau of Statistics, Mainland China.

FIGURE 38 Ratio of home price to average household income (PIR) in Mainland China (2000-2021)



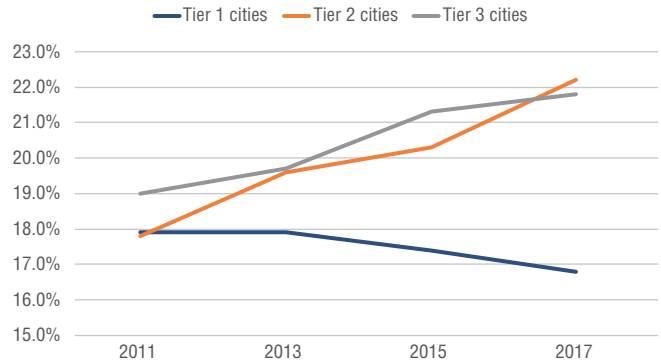
Sources: National Bureau of Statistics, Mainland China, and Urban Land Institute.

FIGURE 39 Vacant housing units and vacancy in Mainland China urban area



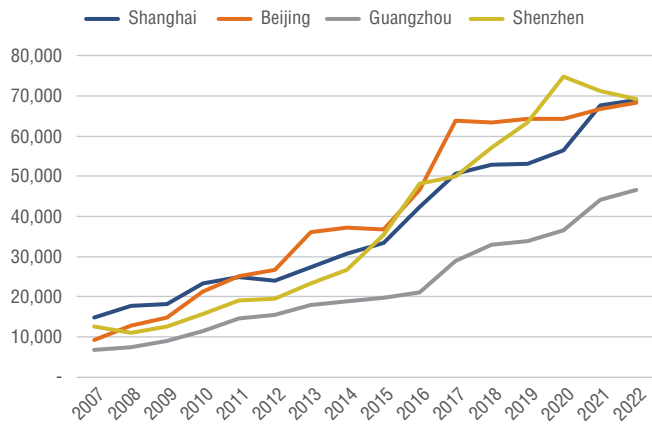
Sources: Mainland China Household Finance Survey, Southwestern University of Finance and Economics.

FIGURE 40 Housing vacancies in Chinese cities



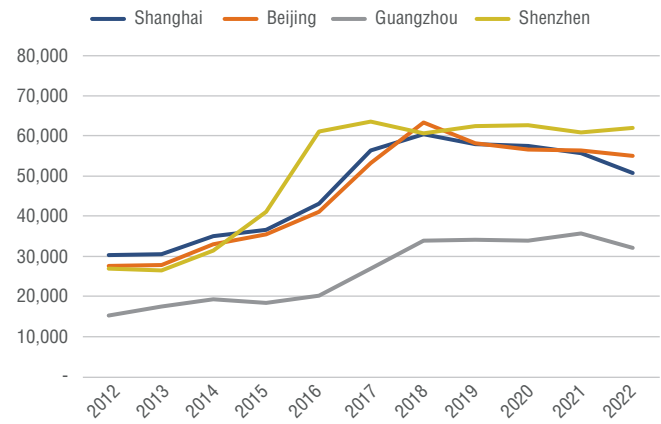
Sources: Mainland China Household Finance Survey, Southwestern University of Finance and Economics.

FIGURE 41 Average selling price for resale homes in Tier 1 cities 2007-2022 (RMB per sqm gross floor area)



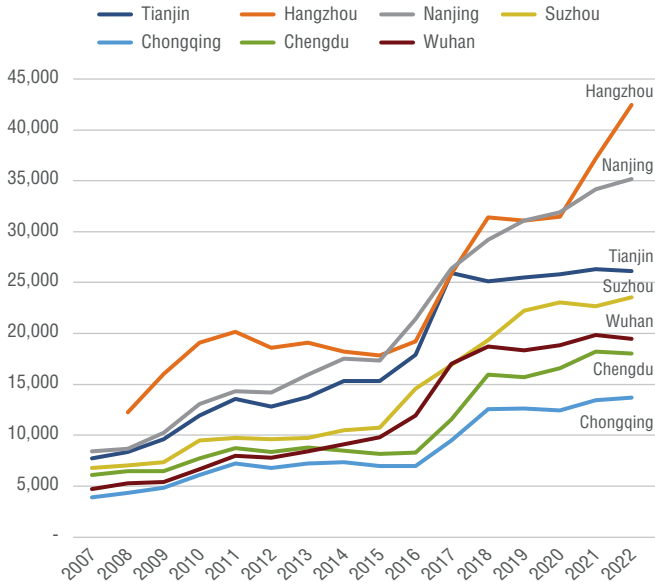
Source: CRTYRE DATA.

FIGURE 42 Average selling price for primary commodity residential in Tier 1 cities 2012-2022 (RMB per sqm gross floor area)



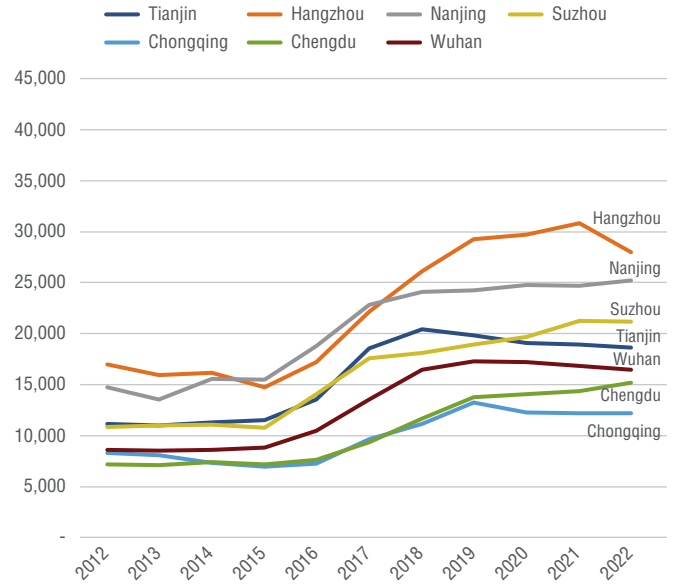
Source: CRTYRE DATA.

FIGURE 43 Average selling price for resale homes in Tier 2 cities 2007-2022 (RMB per sqm gross floor area)



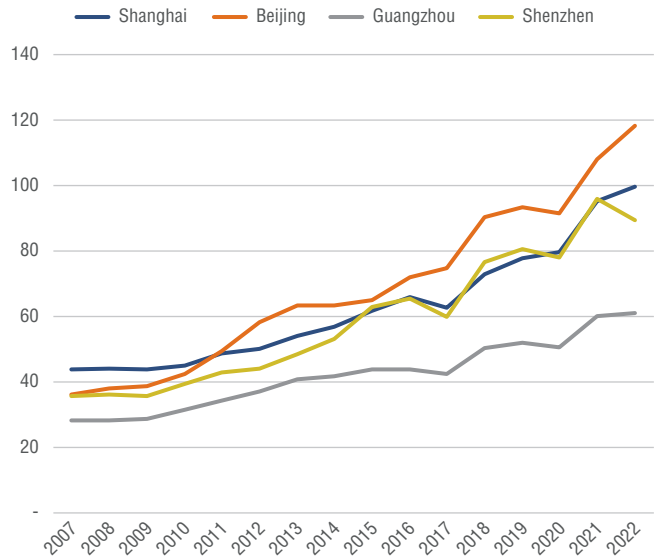
Source: CRTYRE DATA.

FIGURE 44 Average selling price for primary commodity residential in Tier 2 cities 2012-2022 (RMB per sqm gross floor area)



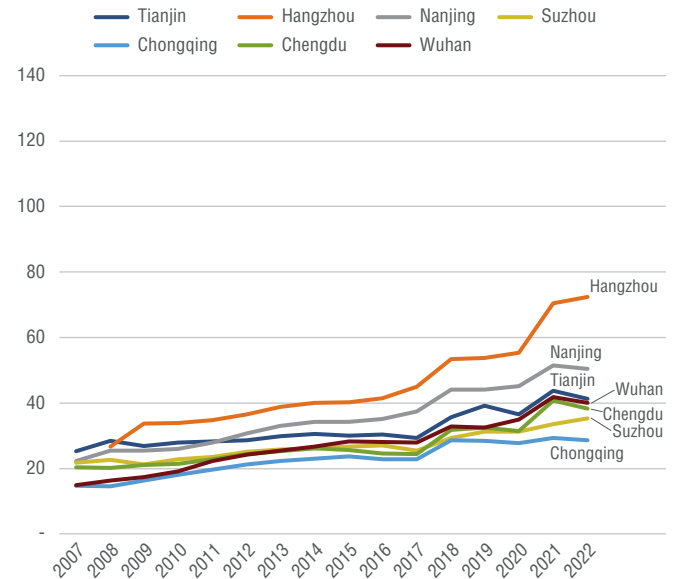
Source: CRTYRE DATA.

FIGURE 45 Average monthly home rent in Tier 1 cities (2007-2022) (RMB per sqm per month)



Source: CRTYRE DATA.

FIGURE 46 Average monthly home rent in Tier 2 cities (2007-2022) (RMB per sqm per month)



Source: CRTYRE DATA.

Hong Kong SAR

Home prices have dropped substantially in 2022. According to government statistics, the home price index decreased approximately 15 percent, returning to the 2017 level. The sharp drop has resulted from a significant increase in mortgage interest rates in line with the U.S. interest rate increase, a net outflow of population, and a less optimistic view on the local property market. The current median home price is US\$1.16 million, an 8.7 percent drop from the prior year's median figure of US\$1.27 million. No longer the most expensive in Asia Pacific, Hong Kong's home price ranks second, behind Singapore's private-sector homes whose median price is US\$1.2 million.

According to official figures released by the Hong Kong government, the city's population dipped 0.9 percent from the year before to 7,333,200 in 2022 due to a combination of low births and a net outflow of 60,000. A continuing decline in the city's population obviously will negatively impact home prices and rents, especially for the high end of the market.

As mentioned earlier, around 35 percent of the city's population resides in deeply subsidized public rental housing units. For those living in public housing units, monthly rent is estimated to be around 10 percent of their median monthly income.

Hong Kong's high housing costs primarily affect those low-income families and individuals who qualify for public housing units but who need to wait in line for an opening more than six years on average due to a shortage of public housing stock. Some of those people live in "subdivided units", meaning apartment units that unrelated individuals and families share. The floor area of subdivided units usually ranges between 5 sqm and 20 sqm per household.

According to *South China Morning Post*, the average monthly rent per sqm for subdivided units was HK\$431 in 2022, an increase of 3.3 percent from HK\$417. The average monthly rent per sqm decreases as the unit size increases. For a 20 sqm unit, monthly rental is approximately HK\$8,000, or US\$1,040. This is almost double the median monthly rent of US\$600 in Tokyo Ku where the median rental home size is 40 sqm. On a per sqm basis, Hong Kong's rental units cost US\$52 per month, compared with US\$15 in Tokyo Ku.

The city government recently launched a programme to build "light public housing" to address the immediate housing needs of those waiting for permanent public housing units and living in "subdivided units". According to the plan, 30,000 units will be completed in the next five years with about half located in urban areas. The internal floor area of light public housing units ranges from 13 to 31 sqm per unit.

According to Ryan Ip of Our Hong Kong Foundation, subdivided units are almost exclusively in highly dense urban areas. While cheaper and more spacious housing options are available in the New Territory and areas farther away from urban centres, it is not convenient to live in those areas because of the time lost for daily commutes and the relative inconvenience for daily living. Ip thinks that improving public transportation for outlying areas can meaningfully address the housing shortage in Hong Kong.

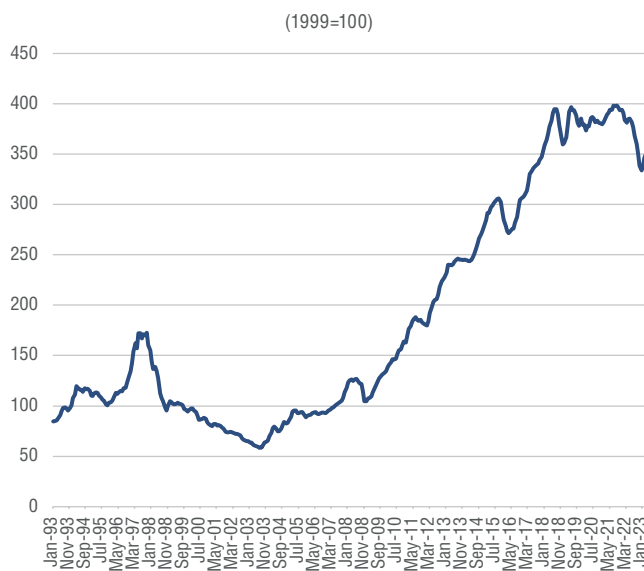
In the 2022 report, it was highlighted that only 4 percent of the city's territory is used for urban housing while 4.4 percent is allocated for farming and 3.1 percent for rural settlements. It is not yet clear how the planned "Northern Metropolis" near the border with Shenzhen will impact the overall housing supply in the long run.



A residential neighbourhood in Sheung Wan, Hong Kong.

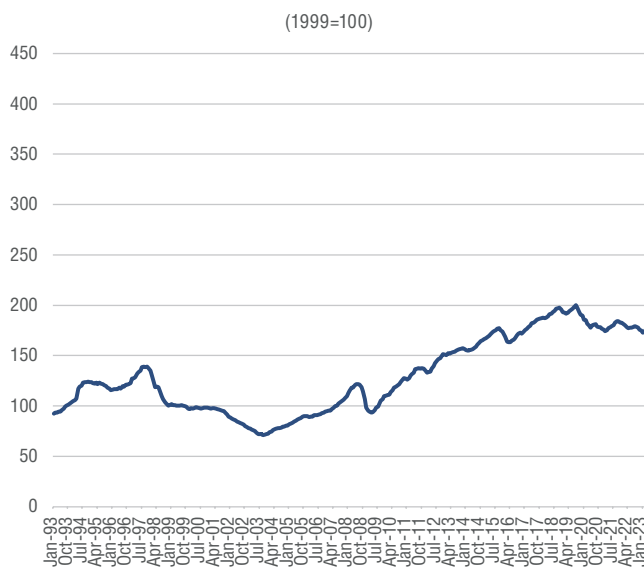
Credit: Kenneth Rhee

FIGURE 47 Hong Kong private home price index (1993-March 2023)



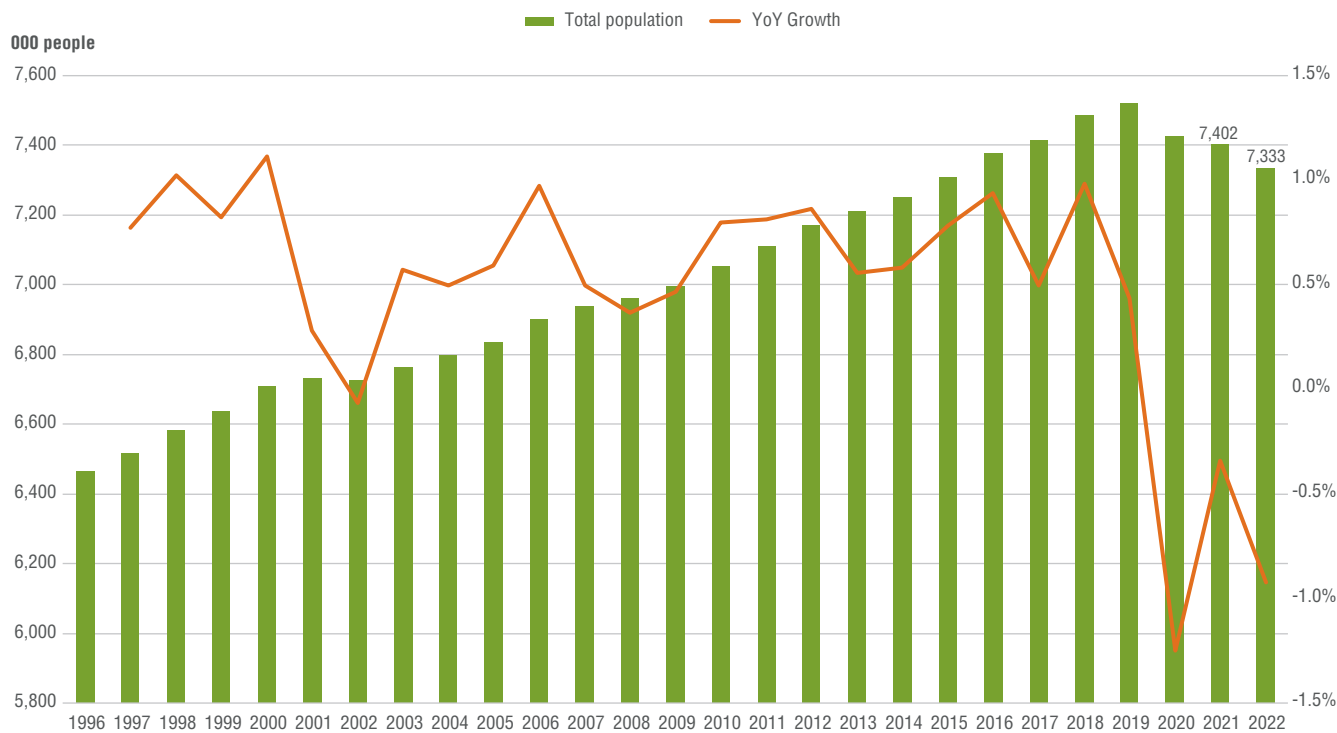
Source: Census and Statistics Department, Hong Kong SAR.

FIGURE 48 Hong Kong private home rental index (1993-March 2023)



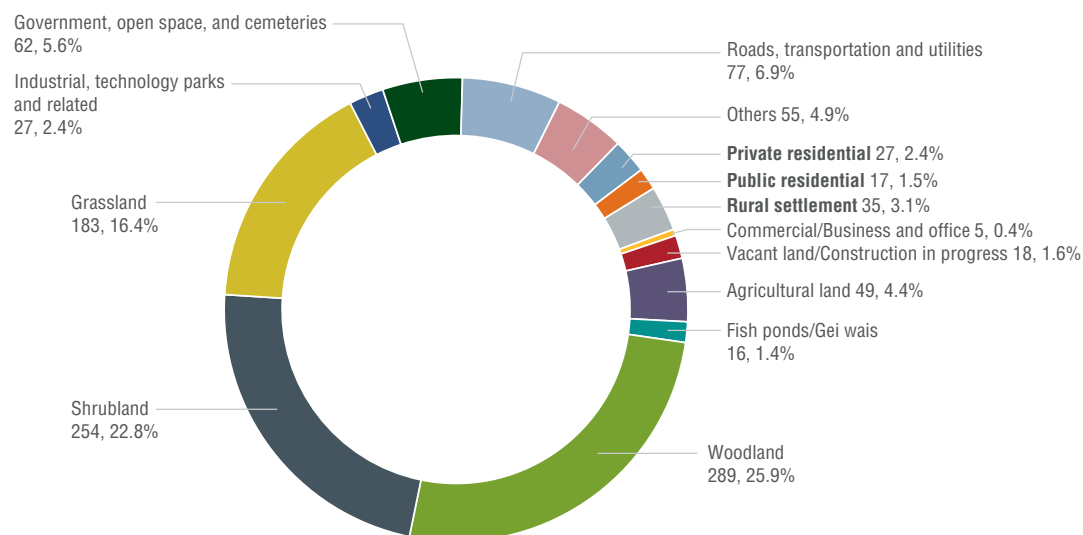
Source: Census and Statistics Department, Hong Kong SAR.

