Office Stock Pyramid 2023



Xymax Real Estate Institute ("Xymax REI") hereby releases *Office Stock Pyramid 2023*, which covers the 23 wards of Tokyo ("Tokyo 23 Wards") and the city of Osaka ("Osaka City"). The Office Stock Pyramid illustrates the distribution of the rentable area and the number of buildings with a gross floor area ("GFA") of 300 tsubo or more that are mainly for office-use. The data is distributed based on building age and categorized by size of building.

1 tsubo = approx. 3.3 sqm

Main Findings

1. TOKYO 23 WARDS | Comparison of Small & Medium and Large Buildings

- The office stock at the end of 2023 will be 13.11 million tsubo on a net rentable area basis, of which large buildings account for slightly more than small & medium buildings at 7.04 million tsubo (54%) in comparison to the latter's 6.07 million tsubo (46%).
- In terms of number of buildings, the office stock for 2023 will be 9,400 buildings, of which small & medium buildings account for 92% (8,642 buildings).
- The average building age is 33.4 years for the entire stock, 34.2 years for small & medium buildings, and 25.0 years for large buildings. Office stock is especially aging among small & medium buildings.

2. TOKYO 23 WARDS | Comparison of 5 Central Wards and 18 Peripheral Wards

- The office stock of the 5 central wards (Chiyoda, Chuo, Minato, Shinjuku, and Shibuya Wards) consists of 6,862 buildings with a total net rentable area of 9.81 million tsubo, accounting for 75% of total in terms of net rentable area and 73% in terms of number of buildings, while the office stock of the 18 peripheral wards consists of 2,538 buildings with a total net rentable area of 3.30 million tsubo.
- The average building age is 33.6 years in the 5 central wards and 33.2 years in the 18 peripheral wards

3. OSAKA CITY | Comparison of Small & Medium and Large Buildings

- The office stock at the end of 2023 will be 2.86 million tsubo on a net rentable area basis, of which small & medium buildings and large buildings account for roughly the same amount at 1.42 million tsubo (50%) and 1.44 million tsubo (50%), respectively.
- In terms of number of buildings, the office stock for 2023 will be 1,769 buildings, of which small & medium buildings account for 89% (1,578 buildings).
- The average building age is 34.8 years for the entire stock, 35.3 years for small & medium buildings, and 31.1 years for large buildings.

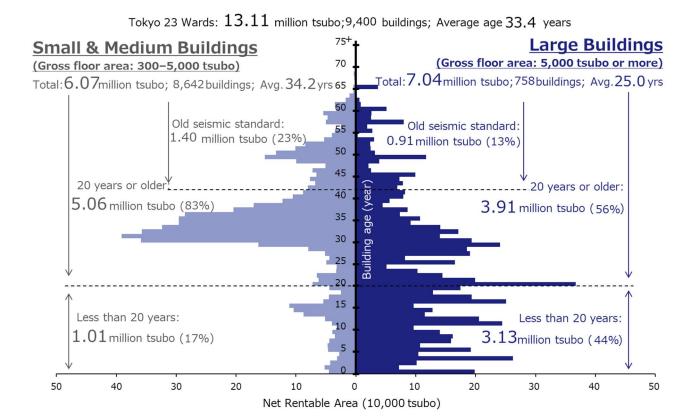


1. TOKYO 23 WARDS | Comparison of Small & Medium and Large Buildings

The office stock in the Tokyo 23 Wards as of the end of 2023 will be 13.11 million tsubo on a net rentable area basis (**Figure 1**). Of this, the stock of small & medium buildings with a GFA between 300 and 5,000 tsubo is 6.07 million tsubo, 46% of total. Large buildings with a GFA of 5,000 tsubo or more account for 7.04 million tsubo, or 54% of total, slightly more than small & medium buildings.

The average building age of the entire office stock is 33.4 years. The average age of the stock of small & medium buildings (34.2 years) is older than that of large buildings (25.0 years).

Figure 1: Tokyo 23 Wards Office Stock Pyramid 2023 (Net Rentable Area)



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In terms of the number of buildings, the office stock of the entire Tokyo 23 Wards is 9,400 buildings, of which small & medium buildings account for a majority with 8,642 buildings (92%), while large buildings number 758 buildings (8%) (Figure 2).

