

# **House Prices, Rents, Home Ownership and Affordability**

**The Facts and a Mainstream Economics Explanation**

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## 1 Presentation Outline

This presentation aims to promote understanding of the nature, causes and major consequences of rising house.

The presentation is structured is as follows:

1. House Prices, Rents and Home Ownership: The Facts
2. Key Drivers: Population, Housing, Incomes, Interest rates: The Facts
3. House Prices, Rents and Home Ownership: General explanations
4. House Prices, Rents and Home Ownership: Empirical explanations
5. Housing Affordability in Sydney
6. Conclusions

The focus is on capital cities, especially Sydney.

This is work in progress: some issues are not fully resolved here, e.g. the full causes of recent declines in home ownership and, importantly, details of housing affordable problems for low income households.

However, we argue that the main conclusions are robust.

In the conclusions, we make a few brief observations about policy responses, but these are not the focus of the presentation.

## 2 Acknowledgments

The presenter is part-time consultant to NSW Treasury. All views are the presenter's responsibility.

Oxford Economics (2016) *Forecasting UK House Prices and Home Ownership (1992 to 2014)*  
<https://www.oxfordeconomics.com/my-oxford/projects/351906>

Thanks to Sydney University for hosting this presentation

This presentation with supporting references and 12 more detailed tables is available at:  
[www.applieconomics.com.au/publications/papers/index.htm](http://www.applieconomics.com.au/publications/papers/index.htm)

### 3 House Prices, Rents and Home Ownership: The Facts

#### House prices in Australian capital cities: 1970 to 2017

Median nominal detached house prices  
Median real detached house price indices  
Median real attached house price indices

#### Sources

2003-2017 ABS  
Earlier data Valuer-General / REIA

Abelson., P and D. Chung, 2005, "The Real Story of Housing Prices in Australia from 1970 to 2003", *Australian Economic Review*, 38, 3, pp.1-17.

#### Quality of Housing

The ABS data are quality adjusted  
The data series are spliced together taking ABS data as the standard  
Earlier data are not quality adjusted – this could overestimate price rises by 0.5% to 1.0% p.a.

**Summary data in next 3 slides.** Full data are given as annexes in accompanying paper.

### 4 Capital Cities: Median Nominal House Prices (\$s, average over year)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
1980	71,787	41,952	36,700	36,496	45,615	33,693		52,070
1990	202,277	139,131	116,903	98,539	114,321	76,215	100,682	140,739
2000	299,244	202,854	175,871	136,860	176,639	109,443	185,294	210,759
2003	473,630	293,130	257,600	228,100	231,750	160,330	209,630	342,280
2005	494,000	325,500	314,730	274,000	311,250	246,880	292,500	375,050
2010	603,380	494,080	405,500	405,500	507,000	344,830	534,750	527,680
2015	880,250	585,880	485,250	432,000	538,250	356,880	586,500	593,000
2016	910,000	627,500	501,250	433,280	522,250	370,080	543,750	625,500
2017	988,800	716,100	517,800	458,500	508,300	398,300	510,000	671,800

Details - See Annex Table 1

## 5 Capital Cities: Median Real House Price Indices (2003=100)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	All cities
1980	45.5	42.9	42.7	48.0	59.0	63.0		44.8	48.1
1990	58.8	65.3	62.5	59.5	67.9	65.4	66.1	56.6	61.3
2000	70.7	77.5	76.4	67.2	85.3	76.4	99.0	68.9	72.7
2003	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2005	99.2	105.7	116.3	114.3	127.8	146.5	132.8	104.3	102.9
2010	104.5	138.3	129.2	145.9	179.5	176.5	209.3	126.5	129.0
2015	135.9	146.1	137.7	138.5	169.8	162.8	204.6	126.7	142.8
2016	139.1	154.9	140.8	137.5	163.1	167.1	187.7	132.3	149.8
2017	148.2	173.5	142.7	142.7	155.7	176.4	172.7	139.4	160.6

Details – Annex Table 3

## 6 Capital Cities: Real Median Other Dwelling Price Indices (2003=100)

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	All cities
1980	47.1	36.8	55.6	60.1	72.5			40.1	
1990	51.9	58.8	62.3	70.1	64.9	77.7		52.7	
2000	79.7	76.6	95.1	69.6	79.7	78.8	107.1	61.9	79.5
2003	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2005	96.3	97.4	110.4	112.4	122.7	121.5	143.7	98.8	104.7
2010	102.5	130.1	137.1	146.7	173.0	136.8	259.7	116.4	132.4
2015	129.0	128.3	128.7	135.6	163.3	124.0	249.4	104.7	135.7
2016	135.5	131.0	126.6	132.7	159.2	128.2	232.7	107.4	137.3
2017	138.9	137.4	125.9	145.7	151.3	135.7	203.7	107.6	139.9

Details – Annex Table 6

## 7 Comments

There are short-term variations in house prices between the capital cities.

**But the long-term changes are remarkably similar.**

Since 2000, median detached house prices **have risen less** in Sydney than average of other capital cities.

Median other dwelling prices have **risen about the same** in Sydney as average of other capital cities.

**Changes in housing prices are a national phenomenon.**

The principal cause of rising house prices is likely to be a national driver / cause.

As shown in Slide 8 and IMF (2018), house price inflation is also an international phenomenon.

## 8 International House Prices

### Global house price index

Q1 1980 =100



Economist.com

## 9 Median Housing Rents and Household Income in Sydney: 1990 to 2017

Year	\$ per week		Real indices: 2001=100		Median gross household income
	Houses	Units	Houses	Units	
1990	185	170	104.0	84.7	
1995	190	180	94.7	79.5	90.8
2000	230	250	104.1	100.3	99.9
2001	235	265	100.0	100.0	100.0
2005	260	280	93.6	98.8	115.2
2010	380	420	123.6	125.0	126.5
2015	460	500	127.6	131.4	139.2
2017	485	550	139.3	140.1	145.0

Notes: 2001 = 100.

Middle ring results are similar.

Units are closer to CBD, so rents higher.

Rent increases in line with household incomes. Much lower than house price increases.

Source: FACs *Rent and Sales Reports*.

Details – Annex Tables 8 and 9.

## 10 Home ownership (%) in Australia and Sydney: 2001 to 2016

	2001	2006	2011	2016
Australia	71.6	70.4	69.4	68.0
Sydney	68.4	67.3	67.4	64.6

Source: Census data: Owned as % of owned and rented. Excludes other tenure type and tenure not stated.

Average may underestimate decline in home ownership – home ownership increases with age. So, if average age increases, overall home ownership may be constant with occupancy rates falling for all ages.

On other hand, migration / short term worker effects may reduce home ownership rate.  
In Sydney, Australian born residents fell from 62.2% in 2001 to 57.1% in 2016.

Ideally need to sort out age and migration effects.

Almost certainly, allowing for these factors, home ownership has declined.

We will see the major cause (the increase in FHO deposits).

UK homeownership fell from 69.3% in 2002 to 63.1% in 2014 (Oxford Economics).

## 11 Key Drivers of Rents and House Prices: The Facts

Key Drivers

Demand: population, incomes, interest rates

Supply: housing stock

Median household incomes in Sydney: slide 9, between 2001 and 2016, real change = 40%

Population and housing supply in Australia and Sydney: 1991 to 2016 (Census data)

	Period	Population increase	Private housing increase
Australia	1996 – 2016	31.8	40.0
Australia	2001 – 2016	24.7	27.1
Sydney	1991 – 2016	36.3	41.3
Sydney	1996 – 2016	28.9	30.1
Sydney	2001 – 2016	22.3	20.1

Housing stock generally increased by **more** than population across country.

Also in Sydney between 1991 and 2016 and between 1996 and 2016.