FIGURE 49 Population changes in Hong Kong (1996-2022)



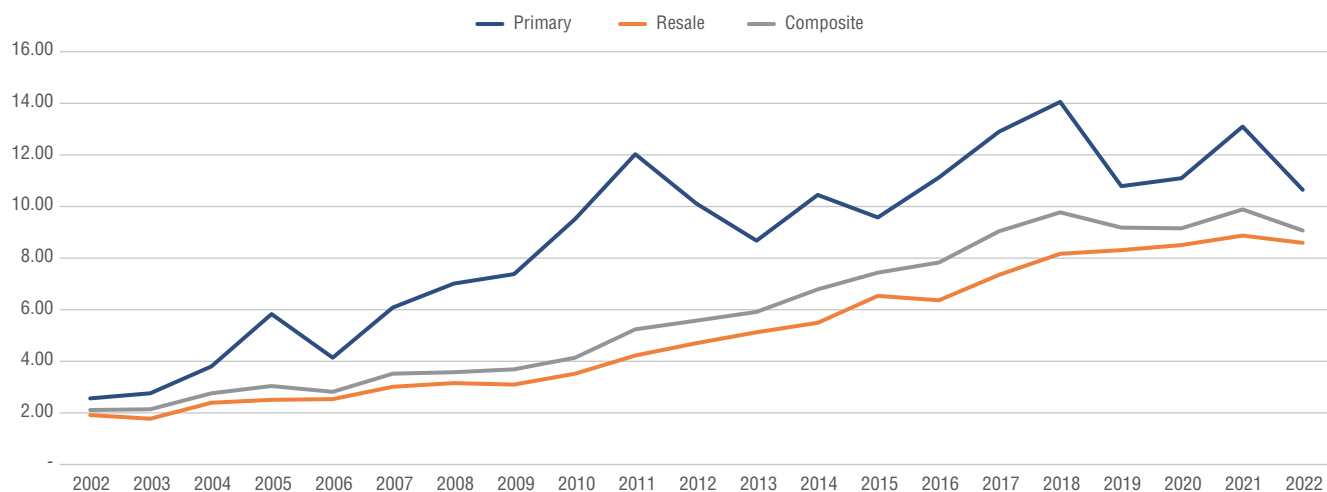
Source: Census and Statistics Department, Hong Kong SAR.

FIGURE 50 Land use in Hong Kong 2020 (land use type, land area in sq km, and percentage)



Source: Land Planning Department, Hong Kong SAR.

FIGURE 51 Average transaction price per unit in Hong Kong (2002-2022) (million HKD per unit)



Source: Census and Statistics Department, Hong Kong SAR.

TABLE 5 Key statistics of persons living in subdivided units, 2016 and 2021

	Households living in subdivided units	
	2016	2021
Median monthly household income (US\$)	1,724	1,955
Median floor area of accommodation (sqm)	10.0	11.0
Median per capita floor area of accommodation (sqm)	5.3	6.0
Median monthly household rent (US\$)	575	639
Median rent to income ratio of households	31.8%	32.0%

Source: 2021 Population Census, Hong Kong SAR.

India

India with its 1.4 billion population has the most potential for urbanization in the coming decades. While it is growing at over 2 percent a year, India's urbanization rate of 36.4 percent is far behind the world's urbanization rate of 56 percent and China's urbanization of 64.6 percent.

Analysing India's home attainability using traditional methods is a real challenge due to limited availability or lack of required data from government or private-sector sources. In addition, where data is available, it may not represent the overall housing stock. For example, median home prices in the eight cities selected for this report are based on online listings, largely consisting of units with proper legal titles. In India, "formal" units with proper legal titles represent only some 10 to 20 percent of housing while the rest are "informal" housing units lacking proper legal titles.

Among the eight cities in the report, Mumbai has the highest median home price per sqm at US\$3,383 while the median home prices for the other cities range from US\$908 in Ahmedabad to US\$1,358 in Delhi NCR. While no official statistics exist on home size and median home price per unit, the analysis of online listings of homes for sale and rent shows a substantial difference in median home size among the cities studied. For example, median home size in Mumbai is 59 sqm while it is approximately 107 sqm for Bengaluru, 106 sqm for Hyderabad, and 96 sqm for Delhi NCR. Moreover, despite the much smaller home size, Mumbai's median home price of US\$177,000 is nearly double that of Delhi NCR's US\$89,000. Mumbai also has the highest median monthly rent to income ratio at 66 percent, while the other cities' ratios range from 30 percent for Delhi NCR to 48 percent for Bengaluru.

In interviews with housing experts in India, the Slum Rehabilitation Act and Real Estate (Regulation and Development) Act were mentioned as key regulations affecting the real estate industry.

In February 2023, this report's primary author visited Dharavi, the largest urban slum in India. Located in the middle of Mumbai, Dharavi occupies about two square kilometres. The area is believed to have a population of 1 million and annual sales of approximately US\$1 billion. The area's key industries

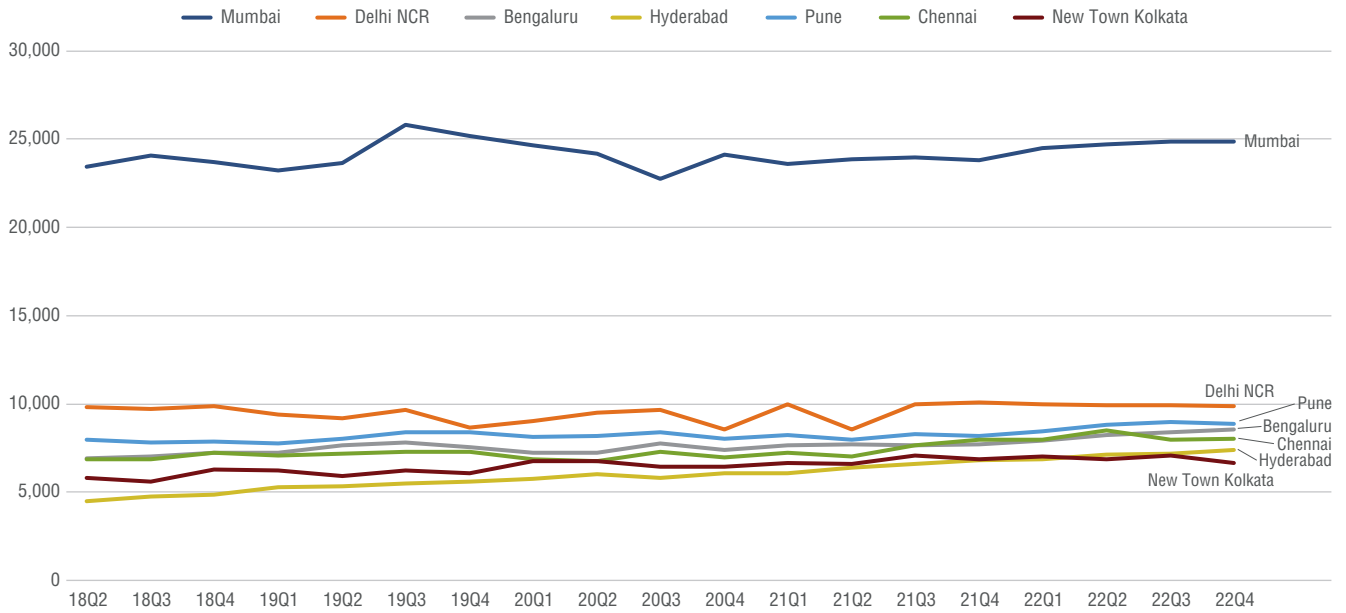


A residential neighbourhood in South Mumbai.
Credit: Kenneth Rhee

include recycling, leather goods, and garment manufacture. Although many initiatives have tried to rehabilitate the area, such efforts were hampered by the difficulty of reaching a compensation settlement with building owners and residents. Apparently, poor records of registration of ownership of illegal buildings in the slum and residency of the residents pose a key challenge to rehabilitation of the area.

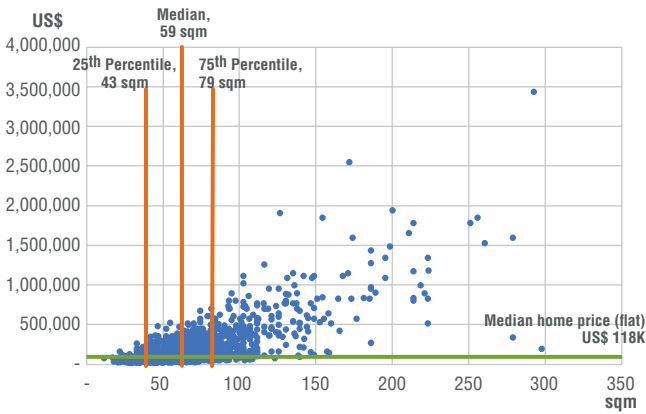
The Real Estate (Regulation and Development) Act is credited with significantly improving the professionalism of the real estate development industry and protecting the interests of homebuyers. The act requires developers to keep 70 percent of sales proceeds in an escrow account until construction has been completed to ensure that sufficient funds are available for the completion of a project.

FIGURE 52 Home price trajectory in key cities in India (18Q2-22Q4) (INR per sq ft)



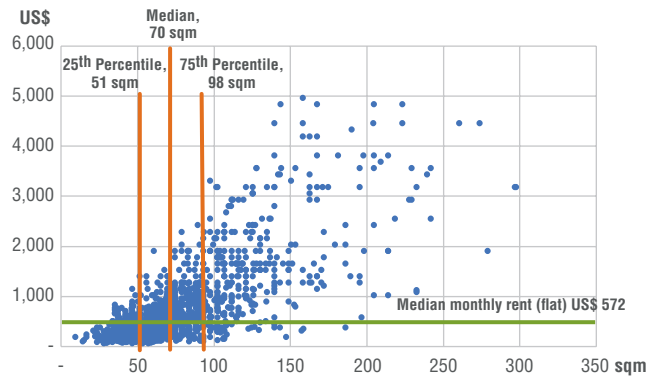
Source: National Housing Bank, India.

FIGURE 53 Mumbai flat price and size (based on 1,499 online listings)



Sources: Magicbricks and Urban Land Institute.

FIGURE 54 Mumbai flat rent and size (based on 1,468 online listings)



Sources: Magicbricks and Urban Land Institute.

TABLE 6 Population, flat price and size, median household income, and price-to-income ratio based on listings in cities in India

City	Population (thousand people)	Flat price (US\$ per unit)			Flat size (sqm)			Median annual household income (US\$)	Median home price to median annual household income
		25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile		
Mumbai	20,961	58,521	117,677	235,355	43	59	79	10,399	11.3
Delhi NCR	32,066	50,887	89,053	178,106	69	98	140	12,518	7.1
Bengaluru	13,193	73,723	95,414	146,301	88	107	130	8,595	11.1
Hyderabad	10,534	75,059	101,775	152,662	96	116	146	9,996	10.2
Ahmedabad	8,450	53,432	76,331	120,858	77	105	139	11,234	6.8
Pune	6,987	59,793	89,371	145,029	61	76	103	9,283	9.6
Chennai	11,503	53,654	82,374	127,219	72	92	121	8,931	9.2
Kolkata	15,134	38,166	54,704	85,618	65	79	102	6,403	8.5

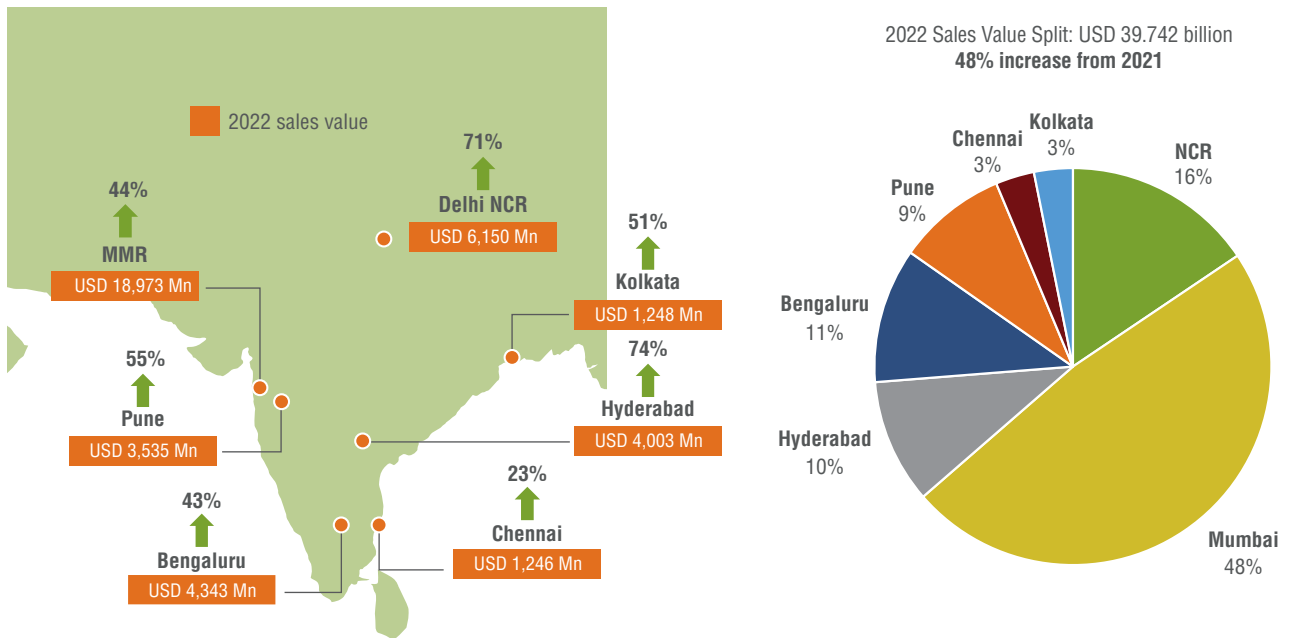
Sources: Magicbricks and Urban Land Institute.

TABLE 7 Flat monthly rent and size, median household income, and rent-to-income ratio based on listings in cities in India

City	Flat rent (US\$ per unit per month)			Rental flat size (sqm)			Median monthly household income (US\$)	Median monthly rent to median monthly household income
	25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile		
Mumbai	305	572	1,024	51	70	98	867	66%
Delhi NCR	191	318	572	70	111	163	1,043	30%
Bengaluru	230	343	509	87	111	139	716	48%
Hyderabad	172	280	483	88	111	153	833	34%
Ahmedabad	204	280	407	81	108	141	936	30%
Pune	153	254	382	59	77	98	774	33%
Chennai	140	197	318	70	86	111	744	26%
Kolkata	140	204	318	65	80	107	534	38%

Sources: Magicbricks and Urban Land Institute.

FIGURE 55 Residential sector: 2022 sales value dashboard

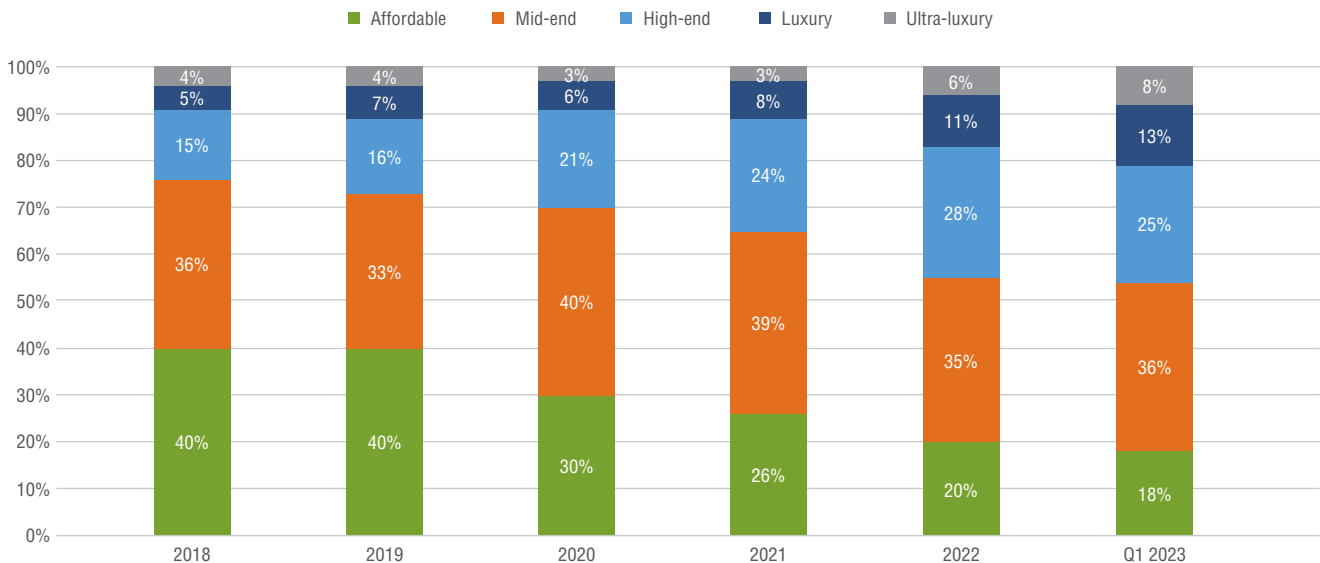


Note: Arrow indicates annual change in sales value; 2022 1 USD = INR 82.747; 2021 1 USD = 74.429.

Source: ANAROCK Research.

FIGURE 56 Residential sector: new launches – budget segmentation

The share of luxury and ultra-luxury units in Q1 2023 more than doubled from 2018



Affordable: < INR 40 Lakh, Mid-end: INR 40 Lakh - INR 80 Lakh, High-end: INR 80 Lakh - INR 1.5 Cr, Luxury: INR 1.5 Cr - INR 2.5 Cr, Ultra-Luxury: > INR 2.5 Cr

Note: Data indicates calendar year.

Source: ANAROCK Research.

Indonesia

This report analysed online home sale and rental listings of Rumah123, a leading real estate agency in Indonesia. For homes for sale, this analysis looked at single-family homes and apartment units separately. The median price for single-family homes is US\$357,000, and median home size is 250 sqm, which is even larger than the Australian cities' median home sizes. For apartments, median price is US\$114,000, and median home size is 75 sqm.

For homes for sale, the ratio of median home price to median household income is 25.9 for single-family homes and 8.3 for apartment units. For rentals, the ratio of median monthly rent to median household income is 63 percent for single-family homes and 47 percent for apartment units.

According to Wendy Haryanto of Jakarta Property Institute, in Jakarta, single-family homes (or landed homes) represent around 41 percent while apartment units (vertical housing) represent around 16 percent with the remainder categorized as "other". As a result, the urban landscape of Jakarta and adjacent cities is generally flat. Although the country has been investing in improving the public transportation network, heavy traffic congestion is common.

