Capital City Price-to-Rent Ratios in Australia An In-depth Look at Melbourne

Dr Nigel Stapledon
Andrew Roberts Fellow and Director Real Estate Research and Teaching
Centre for Applied Economic Research
UNSW Business School

Figure 2: Australian capital city rents 1984-2014

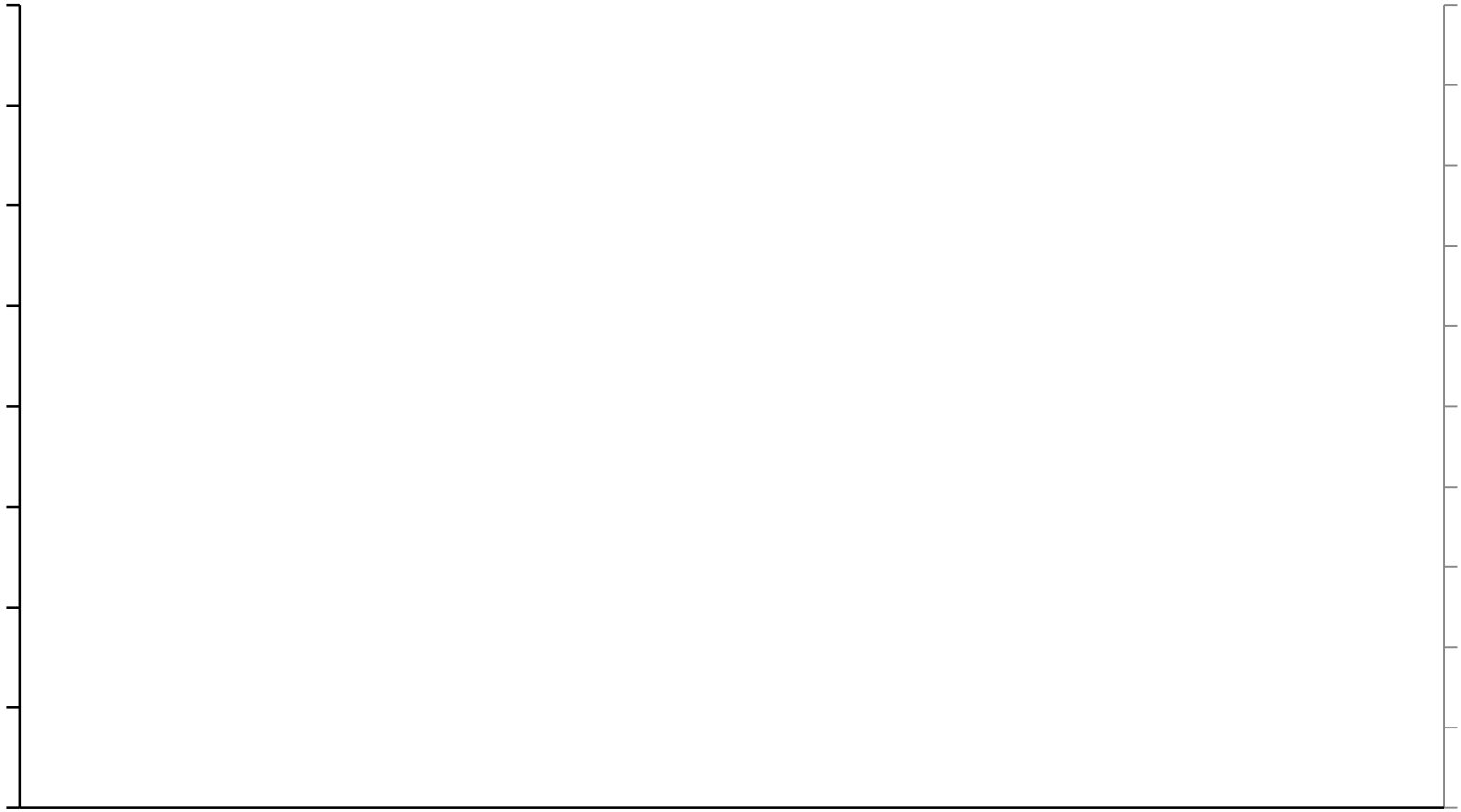
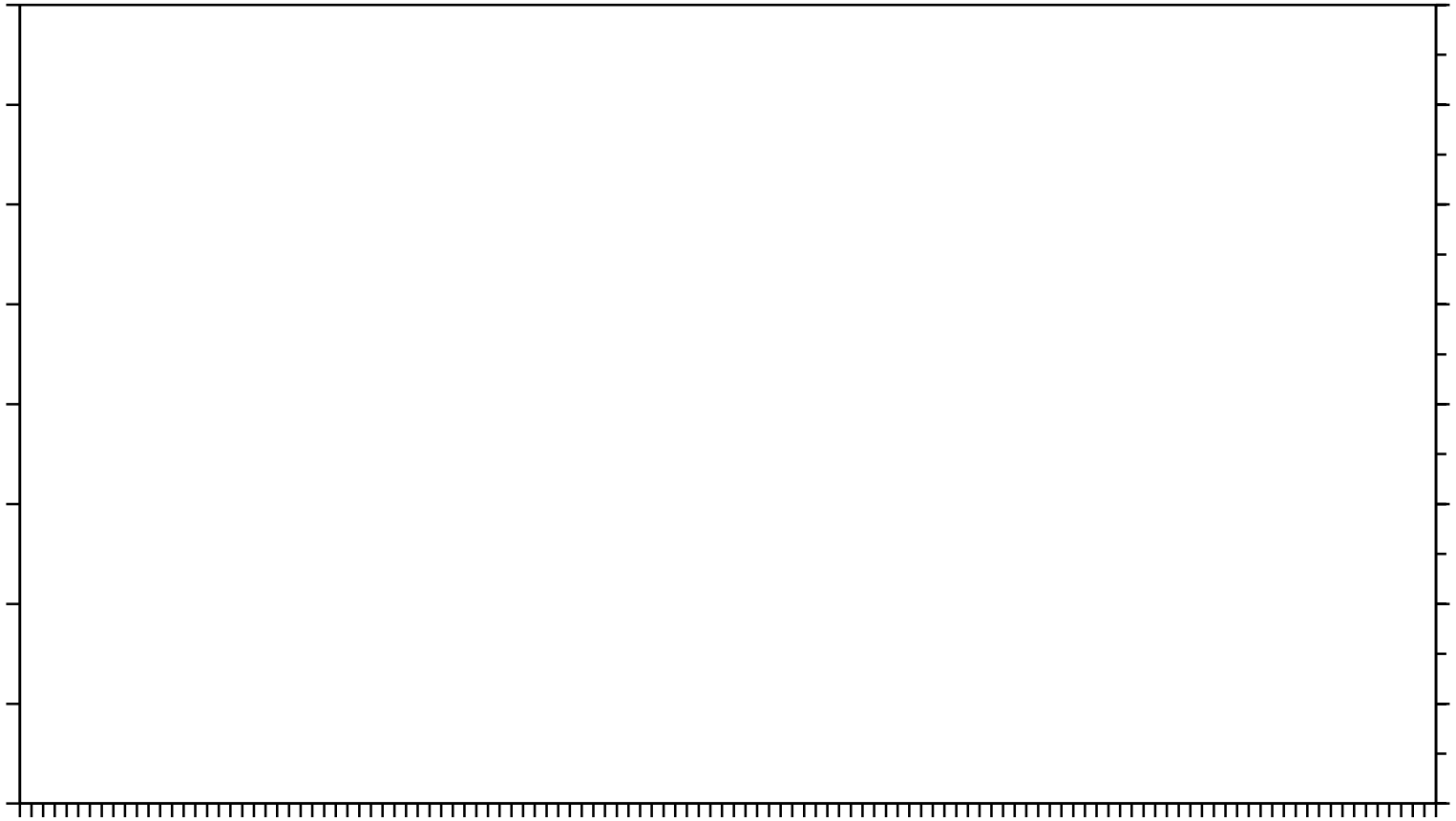


