ASIA PACIFIC QUARTERLY INSIGHTS | INVESTMENT RESEARCH

How Office Affordability Analysis Improves Forecasting

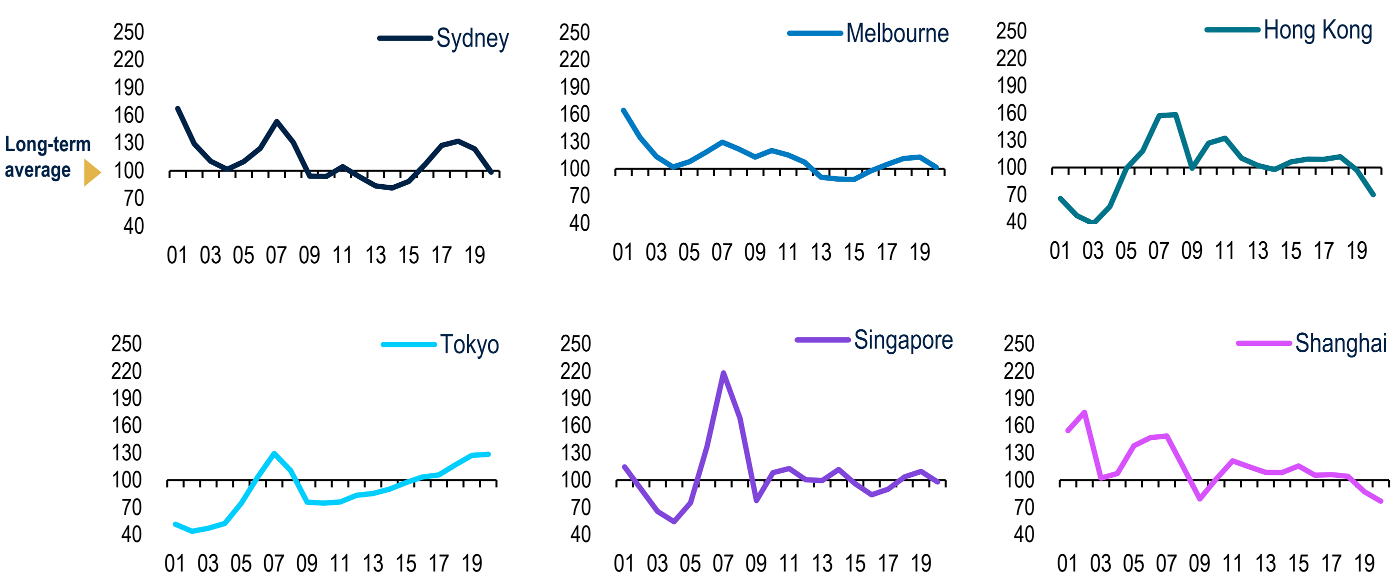
In early 2021, our Quarterly Insight (QI) looked at how office affordability measures might help us improve our understanding of rental growth. Too often forecasts can get hung up on growth and vacancy rates without considering other factors such as how much a tenant is willing or able to pay.

The thinking here is intuitive – the more (less) profitable a space is to occupiers, the more able and willing they are to pay more (less) rent.

So, does looking at occupier affordability improve our outlook for markets?

Exhibit 1: CBD Prime Office Rent Affordability Index, 2001-20

Office Rent Affordability Index (Neutral = 100; >100 = Less Affordable, <100=More Affordable)



Sources: JLL, Oxford Economics, PGIM Real Estate. As of February 2024.

For professional and institutional investors only. All investments involve risk, including the possible loss of capital.

For that we go back to our analysis in 2021, in which affordability is measured as office output per square meter (psm) of occupied space relative to rent. We assume the more output produced relative to rent, the more affordable the space becomes and the more able landlords are to raise rents and vice versa.

In **Exhibit 1**, our measure of office affordability, given as an index, is plotted on a year-over-year basis for each of a number of major CBD office markets. The long-term average or neutral rate is 100. When the affordability index (Index) falls below the neutral rate, occupier affordability is improving, and when above it is deteriorating.

Exhibit 1 highlights that in 2020 all markets other than Tokyo reported improving affordability. To be fair, Melbourne remained above the estimated neutral rate – reporting slightly lower occupier affordability – whilst Sydney and Singapore both fell just below the line.

A simple interpretation of the Index suggested that for 2021 there was a risk that rental growth would be better than expected in all markets other than Tokyo and Melbourne because office affordability had fallen so much. For Tokyo and Melbourne, the risk was that rental growth would do worse than expected.