Moreover, most landed homes are not connected to the municipal water system and instead rely on ground water. This causes the ground level to subside around 17 centimetres annually, which is significant, especially for a city that is only eight metres above sea level. As the city's soil has

a thick layer of clay that is impermeable, rainwater runs off the surface and does not replenish ground water.

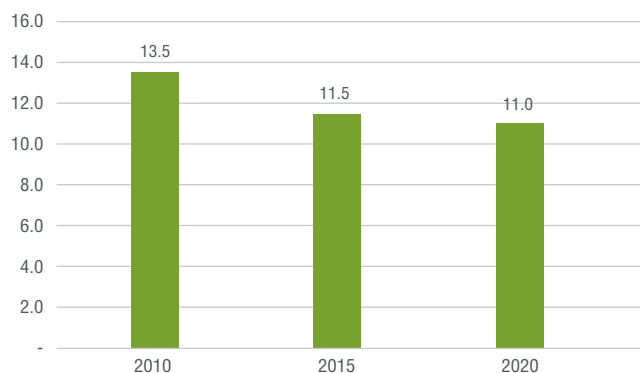
The national government initiated the One Million Houses programme in 2015, aiming to provide adequate housing facilities to low-income households and reduce the housing backlog. As of 2021, the country still has a backlog of over 10 million houses.



View of residential area in Setiabudi sub-district, Jakarta. High-angle view from the WTC building.

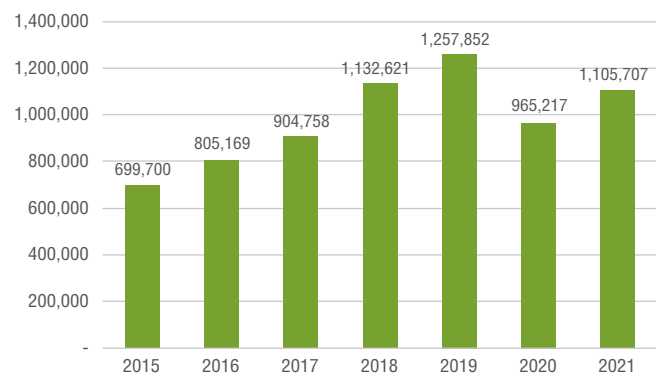
Credit: Shutterstock

FIGURE 57 Housing unit backlog in Indonesia 2010-2020 (million units)



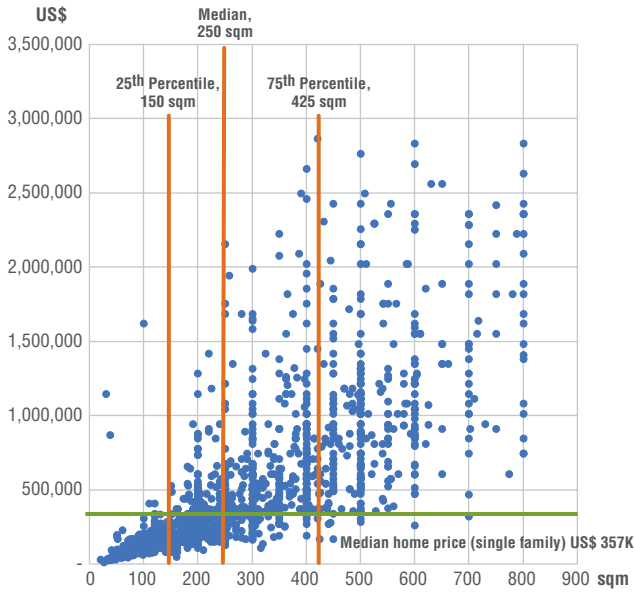
Source: Kementerian PUPR, 2016, 2022.

FIGURE 58 Construction of houses under One Million Houses programme 2015-2021 (units)



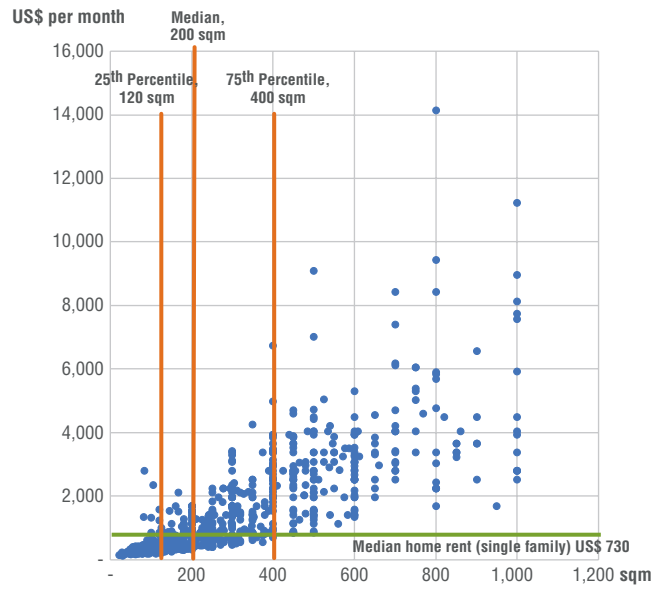
Source: Kementerian PUPR, 2016, 2022.

FIGURE 59 DKI Jakarta single-family home price and size (based on 1,789 online listings)



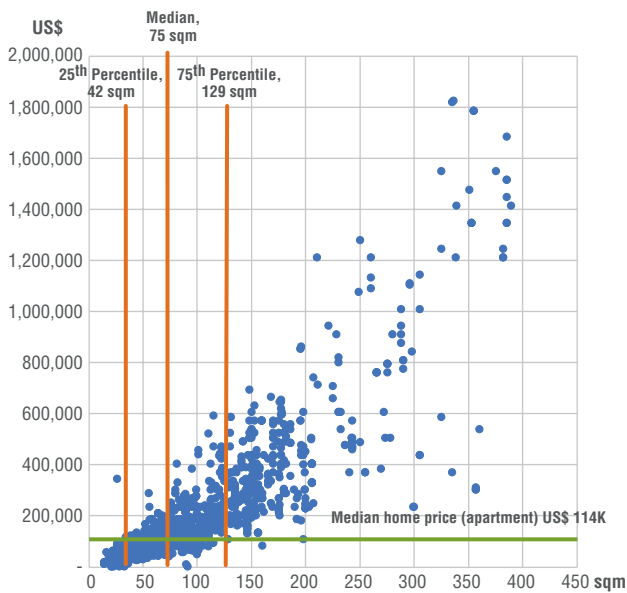
Sources: Rumah123 and Urban Land Institute.

FIGURE 60 DKI Jakarta single-family home rent and size (based on 956 online listings)



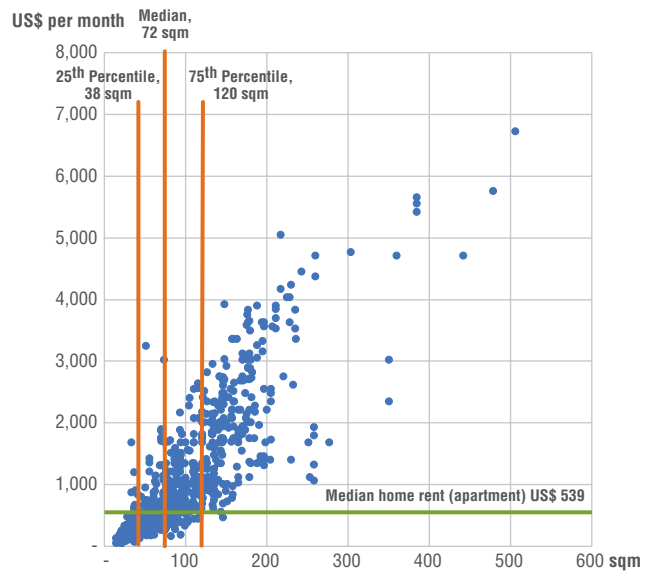
Sources: Rumah123 and Urban Land Institute.

FIGURE 61 DKI Jakarta apartment price and size (based on 1,708 online listings)



Sources: Rumah123 and Urban Land Institute.

FIGURE 62 DKI Jakarta apartment rent and size (based on 971 online listings)



Sources: Rumah123 and Urban Land Institute.

Japan

The median home price in the Tokyo Ku area is US\$626,000, on par with Shenzhen's median price and about half of Hong Kong's and Singapore's private-sector home prices. The median price represents around 17.8 times median annual household income. By comparison, the nearby cities of Yokohama and Tachikawa have significantly lower median home prices of US\$430,000 and US\$262,000, respectively.

According to Ko Iwahori, a real estate development and investment consultant, condominium prices in Tokyo Ku have been buoyed by local lenders' willingness to provide a mortgage loan for as much as 110 percent of home purchase price to qualified homebuyers. Qualified buyers must have stable jobs with sufficient regular income from major companies and a healthy balance sheet, and the loan is with recourse.

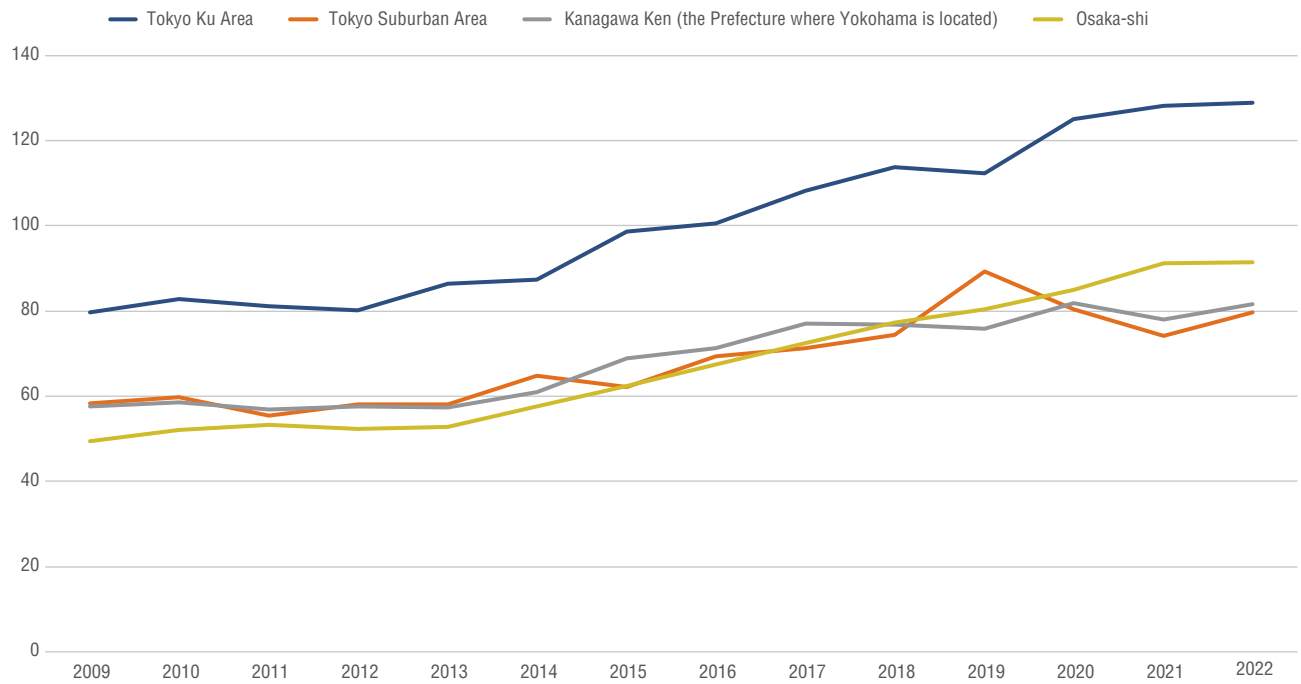
By comparison, lenders usually lend up to 90 percent of home purchase price for single-family homes. According to Iwahori, condominiums in Tokyo Ku are built by highly reputable builders, and market price is more transparent, whereas single-family homes have a less easily established market price and quality of construction may not be consistently reliable.

Japan's rental housing is considerably more affordable, with median monthly rents ranging from around US\$350 in Osaka to US\$602 in Tokyo Ku. For the Japanese cities in the report, median monthly rent is between 14 and 21 percent of median household income, which is the lowest for all cities in the report. The low rent stems from a relatively large housing pool available for rent, caused by the ageing of the population and limited new household formation. Japan's median age of 48 is the highest in Asia.



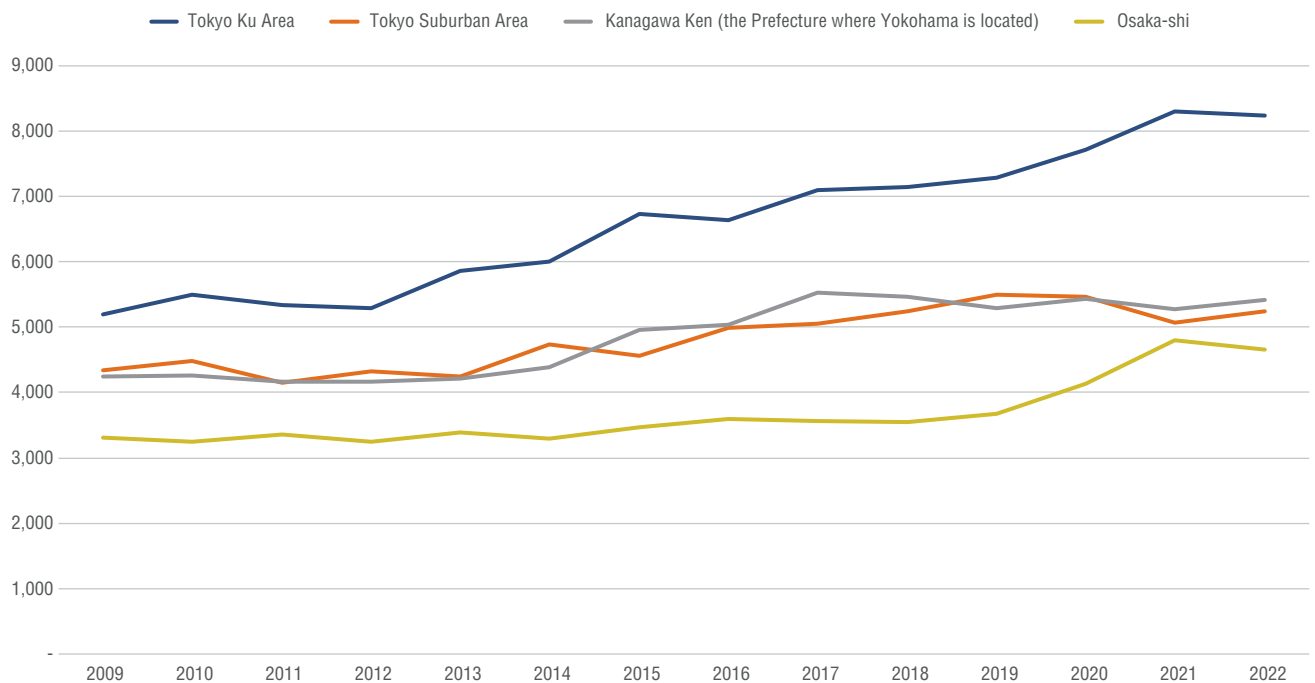
Downtown Tokyo and Mount Fuji.
Credit: Paixin

FIGURE 63 Average selling price for newly built condos in Japan (2009-2022) (10,000 JPY per sqm)



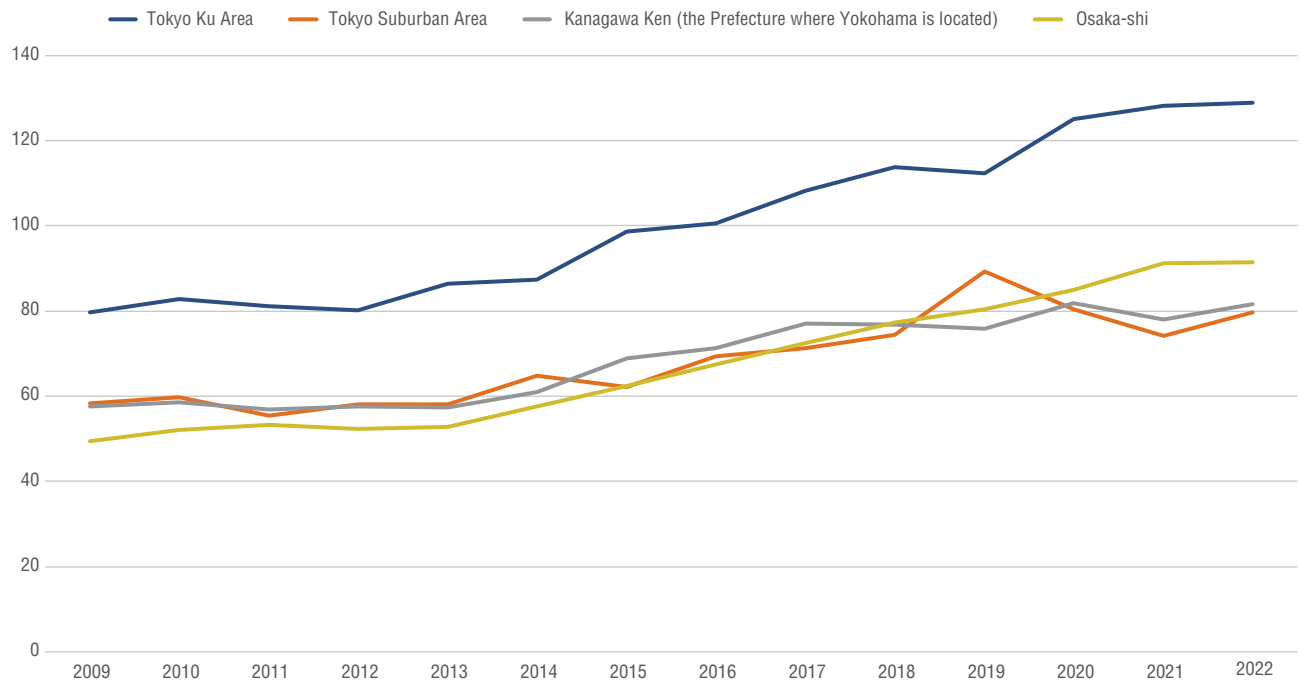
Source: Japan Real Estate Economic Institute.