Figure 3: Australian capital city rental yields 1984-2014



Capital City Rent-to-Price Ratios in Australia An In-depth Look at Melbourne

The unanswered questions are:

1. Explaining the factors leading to the decline in the rent-to-price ratio
2.

Table 1 Melbourne LGA Houses - Bedrooms & Rents 2011

Number	**Mean beds**	Variance	Variance(%)		

Table 2 Melbourne LGA Units - Bedrooms & Rents 2011

Number	**Mean beds**	Variance	Variance(%)	**Units ownership**	
All	2.07	0.21	10.3	% share	Variance(%)
Owner-occupied	2.24	0.19	8.5	39.9	8.9 (22.3)
Rented	1.96	0.23	11.7	60.1	8.9 (14.8)
OO/Rented	14.6%				
All/Rented					

Figure 4: Australian capital city rental yields 1971-2014

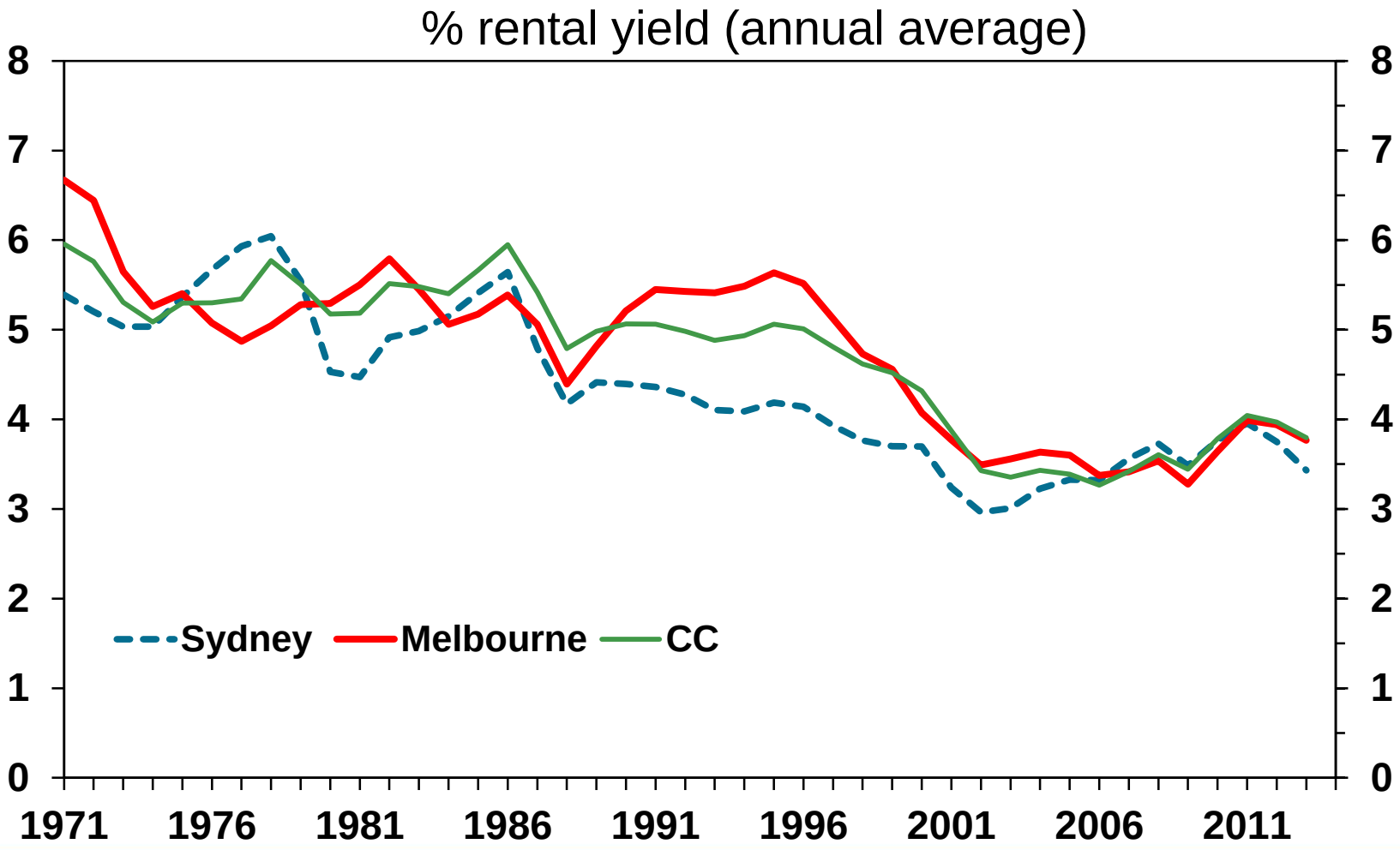


Table 3 Melbourne LGA House Prices and Rents

Summary Statistics on Real House Prices						
2011/12 prices	House Prices for the 31 LGAs			House Rents for the 31 LGAs		
Year	Mean	Variance ($)	Variance (%)	Mean	Variance ($)	Variance (%)