Major exception: Sydney 2007-12 – private completions were very low - just under 1% of stock

## 12 Borrowing Rates: 1991 to 2017

Year	RBS cash rate	Standard mortgage rate	Discounted mortgage rate
June Qtr	%	%	%
1991	10.52	13.42	13.22
1995	7.50	10.50	10.30
2000	6.25	7.72	7.52
2005	5.50	7.30	6.80
2010	4.75	7.27	6.75
2015	2.00	5.45	4.65
2016	1.75	5.40	4.60
2017	1.50	5.25	4.50

Bergman and Tran (2018) provide strong evidence that the discounted mortgage rate is the common rate.

In a highly competitive mortgage market, borrowing rates for an 80% LTV mortgage may be even lower than the discounted mortgage rate.

Details – Annex Table 7.

## 13 Other Factors: Taxes / Subsidies, International Demand, Regulation

Taxes and subsidies: main ones have not changed in real terms over last 20 years

Negative gearing unchanged since 1985

1999: CGT changed from 100% on real gains to 50% of nominal gains (real + inflation)

This is a concession only if real gain > inflation. This is recent experience.

If inflation > real gains, the 1999 change is not concessionary.

International demand has escalated. Reliable data hard to get as money moves in many ways.

Lending regulations: Loan to value ratios. Have tightened recently and almost certainly will be having current impacts. (See, for example, Atkin and Cheung, 2017).

Note also the role of substitutes – housing prices in other Australian cities (and international cities, IMF, 2018).



## 14 General Explanations: Rents and House Prices – Core Concepts

**There are two distinct concepts: living in a house and owning a house**

Latter is equivalent to consuming housing services and investing in a house

Rents are the price of housing services

Rental prices balance the supply and demand for **housing services**

House prices are the price of owning houses

House prices balance the supply and demand for housing **as an asset**

Note also potential role of substitutes, i.e. house prices in other cities (or even countries – IMF, 2018)

## 15 Real Housing User Cost

Another key concept: the cost of home ownership is the real annual cost of the owner.

This is known as the real housing user cost (RHUC)

RHUC is cost of housing that leaves the owner as well off at end of year as at the start.

$RHUC = f(RMR, RER, D, M, PT, RCG)$

RMR is real mortgage rate of interest, RER is real post-tax return on own equity, D and M are depreciation and maintenance in real terms, PT is property tax, RCG is real capital gains.

- RHUC is all costs (and gains) of home ownership expressed **in real terms**.
- Can estimate in nominal terms and discount for inflation
- Repayments of mortgages are **not** part of RHUC - these repayments do not affect net worth.
  - They reduce current consumption, but increase future consumption
- RHUC may be calculated in absolute \$s or as % of house price.

## 16 Drivers of Housing Rents

Three main drivers

Rents depend on the demand (population and income) and supply of housing

Changes in house prices do not influence rents.

## 17 Drivers of House Prices

**Asset prices are the present capital value of an income stream.**

House price = current net rent / RCC (investor) or rent / RHUC (owner)

where net rent is rent less any operating costs and RCC is the **real** cost of capital. This takes inflation out of the both the income stream and the discount rate.

Thus, changes in rents affect house prices.

But house price can change **without** change in rents (the price of housing services).

Standard asset pricing theory – if RCC halves, the price of houses doubles.

An analogy: one can buy clothes or invest in a clothing company. The value of the shares may rise without any increase in the price of clothing.

Thus, **the core drivers of house prices** are drivers of rents plus borrowing (discount) rates.

Population (inc. migration), income, housing supply and interest rates.

Other factors (Slide 13): tax / subsidy changes, international demand, prudential regulations.

## 18 Drivers of Home Ownership

Complex topic with several drivers – the presenter has not researched this in detail

Demographics of potential FHOs (age structure)

Earnings of potential FHOs

Cost of FHO

Constraints on FHO borrowing for mortgage (high LTV ratios expensive)

Housing preferences (security of ownership, cf. mobility)

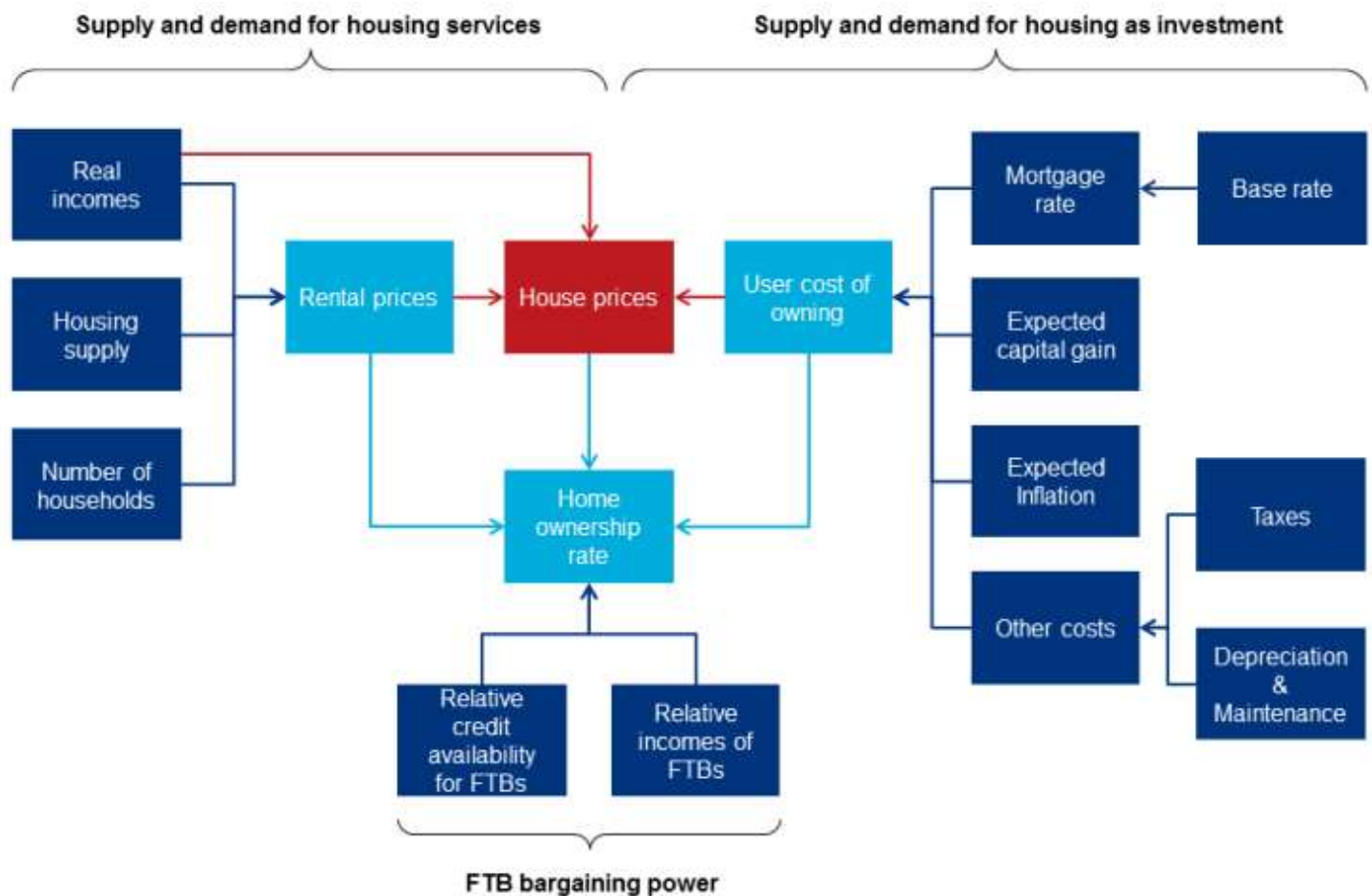
Potential differences between native born and new migrants

The balance between rents and RHUC.

Renting < RHUC → More renting / less home ownership and vice versa

Oxford Economics Report (2016, Section 6.4) estimated these relationships for UK. They found that the home ownership rate is not affected by the supply of housing (more houses reduce RHUC and rents).