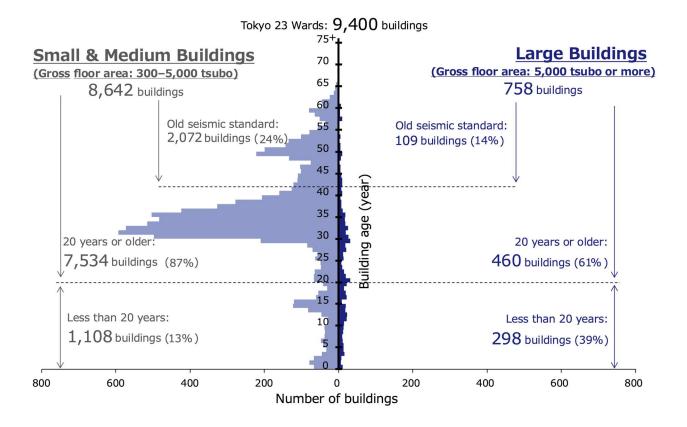


Figure 2: Tokyo 23 Wards Office Stock Pyramid 2023 (Number of Buildings)

Many small & medium buildings were completed around the time of the bubble economy period (i.e., between 1986 and 1997; building age 26–37 years), with 5.06 million tsubo, or 83% of the buildings, aged 20 years or older. New supply has been low after the bubble economy period, with only 1.01 million tsubo aged less than 20 years. Buildings aged 20 years or older also account for a large majority of small & medium buildings in terms of number, with 7,534 buildings aged 20 years or older and 1,108 buildings younger than 20 years old.

As for large buildings, 3.91 million tsubo are aged 20 years or older, while 3.13 million tsubo are aged less than 20 years. Compared to the office stock as of the end of 2022, the percentage of large buildings aged 20 years or older increases by 4 percentage points to 56%. In terms of the number of buildings, 460 are aged 20 years or older and 298 are aged less than 20 years. Buildings aged 20 years or older increase by 3 percentage points to 61%. This is because the age of properties completed in 2003, a year when there was mass supply, reaches 20 years or older.



2. TOKYO 23 WARDS | Comparison of 5 Central Wards and 18 Peripheral Wards

Here we examine the office stock by sorting the 23 wards into 5 central wards (Chiyoda, Chuo, Minato, Shinjuku, and Shibuya Wards) and 18 peripheral wards. The office stock in the 5 central wards of Tokyo as of the end of 2023 will be 9.81 million tsubo based on net rentable area, which accounts for 75% of the entire office stock of the Tokyo 23 Wards (13.11 million tsubo) (Figure 3). This is broken down into 4.47 million tsubo (46%) of small & medium buildings and 5.34 million tsubo (54%) of large buildings. The average building age of the entire stock of the 5 central wards is 33.6 years. Small & medium buildings are aging more rapidly than large buildings, with the average age being 34.2 years for the former and 25.7 years for the latter.

Tokyo 5 Central Wards: 9.81 million tsubo; 6,862 buildings; Average age 33.6 years **Large Buildings Small & Medium Buildings** 70 (Gross floor area: 5,000 tsubo or more) (Gross floor area: 300-5,000 tsubo) Total: 4.47million tsubo; 6,310 buildings; Avg.34.2yrs65 Total: 5.34 million tsubo; 552 buildings; Avg. 25.7 yrs 60 Old seismic standard: 55 Old seismic standard: 1.15 million tsubo (26%) 0.83 million tsubo (16%) 50 45 40 20 years or older: 20 years or older: 35 3.61 million tsubo (81%) 2.93 million tsubo (55%) age 30 25 20 15 Less than 20 years: Less than 20 years: 10 0.86 million tsubo (19%) 2.41 million tsubo (45%) 30 10 0 10 Net Rentable Area (10,000 tsubo) 20 20 30

Figure 3: Tokyo 5 Central Wards Office Stock Pyramid 2023 (Net Rentable Area)

The number of buildings is 6,862 for the 5 central wards, which is 73% of the stock of the Tokyo 23 Wards (9,400 buildings) (Figure 4). Small & medium buildings account for 6,310 (92%) and large buildings 552 (8%).