Table 4 Melbourne LGA Unit Prices and Rents

Summary Statistics on Real Unit Prices						
2011/12 prices	Unit Prices for the 31 LGAs			Unit Rents for the 31 LGAs		
Year	Mean					

Table 5 Melbourne LGA House Price and Rent Growth

Growth rates, 2011/12 prices						
Period	ALL	Variance	Inner LGAs	Middle high price LGAs	Middle low price LGAs	Outer LGAs
					2.0	2.0
					1.4	1.5
					3.2	3.0

Table 6 Melbourne LGA Unit Price and Rent Growth

Growth rates, 2011/12 prices						
Period	Mean growth	Variance (%)	Inner LGAs	Middle high price LGAs	Middle low price LGAs	Outer LGAs
					3.4	2.7
					1.8	1.6
					7.0	5.8
					1.5	1.3
					0.4	0.6
					3.6	2.8

Table 7 Melbourne LGA Rent-Price Ratios (Rental Yields)

Key Observations on Melbourne Property Data Part 1

Sharp contrast in experience 1971-1996 vs 1996-2011

Which period is best guide to the future or are any a guide to future?

As expected inner urban prices and rents have risen faster than outer

Observe significant variation in rent price ratios across time and space (see Figures below)

Figure 6: Melbourne LGA House Rental Yields vs Price 1996

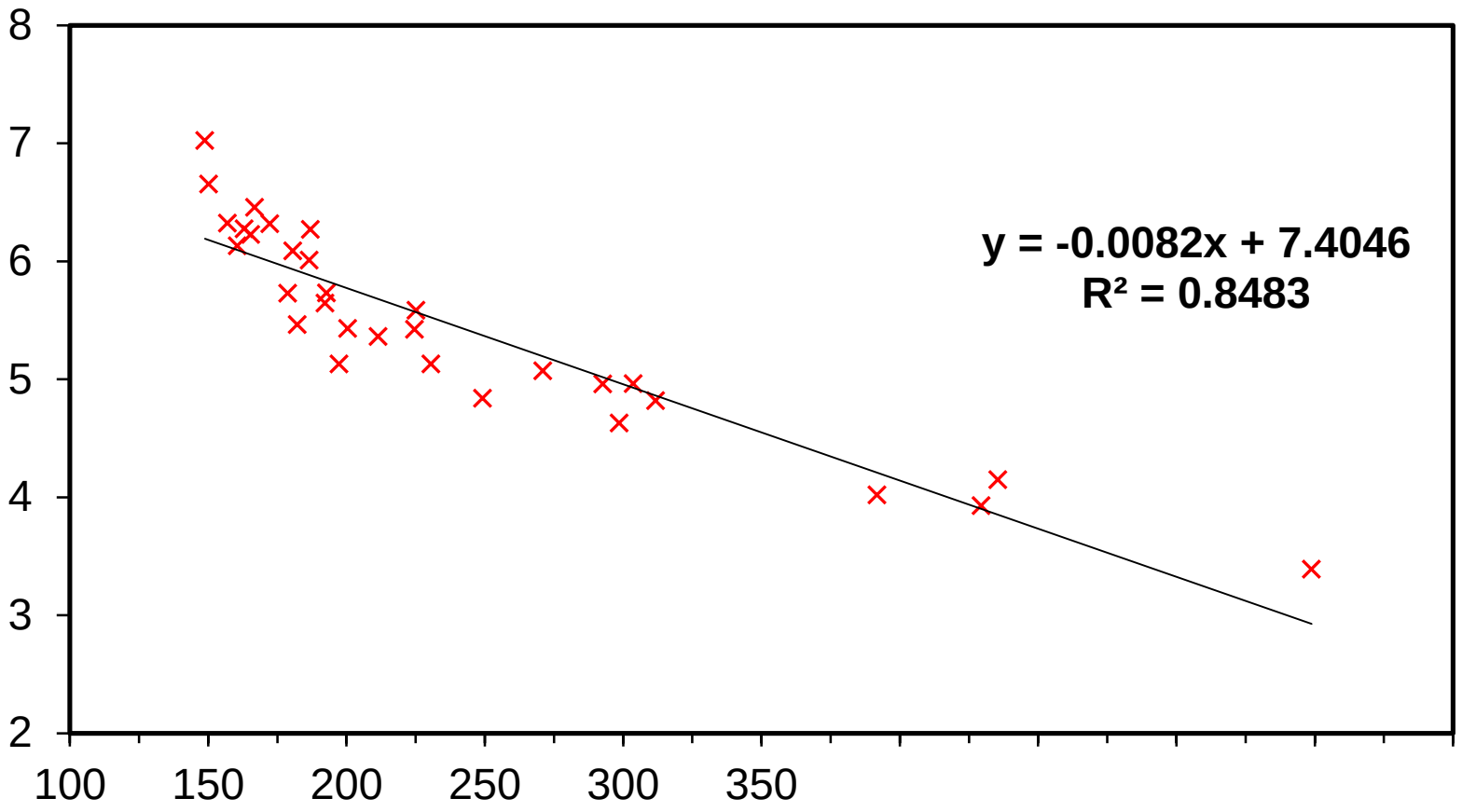


Figure 7: Melbourne LGA House Rental Yields vs Price 2006

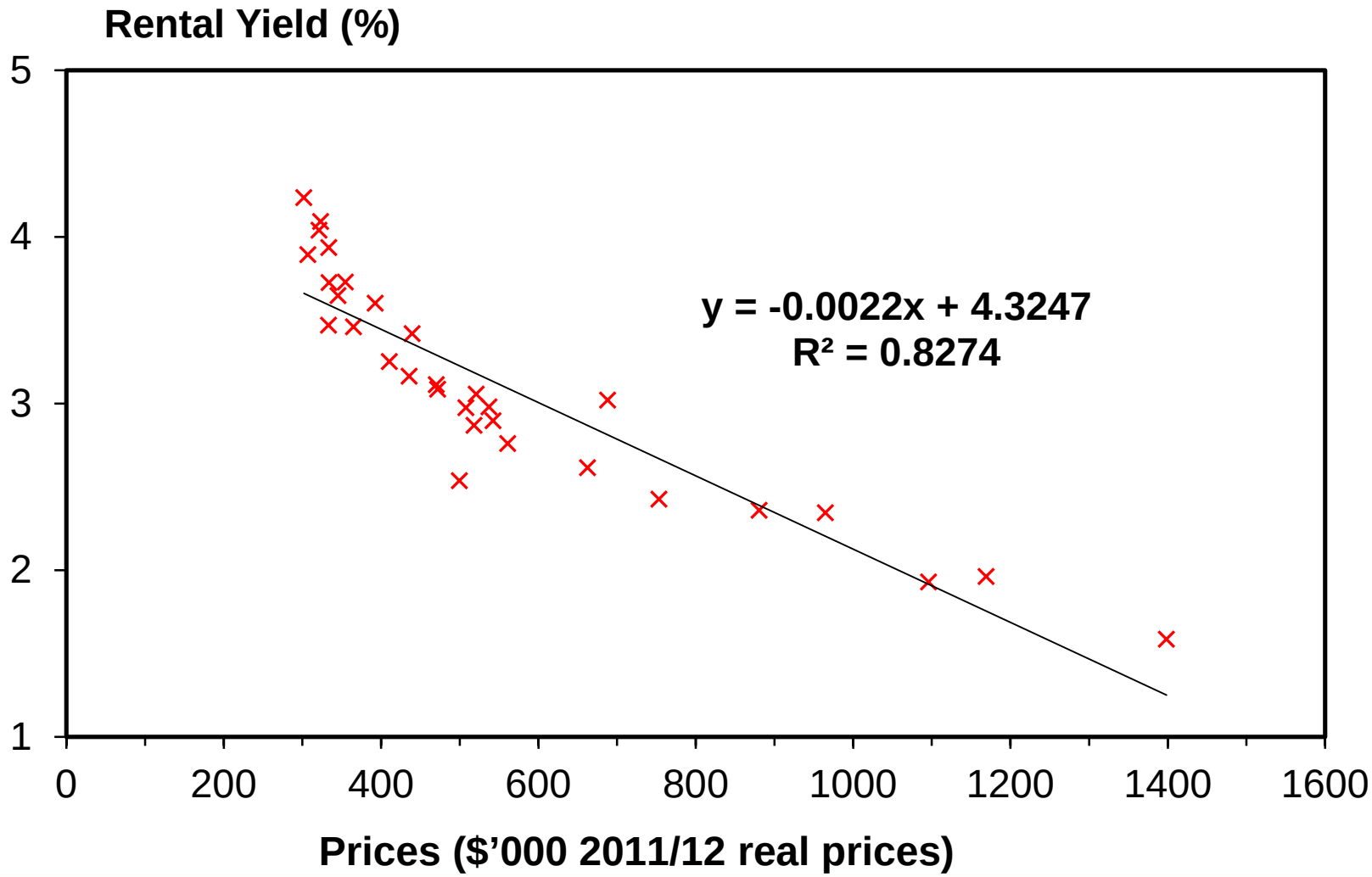


Figure 8: Melbourne LGA House Rental Yield + Past Capital gains (01-06) vs Price 2006

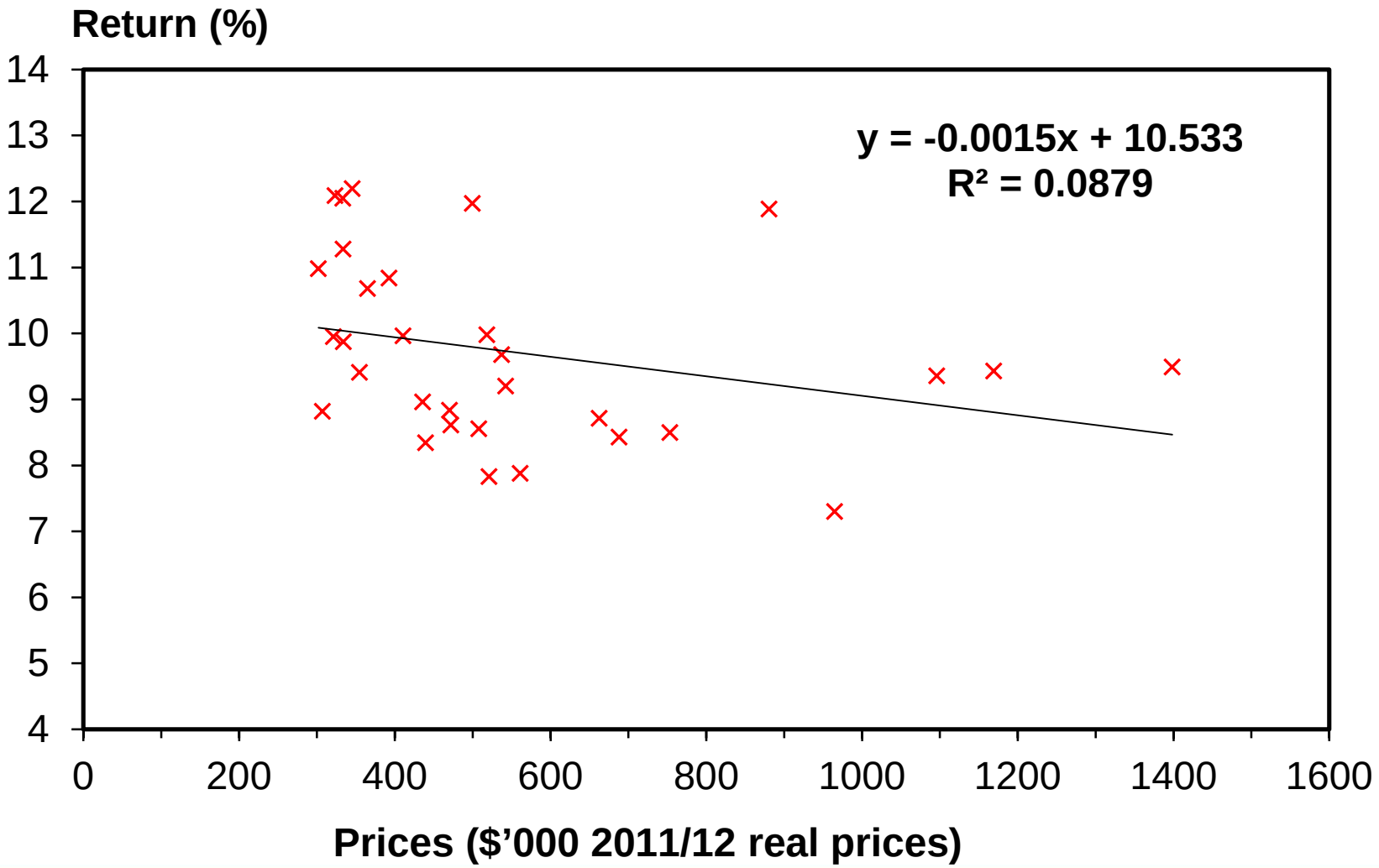


Figure 9: Melbourne LGA House Rental Yield + Future Capital gains (06-11) vs Price 2006