## 19 An Overall Explanatory Diagram: Oxford Economics



## 20 Rents: Empirical Explanations

Rents = f (population, income and housing supply)

Population and housing supply increased similarly over this period offsetting each other.

We have seen that housing rents have risen almost exactly with household income

In Sydney between 2001 and 2017:

- Real median rent for 3-bedroom houses rose by 39%
- Real median rent for 2-bedroom units rise by 40%.
- Real median gross household income rose by 45%;

Thus, rent increases reflect primarily increases in household income.

See Slide 9 and Annex Tables 8 and 9).

## 21 House Prices: Empirical Explanations

Simple model: House prices =  $f$  (rents, interest rates) or (population, income, housing supply and real interest rates)

Between 2001 and 2017, in Sydney real detached house prices rose by 100% and real attached housing prices by nearly 70% - see Slides 3 and 6.

Rents (i.e. population, housing supply and household incomes) accounted for a 40% increase. The major factor was household incomes.

Over this period, population increased slightly more than supply in Sydney (slide 11). Thus, low supply presumably made a small contribution to rent increase.

Therefore, most of the difference between house price and rent rises was due to the fall in real interest rates as per explanation / equation in Slide 17 and data in Slide 12 (note mortgage rates there are nominal).

Between 2001 and 2017, the real discounted mortgage fell by over 40%. Applying this to the equation in Slide 17, this fall accounted for over 40% increase in house prices between 2001 and 2017 (i.e. a substantial part of the real increase in house prices).

As noted at the start, with house price inflation a national phenomenon, some national factor like interest rates is likely to be a major factor.

## 22 House Prices: Empirical Explanations (Continued)

More complex econometric modelling

Abelson, P., Joyeux, R., Milunovich, G. and D. Chung, 2005, 'Explaining House Prices in Australia: 1970 to 2003', *Economic Record*, 81, pp. S1-S8.

Major findings were:

- Real house prices rose by 1.7% for each 1% increase in real disposable income per capita (i.e. elasticity = 1.7).
- A 1% fall in the real mortgage rate led to a 5.4% rise in real house prices. Note this was estimated in absolute terms; it is not an elasticity estimate. This would imply that a 3% fall in real interest rates would increase real house prices by around 16%.
- A 1% increase in housing per capita led to a 3.6% fall in real house prices (i.e. an elasticity of -3.6).
- Expectations of real capital gains also explained the demand for housing (lowering RHUC)

In analysis of 20 studies across 12 counties Girouard et al., (2006) found following elasticities:

- Real house prices to real disposable household income = 1.9 (for 20 studies).
- Real house prices to real interest rates = -3.1 (for 18 studies).
- Real house prices to housing stock = -3.1 (for 10 studies).

These elasticities are similar to Abelson et al. for income and housing supply but indicate a significantly higher impact for changes in real interest rates. (Abelson et al. are currently updating 2005 model).

## 23 Other House Stock Price Supply Elasticities

Oxford Economics (2016) found a house price elasticity of -1.8 in relation to UK housing stock. They cite (in Figure 20) three other studies with price elasticities for housing stock between -1.1 and - 2.1.

They conclude that an increase in housing supply would have little impact on house prices in the UK.

Critically, these estimates relate to **changes in the housing stock (not to flow figures)**.

Example: In Sydney, private housing stock is about 1.9 million dwellings. Average annual supply is about 25,000 dwellings. Increasing annual supply by 10,000 (40%) would increase the housing stock by 0.05 per cent.

Adopting a price elasticity of -3.0, this would reduce real house prices in Sydney by 1.5%.

Achieving this for 3 years would reduce real house prices by 4.5%

## 24 City Substitutes - Inter-City Equilibrium: Another Core Issue

Cities are substitutes – they are not independent.

Abelson / Applied Economics and Travers Morgan (1991) study found Melbourne prices followed Sydney and Adelaide followed Melbourne

Thus, above supply effect for Sydney requires house prices in other cities also to fall by 4.5%.

At margin, similar households have equal welfare in each city (Glaeser, 2007).

Welfare = f (income, commuting costs, house prices and amenity).

To achieve equilibrium, house prices are higher in cities with high incomes and high amenity.

House prices in Sydney are a national problem. Without lower prices in other cities, lower prices in Sydney would lead to more immigration into Sydney.

Sydney house prices would rise and prices elsewhere fall until the inter-city equilibrium would be restored.

## 25 Drivers of Home Ownership

As per slide 10, home ownership rates have fallen in Australia and in Sydney.

Slide 18 discusses possible factors.

Demographics, migrants, lower earnings of potential FHOs, constraints on FHO borrowing.

I am not aware of detailed modelling of these factors.

But I note two other factors:

Government support for FHOs varies. Before September 2012, FHO grant was \$15,000 for any home up to \$650,000. Now \$10,000 only for new homes up to \$750,000.

On the other hand, FHOs now receive relief from stamp duties on low priced housing.

But Note: the rising cost of the FHO deposit of 20% of the price (see Slide 30)

## 26 Housing Affordability in Sydney: Average-Income Renters: 1995 to 2017

Year	Rent as % of median disposable household income	
	Houses	Units
1995	31.3	29.7
2000	31.3	34.7
2005	26.2	28.2
2010	30.3	33.5
2015	29.4	32.0
2017	28.9	32.8

Median rents have not increased as a proportion of median household disposable income.

Indicates that housing affordability has not worsened for middle income housing renters.

See Tables 8 and 9 in Annex.

## 27 Housing Affordability in Sydney: Low-Income Renters

### First Quartile Rents and Top First Quintile Income

June qtr	Housing 3-bedroom		Unit 2-bedroom		Disposable HH income
	Rent (\$)	% of median rent	Rent (\$)	% of median rent	Top 1 <sup>st</sup> quintile as % median
2001	195	84.8	195	78.0	48.6
----					
2010	330	86.8	340	80.0	49.2
2015	400	87.0	410	82.0	50.7
2016	410	87.2	420	80.8	49.4
2017	420	86.8	450	81.8	50.4

Source: FACs, Sales and Rental Reports.

Table shows:

- First quartile rents (25% level) for all 3-bedroom houses and 2-bedroom units in Sydney.
- These rents as % of median rents.
- Estimated disposable household income at top of first quintile (20% level) as % of median disposable household income.

See also Annex Table 10.

## 28 Explaining High Housing Costs for Low-Income Renters

First quartile rents are typically between **80% and 85% of median rents**. i.e. first quartile rents represent a reduction of 15% to 20% on median rents.

In 2015-16 \$s, gross household income was \$45,321 at top of 2<sup>nd</sup> decile compared with \$106,742 at top of 5<sup>th</sup> decile (median household income).

Allowing for average tax rates of 20% and 5% respectively, households at top of 2<sup>nd</sup> decile have approximately 50% of disposable income of median household.

Rent as a percentage of disposable household income for a low- income household ( $R/Y_{LYH}$ ) is given by:

$$R/Y_{LYH} = R/Y_{MYH} \times 0.8/0.5$$

where  $R/Y_{MYH}$  = rent as a percentage of income for a median income household, 0.8 represents rent discount and 0.5 the income discount for the low-income household.

This implies housing rent to income ratio = 60% higher for low-income household (at top of the 2<sup>nd</sup> decile level). Slide 27, we apply this ratio to results for 3-bedroom houses.

This shows low-income households pay nearly 50% of their disposable income on housing rents.

These results are not precise, but **indicate strongly where housing affordability is a major problem**.

## 29 Affordability for First Home Owners: Four Metrics

Four metrics in relation to median FHO disposable income.

1. Interest payments on an 80% mortgage
2. Mortgage payments (principle and interest)
3. First home owner deposits
4. Real housing user costs

Assumptions underlying estimates

Median FHO income = median Sydney household income. (ABS 4130.0 55% are > median; 45% < median)

FHO purchases a dwelling at 70% of median price in Sydney (For all Australia, ratio is 87%)

FHOs borrow 80% of house price.