FIGURE 64 Average selling price for newly built condos in Japan (2009-2022) (10,000 JPY per unit)



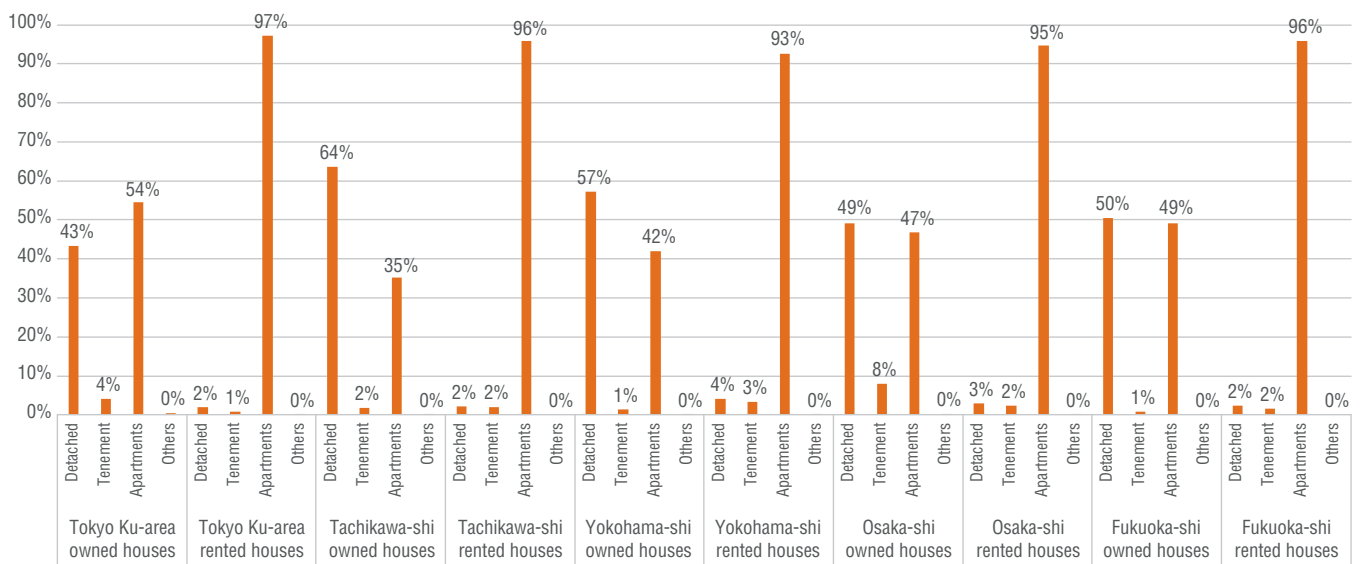
Source: Japan Real Estate Economic Institute.

FIGURE 65 Average unit size for newly built condos in Japan (2009-2022) (sqm per unit)



Source: Japan Real Estate Economic Institute.

FIGURE 66 Housing stock breakdown by housing type in key cities in Japan (2018 Housing and Land Survey)



Source: Statistics Bureau of Japan.

Philippines

The Philippines is the youngest country with a median age of 24.1 years and has an urbanization rate of 48 percent, the third lowest among the countries covered in the report.

For Metro Manila, Metro Cebu, and Davao, this report used online listings for home sales and rentals by Lamudi, a leading real estate agency. Median condominium price is highest in Metro Manila at US\$181,000 while it is US\$141,000 for Metro Cebu and US\$90,000 for Davao.

Median home prices represent between 16 and 25 times annual median household income. Median home price per sqm for the three metro areas in the Philippines is similar to many of the Tier 2 cities in mainland China and South Korea.

As for rental homes, monthly median rent is highest in Metro Manila at slightly over US\$1,000, representing 166 percent of median monthly household income. The high ratio likely reflects the fact that rental homes captured in the data are disproportionately for upper-income local and expatriate households. It is also likely that the cities suffer from a shortage of rental homes relative to demand.

One unique aspect of the housing market in Metro Manila is its high FAR of 16, the highest seen in Asia. Nonetheless, the majority of local residents live in single-family homes, and Metro Manila has experienced years of urban sprawl and suffers from heavy traffic congestion as a result.

In March 2023, the primary author of this report visited a rental housing project for office workers located in the city

centre. Equipped with a bathroom and a kitchenette, most of the rooms have three to four people sharing, much like college dorm rooms. Monthly rent was around US\$250 per person, and average renters earned about US\$1,000 per person working in the central business district. Roughly half the renters live in nearby areas that are 20 to 30 kilometres from their work and rental home, and they generally return home on weekends. Due to heavy traffic and poor public transportation, it would normally take over two hours to commute to work one way.

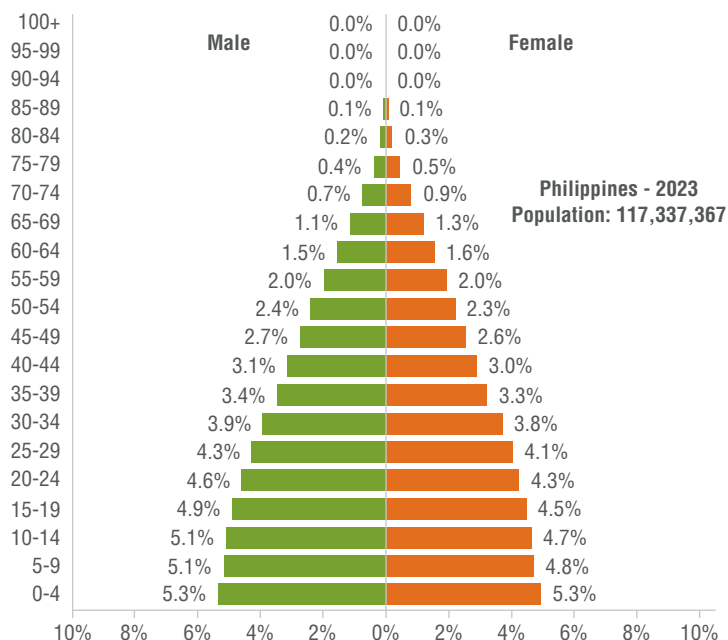
Much like Indonesia's One Million Houses programme, the new Philippine government has initiated a programme to build 1 million homes each year to fill the housing gap, estimated to be around 6 million units. As the country does not have a government-owned housing development agency, new homes need to be built by the private sector. Given that the most homes built in a year was around 300,000 units in 2018, meeting the annual target of 1 million new units may be quite challenging.

The government promotes "socialized housing" units that target low-income households that lack homes; however, as the price ceiling is set at around US\$10,000 for 25 sqm of floor area throughout the country, socialized housing projects are not economically feasible in urban areas, especially in Metro Manila where land and other costs are significantly higher. In addition, the situation has been made worse by rising construction costs caused by disruptions of the supply chain globally, which further erodes the profit margin for developers.



A neighbourhood in City of Cebu, Philippines.
Credit: Paixin

FIGURE 67 Population pyramid of Philippines (2023)



Age	M	F	Total
100+	188	805	993
95-99	2,041	6,958	8,999
90-94	14,677	38,641	53,318
85-89	69,568	139,795	209,363
80-84	205,183	332,148	537,331
75-79	437,538	605,368	1,042,906
70-74	847,288	1,036,574	1,883,862
65-69	1,330,259	1,509,897	2,840,156
60-64	1,811,703	1,934,405	3,746,108
55-59	2,309,688	2,335,023	4,644,711
50-54	2,803,828	2,727,707	5,531,535
45-49	3,209,050	3,084,942	6,293,992
40-44	3,656,951	3,484,429	7,141,380
35-39	4,024,953	3,853,203	7,878,156
30-34	4,580,602	4,439,358	9,019,960
25-29	4,994,781	4,830,884	9,825,665
20-24	5,366,354	5,067,569	10,433,923
15-19	5,705,806	5,330,969	11,036,775
10-14	5,942,778	5,533,348	11,476,126
5-9	6,030,452	5,619,976	11,650,428
0-4	6,250,159	5,831,509	12,081,668
Total	59,593,847	57,743,508	117,337,355

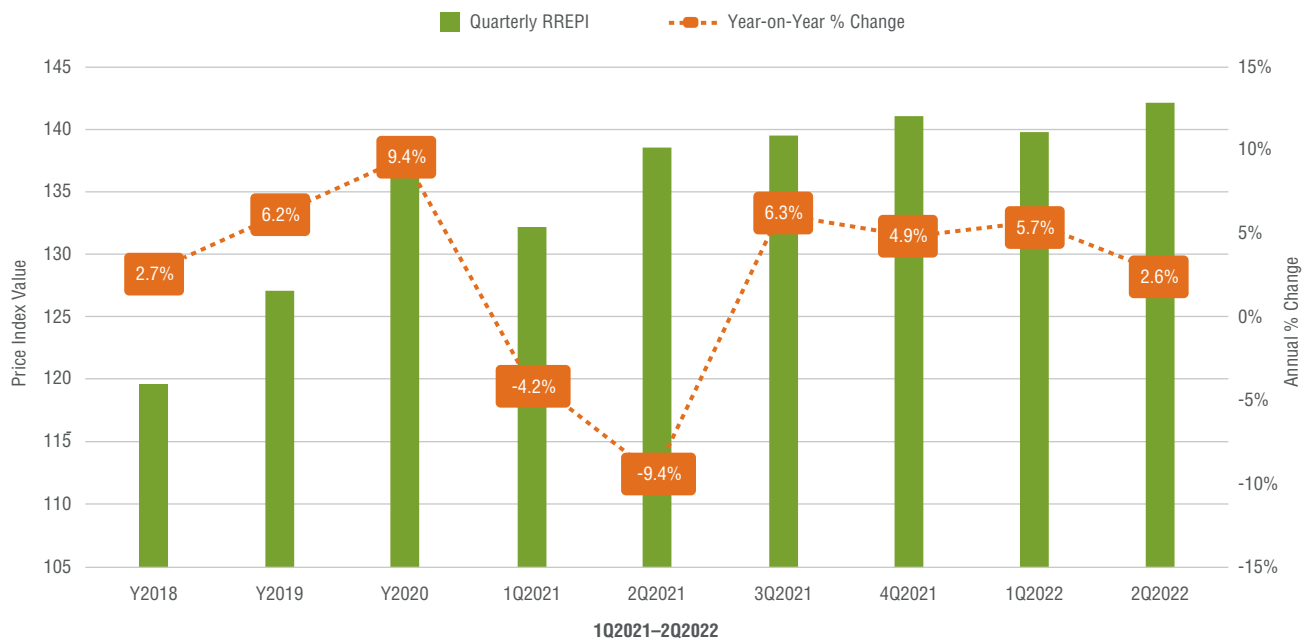
Source: PopulatonPyramid.net.

TABLE 8 2016-2030 estimated housing demand in Philippines

SEGMENT	UNITS
Cannot afford	1,134,986
Socialized	1,369,181
Economic	2,509,718
Low-cost	611,815
Mid-cost	78,705
High-cost	11,767
TOTAL	5,716,172

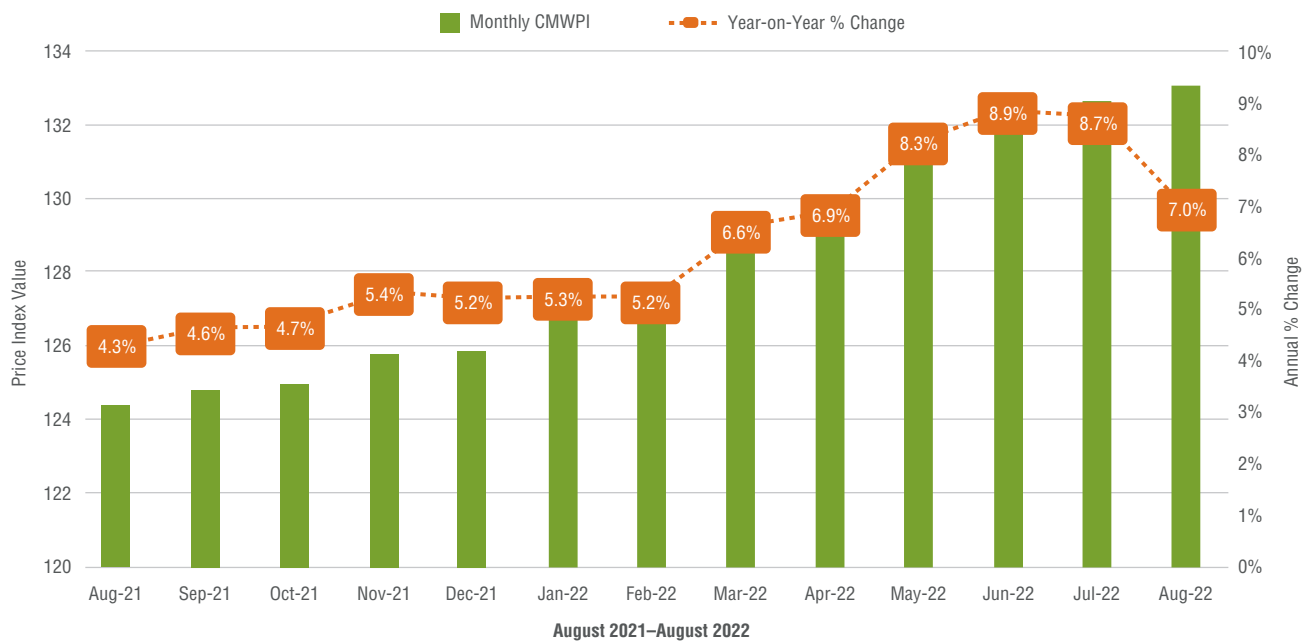
Source: Statistics for Housing Policy, Subdivision and Housing Developers Association, Philippines.

FIGURE 68 Residential real estate price index (RREPI) for all housing unit types (1Q2014=100)



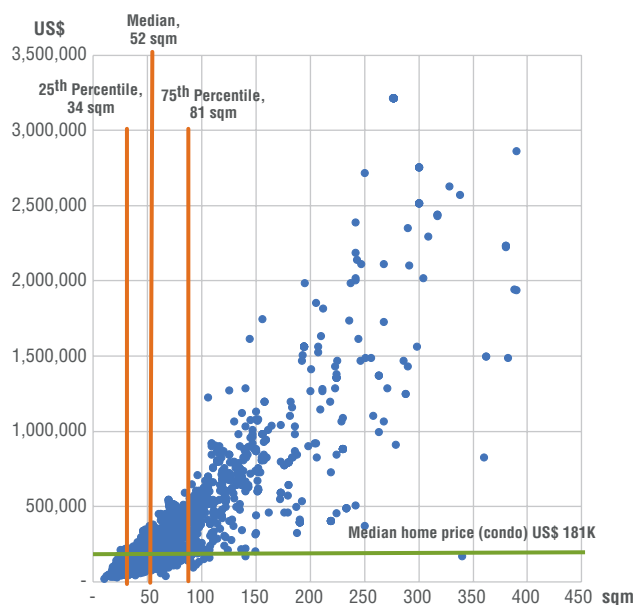
Source: Lamudi, Philippine Statistics Authority.

FIGURE 69 Construction materials wholesale price index (CMWPI) for all housing unit types (2012=100)



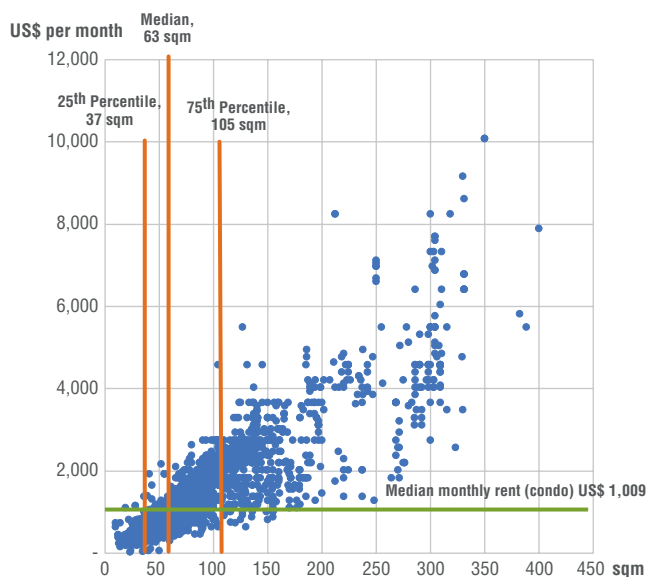
Source: Lamudi, Philippine Statistics Authority.

FIGURE 70 Metro Manila condo price and size (based on 2,745 online listings)



Sources: Lamudi and Urban Land Institute.

FIGURE 71 Metro Manila condo rent and size (based on 2,942 online listings)



Sources: Lamudi and Urban Land Institute.

TABLE 9 Population, condo price and size, median household income, and price-to-income ratio based on listings in cities in Philippines

City	Population (thousand people)	Condo price (US\$ per unit)			Condo size (sqm)			Median annual household income (US\$)	Median home price to median annual household income
		25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile		
Metro Manila	13,484	104,577	181,058	366,936	34	52	81	7,301	24.8
Metro Cebu	1,826	78,891	141,270	245,847	28	42	68	6,068	23.3
City of Davao	1,777	67,928	89,532	124,758	30	43	57	5,551	16.1

Sources: Lamudi and Urban Land Institute.

TABLE 10 Condo monthly rent and size, median household income, and rent-to-income ratio based on listings in cities in Philippines

City	Condo rent (US\$ per unit per month)			Rental condo size (sqm)			Median annual household income (US\$)	Median home price to median annual household income
	25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile		
Metro Manila	550	1,009	1,835	37	63	105	608	166%
Metro Cebu	440	587	1,101	28	45	80	506	116%
City of Davao	330	459	642	28	36	50	463	99%

Sources: Lamudi and Urban Land Institute.

Singapore

In 2022, average HDB resale flat price increased 10.4 percent, and private-sector home price increased by over 8.6 percent. Median monthly rent also increased by a whopping 29.7 percent. The increases in home price and rent have resulted from various factors, including (1) construction delays caused by quarantines and travel restrictions affecting foreign construction workers during COVID; (2) young professionals moving out of their multi-generational family homes for more space and freedom; (3) the government's recent measure to require homeowners to wait 15 months after selling their homes before they are allowed to buy a non-subsidized resale HDB flat; and (4) an increase in foreign immigrants into the city-state. In 2020 and 2021, about 9,000 and 13,300 HDB units were completed, respectively, well below the annual average of approximately 20,000 before COVID.

