

## Non-technical summary for 'The Apartment Shortage'

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Planning regulations restrict the supply of apartments and hence drive up their price. This effect can be measured by the difference between the price of new apartments and the cost of supplying them. We estimate this gap to be large, especially in Sydney. Specifically, planning restrictions increase the cost of apartments by 68 per cent in Sydney, by 20 per cent in Melbourne and 2 per cent in Brisbane.

One way of supplying extra apartments is to build taller buildings. This increases per-apartment construction costs but means that extra land is not required. Our estimates allow for these higher construction costs, together with costs of finance, marketing, professional fees, infrastructure contributions and developer's margins. Results are in the following table.

**Table 1: Average Apartment Prices and Costs**

\$'000, 2018

	Sydney	Melbourne	Brisbane
Average sale price	873	588	470
Cost of supply	519	491	460
Effect of planning restrictions (\$'000)	355	97	10
Effect of planning restrictions (per cent of costs)	68	20	2

We also estimate the effect of planning restrictions at a more detailed level within capital cities for a slightly earlier period – from 2011 to 2016. In Sydney, the effect of restrictions increases strongly as you get closer to the centre of the city. The largest effects – averaging more than \$450,000 per apartment in 2011 to 2016 – occur in inner-ring areas like the eastern suburbs, Leichhardt and North Sydney. However, even though the excess demand for apartments is greatest near the centre, building patterns do not reflect this. Recent and planned construction in Sydney is located predominantly in middle and outer suburbs. In Melbourne and Brisbane the effect was unevenly spread throughout the metropolitan areas.

While we focus on the cost of adding additional floors to apartment buildings, an alternative way of supplying apartments would be to construct more buildings. This requires the purchase of land, which is expensive, especially in Sydney. For short buildings, land costs amount to hundreds of thousands of dollars per apartment. For this reason, medium-density housing in the form of low-rise apartment buildings is much more expensive to provide than high-density housing.

As building height increases, however, the per-apartment cost of land declines while construction costs increase. So, above a certain height, tall buildings become more costly to build than more, shorter buildings. In Sydney, under central assumptions and on average across the metropolitan area, this crossover point occurs at 20 storeys, much higher than the typical apartment building, which is 10 storeys. This cost advantage of taller buildings is largest in Sydney's inner suburbs, where land costs are very high and where, in the absence of height restrictions, it would be economic to raise building heights by 20 storeys or more above their current heights.

In contrast, the benefits of raising building heights in Melbourne and Brisbane are smaller. This is partly because land is less expensive, so it does not need to be used so intensively. And partly because apartment buildings in those cities are already close to the economically efficient height.