They have access to discounted mortgages at this LTV ratio

## 30 Affordability for First Home Owners: Four Metric Results

Year 2017 Compared with 1995-2016 Average

Metric	1995-2016 % of income	2017 % of income
<b>Detached dwellings</b>		
Interest payments	40.0	35.3
Mortgage payments	50.5	52.9
First home deposit	174.7	223.9
Real housing user costs	36.2	26.4
<b>All other dwellings</b>		
Interest payments	33.2	26.3
Mortgage payments	41.5	39.4
First home deposit	143.9	167.1
Real housing user costs	30.1	19.7

If FHO either has savings = 20% of value of housing OR can borrow 100% at discounted mortgage rate, there is no more affordability problem in 2017 than 10 or 20 years prior.

When neither of these conditions exist, there is a FHO housing deposit problem which deters FHO buyers.

Annex Table 11.



## 31 Affordability for First Home Owners: Four Metric Results

### Housing Affordability in 2017 Compared with other 22 Years 1995-2016

Metric	Equally affordable in 2017	More affordable in 2017	Less affordable in 2017
<b>Detached dwellings</b>			
Interest payments	0	14	7
Mortgage payments	0	6	16
First home deposit	0	0	22
Real housing user costs	0	21	1
<b>All other dwellings</b>			
Interest payments	0	21	1
Mortgage payments	1	17	4
First home deposit	0	1	21
Real housing user costs	0	22	0

See Annex Table 12.

## 32 Conclusions

This presentation has focused on explaining the causes of house price inflation and some of the consequences.

### Rents

Rents have risen broadly with household incomes. They have not risen with house prices. Thus, median income households are spending a similar % of their income on rents, probably for improved quality housing.

But rents are a serious problem for low-income households because the distribution of incomes is much greater than the distribution of rents.

This is an ongoing problem (and perhaps worsening with low wage growth) which in my view needs more analysis and action.

Dealing with this is complicated by Commonwealth / state relationships for welfare support.

### House Prices

House prices are an asset pricing issue.

The key driver of house price inflation (in Sydney, nationally and internationally) over the last 18 years has been large falls in the RBA and international bank rates and related borrowing rates.

With borrowing rates likely to rise, house prices are likely to fall in real terms from recent peaks.

## 33 Conclusions (cont.)

Using 3 metrics (interest payments, mortgage payments and RHUC), the cost of homeownership has been broadly constant relative to income over last 20 years.

### First Home Owners

But there are FHO problems as deposits have risen in relation to income which has most likely contributed to a fall in homeownership rate.

There are in my view strong social reasons to support home ownership. One way is assistance for FHOs buying low-priced housing. An issue here is whether this pushes up house prices and helps home owners more than the purchasers.

### Housing Supply

Housing supply has a minor impact on house prices. Increasing housing completions by a large amount, say 40% (from 25,000 to 35,000 p.a.) for 3 years would increase housing stock by about 1.5% and could reduce real house prices in Sydney by about 5%.

However, this assumes no increase in immigration to Sydney as a result. House prices in Sydney can be lowered substantially relative to other cities only by lowering its relative amenity premium.

### Environment

Without investment in infrastructure and environmental amenities, increases in housing density tend to increase congestion and reduce existing amenity. The various trade-offs require careful and fair management.

As a young Frenchman from Paris planning to settle in Sydney explained his reason to me: **“There are no trees in Paris!”**

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## Annexes

Table 1 Capital Cities: Nominal Median House Prices (Average over year)

Table 2 Capital Cities: Real Median House Prices (Average over year: 2017 prices)

Table 3 Capital Cities: Real Median House Price Indices (2003=100)

Table 4 Capital Cities: Nominal Median Other Dwelling Prices (avr. over year)

Table 5 Capital Cities: Real Median Attached Dwelling Prices (2017 prices)

Table 6 Capital Cities: Real Median Other Dwelling Price Indices (2003=100)

Table 7 Borrowing Rates: 1991 to 2017

Table 8 Median Housing Rents in Sydney: 1990 to 2017

Table 9 Rents and Household Income

Table 10 First Quartile Rents and Top First Quintile Incomes in Sydney

Table 11 Affordability of Detached Dwellings in Sydney

Table 12 Affordability of Attached Dwellings in Sydney

**Table 1 Capital Cities: Median Nominal House Prices (\$s, average over year)**

Year	Sydney (a)	Melbourne (b)	Brisbane (c)	Adelaide (d)	Perth (e)	Hobart (f)	Darwin (g)	Canberra (h)
1970	19,498	13,594			19,784			
1971	22,104	14,232		12,064	20,066	11,037		20,980
1972	24,711	15,931		13,407	19,784	11,711		23,719
1973	28,569	21,029	18,104	16,474	21,310	14,128		31,295
1974	33,157	27,083	22,243	22,506	21,310	19,054		37,297
1975	35,763	30,481	24,519	26,510	27,697	24,026		39,162
1976	38,370	34,942	27,182	30,211	37,306	29,347		40,910
1977	40,872	39,296	29,588	33,049	41,150	32,066		42,775
1978	45,043	39,934	31,010	33,556	43,609	31,601		43,475
1979	52,863	40,358	32,536	34,215	43,637	32,298		45,456
1980	71,787	41,952	36,700	36,496	45,615	33,693		52,070
1981	82,266	46,731	46,890	39,639	49,544	34,483		67,310
1982	82,814	49,652	57,029	43,440	54,518	37,480		68,796
1983	84,899	55,758	57,443	48,611	55,394	39,502		79,431
1984	89,565	69,034	60,986	62,094	54,461	41,593		98,197
1985	92,119	79,867	63,676	73,195	58,842	51,584		105,627
1986	102,520	87,089	65,176	74,513	65,568	52,723	86,795	106,268
1987	125,146	95,055	65,693	75,526	69,214	58,974	80,422	105,044
1988	147,016	115,765	73,452	81,508	88,178	63,156	85,307	118,011
1989	178,139	140,193	99,316	91,646	115,875	71,870	90,019	134,037
1990	202,277	139,131	116,903	98,539	114,321	76,215	100,682	140,739
1991	189,765	134,882	124,145	105,332	112,484	83,325	110,651	159,096
1992	191,120	132,758	133,455	109,792	115,875	89,064	125,108	180,950
1993	196,021	133,820	141,214	112,732	127,463	96,895	149,287	185,758
1994	200,582	138,068	147,939	115,064	139,191	102,704	156,603	187,477
1995	205,144	137,006	152,077	113,036	143,332	99,219	164,042	181,300
1996	220,132	139,131	153,112	111,516	143,148	100,381	162,926	177,599
1997	243,201	150,813	155,181	115,064	151,627	101,078	175,077	178,036
1998	259,363	164,620	165,009	120,234	159,399	99,683	172,102	181,241
1999	284,126	185,861	166,561	128,750	166,747	104,307	177,929	188,235
2000	299,244	202,854	175,871	136,860	176,639	109,443	185,294	210,759
2001	336,259	238,965	184,872	152,067	190,346	112,068	186,485	240,392
2002	404,032	274,013	212,080	182,480	213,945	127,474	200,620	272,911
2003	473,630	293,130	257,600	228,100	231,750	160,330	209,630	342,280
2004	509,000	308,880	305,680	259,630	264,000	223,000	248,080	368,030
2005	494,000	325,500	314,730	274,000	311,250	246,880	292,500	375,050
2006	486,750	345,250	333,380	289,000	426,250	269,500	357,750	404,580
2007	511,580	371,750	383,000	325,250	473,750	291,630	400,750	450,750
2008	490,500	388,750	414,750	360,000	447,500	301,500	429,330	460,250
2009	508,250	418,630	426,250	371,330	468,000	316,650	482,500	469,880
2010	603,380	494,080	405,500	405,500	507,000	344,830	534,750	527,680
2011	566,750	492,380	392,500	392,500	483,750	335,130	505,500	523,250
2012	608,130	487,750	435,000	387,000	498,380	329,200	542,380	501,000
2013	670,000	516,750	449,750	399,250	530,250	336,250	554,750	506,830
2014	785,750	543,250	472,630	418,080	548,000	357,250	576,000	556,880
2015	880,250	585,880	485,250	432,000	538,250	356,880	586,500	593,000
2016	910,000	627,500	501,250	433,280	522,250	370,080	543,750	625,500
2017	988,800	716,100	517,800	458,500	508,300	398,300	510,000	671,800
Splicing Factor	1.043	1.062	1.035	1.014	1.130	0.929	0.992	1.166

Splicing factor implies new (ABS) house price higher / lower when splicing factor is positive/ negative.