What actually happened is shown in **Exhibits 2a and 2b.**

In all cases, the Index correctly flagged the risks to the forecasts. So what does this mean for 2024?

Exhibit 2a: Comparing the Forecasts and the Outcome for Annual Change in Net Effective Rents for Major CBD Office Markets, 2021 (% p.a.)

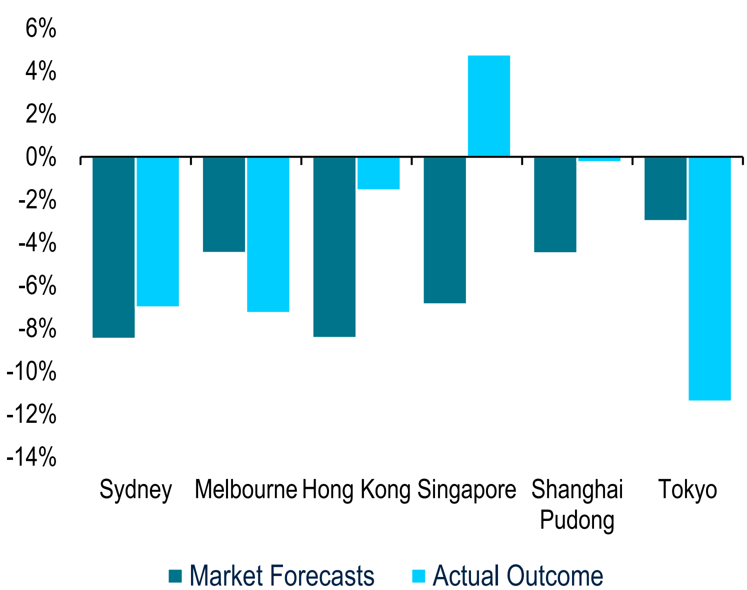


Exhibit 2b: Comparing AI Risks to the Outcomes

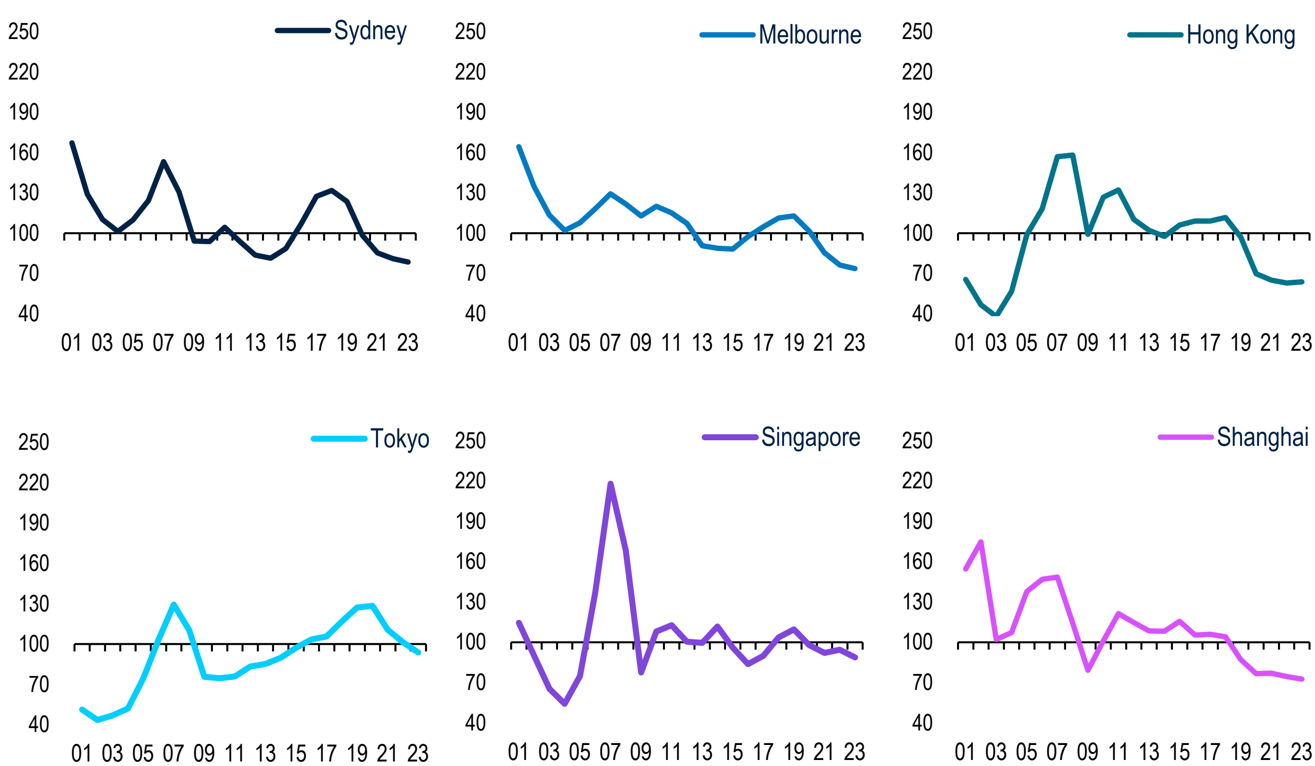
CBD Office Market	AI Signal: Risks to Forecasts	Result: Outcome vs. Forecasts
Sydney	Better	Better
Melbourne	Worse	Worse
Hong Kong	Better	Better
Singapore	Better	Better
Shanghai	Better	Better
Tokyo	Worse	Worse