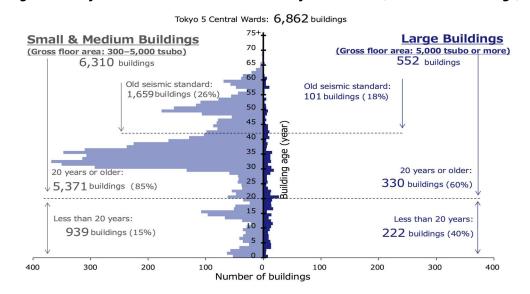


Figure 4: Tokyo 5 Central Wards Office Stock Pyramid 2023 (Number of Buildings)

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Meanwhile, the office stock in Tokyo's 18 peripheral wards at the end of 2023 will be 3.30 million tsubo on a net rentable area basis, 25% of the stock of the entire Tokyo 23 Wards (13.11 million tsubo) (**Figure 5**). Of this, small & medium buildings account for 48% with a net rentable area of 1.60 million tsubo, while large buildings account for 52% with 1.70 million tsubo. The average building age of the entire stock of the 18 peripheral wards is 33.2 years, which is not that different from the 33.6 years for the 5 central wards. By building size, the average age of small & medium buildings is 34.0 years, while that of large buildings is 23.3 years.

Tokyo 18 Peripheral Wards: 3.30 million tsubo; 2,538 buildings; Average age 33.2 years Large Buildings **Small & Medium Buildings** 70 (Gross floor area: 5,000 tsubo or more) (Gross floor area: 300-5,000 tsubo) Total: 1.60 million tsubo; 2,332 buildings; Avg.34.0 yrs⁶⁵ Total: 1.70 million tsubo; 206 buildings; Avg. 23.3 yrs 60 Old seismic standard: 0.26 million tsubo (16%) Old seismic standard: 50 0.09 million tsubo (5%) 20 years or older: 40 20 years or older: 1.45 million tsubo (91%) 35 0.98 million tsubo (58%) 30 25 Less than 20 years: Less than 20 years: 0.72 million tsubo (42%) 0.15 million tsubo (9%) 20 15 5 10 15 20 Net Rentable Area (10,000 tsubo)

Figure 5: Tokyo 18 Peripheral Wards Office Stock Pyramid 2023 (Net Rentable Area)

The number of buildings is 2,538 for the entire 18 peripheral wards, of which 2,332, or 92%, are small & medium buildings, and 206, or 8%, are large buildings (**Figure 6**).

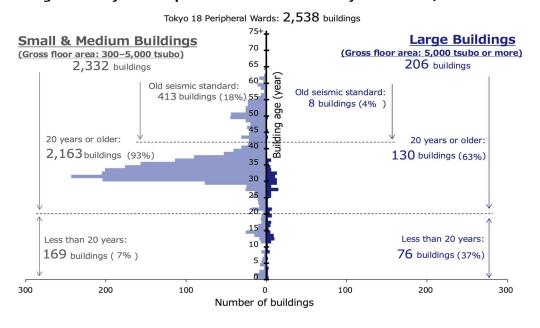


Figure 6: Tokyo 18 Peripheral Wards Office Stock Pyramid 2023 (Number of Buildings)

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3. OSAKA CITY | Comparison of Small & Medium and Large Buildings

The office stock in Osaka City at the end of 2023 will be 2.86 million tsubo on a net rentable area basis (**Figure 7**). Of this, small & medium buildings with a GFA between 300 and 5,000 tsubo and large buildings with a GFA of 5,000 tsubo or more account for roughly the same amount at 1.42 million tsubo (50%) and 1.44 million tsubo (50%), respectively. The office stock of Osaka City (2.86 million tsubo) is 22% of that of the Tokyo 23 Wards (13.11 million tsubo).

The average building age of the entire office stock is 34.8 years. The average age of small & medium buildings is 35.3 years and that of large buildings is 31.1 years.