## Sources and References

- a 1970-1979 are Applied Economics (1991); 1980-2003 are based on VG data.
- b 1970-79 are PC data; 1980-2003 are VG data.
- c 1973-79 are mean values (Abelson 1982) reduced by 8% to fit REIA median data in 1980, 1981; 1980-85, REIA data; 1986-2003, VG data.
- d 1971-79 are mean values from Abelson (1982) and Applied Economics (1991) reduced by 8% for medians; 1980-2003 are median figures from VG.
- e 1980-89, REIA data. 1990-2003, average of quarterly data from the Department of Land.
- F 1971-81 are mean values (Abelson 1982) reduced by 8%; 1982-83 are interpolated; 1984-90, CBA data spliced to 1991-03 average quarterly REIA data.
- g Average of quarterly data from REIA.
- H 1971-79 are mean values from Abelson (1982) reduced by 9% for medians; 1980-03 are average of quarterly medians from REIA.
- I All 2003-2017 data are ABS data 6416.0.

**Table 2 Capital Cities: Real Median House Prices (Average over year: 2017 prices)**

<b>Year</b>	<b>Sydney</b> (a)	<b>Melbourne</b> (b)	<b>Brisbane</b> (c)	<b>Adelaide</b> (d)	<b>Perth</b> (e)	<b>Hobart</b> (f)	<b>Darwin</b> (g)	<b>Canberra</b> (h)
1970	222,516	155,145			225,777			
1971	239,899	154,456		130,929	217,777	119,786		223,372
1972	250,965	161,794		136,163	200,921	118,937		236,317
1973	268,016	197,280	169,844	154,547	199,914	132,536		288,018
1974	271,885	222,078	182,389	184,548	174,740	156,240		300,036
1975	250,570	213,562	171,785	185,740	194,054	168,336		269,178
1976	239,975	218,535	170,006	188,944	233,321	183,545		251,010
1977	225,103	216,424	162,954	182,017	226,631	176,602		231,114
1978	229,782	203,717	158,195	171,182	222,464	161,210		217,573
1979	247,964	189,309	152,617	160,492	204,686	151,501		209,175
1980	303,315	177,253	155,066	154,203	192,733	142,357		215,834
1981	320,664	182,152	182,774	154,507	193,115	134,409		257,389
1982	291,031	174,490	200,416	152,662	191,591	131,716		237,182
1983	268,523	176,356	181,683	153,749	175,203	124,938		246,465
1984	272,385	209,948	185,471	188,840	165,628	126,493		292,971
1985	262,825	227,869	181,673	208,831	167,881	147,175		295,647
1986	269,571	228,997	171,377	195,928	172,409	138,633	228,223	279,427
1987	301,166	228,752	158,092	181,756	166,565	141,921	193,536	252,791
1988	330,114	259,943	164,932	183,020	197,998	141,813	191,551	264,986
1989	372,075	292,817	207,439	191,418	242,026	150,113	188,020	279,960
1990	392,155	269,733	226,640	191,038	221,634	147,758	195,192	272,851
1991	356,050	253,076	232,929	197,630	211,050	156,341	207,611	298,507
1992	354,389	246,170	247,463	203,584	214,864	165,150	231,985	335,530
1993	356,900	243,650	257,113	205,254	232,074	176,419	271,810	338,214
1994	358,715	246,917	264,569	205,776	248,925	183,673	280,063	335,278
1995	350,996	234,414	260,200	193,402	245,238	169,761	280,672	310,199
1996	365,347	230,911	254,115	185,079	237,578	166,599	270,404	294,756
1997	402,427	249,552	256,779	190,397	250,898	167,254	289,702	294,598
1998	425,986	270,378	271,016	197,476	261,802	163,723	282,665	297,677
1999	461,861	302,127	270,753	209,289	271,056	169,557	289,233	305,985
2000	471,886	319,886	277,336	215,818	278,546	172,583	292,195	332,350
2001	499,649	355,079	274,702	225,957	282,836	166,523	277,099	357,201
2002	583,895	395,995	306,492	263,715	309,187	184,222	289,930	394,403
2003	667,059	412,843	362,803	321,255	326,396	225,808	295,242	482,066
2004	699,086	424,231	419,836	356,589	362,591	306,279	340,725	505,470
2005	662,056	436,233	421,799	367,213	417,135	330,867	392,007	502,640
2006	627,279	444,926	429,629	372,437	549,312	347,307	461,035	521,385
2007	645,746	469,244	483,445	410,549	597,995	368,112	505,850	568,963
2008	592,777	469,810	501,232	435,066	540,811	364,367	518,852	556,219
2009	605,633	498,841	507,921	442,478	557,671	377,321	574,949	559,911
2010	697,225	570,925	468,568	468,568	585,855	398,462	617,921	609,751
2011	632,452	549,460	438,002	438,002	539,830	373,981	564,101	583,909
2012	670,518	537,788	479,626	426,702	549,509	362,973	598,023	552,397
2013	721,488	556,461	484,313	429,932	570,999	362,090	597,382	545,779
2014	821,365	567,873	494,052	437,030	572,839	373,443	602,108	582,121
2015	906,453	603,320	499,695	444,860	554,272	367,503	603,959	610,652
2016	927,597	639,634	510,943	441,658	532,349	377,236	554,265	637,595
2017	988,800	716,100	517,800	458,500	508,300	398,300	510,000	671,800