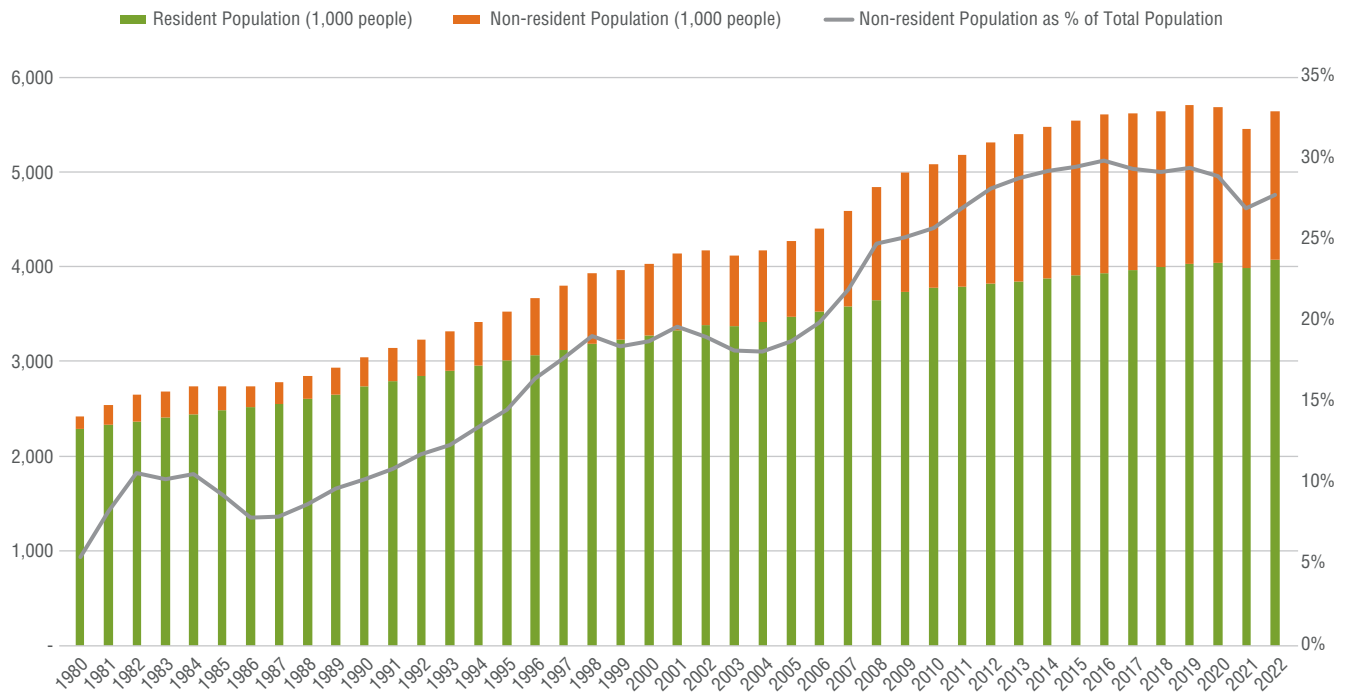
In this year's report, Singapore's median private-sector home price is the highest at US\$1.2 million, surpassing Hong Kong's median price of US\$1.16 million. Median monthly rent for private homes is US\$2,596, 53 percent higher than Hong Kong's median monthly rent of US\$1,686. Median monthly rent for private-sector homes represents 35 percent of median household income; however, as most renters of private-sector homes have higher than median income, the monthly rent amount should be a significantly smaller percentage of the renters' monthly income.

Median HDB price increased from US\$379,000 to US\$409,000, an increase of 7.9 percent, and the ratio of median HDB price to median annual income increased from 4.5 to 4.7.



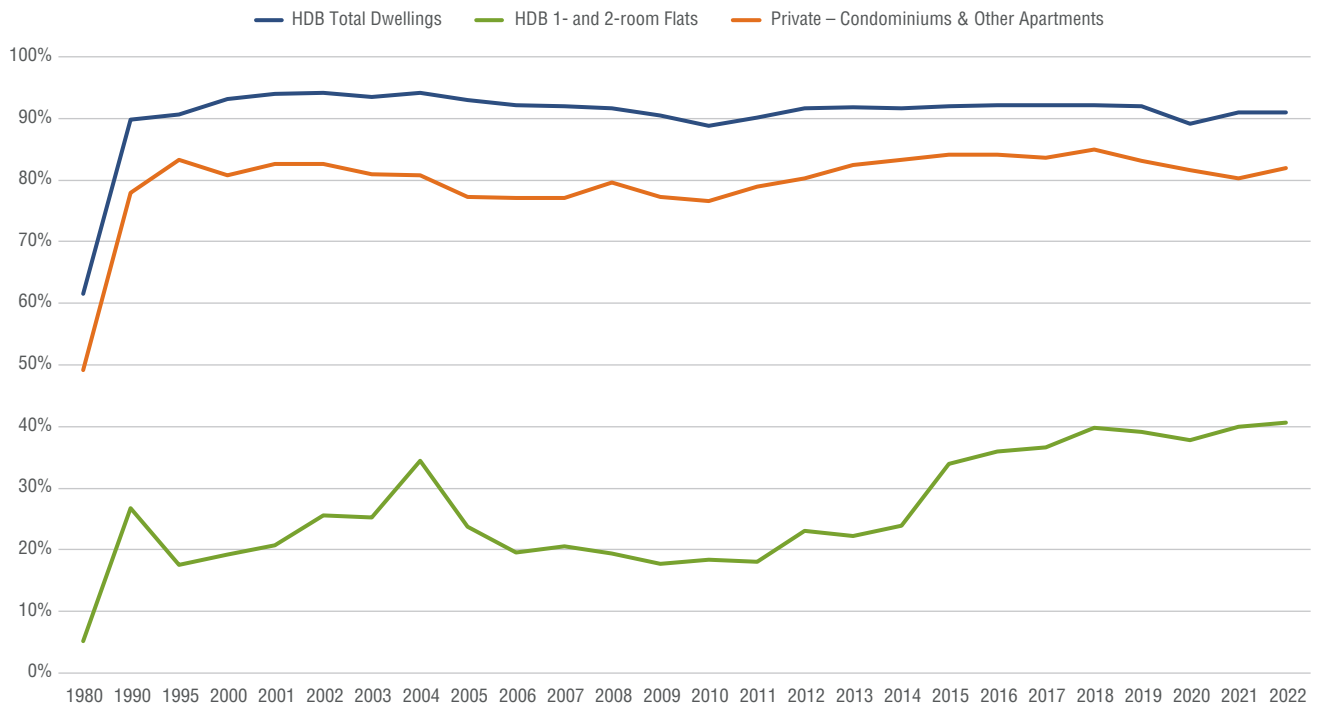
A residential neighbourhood in city centre, Singapore.
Credit: Paixin

FIGURE 72 Total population breakdown in Singapore (1990-2022)



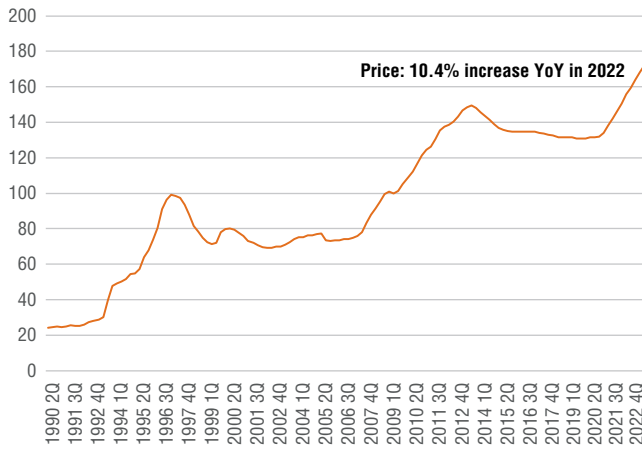
Source: Department of Statistics, Singapore.

FIGURE 73 Homeownership by type of housing in Singapore (1990-2022)



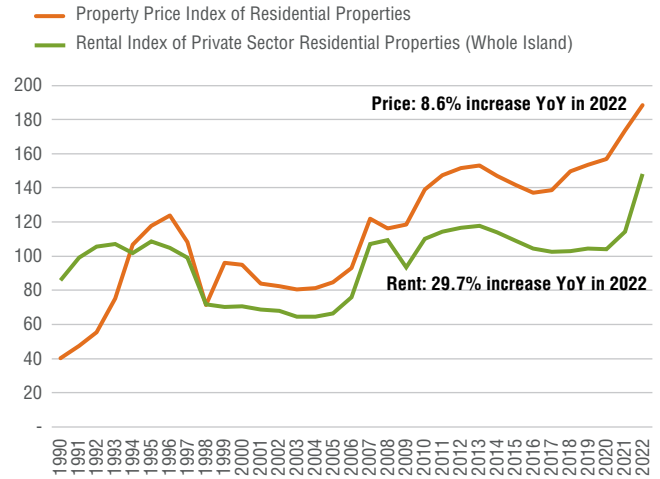
Source: Department of Statistics, Singapore.

FIGURE 74 Housing and Development Board resale price index (1Q2009 = 100)



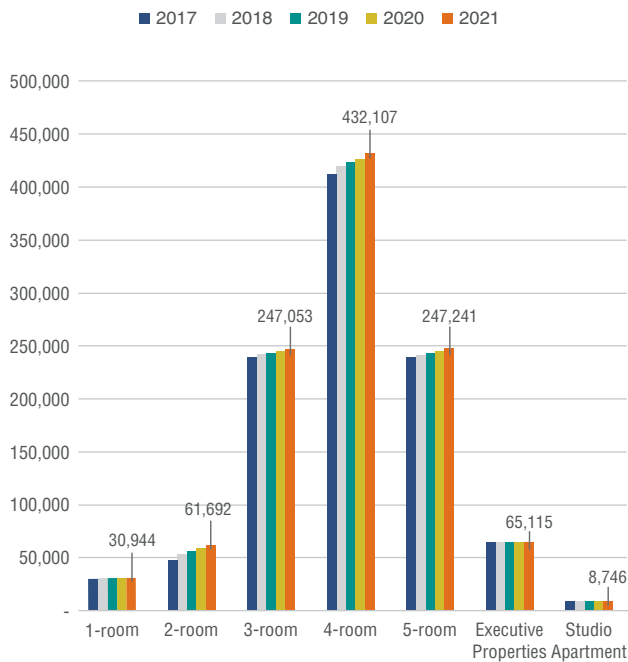
Sources: Housing and Development Board, Singapore, Urban Redevelopment Authority, Singapore.

FIGURE 75 Private residential price and rental indices (URA) (1Q2009=100)



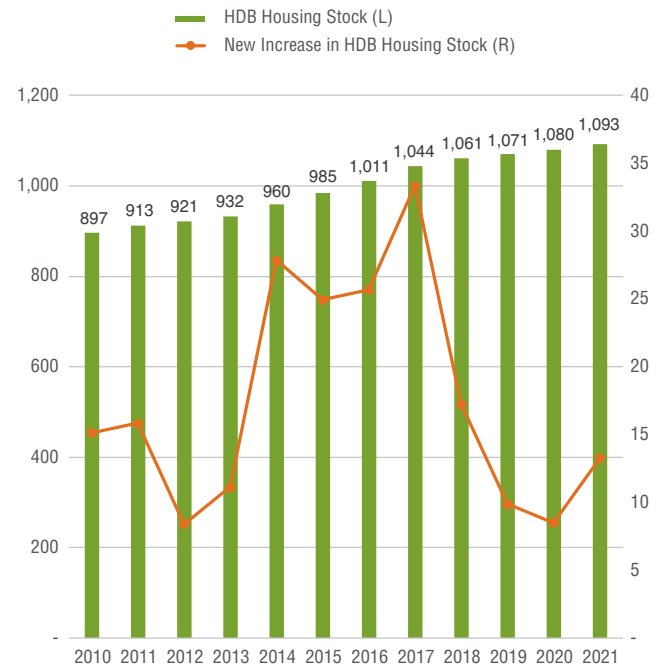
Sources: Housing and Development Board, Singapore, Urban Redevelopment Authority, Singapore.

FIGURE 76 HDB housing stock breakdown by type (2017-2021) (units)



Source: Department of Statistics, Singapore; Housing and Development Board, Singapore.
Note: Room counts include a living room.

FIGURE 77 HDB housing stock and annual increase (2010-2021) (1,000 units)



Source: Department of Statistics, Singapore; Housing and Development Board, Singapore.

South Korea

Since the middle of 2022, prices in Korea’s housing market have been dropping, in large part because of (1) a rising mortgage interest rate in step with the U.S. interest rate and (2) a more pessimistic view on the housing market. Interviews indicate this price decline has been more pronounced in cities outside Seoul such as Incheon, and within Seoul, prices have kept up better in central locations such as Gangnam. It should also be noted that the new national and Seoul governments have adopted policies to make redevelopment easier by allowing higher FAR and height increases and streamlining redevelopment procedures.

In contrast to home prices, renting is relatively inexpensive. In Seoul, median monthly rent is US\$689 or 27 percent of median household income. For the other cities, median monthly rent ranges from 17 to 24 percent of median household income. For Seoul, monthly rent has changed very little in the past six or seven years while median home price has nearly doubled.

Unique among the countries in the region, South Korea has a form of home rent called “Jeonse”. Renters in South Korea can (1) pay monthly rent at market rate, (2) put up a lump sum deposit (“Jeonse”), which can be between 50 and 80 percent of the market value of the unit, and not pay any monthly rent during the lease period, or (3) put up a partial deposit and pay a reduced monthly rent. Traditionally, the practice of “Jeonse” was popular as renters would not need to “waste” any money paying rent and could get the deposit back at the end of the lease, which is typically one or two

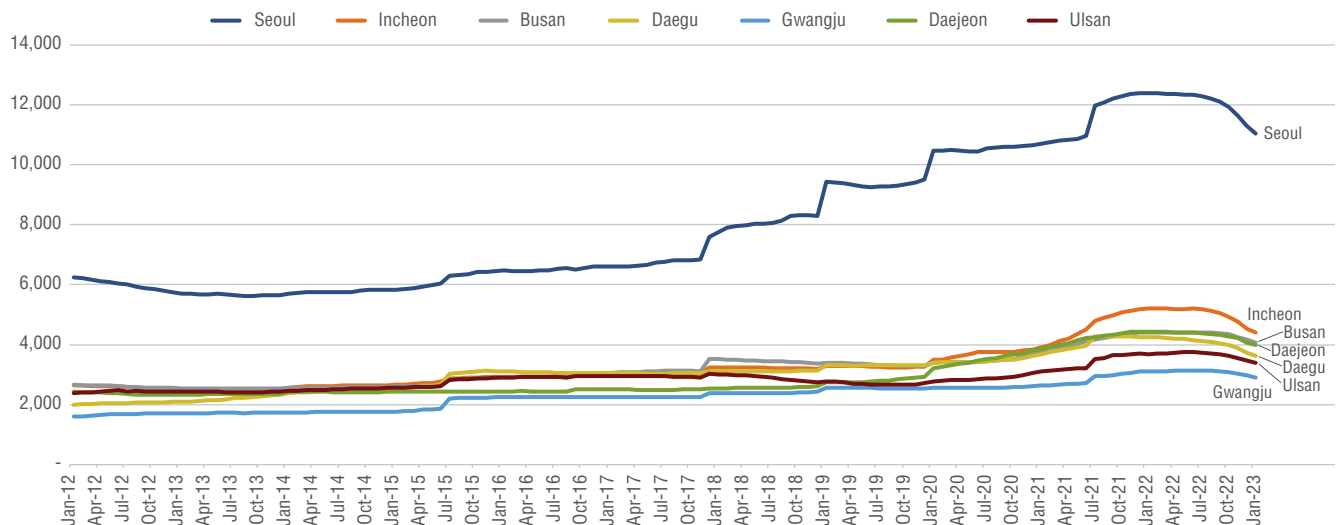


A residential neighbourhood in Seoul.
Credit: Kenneth Rhee

years. At the same time, landlords can use the “Jeonse” deposits to help pay for the acquisition of the property or invest in more properties.

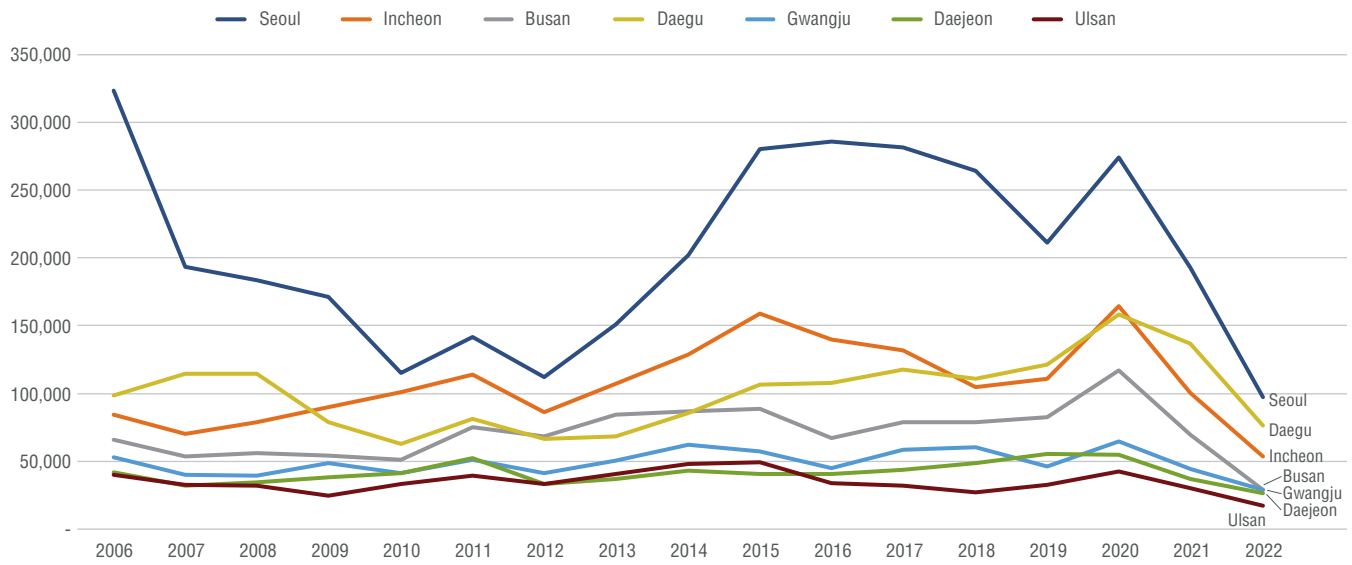
In recent months, as housing prices declined substantially, especially for small-sized units used as rental properties, a growing number of renters who have put up “Jeonse” deposits have been unable to recover their deposits at the expiration of the lease. This has become a major economic and political issue for the country.

FIGURE 78 Apartment median sales price trajectory in major cities in South Korea (2012-January 2023)
(1,000 KRW per sqm)



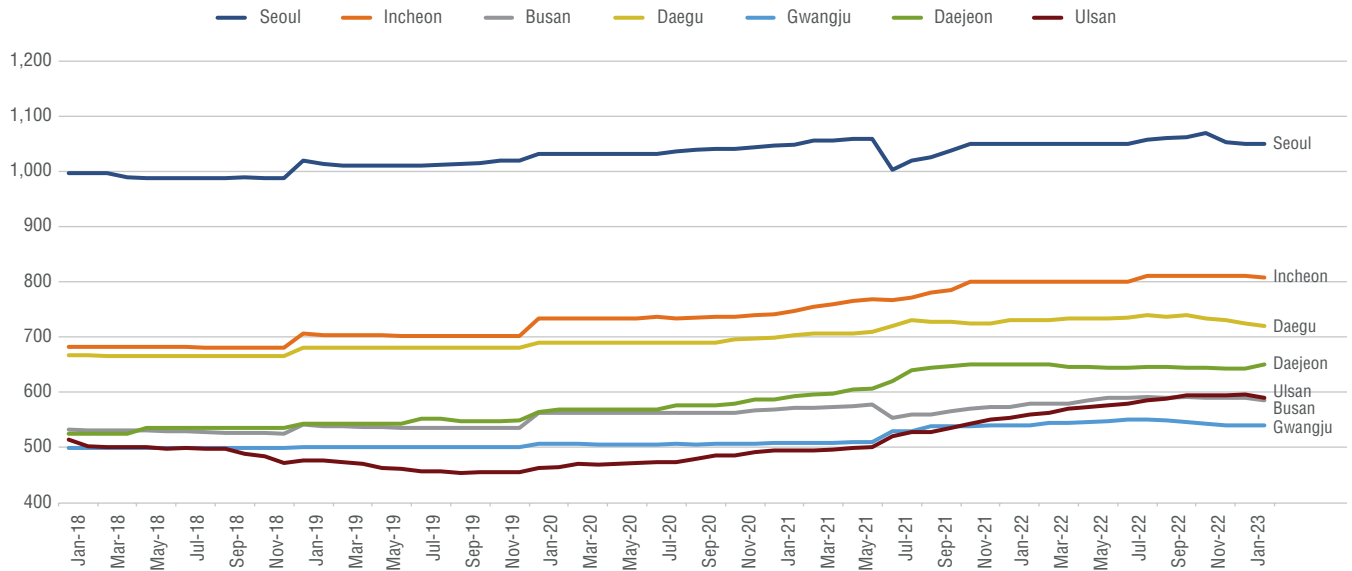
Source: Korea Real Estate Board (REB).