By building age, office stock aged 20 years or older accounts for 89% of small & medium buildings, with 1.26 million tsubo aged 20 years or older and 0.16 million tsubo aged less than 20 years, indicating that supply has been limited over the past 20 years. Among large buildings, office stock aged 20 years or older accounts for 72%, with 1.03 million tsubo aged 20 years or older and 0.41 million tsubo aged less than 20 years old.

Osaka City: 2.86 million tsubo; 1,769 buildings; Average age 34.8 years **Small & Medium Buildings** Large Buildings (Gross floor area: 300-5,000 tsubo) 70 (Gross floor area: 5,000 tsubo or more) Total: 1.42 million tsubo; 1,578 buildings; Avg.35.3 yrs 65 Total: 1.44 million tsubo; 191 buildings; Avg. 31.1 yrs 60 Old seismic standard: Old seismic standard: 0.43 million tsubo (30%) 0.39 million tsubo (27%) 55 50 45 20 years or older: 40 20 years or older: 1.26 million tsubo (89%) 1.03 million tsubo (72%) 35 ade 30 25 20 15 Less than 20 years: Less than 20 years: 10 0.16 million tsubo (11%) **0.41** million tsubo (28%) 5 15 10 10 15

Figure 7: Osaka City Office Stock Pyramid 2023 (Net Rentable Area)

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Net Rentable Area (10,000 tsubo)

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In terms of the number of buildings, Osaka City as a whole has 1,769 buildings, of which small & medium buildings account for 1,578 (89%) and large buildings 191 (11%) (Figure 8).

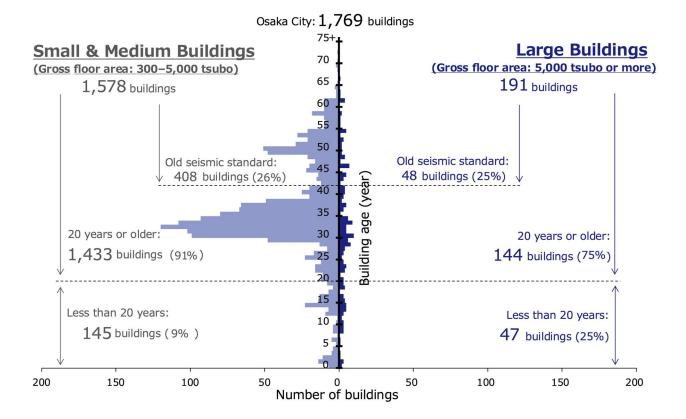


Figure 8: Osaka City Office Stock Pyramid 2023 (Number of Buildings)

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Survey Overview

Survey period	December 2022
Coverage	23 wards of Tokyo, city of Osaka
Target properties	Office buildings with a gross floor area of 300 tsubo or more as of the end of 2023, completed (or scheduled to be completed) in and after 1946 and used mainly as office space (excludes owner-occupied buildings)
Target data	Number of office buildings and net rentable area (in tsubo) for offices of small & medium and large buildings Large buildings: Gross floor area of 5,000 tsubo or more Small & medium buildings: Gross floor area between 300 and 5,000 tsubo
Survey method	Mostly based on publicly available information such as newspaper articles, with some field surveys and interviews with business operators
Remarks	 * The data of reconstructed or demolished buildings have been collected and reflected to the extent possible. Therefore, the overall stock volume and stock volume for a certain building age may decrease from the previous year's survey. * The sum figures may not match due to rounding. * The figures contained in the survey were aggregated at the time of the survey. Since information is added and updated on a daily basis, any differences from figures released in the previous year are not necessarily due to new construction or demolition. * The office stock for 2023 includes buildings whose scheduled completion date was known in December 2022. * Published rentable areas are used in the study, if available. If not, the study uses the area estimated from gross floor area based on a formula derived from a joint study with the Naoki Kato Lab, Architecture and Architectural Engineering, Kyoto University Graduate School of Engineering. * In this report, buildings completed in and before 1981, when the Revised Seismic Design Method of 1981 was enacted, are aggregated as "old seismic standard" buildings.

For further inquiries please contact below:

Xymax Real Estate Institute
https://soken.xymax.co.jp | E-MAIL: info-rei@xymax.co.jp

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