**Table 3 Capital Cities: Real Median House Price Indices (2003=100)**

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	All cities
1970	33.4	37.6							36.0
1971	36.0	37.4		40.8		53.0		46.3	37.5
1972	37.6	39.2		42.4	61.6	52.7		49.0	39.4
1973	40.2	47.8	46.8	48.1	61.2	58.7		59.7	43.1
1974	40.8	53.8	50.3	57.4	53.5	69.2		62.2	46.0
1975	37.6	51.7	47.3	57.8	59.5	74.5		55.8	43.5
1976	36.0	52.9	46.9	58.8	71.5	81.3		52.1	43.0
1977	33.7	52.4	44.9	56.7	69.4	78.2		47.9	42.5
1978	34.4	49.3	43.6	53.3	68.2	71.4		45.1	42.2
1979	37.2	45.9	42.1	50.0	62.7	67.1		43.4	43.2
1980	45.5	42.9	42.7	48.0	59.0	63.0		44.8	48.1
1981	48.1	44.1	50.4	48.1	59.2	59.5		53.4	51.1
1982	43.6	42.3	55.2	47.5	58.7	58.3		49.2	48.4
1983	40.3	42.7	50.1	47.9	53.7	55.3		51.1	46.3
1984	40.8	50.9	51.1	58.8	50.7	56.0		60.8	48.4
1985	39.4	55.2	50.1	65.0	51.4	65.2		61.3	49.7
1986	40.4	55.5	47.2	61.0	52.8	61.4	77.3	58.0	49.2
1987	45.1	55.4	43.6	56.6	51.0	62.9	65.6	52.4	47.7
1988	49.5	63.0	45.5	57.0	60.7	62.8	64.9	55.0	54.3
1989	55.8	70.9	57.2	59.6	74.2	66.5	63.7	58.1	64.0
1990	58.8	65.3	62.5	59.5	67.9	65.4	66.1	56.6	61.3
1991	53.4	61.3	64.2	61.5	64.7	69.2	70.3	61.9	60.1
1992	53.1	59.6	68.2	63.4	65.8	73.1	78.6	69.6	59.8
1993	53.5	59.0	70.9	63.9	71.1	78.1	92.1	70.2	59.9
1994	53.8	59.8	72.9	64.1	76.3	81.3	94.9	69.6	61.4
1995	52.6	56.8	71.7	60.2	75.1	75.2	95.1	64.3	60.8
1996	54.8	55.9	70.0	57.6	72.8	73.8	91.6	61.1	60.1
1997	60.3	60.4	70.8	59.3	76.9	74.1	98.1	61.1	61.5
1998	63.9	65.5	74.7	61.5	80.2	72.5	95.7	61.8	65.2
1999	69.2	73.2	74.6	65.1	83.0	75.1	98.0	63.5	69.2
2000	70.7	77.5	76.4	67.2	85.3	76.4	99.0	68.9	72.7
2001	74.9	86.0	75.7	70.3	86.7	73.7	93.9	74.1	77.9
2002	87.5	95.9	84.5	82.1	94.7	81.6	98.2	81.8	89.9
2003	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2004	104.8	102.8	115.7	111.0	111.1	135.6	115.4	104.9	104.1
2005	99.2	105.7	116.3	114.3	127.8	146.5	132.8	104.3	102.9
2006	94.0	107.8	118.4	115.9	168.3	153.8	156.2	108.2	107.1
2007	96.8	113.7	133.3	127.8	183.2	163.0	171.3	118.0	116.5
2008	88.9	113.8	138.2	135.4	165.7	161.4	175.7	115.4	116.6
2009	90.8	120.8	140.0	137.7	170.9	167.1	194.7	116.1	118.4
2010	104.5	138.3	129.2	145.9	179.5	176.5	209.3	126.5	129.0
2011	94.8	133.1	120.7	136.3	165.4	165.6	191.1	121.1	121.7
2012	100.5	130.3	132.2	132.8	168.4	160.7	202.6	114.6	118.7
2013	108.2	134.8	133.5	133.8	174.9	160.4	202.3	113.2	123.8
2014	123.1	137.6	136.2	136.0	175.5	165.4	203.9	120.8	132.1
2015	135.9	146.1	137.7	138.5	169.8	162.8	204.6	126.7	142.8
2016	139.1	154.9	140.8	137.5	163.1	167.1	187.7	132.3	149.8
2017	148.2	173.5	142.7	142.7	155.7	176.4	172.7	139.4	160.6

Red indicates years of relatively high price inflation. Note this is just a casual notation at this stage.



**Table 4 Capital Cities: Nominal Median Other Dwelling Prices (avr. over year)**

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
1970	14,202							
1971	15,925							
1972	18,279							
1973	21,208							
1974	26,299	24,296		27,028				
1975	27,867	26,773		28,469				
1976	29,899	30,891		34,612				
1977	32,215	33,420		36,879				
1978	34,742	34,463		35,958				
1979	42,532	32,847		37,396				
1980	59,482	34,411	42,836	37,417	43,870			39,406
1981	70,852	38,060	55,361	40,149	44,089			51,153
1982	73,905	40,146	55,547	45,474	47,707			49,839
1983	69,483	44,317	62,337	52,871	49,875			58,595
1984	71,378	54,744	67,313	65,764	45,880	54,152		69,619
1985	74,221	62,565	63,541	72,034	49,023	64,323		84,479
1986	76,116	69,604	69,342	76,477	53,931	83,653		98,126
1987	90,749	75,339	70,073	75,074	59,100	80,701		89,230
1988	124,649	88,634	78,930	78,348	70,310	82,031		98,514
1989	145,836	108,967	98,102	85,248	92,964	99,459		106,247
1990	142,878	119,916	104,715	95,071	92,607	95,922		112,841
1991	146,636	113,138	107,580	100,567	92,454	98,033		121,107
1992	147,684	114,703	113,334	104,776	93,393	103,477		149,080
1993	150,295	114,703	116,533	106,881	97,342	108,804		151,941
1994	164,312	119,916	118,706	112,260	105,557	113,883		150,196
1995	182,789	119,916	123,032	110,039	106,653	118,935		142,584
1996	196,080	119,916	146,210	104,075	107,179	113,698		142,051
1997	225,558	132,429	146,831	104,426	113,654	104,229	114,116	142,342
1998	240,428	145,985	166,551	106,531	120,585	106,441	110,216	149,517
1999	256,220	177,346	159,293	110,039	131,119	115,174	134,816	152,571
2000	269,774	191,866	196,538	116,119	139,936	119,687	127,015	163,189
2001	306,622	224,596	189,634	131,204	151,324	119,249	129,789	182,533
2002	346,890	250,338	199,145	161,725	174,070	128,813	134,122	230,093
2003	379,000	280,500	231,300	186,750	196,500	170,000	132,750	295,000
2004	382,500	277,380	257,250	208,380	216,750	194,950	156,650	291,000
2005	383,750	287,000	268,430	220,650	253,380	217,130	200,500	306,330
2006	384,530	300,030	291,250	236,500	334,250	228,750	244,630	316,130
2007	396,250	342,500	331,750	271,250	375,250	247,500	300,000	352,500
2008	387,630	358,750	365,750	300,230	365,580	246,750	323,330	361,880
2009	412,750	385,130	366,450	311,710	383,750	267,500	376,750	382,000
2010	473,650	444,750	386,580	334,000	414,250	283,500	420,180	418,350
2011	476,000	441,250	377,880	328,700	401,250	283,250	406,880	417,500
2012	506,500	431,250	382,380	320,500	404,000	278,200	418,880	414,580
2013	541,250	447,250	395,500	327,250	434,000	280,700	458,950	414,500
2014	601,080	476,880	402,630	339,250	453,500	272,630	463,930	413,630
2015	668,750	492,250	407,000	346,250	438,880	288,200	452,750	422,500
2016	696,250	498,250	397,000	335,830	424,000	295,500	418,750	429,380
2017	727,500	532,600	402,400	375,900	410,900	318,800	373,600	438,400
Splicing Factor	1.053	1.043	1.146	1.169	1.225	1.347	0.867	1.164