FIGURE 79 Home transaction volume trajectory in key cities in South Korea (2006-2022) (number of units)



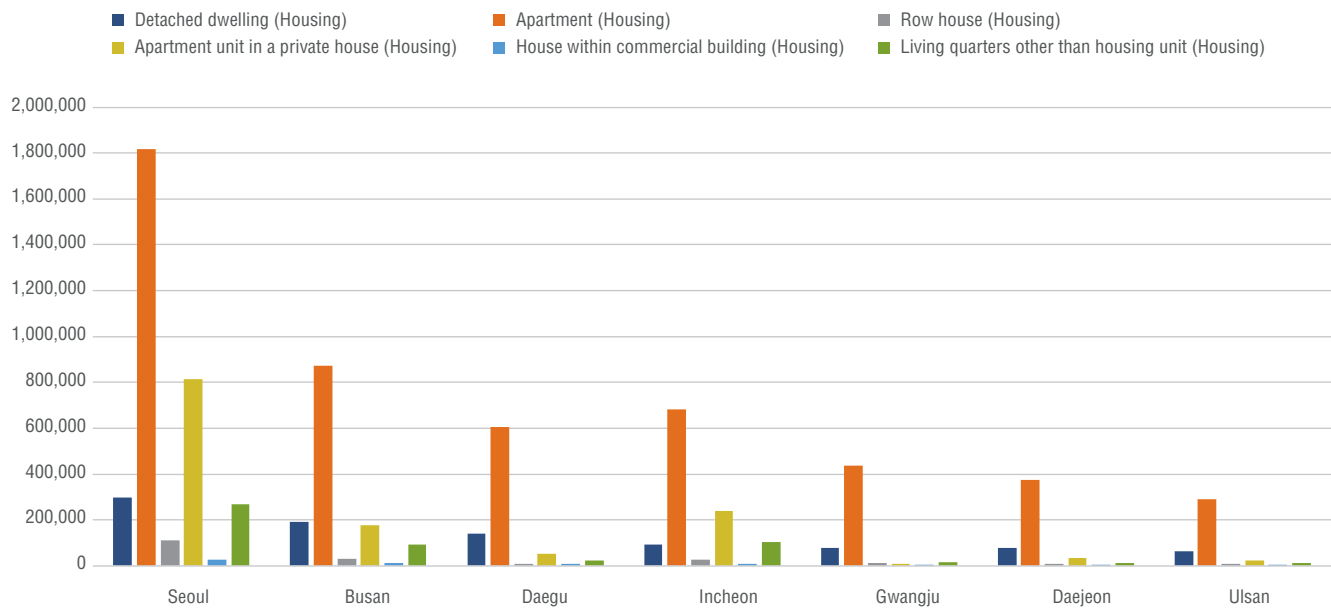
Source: Korea Real Estate Board (REB).

FIGURE 80 Apartment median monthly rent trajectory in key cities in South Korea (Jul 2015-Feb 2023)



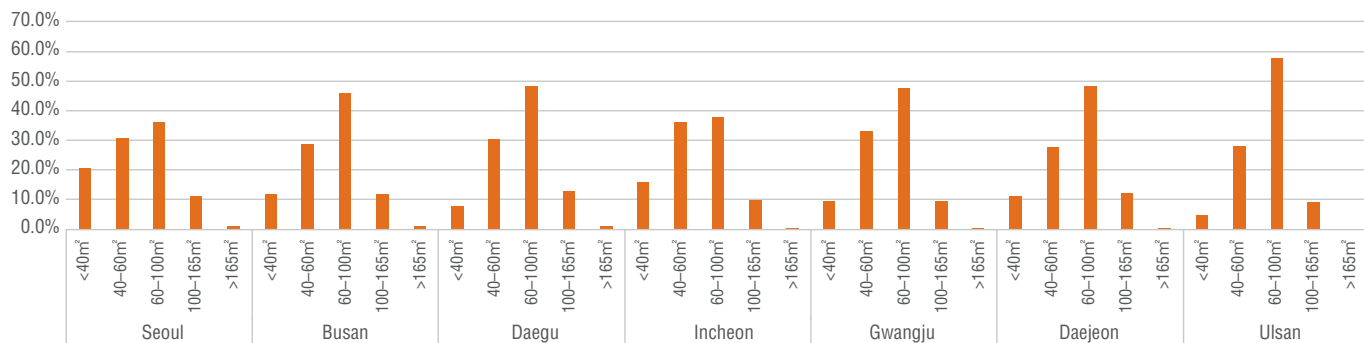
Source: Korea Real Estate Board (REB).

FIGURE 81 Existing housing stock by type (2021) (number of units)



Source: Korean Statistical Information Service (KOSIS).

FIGURE 82 Housing stock breakdown by size in key cities in South Korea (2020)



Source: Korean Statistical Information Service (KOSIS).

Vietnam

In Vietnam, Ho Chi Minh City, the economic and financial hub of the country, has the highest median home price at US\$296,000, far higher than Da Nang at US\$214,000 and Hanoi at US\$182,000. Although Ho Chi Minh City has a slightly larger population than Hanoi, about 35 percent less new housing has been completed in Ho Chi Minh City since 2010 than in Hanoi. Besides the relatively limited new supply of housing, the larger unit size in Ho Chi Minh City contributes to the city's higher median home price. Ho Chi Minh City has a median home size of 83 sqm versus 65 sqm for Hanoi. These two factors help explain the significantly higher ratio of median home price to median annual household income of 32.5 for Ho Chi Minh City compared with 18.3 for Hanoi.

According to Adam Fowler, a developer based in Hanoi, many homebuyers are speculative or long-term investors who own multiple units, using property as an asset in which to store value. The government is currently considering levying taxes or imposing a penalty to prevent speculative homebuying.

Nonetheless, a significant portion of the units purchased for investment are used as rental properties. Typical apartment units are initially sold by developers with basic interior finishing (but unfurnished). As such, the furniture investment required for owners to rent out the properties is low.

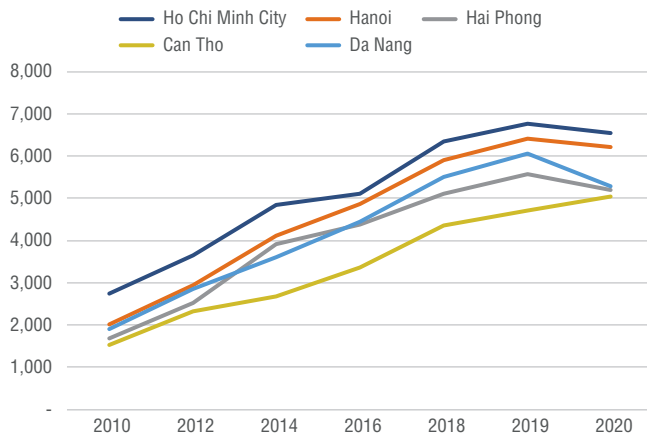
While the ratio of median monthly rent to median household income ranges from 48 to 78 percent, most renters are young professionals from out of town who share apartments with either family members or roommates. According to Fowler, for most young professionals, monthly rent expense should be around 20 to 25 percent of monthly income.

Fowler expects the housing markets in second-tier cities to perform well in the coming years. Increasingly, international manufacturers are setting up production facilities in regional cities in Vietnam as they seek to establish alternate facilities outside mainland China. He also notes an emerging trend of “digital nomads” or international travellers who settle in Vietnam and other Southeast Asian cities and work remotely, especially in creative industries.



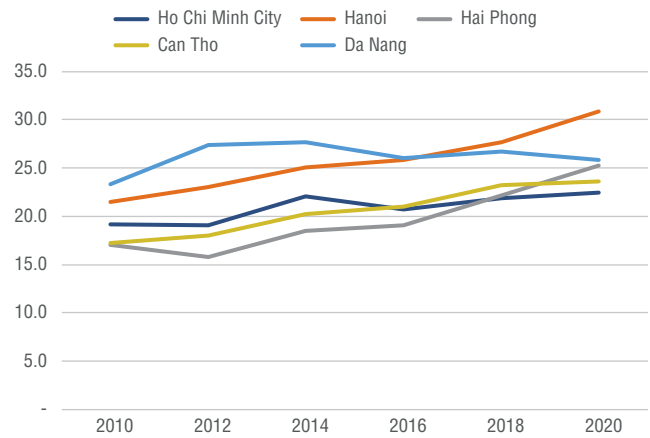
A high-rise residential neighbourhood in Ho Chi Minh City.
Credit: Paixin

FIGURE 83 Monthly income per capita in key cities in Vietnam (2010-2020) (1,000 VND)



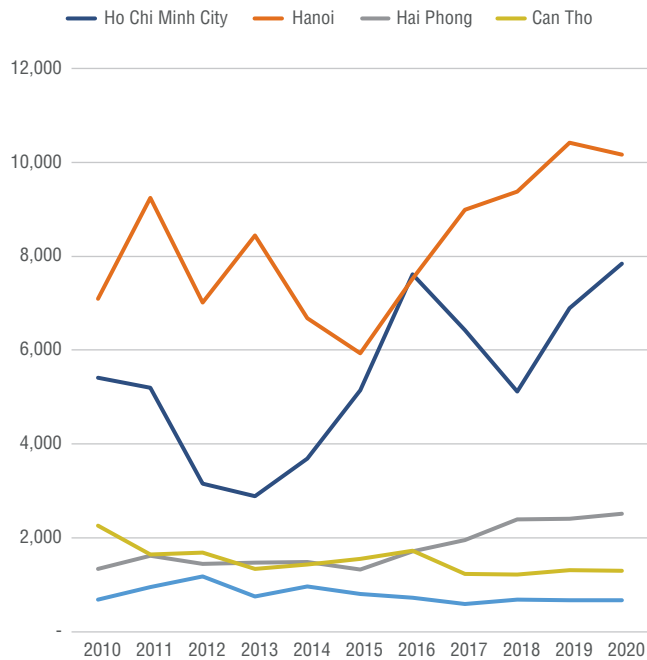
Source: General Statistics Office, Vietnam.

FIGURE 84 Living area per capita in key cities in Vietnam (2010-2020) (sqm)



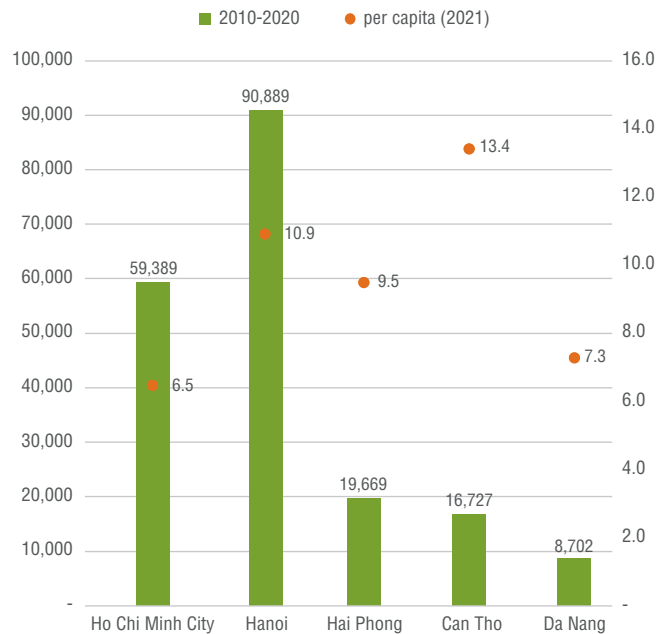
Source: General Statistics Office, Vietnam.

FIGURE 85 Area of housing floor area constructed in the year (1,000 sqm)



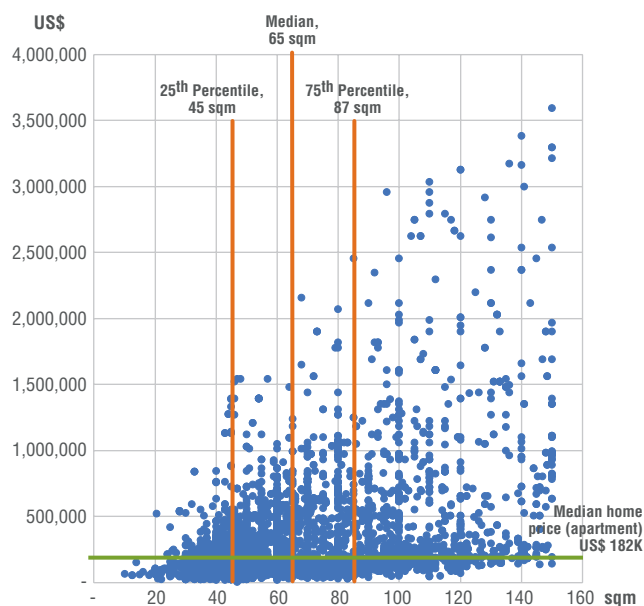
Source: General Statistics Office, Vietnam.

FIGURE 86 Accumulated area of housing floor area constructed in 2010-2020 (1,000 sqm) and per capita floor area based on 2021 population (sqm per person)



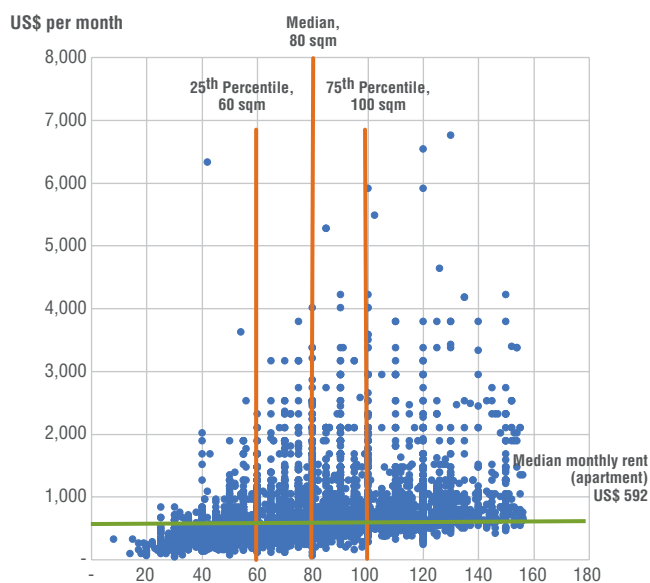
Source: General Statistics Office, Vietnam.

FIGURE 87 Hanoi apartment price and size (based on 4,651 online listings)



Sources: Batdongsan and Urban Land Institute.

FIGURE 88 Hanoi apartment rent and size (based on 6,832 online listings)



Sources: Batdongsan and Urban Land Institute.

TABLE 11 Population, apartment price and size, median household income, and price-to-income ratio based on listings in cities in Vietnam

City	Population (thousand people)	Apartment price (US\$ per unit)			Apartment size (sqm)			Median annual household income (US\$)	Median home price to median annual household income
		25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile		
Hanoi	8,331	114,196	182,290	372,193	45	65	87	9,967	18.3
Ho Chi Minh City	9,167	148,031	296,063	676,714	64	83	120	9,120	32.5
Da Nang	1,195	117,473	214,540	486,388	75	100	150	8,042	26.7
Hai Phong	2,072	87,973	160,297	372,193	56	75	110	7,476	21.4
Can Tho	1,247	99,392	139,361	274,915	72	100	121	8,510	16.4

Sources: Batdongsan and Urban Land Institute.

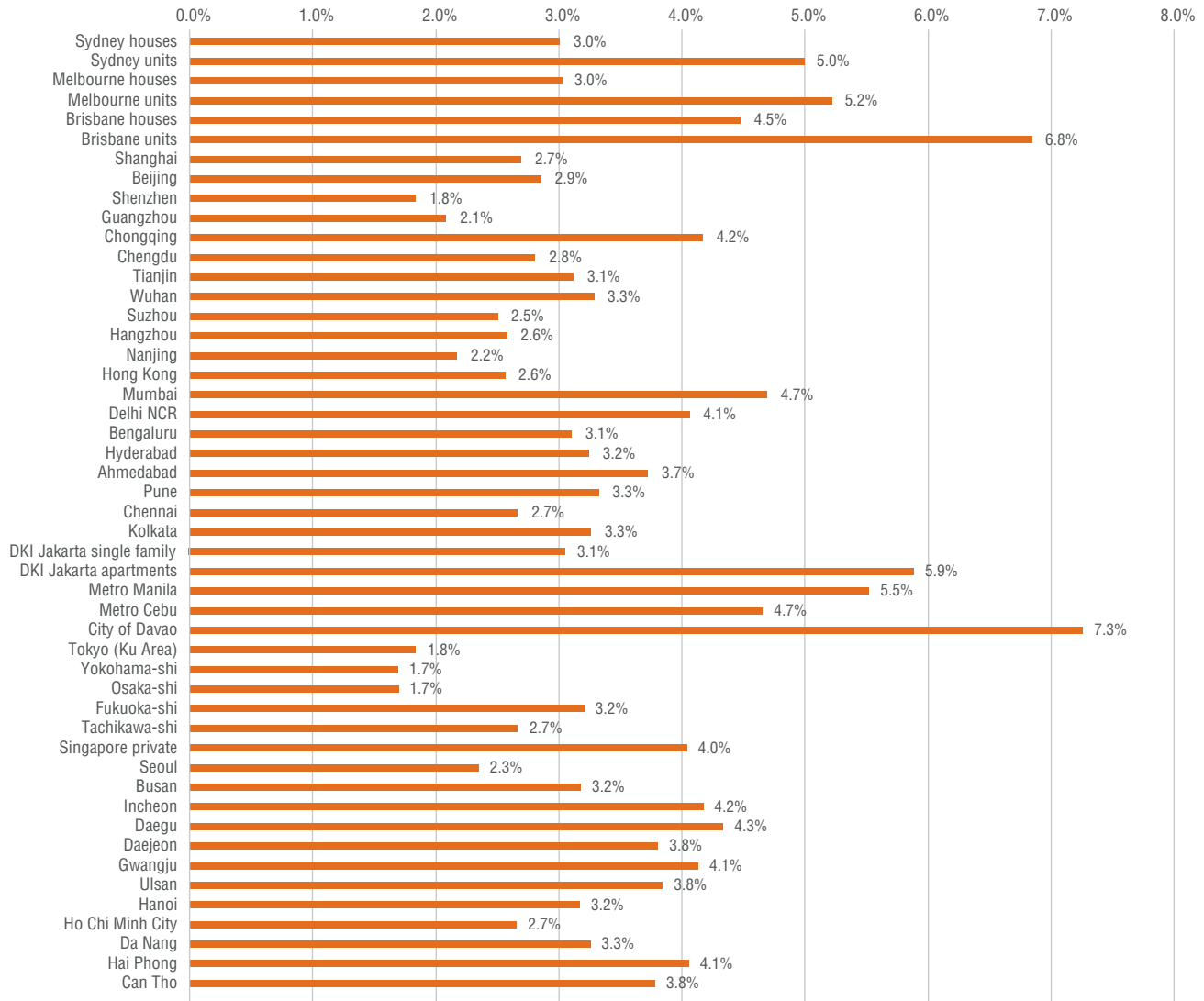
TABLE 12 Apartment monthly rent and size, median household income, and rent-to-income ratio based on listings in cities in Vietnam

City	Apartment rent (US\$ per unit per month)			Rental apartment size (sqm)			Median annual household income (US\$)	Median home price to median annual household income
	25th Percentile	Median	75th Percentile	25th Percentile	Median	75th Percentile		
Hanoi	423	592	846	60	80	100	831	71%
Ho Chi Minh City	381	592	846	60	75	94	760	78%
Da Nang	338	465	634	65	80	100	670	69%
Hai Phong	254	455	592	50	63	73	623	73%
Can Tho	248	338	508	50	77	100	709	48%

Sources: Batdongsan and Urban Land Institute.