Sources: JLL, Oxford Economics, PGIM Real Estate. As of February 2024.

Repeating the exercise for 2024 does bring its own challenges, of course. The risks to rental growth forecasts are now more complicated – this is not only about supply, vacancy, jobs growth and so on, but also now about office utilization trends as well, which is not yet a settled issue.

Nonetheless, **Exhibit 3** illustrates that as of end-2023 all CBD office markets are now more affordable for occupiers than the neutral rate. In each case this points to risks that rental growth forecasts are too negative and actual rental growth in 2024 will prove to be stronger than expected.

Exhibit 3: Office Rent Affordability Index (Neutral = 100; >100 = Less Affordable, <100=More Affordable)

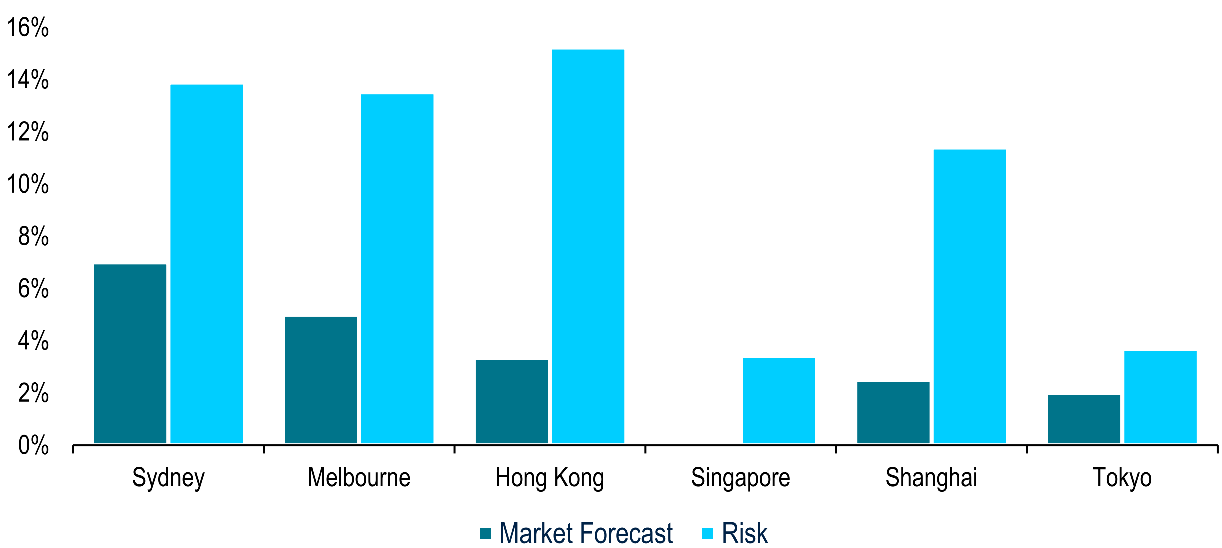


Sources: JLL, Oxford Economics, PGIM Real Estate. As of February 2024.

If we use the relationship between the Index and the forecast errors in 2021 and apply that to our 2024 forecasts, we can estimate by how much our rental growth forecasts might be wrong. **Exhibit 4** compares our net effective rental growth forecast against the estimated risk to those forecasts for the six CBD office markets.

In magnitude, the estimated risks to the forecasts look too high given current market dynamics. Nonetheless, the Index might still be of value by flagging where the forecast errors are the largest. Here Hong Kong looks to be the most under-rated for rental growth. By contrast, Singapore and Tokyo look the least risky.

Exhibit 4: Prime CBD Office Markets, Net Effective Nominal Rental Growth Forecasts vs. Estimated Risks to Those Forecasts, 2024 (% p.a.)



Sources: JLL, PGIM Real Estate. As of February 2024.

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