**Table 5 Capital Cities: Real Median Attached Dwelling Prices (2017 prices)**

Year	Sydney (a)	Melbourne (b)	Brisbane (c)	Adelaide (d)	Perth (e)	Hobart (f)	Darwin (g)	Canberra (h)
1970	159,004							
1971	169,558							
1972	182,123							
1973	195,187							
1974	211,564	195,449		217,424				
1975	191,542	184,019		195,676				
1976	183,447	189,538		212,368				
1977	174,057	180,569		199,255				
1978	173,868	172,473		179,958				
1979	195,720	151,150		172,083				
1980	246,555	142,634	177,558	155,093	181,841			163,338
1981	270,934	145,541	211,698	153,529	168,594			195,605
1982	254,796	138,408	191,506	156,776	164,474			171,826
1983	215,597	137,509	193,424	164,052	154,755			181,811
1984	212,958	163,331	200,829	196,207	136,884	161,564		207,711
1985	207,742	175,118	177,848	201,620	137,214	180,037		236,454
1986	196,346	179,548	178,873	197,279	139,120	215,789		253,124
1987	214,248	177,865	165,433	177,240	139,527	190,524		210,661
1988	274,582	195,246	173,871	172,589	154,881	180,701		217,011
1989	298,826	223,281	201,016	174,678	190,489	203,796		217,706
1990	271,743	228,072	199,161	180,817	176,131	182,437		214,615
1991	269,910	208,251	198,021	185,111	170,178	180,447		222,918
1992	268,651	208,655	206,166	190,598	169,890	188,235		271,192
1993	268,454	204,880	208,150	190,910	173,870	194,344		271,394
1994	288,276	210,386	208,263	196,955	185,193	199,802		263,510
1995	306,814	201,282	206,511	184,702	179,020	199,634		239,330
1996	319,254	195,246	238,057	169,453	174,507	185,122		231,285
1997	366,152	214,975	238,353	169,516	184,496	169,197	185,246	231,066
1998	387,396	235,222	268,360	171,650	194,296	171,506	177,588	240,913
1999	408,597	282,816	254,027	175,480	209,097	183,670	214,992	243,307
2000	417,343	296,819	304,046	179,638	216,482	185,157	196,494	252,454
2001	446,968	327,398	276,432	191,259	220,588	173,832	189,195	266,081
2002	491,805	354,918	282,339	229,287	246,789	182,626	190,152	326,215
2003	523,656	387,561	319,582	258,029	271,500	234,885	183,418	407,595
2004	515,378	373,740	346,617	280,770	292,048	262,675	211,069	392,092
2005	504,543	377,339	352,924	290,104	333,136	285,476	263,611	402,753
2006	486,146	379,316	368,216	298,998	422,579	289,200	309,276	399,671
2007	490,681	424,122	410,810	335,892	464,677	306,482	371,494	436,505
2008	459,570	425,330	433,629	355,950	433,428	292,544	383,337	429,041
2009	482,504	450,217	428,380	364,389	448,603	312,707	440,420	446,558
2010	536,935	504,174	438,232	378,626	469,599	321,379	476,321	474,246
2011	521,105	483,062	413,687	359,847	439,272	310,090	445,435	457,061
2012	547,868	466,472	413,610	346,676	436,996	300,922	453,091	448,440
2013	571,787	472,484	417,814	345,714	458,486	296,537	484,844	437,886
2014	616,405	489,038	412,895	347,899	465,062	279,581	475,758	424,176
2015	675,593	497,287	411,165	349,793	443,371	291,149	457,383	426,823
2016	709,713	507,885	404,677	342,324	432,199	301,214	426,847	437,683
2017	727,500	532,600	402,400	375,900	410,900	318,800	373,600	438,400

**Table 6 Capital Cities: Real Median Attached Dwelling Price Indices: 2003=100**

Year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	All cities
1970	30.4								
1971	32.4								
1972	34.8								
1973	37.3								
1974	40.4	50.4		84.3					
1975	36.6	47.5		75.8					
1976	35.0	48.9		82.3					
1977	33.2	46.6		77.2					
1978	33.2	44.5		69.7					
1979	37.4	39.0		66.7					
1980	47.1	36.8	55.6	60.1	67.0			40.1	
1981	51.7	37.6	66.2	59.5	62.1			48.0	
1982	48.7	35.7	59.9	60.8	60.6			42.2	
1983	41.2	35.5	60.5	63.6	57.0			44.6	
1984	40.7	42.1	62.8	76.0	50.4	68.8		51.0	
1985	39.7	45.2	55.7	78.1	50.5	76.6		58.0	
1986	37.5	46.3	56.0	76.5	51.2	91.9		62.1	
1987	40.9	45.9	51.8	68.7	51.4	81.1		51.7	
1988	52.4	50.4	54.4	66.9	57.0	76.9		53.2	
1989	57.1	57.6	62.9	67.7	70.2	86.8		53.4	
1990	51.9	58.8	62.3	70.1	64.9	77.7		52.7	
1991	51.5	53.7	62.0	71.7	62.7	76.8		54.7	
1992	51.3	53.8	64.5	73.9	62.6	80.1		66.5	
1993	51.3	52.9	65.1	74.0	64.0	82.7		66.6	
1994	55.1	54.3	65.2	76.3	68.2	85.1		64.6	
1995	58.6	51.9	64.6	71.6	65.9	85.0		58.7	
1996	61.0	50.4	74.5	65.7	64.3	78.8		56.7	
1997	69.9	55.5	74.6	65.7	68.0	72.0	101.0	56.7	66.0
1998	74.0	60.7	84.0	66.5	71.6	73.0	96.8	59.1	70.1
1999	78.0	73.0	79.5	68.0	77.0	78.2	117.2	59.7	76.2
2000	79.7	76.6	95.1	69.6	79.7	78.8	107.1	61.9	79.6
2001	85.4	84.5	86.5	74.1	81.2	74.0	103.1	65.3	83.1
2002	93.9	91.6	88.3	88.9	90.9	77.8	103.7	80.0	91.1
2003	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2004	98.4	96.4	108.5	108.8	107.6	111.8	115.1	96.2	101.6
2005	96.3	97.4	110.4	112.4	122.7	121.5	143.7	98.8	104.7
2006	92.8	97.9	115.2	115.9	155.6	123.1	168.6	98.1	108.8
2007	93.7	109.4	128.5	130.2	171.2	130.5	202.5	107.1	118.5
2008	87.8	109.7	135.7	137.9	159.6	124.5	209.0	105.3	117.1
2009	92.1	116.2	134.0	141.2	165.2	133.1	240.1	109.6	122.5
2010	102.5	130.1	137.1	146.7	173.0	136.8	259.7	116.4	132.4
2011	99.5	124.6	129.4	139.5	161.8	132.0	242.9	112.1	126.4
2012	104.6	120.4	129.4	134.4	161.0	128.1	247.0	110.0	126.0
2013	109.2	121.9	130.7	134.0	168.9	126.2	264.3	107.4	129.1
2014	117.7	126.2	129.2	134.8	171.3	119.0	259.4	104.1	132.6
2015	129.0	128.3	128.7	135.6	163.3	124.0	249.4	104.7	135.7
2016	135.5	131.0	126.6	132.7	159.2	128.2	232.7	107.4	137.3
2017	138.9	137.4	125.9	145.7	151.3	135.7	203.7	107.6	139.9

Red highlights indicative only.

**Table 7 Borrowing Rates: 1991 to 2017**

Year	RBS cash rate	Standard mortgage rate	Discounted mortgage rate
June Qtr	%	%	%
1991	10.52	13.42	13.22
1992	6.50	10.58	10.38
1993	5.15	9.42	9.22
1994	5.27	9.09	8.89
1995	7.50	10.50	10.30
1996	7.20	9.73	9.53
1997	5.00	7.17	6.97
1998	4.75	6.68	6.48
1999	5.00	6.57	6.37
2000	6.25	7.72	7.52
2001	4.28	6.84	6.44
2002	4.75	6.36	5.96
2003	5.25	6.61	6.21
2004	5.25	7.05	6.60
2005	5.50	7.30	6.80
2006	6.25	7.75	6.95
2007	6.75	8.30	7.45
2008	4.35	8.90	8.85
2009	3.75	6.02	5.15
2010	4.75	7.27	6.75
2011	4.30	7.73	7.05
2012	3.00	7.00	6.15
2013	2.50	6.18	5.35
2014	2.50	5.95	5.10
2015	2.00	5.45	4.65
2016	1.75	5.40	4.60
2017	1.50	5.25	4.50

