Global Housing Metrics Misrepresent Australian Affordability

Is Australia Really Less Affordable, or Is It Just Bad Math?

Background

The recently released 2024 Demographia International Housing Affordability Report rated middle-income housing affordability in 94 major housing markets (metropolitan areas) across eight nations for the third quarter of 2023. The eight nations included Australia, Canada, China, Ireland, New Zealand, Singapore, the United Kingdom, and the United States.

In this report, the methodology that was used for assessing housing affordability is house prices relative to incomes. The "median multiple" was used to rate middle-income housing affordability which is a price-to-income ratio being the median house price divided by the gross median household income (pre-tax).

This is a necessary metric because housing affordability cannot simply be assessed by just comparing house prices across nations.

The accuracy of these comparative reports is crucial. In Australia, where housing is an important consideration in numerous public policy decisions, insights from reputable think tanks like this one are often cited in significant policy discussions and papers.

The Australian Property Market

It is no secret that the Australian property market has boomed. Since the onset of COVID-19 in March 2020, Australian property prices have risen by 35.6% nationally. CoreLogic's National Home Value Index (HVI) rose 7.4% in last year, a reduction from the 24.5% surge recorded in 2021 (CoreLogic Report).

Demographia International Housing Affordability Report Findings

Middle-income housing affordability is rated in five categories, ranging from the most affordable ("affordable") to the least affordable ("impossibly unaffordable"). In a well-functioning market, the median priced house should be affordable to a large proportion of middle-income households.

Table ES-1 DEMOGRAPHIA HOUSING AFFORDABILITY RATINGS	
Housing Affordability Rating	Median Multiple
Affordable	3.0 & Under
Moderately Unaffordable	3.1 to 4.0
Seriously Unaffordable	4.1 to 5.0
Severely Unaffordable	5.1 & 8.9
Impossibly Unaffordable	9.0 & Over

Median multiple: Median house price divided by median household income

The Demographia International Housing Affordability Report found that Sydney was the 2nd least affordable city at 13.8 following Hong Kong at 16.7. When assessing some of the other countries and looking at their main cities, London was 14th at 8.1, Vancouver 3rd at 12.3, Los Angeles 5th at 10.9 and Auckland 12th at 8.2.

For the other main Australian cities, Melbourne came 7th at 9.8, Adelaide 9th at 9.7, Brisbane 15th at 8.1 and Perth 20th at 6.8.

But let's delve deeper into the "Price to Income" calculation…

Robbie Baskin, Co-Founder and Chief Investment Officer at FrontYa, found the Demographia International Housing Affordability Report fascinating as FrontYa is constantly immersed in Australian property market data.

"We found it surprising that Sydney was ranked the 2nd least affordable city in the world and that the other Australian cities were not far behind" said Baskin. "Obsessed with Australian housing, I suspected the calculation of data in this report needed to be looked into".

Through replicating the numbers and assessing the most expensive main cities in each country (Sydney, London, Vancouver, Los Angeles and Auckland), it was found that for all countries except for Australia, the median house price used in the "Price to Income" metric was actually the median **dwelling** price – but rather called a 'house' price, not differentiating houses from units. The reporting in Australia, however, separates houses from units meaning that the median 'house' price is actually a **house** price rather than a dwelling price.

It's not a 'house' it's a 'home'. It's not a 'home' it's a 'castle' … Definitions matter!

This notion explains why the Australian cities ranked so high in terms of unaffordability because the reporting focuses solely on houses and does not include units. Units represent 40% of Sydney dwellings alone. In every country examined in the report, units are included. Generally, units are lower value compared to house values which would skew and reduce the median dwelling price.

Turning the data into a "like-for-like" comparison

In order to make a fair assessment on housing affordability between countries, it is important for the data to be a "like-for-like" comparison. For this to be the case, the Australian price metric needs to also include units to make it a median dwelling price.

When using the median dwelling price, **Sydney drops from a price to income metric of 13.8 to 9.1 which moves its ranking from the 2nd least affordable city to the 10th** least affordable city. Melbourne also moves from the 7th least affordable city to the 14th least affordable city.

Similarly, our research showed that Auckland was likely miscalculated by using an average household income rather than a median household income. Using average household

income yielded the metric closer to the 8.2 stated in the report, while using a median returned a metric of 10.5, which is closer to the 10.8 reported by Demographia last year.