Appendix: Additional Graphs and Data Sources

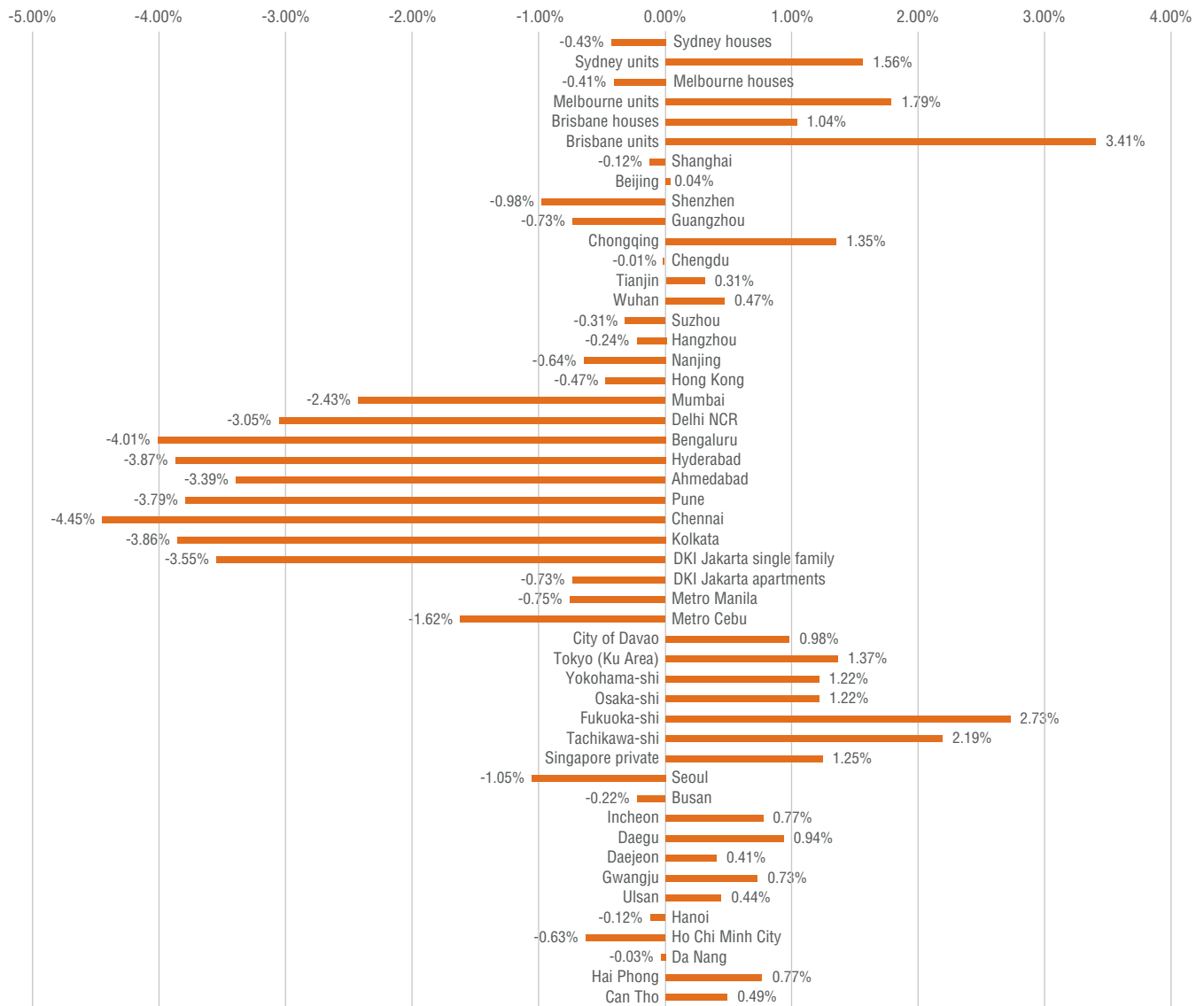
FIGURE A1 Implied housing yield – annual rent to home purchase price 2022



Notes:

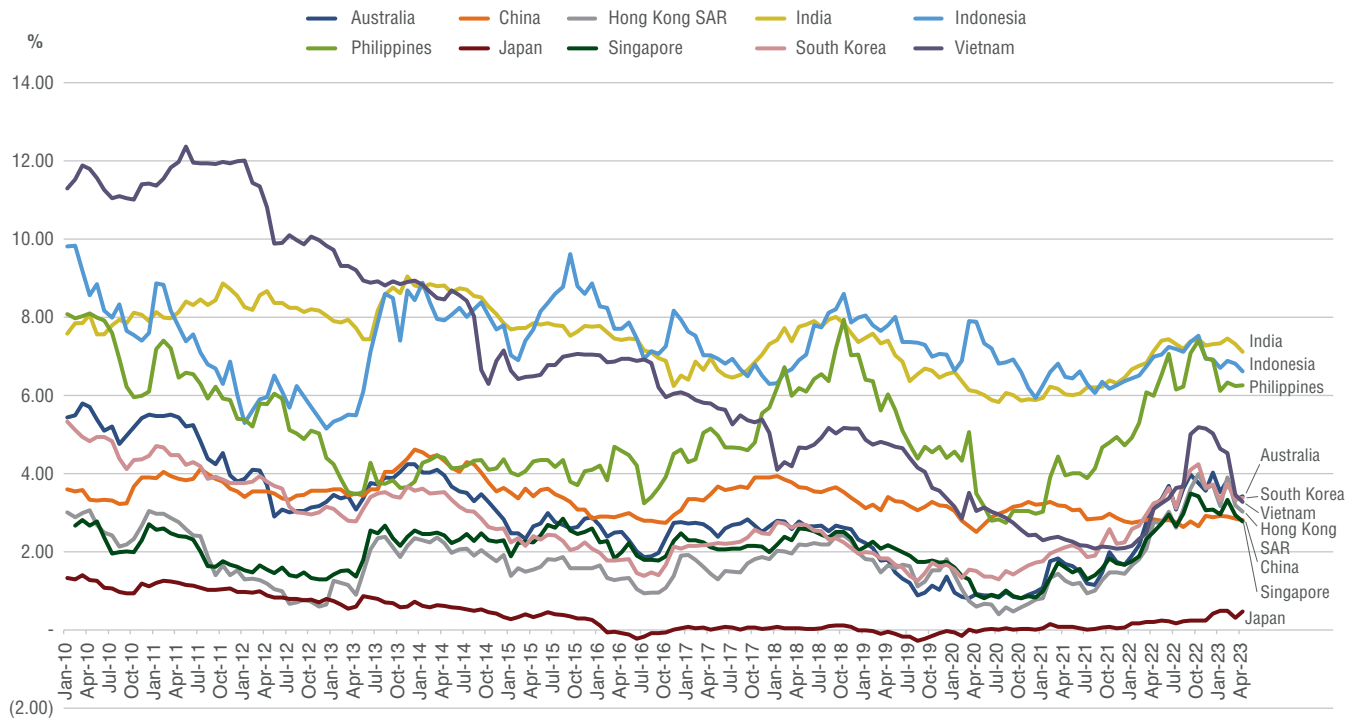
1. Implied housing yield refers to median annual rent per sqm divided by median home price per sqm.

FIGURE A2 Yield spread (the difference between implied housing yield and 10-year government bond yield)



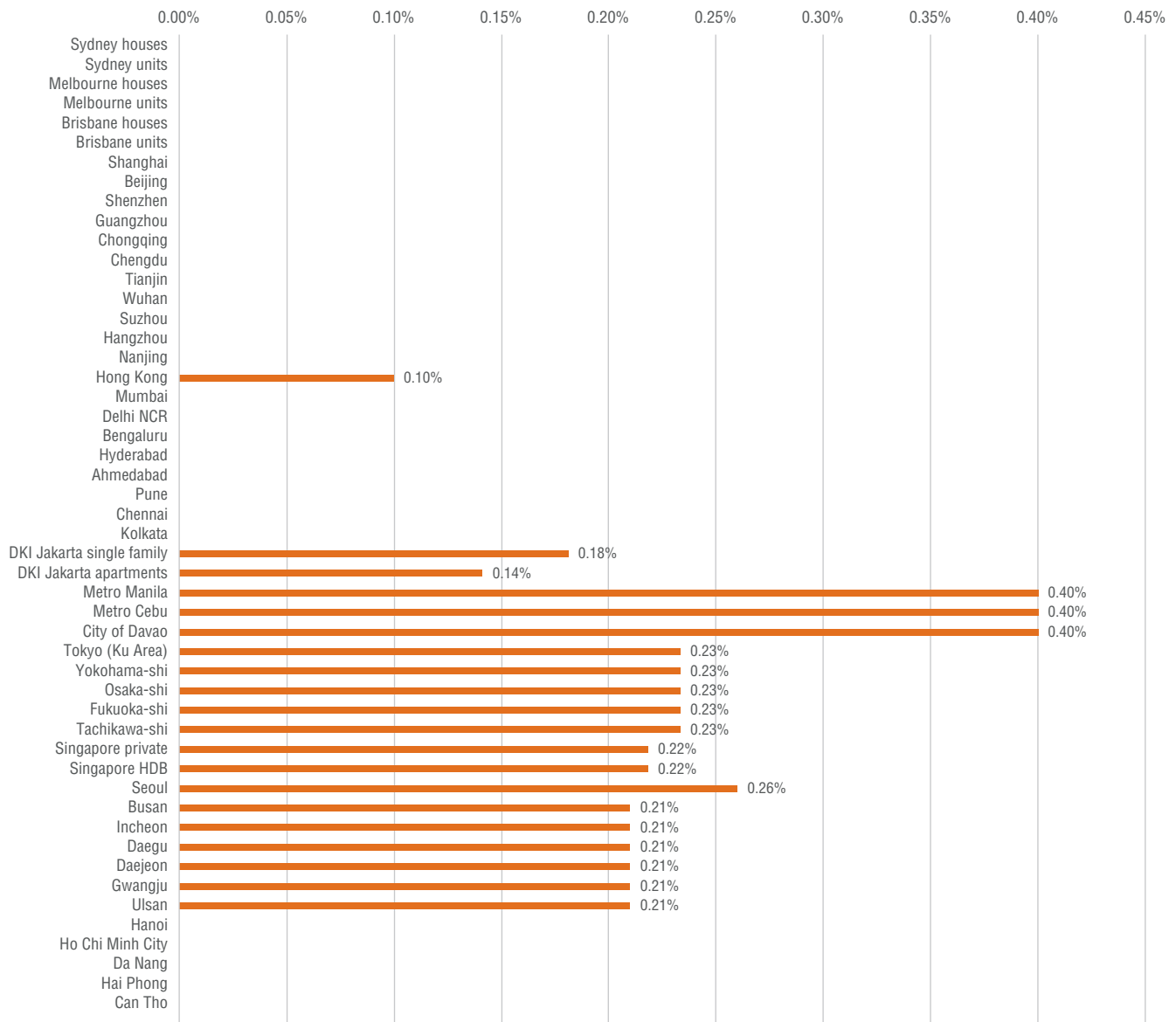
Source: 10-year government bond yield – Investing.com.

FIGURE A3 10-year government bond yield (January 2010-April 2023)



Source: Investing.com.

FIGURE A4 Annual property tax % (or implied property tax)



Notes:

1. In Australia, there is no property tax. However, local governments charge land tax if the property owner owns investment properties, including residential rental properties, commercial properties, holiday homes and vacant land.
2. Though Shanghai and Chongqing in mainland Mainland China have adopted property tax initiatives since 2011, the impact on first-home buyers is zero due to exempt programs.
3. In Hong Kong, property tax is charged for owner-occupiers (5% of the hypothetical annual rent).
4. In India, property tax is levied by local governments and the basis for calculating property tax varies greatly among local administrations. The government offers 50% discount in property tax for owner-occupiers. Homes under 100 sqm are usually granted another 10% discount. Homes that have been existing for certain years are given another 10-20% discount. Home owners that are women or disabled, or civil servants, are granted another 30% discount. Property tax is very minimal for owner-occupiers.
5. In Indonesia, annual land and building tax is levied based on 0.1% of the sale value for properties valued at less than IDR 1 billion or 0.2% of properties valued above this.
6. In Philippines, annual real property tax is 2% of 20% of property value.
7. In Japan, property tax comprises property tax and city urban planning tax, a total of 1.7% of assessed property value (about 70% of the market value). However, for home size below 200 sqm, both taxes get sharp discounts (home owners only pay 1/6 of property tax and 1/3 of city urban planning tax).
8. In Singapore, property tax for owner-occupiers is levied based on the hypothetical annual rent (0-16% depending on the annual rent amount).
9. There is no holding tax for residential properties in Vietnam at the moment.

FIGURE A5 Property tax (annual) US\$/year

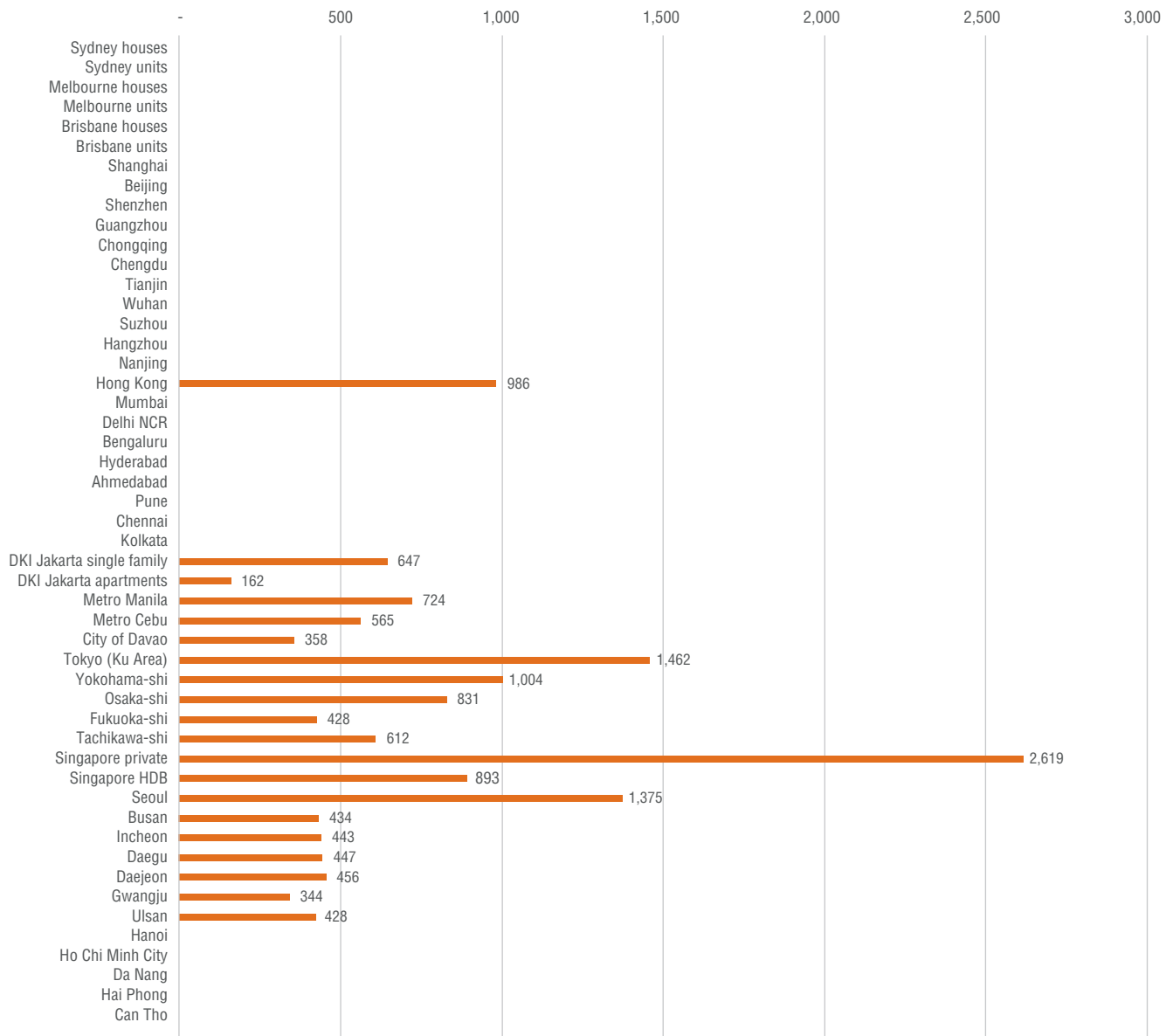
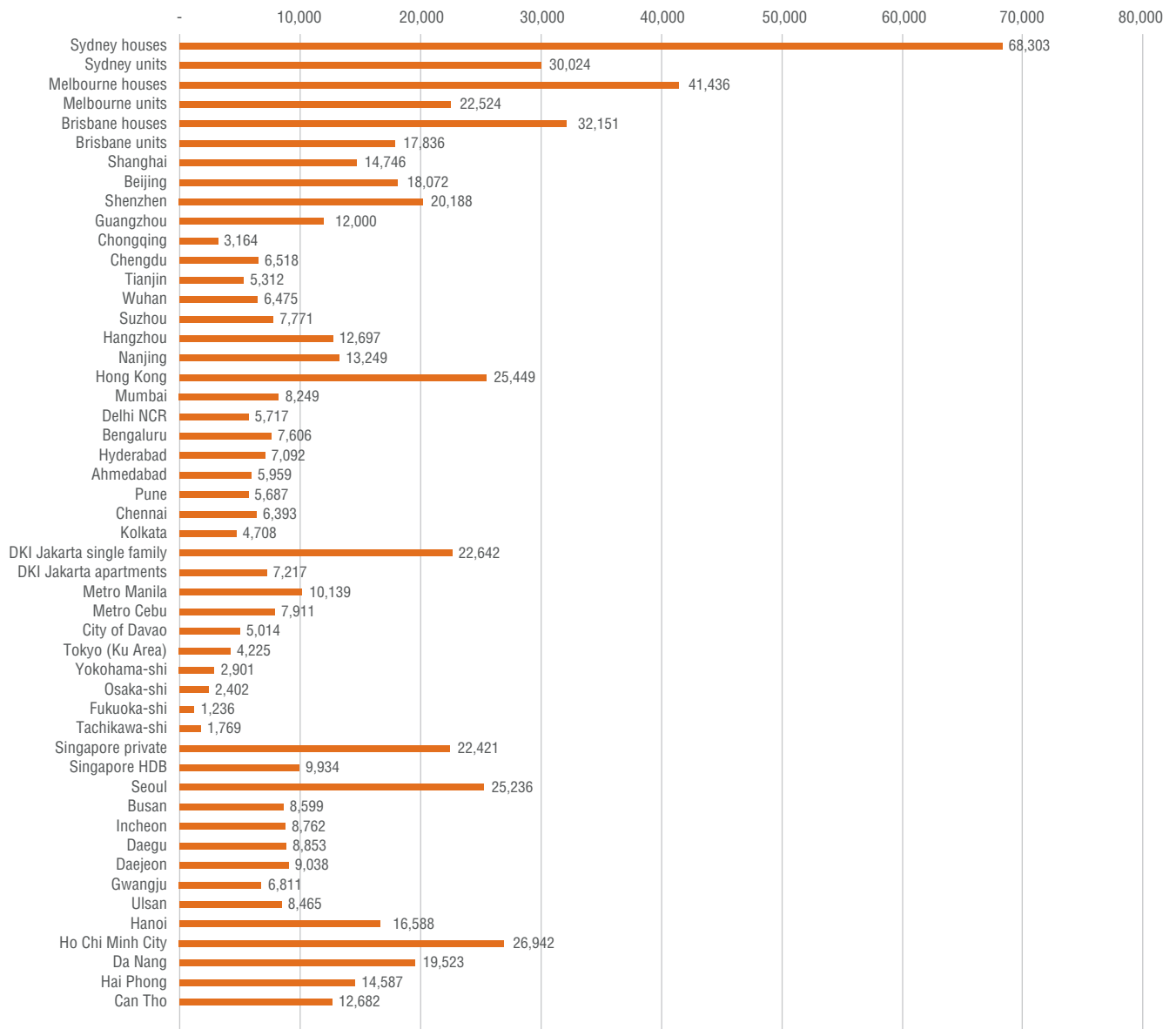


FIGURE A6 Annual mortgage payment plus property tax USD/year



Note: Assuming a 30-year amortization period, minimum required downpayment, and the current home mortgage rate.