Source: RBA

**Table 8 Median Housing Rents in Sydney: 1990 to 2017**

June qtr	Housing: 3-bedrooms				Units: 2-bedrooms				gross hh income Real Index 2001=1	3-bed rooms	2-bed rooms
	All Sydney	Middle ring	All Sydney	Middle ring	All Sydney	Middle ring	All Sydney	Middle ring		Median rent as % median disposable HHY	
	Nominal values		Real Index		Nominal values		Real Index				
	\$ / week	\$ / week	2001=1 00	2001=1 00	\$ / week	\$ / week	2001=1 00	2001=1 00		(%)	(%)
1990	185	220	104.0	96.8	170	160	84.7	91.9			
1991	190	220	103.3	93.7	170	165	82.0	91.7			
1992	190	220	102.1	92.6	170	165	81.0	90.6			
1993	185	220	98.1	91.4	170	160	80.0	86.7			
1994	190	220	99.3	90.1	175	165	81.1	88.1			
1995	190	230	94.7	89.8	180	170	79.5	86.5	90.8	31.3	29.7
1996	195	240	93.4	90.0	195	180	82.8	88.1	86.9	32.3	32.3
1997	200	250	95.6	93.6	210	185	89.0	90.4	96.7	29.7	31.2
1998	210	260	99.4	96.4	220	195	92.3	94.3	95.4	31.3	32.8
1999	220	270	102.7	98.8	230	200	95.3	95.4	97.6	31.6	33.1
2000	230	290	104.1	102.8	250	220	100.3	101.7	99.9	31.3	34.1
2001	235	300	100.0	100.0	265	230	100.0	100.0	100.0	30.1	33.9
2002	240	290	99.4	94.0	265	230	97.3	97.3	100.8	29.6	32.7
2003	250	300	101.0	95.0	270	240	96.8	99.1	101.6	29.9	32.3
2004	250	300	98.8	92.9	280	250	98.1	100.9	112.7	26.4	29.5
2005	260	310	100.3	93.6	280	255	95.8	100.5	115.2	26.2	28.2
2006	265	330	98.4	96.0	300	270	98.8	102.4	117.8	25.1	28.4
2007	280	360	102.2	102.9	330	300	106.8	111.9	124.0	24.8	29.2
2008	330	410	115.5	112.4	380	350	117.9	125.1	130.1	26.7	30.7
2009	350	430	120.9	116.3	400	370	122.5	130.6	128.3	28.3	32.4
2010	380	470	127.5	123.6	420	390	125.0	133.7	126.5	30.3	33.5
2011	400	485	129.4	122.9	450	410	129.1	135.5	129.3	30.1	33.9
2012	420	510	134.1	127.5	450	420	127.4	137.0	132.0	30.6	32.7
2013	420	525	130.7	128.0	470	445	129.7	141.5	134.1	29.3	32.8
2014	450	540	136.2	128.0	495	460	132.9	142.3	136.3	30.1	33.1
2015	460	550	136.3	127.6	500	480	131.4	145.3	139.2	29.4	32.0
2016	470	580	138.0	133.4	520	500	135.4	150.0	142.1	29.2	32.3
2017	485	610	139.3	137.3	550	530	140.1	155.5	145.0	28.9	32.8

Sources

Department of Family and Community Services, Rent and Sales Reports.

ABS 6523.0, *Household Income and Wealth*, Data Cube 16: *Household Income and income Distribution in NSW 2015-16*.

ABS 6491:0 CPI

**Table 9 Rents and Household Income**

Median HHY 2001=100	Median rent % of disposable income		
	All houses 3-bedrooms (%)	All Units 2-bedrooms (%)	Middle Units 2-bedrooms (%)
90.8	31.3	29.7	28.0
86.9	32.3	32.3	29.8
96.7	29.7	31.2	27.5
95.4	31.3	32.8	29.1
97.6	31.6	33.1	28.8
99.9	31.3	34.1	30.0
100.0	30.1	33.9	29.4
100.8	29.6	32.7	28.4
101.6	29.9	32.3	28.7
112.7	26.4	29.5	26.4
115.2	26.2	28.2	25.7
117.8	25.1	28.4	25.6
124.0	24.8	29.2	26.6
130.1	26.7	30.7	28.3
128.3	28.3	32.4	29.9
126.5	30.3	33.5	31.1
129.3	30.1	33.9	30.9
132.0	30.6	32.7	30.6
134.1	29.3	32.8	31.1
136.3	30.1	33.1	30.7
139.2	29.4	32.0	30.7
142.1	29.2	32.3	31.1
145.0	28.9	32.8	31.6

<b>Table 10</b>		<b>1st Quartile Rents and Top 1st Quintile Incomes in Sydney</b>								Disposable
										top 1st
	<b>Housing: 3-bedrooms</b>				<b>Units: 2-bedrooms</b>					quintile as
	All Sydney	Middle ring	All Sydney	Middle ring	All Sydney	Middle ring	All Sydney	Middle ring		% median
June qtr	Nominal values		% of median rent		Nominal values		% of median rent			income
	\$	\$	%	%	\$	\$	%	%		%
2001	195	250	84.8	86.2	195	185	78.0	84.1		48.6
-----										
2010	330	410	86.8	87.2	340	340	81.0	87.2		49.2
2011	350	430	87.5	88.7	360	350	80.0	85.4		50.1
2012	360	450	85.7	88.2	370	370	82.2	88.1		51.0
2013	370	460	88.1	87.6	380	380	80.9	85.4		51.6
2014	390	480	86.7	88.9	400	400	80.8	87.0		52.1
2015	400	490	87.0	89.1	410	405	82.0	84.4		50.7
2016	410	500	87.2	86.2	420	420	80.8	84.0		49.4
2017	420	520	86.6	85.2	450	440	81.8	83.0		50.4

**Table 11 Affordability of Detached Dwellings in Sydney**

Year	Discounted housing mortgage rate	Interest payments	Mortgage and interest payments	First home deposit	Real housing user costs
		% of income	% of income	% of income	% of income
1995	10.30	46.9	51.3	130.1	45.1
1996	9.53	46.8	52.1	140.2	45.2
1997	6.97	33.9	41.6	133.0	32.2
1998	6.48	33.7	42.6	148.7	31.4
1999	6.37	41.2	44.5	157.1	32.7
2000	7.52	35.0	49.3	156.7	39.3
2001	6.44	37.3	47.2	165.4	32.0
2002	5.96	40.1	52.4	192.0	36.2
2003	6.21	47.3	60.8	217.6	43.6
2004	6.60	47.7	59.8	206.5	44.4
2005	6.80	45.5	56.4	191.2	42.7
2006	6.95	43.2	53.1	177.6	40.8
2007	7.45	45.5	54.5	174.4	44.7
2008	8.85	47.3	53.8	162.7	42.7
2009	5.15	28.5	39.9	158.1	24.9
2010	6.75	43.7	54.3	185.0	39.8
2011	7.05	40.5	49.5	164.1	36.1
2012	6.15	36.6	47.2	170.1	31.8
2013	5.35	33.7	46.2	179.8	27.5
2014	5.10	36.1	50.7	202.0	29.1
2015	4.65	35.3	51.3	216.6	27.4
2016	4.60	35.0	51.8	217.4	27.2
2017	4.50	35.3	52.9	223.9	26.4
1995-2016 Average		40.0	50.5	174.7	36.2

**Note:** rows highlighted in red are for visual convenience.



**Table 12 Affordability of Attached Dwellings in Sydney**

Year	Discounted housing mortgage rate	Interest payments	Mortgage and interest payments	First home deposit	Real housing user costs
		% of income	% of income	% of income	% of income
1995	10.30	41.3	45.8	116.1	40.3
1996	9.53	41.7	46.4	124.9	40.3
1997	6.97	31.5	38.7	129.2	30.0
1998	6.48	31.3	39.5	137.7	29.1
1999	6.37	31.6	40.1	141.6	23.4
2000	7.52	37.2	44.5	141.5	35.5
2001	6.44	34.1	43.1	151.1	29.2
2002	5.96	34.4	45.0	164.9	31.1
2003	6.21	37.9	48.7	174.4	35.1
2004	6.60	35.9	45.0	155.4	33.4
2005	6.80	35.4	43.8	148.7	33.2
2006	6.95	34.2	42.0	140.4	32.3
2007	7.45	35.2	42.2	134.9	34.6
2008	8.85	37.4	42.5	120.7	33.7
2009	5.15	23.2	32.4	128.6	20.2
2010	6.75	34.4	42.7	145.4	31.3
2011	7.05	34.0	41.6	137.6	30.3
2012	6.15	30.5	39.4	141.9	26.5
2013	5.35	27.2	37.3	145.2	22.2
2014	5.10	27.6	38.7	154.4	22.2
2015	4.65	26.8	39.5	164.7	20.8
2016	4.60	26.8	39.7	166.3	20.8
2017	4.50	26.3	39.4	167.1	19.7
1995-2016 Average		33.2	41.8	143.9	30.1

**Note:** rows highlighted in red are for visual convenience.