See below for a "like-for-like" comparison of the other major cities used in this assessment:

Demographia Report (original numbers)			Adjusted Demographia Report (Aus. + NZ cities now like-for-like)	
City	Median Multiple		City	Median Multiple
1. Hong Kong	16.7		1. Hong Kong	16.7
2. Sydney	13.8		2. Vancouver	12.3
3. Vancouver	12.3		3. San Jose	11.9
4. San Jose	11.9		4. Los Angeles	10.9
5. Los Angeles	10.9		5. Honolulu	10.5
6. Honolulu	10.5		6. Auckland	10.5
7. Melbourne	9.8		7. San Francisco	9.7
8. San Francisco	9.7		8. San Diego	9.5
9. Adelaide	9.7		9. Toronto	9.3
10. San Diego	9.5		10. Sydney	9.1
11. Toronto	9.3		11. Miami	8.1
12. Auckland	8.2		12. London	8.1
13. Miami	8.1		13. Adelaide	7.9
14. London	8.1		14. Melbourne	7.6
15. Brisbane	8.1		15. Bournemouth	7.5
16. Bournemouth	7.5		16. Brisbane	7.3
17. New York	7.0		17. New York	7.0
18. Bristol-Bath	7.0		18. Bristol-Bath	7.0
19. Boston	6.8		19. Boston	6.8
20. Perth	6.8		20. Seattle	6.7
			36. Perth	5.6

Outcome/Findings

Whilst Sydney and the wider Australian property market are generally unaffordable for many median-income earners, **the Australian market is not as expensive as some other major cities in the world**.

Reports (like Demographia) when referenced in public policy have critical downstream impact into the Australian market. It's important that accurate data is used.

Then the next step to achieve further 'like for like' would be comparable definitions of a 'city'. The greater suburbs that surround a city can have varying definitions by country as to whether they are included in the city's statistical reporting.

Data Sources

Demographia did not publish their data sources, however, we have been able to generally replicate their published "median multiple' metric values using the sources stated below.

Median House Prices as at Q3 2023 (date of Demographia analysis):

City	Demographia Suspected Source (and Value)	Like for Like Source (and Value)
Sydney	REIA - Houses (AUD $1,578,000)	PropTrack – Dwellings (AUD $1,057,000)
London	ONS – Dwellings (GBP £552,000)	ONS – Dwellings (GBP £552,000)
Auckland	CoreLogic – Dwellings (NZD $1,270,000)	CoreLogic – Dwellings (NZD $1,270,000)
Los Angeles	Zillow – Dwellings (USD $944,000)	Zillow – Dwellings (USD $944,000)
Vancouver	CREA – Dwellings (CAD $1,203,000)	CREA – Dwellings (CAD $1,203,000)
Melbourne	REIA - Houses (AUD $1,045,000)	PropTrack – Dwellings (AUD $810,000)
Adelaide	REIA - Houses (AUD $845,000)	PropTrack – Dwellings (AUD $689,000)
Brisbane	REIA - Houses (AUD $851,000)	PropTrack – Dwellings (AUD $762,000)
Perth	REIA - Houses (AUD $719,000)	PropTrack – Dwellings (AUD $597,000)

Note: PropTrack data was sourced from PropTrack Pty Ltd (ABN 43 127 386 298). Copyright and Property Data Disclaimers.

Median Household Income as at Q3 2023 (date of Demographia analysis):

City	Demographia Suspected Source (and Value)
Sydney	ABS (AUD $116,660)
London	ONS (GBP £69,134)
Auckland	Infometrics (NZD $161,793) … should be Stats NZ (NZD $120,950)
Los Angeles	US Census (USD $82,031)
Vancouver	Statistics Canada (CAD $106,680)
Melbourne	ABS (AUD $106,588)
Adelaide	ABS (AUD $87,067)
Brisbane	ABS (AUD $105,049)
Perth	ABS (AUD $105,666)

Note: In some cases the most relevant median household income metric was prior to Q3 2023 and to normalise we grew the income by the reported wage growth in that area. In some cases a median value was not available and so the median value was estimated using mean to median ratios available in comparable countries.