FIGURE A7 Ratio of annual mortgage payment plus property tax to median income

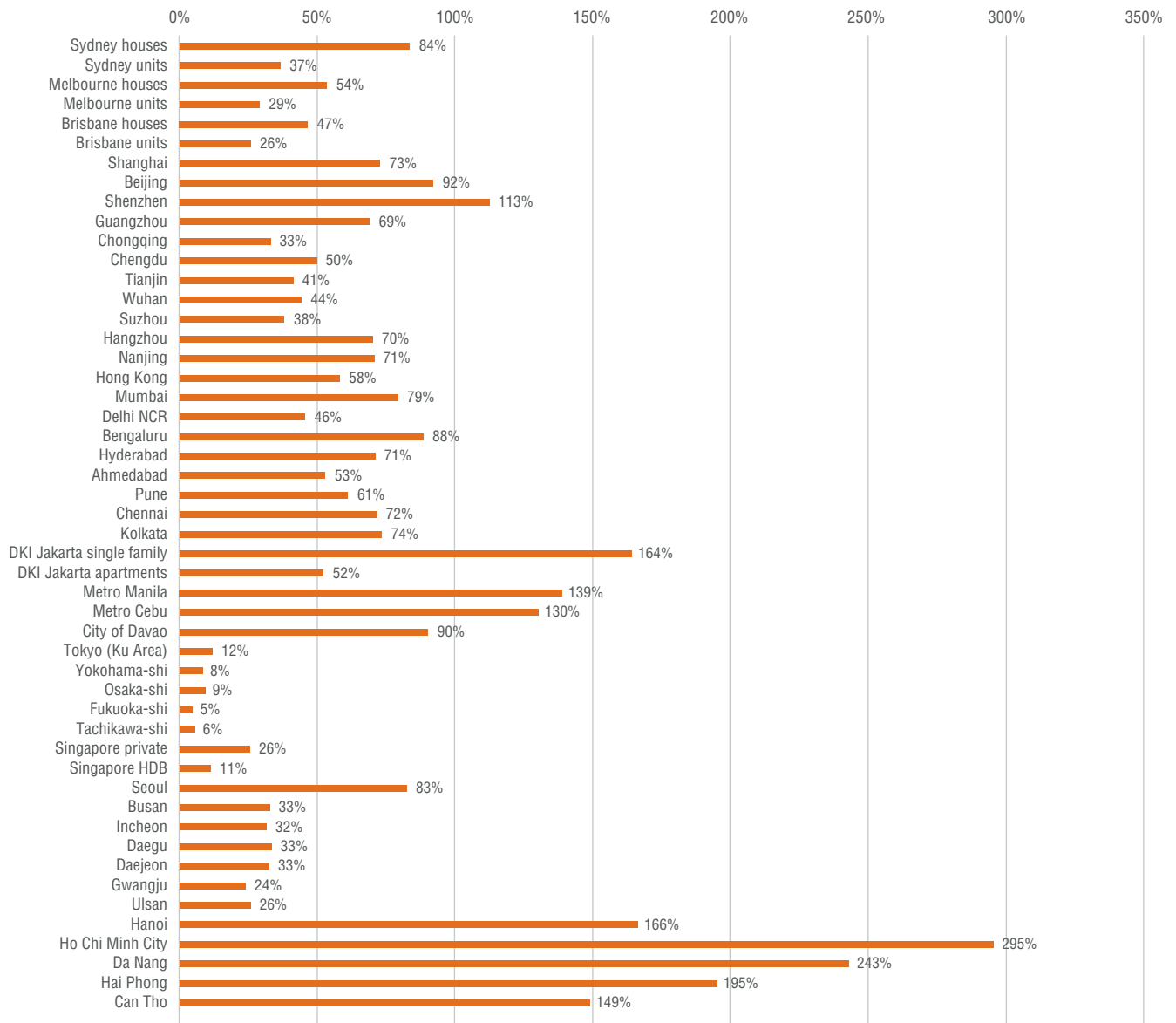
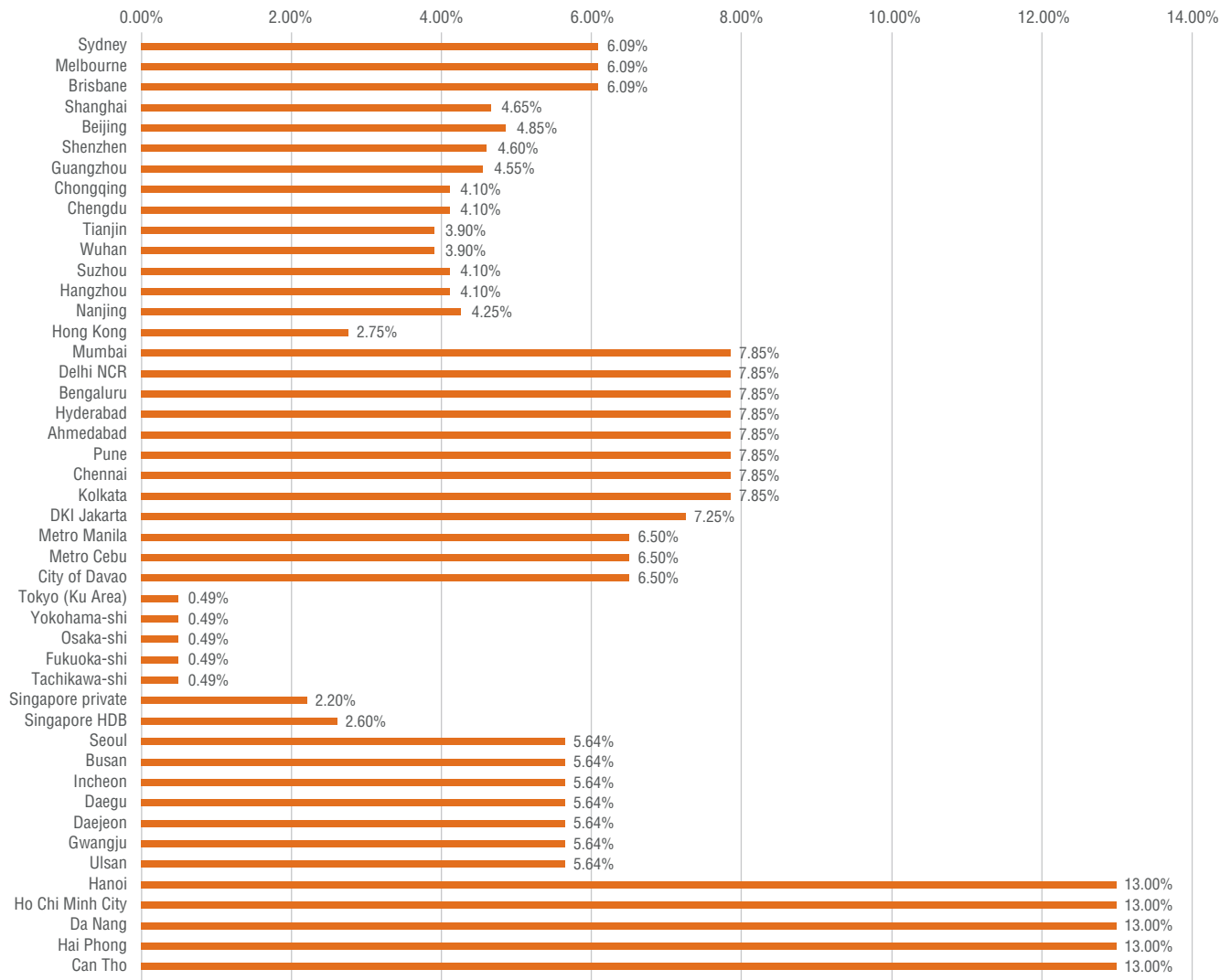


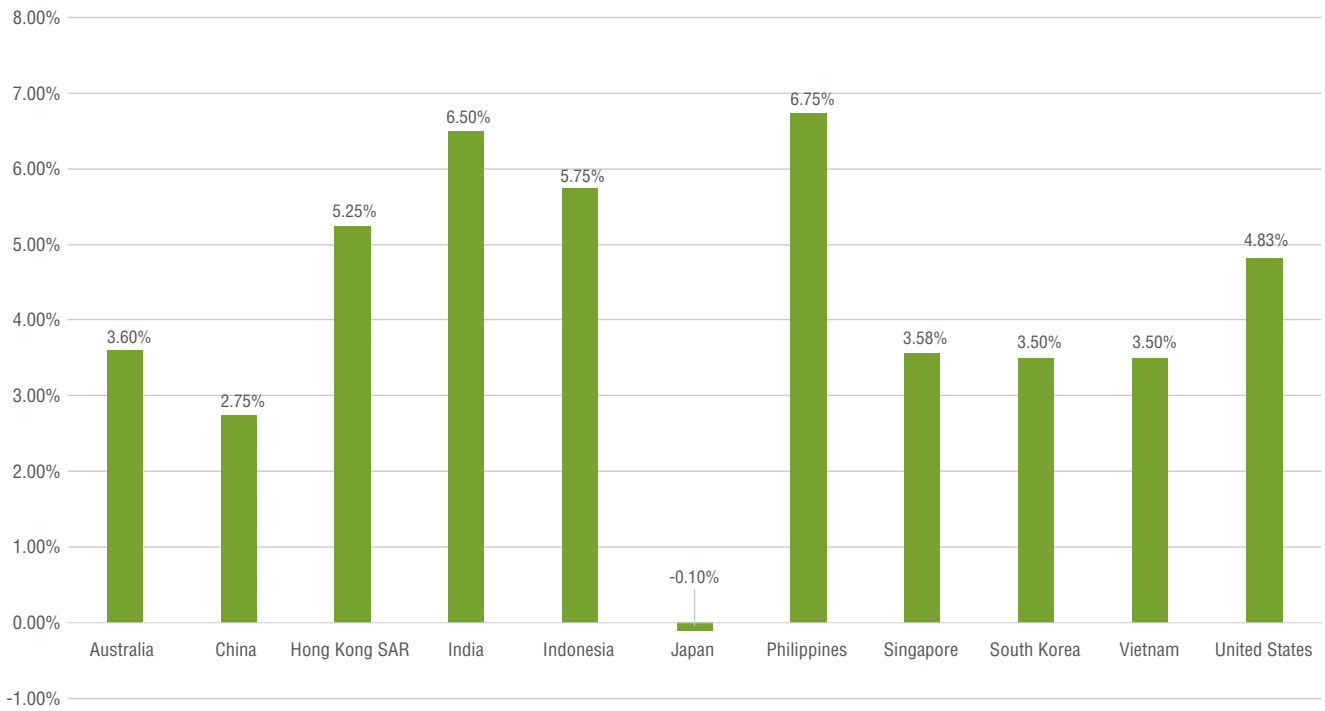
FIGURE A8 Mortgage interest rate (floating)



Notes:

1. For Singapore, the buyers of HDB flats usually opt to choose HDB loans, the interest rate of which is higher compared with commercial lenders, but is fixed and there is no penalty for early payment.

FIGURE A9 Policy interest rate (March 2023)



Source: CEIC.

Data Sources

	Population	Household income	Housing price	Owner-occupier home size	Rent	Rental home size	Downpayment requirement	Mortgage rate	Purchase fees and property tax
Australia	Australian Bureau of Statistics	median gross household weekly income for capital cities Australian Bureau of Statistics	median prices for houses and apartments Domain	80% of average sizes of newly built houses and apartments in NSW, VIC and QSL (2020/21) CommSec	median weekly rents for houses and apartments Domain	64% of average sizes of newly built houses and apartments in NSW, VIC and QSL (2020/21) CommSec	ANZ Australian Housing and Urban Research Institute	Ratecity CommBank	Revenue NSW State Revenue Office Victoria Queensland Government whichrealestateagent.com.au
China	National Statistics Bureau Statistics Bureau of each city	per capita disposable income times average household size (and GINI coefficient-adjusted to median household income) National Statistics Bureau	average selling price (new commodity residential) National Statistics Bureau	average family living space (For Beijing, Shanghai, Tianjin and Chongqing, city level data; for the rest of the Chinese cities, provincial level data) Census 2020	average monthly rent per sqm creprice.com, affiliated to China Real Estate Association	60% of owner-occupied home size	Housing and Urban-Rural Development Commission of each city	The People's Bank of China local Chinese media Bendibao	Provincial Tax Service, State Taxation Administration Bendibao
Hong Kong	Census and Statistics Department	median household income General Household Survey Census and Statistics Department	total considerations and total number of residential transactions (both primary and resale), housing price per sqm and housing stock by district and size Rating and Valuation Department The Land Registry	median floor area of accommodation of domestic households, private owner-occupier housing 2016 Population By-census Census and Statistics Department	average monthly rent and housing stock by district and size Rating & Valuation Department	median floor area of accommodation of domestic households, private rental housing 2016 Population By-census Census and Statistics Department	Hong Kong Monetary Authority	Hong Kong Monetary Authority	PwC Hong Kong PlaceProperty
India	World Population Review	per capita GDP adjusted to per capita disposable income (and GINI coefficient-adjusted to median household income) Census 2011 (household size) Havard University (per capita GDP)	median asking price for flats Magicbricks (using internet crawler)	median size for flats Magicbricks (using internet crawler)	median monthly asking rent for rental flats Magicbricks (using internet crawler)	median size for rental flats Magicbricks (using internet crawler)	Magicbricks	Magicbricks	99acres Magicbricks
Indonesia	Statistics Indonesia	per capita GDP adjusted to per capita disposable income (and GINI coefficient-adjusted to median household income) (household size 2018 from CEIC) Statistics Indonesia	median asking price for resale apartments Rumah123 (using internet crawler)	median size for resale apartments Rumah124 (using internet crawler)	median monthly asking rent for rental homes Rumah125 (using internet crawler)	median size for rental homes Rumah126 (using internet crawler)	Jakarta Globe	PT Bank Negara Indonesia (Persero)	Global Property Guide CCI Consulting
Japan	Statistics Bureau of Japan	per capita disposable income times average household size Statistics Bureau of Japan	average selling price (condo) for Tokyo-Ku and Osaka-shi Real Estate Economic Institute average selling price (condo) for Yokohama-shi Mercury average selling price (condo) for Fukuoka-shi Nishinihon Real Estate average selling price (condo) for Tachikawa-shi マンション相場価格	average home size of condo transaction (Tokyo Ku, and Osaka) Real Estate Economic Institute average home size of condo transaction (Yokohama, Fukuoka and Tachikawa) Mercury Nishinihon Real Estate マンション相場価格	monthly asking rent Suumo	area of floor area per rented dwelling Statistics Bureau of Japan	Hitotsubashi University, Shimizu Laboratory	Hitotsubashi University, Shimizu Laboratory	Hitotsubashi University, Shimizu Laboratory
Philippines	Philippine Statistics Authority	Philippine Statistics Authority	median asking price for condominium Lamudi (using internet crawler)"	median size for condominium Lamudi (using internet crawler)	median monthly asking rent for rental apartments Lamudi (using internet crawler)	median size for rental apartments Lamudi (using internet crawler)	Money Max Philippine National Bank (PNB)	Philippine National Bank (PNB)	Lamudi
Singapore	Singapore Statistics of Bureau	median household income Singapore Statistics of Bureau	median selling price (private resale) Urban Redevelopment Authority average selling price (HDB resale flat) Housing & Development Board"	median home size (private resale) Urban Redevelopment Authority average home size (HDB resale flat) Housing & Development Board	median monthly rent - 2-bedroom (private) Urban Redevelopment Authority	assuming 72 sqm for 2-bedroom rental apartments	Urban Redevelopment Authority Housing Development Board"	"PropertyGuru Housing Development Board"	Inland Revenue Authority of Singapore PropertyGuru
South Korea	Statistical Information Service	per capita disposable income times average household size Korean Statistical Information Service	median housing price Korea Real Estate Board	median home size Korea Real Estate Board	median monthly rent price Korea Real Estate Board	80% of residential size per household Korean Statistical Information Service	Financial Services Commission, Republic of Korea Korean Housing Finance Corporation	Bank of Korea The Korean Times	Taxwatch Prian.info
Vietnam	General Statistics Office, Vietnam	Vietnam Household Living Standards Survey	median asking price for resale apartments Batdongsan (internet crawler)	median size for resale apartments Batdongsan (internet crawler)	median monthly asking rent for rental apartments Batdongsan (internet crawler)	median size for rental apartments Batdongsan (internet crawler)	HSBC Vietnam	HSBC Vietnam	Tilleke & Gibbins Batdongsan Vietnam Investment Review



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