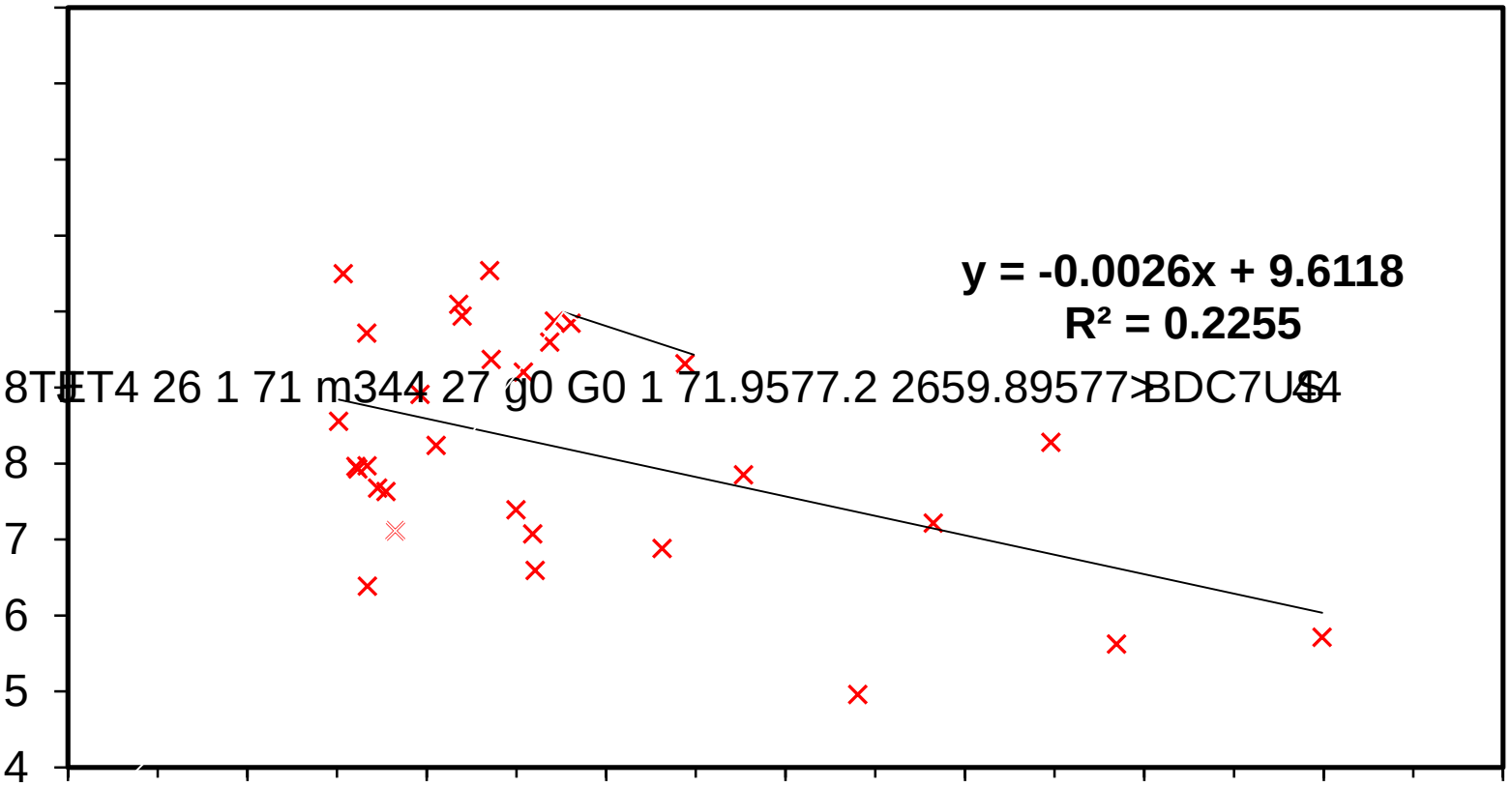


Figure 11: Melbourne LGA Unit Rental Yields vs Price 1996

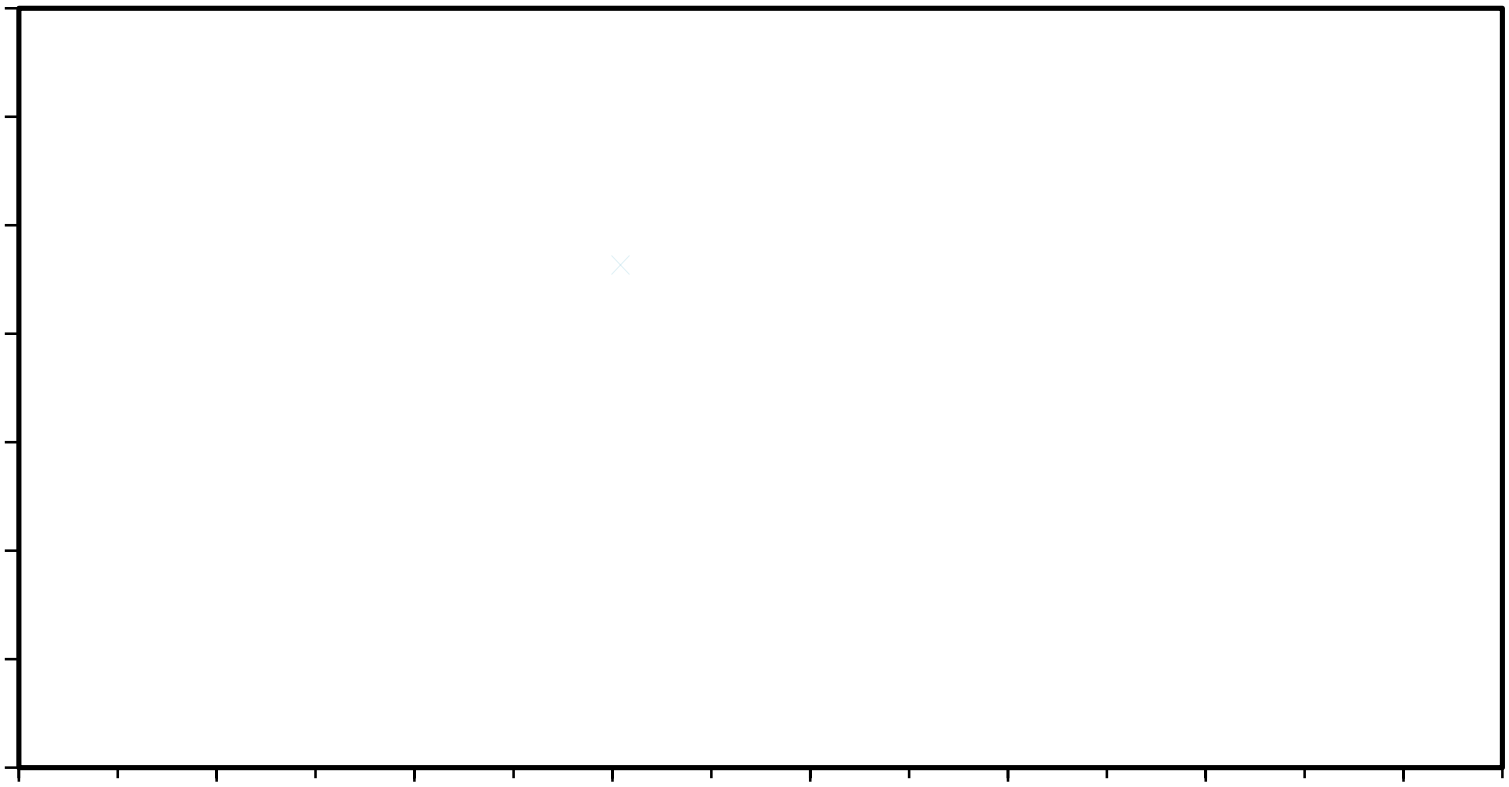


Figure 14: Melbourne LGA Unit Rental Yield + Past Capital Gains (01-06) vs Price 2006

Key Observations on Melbourne Property Data Part 2

For 2006 we observe past capital gains explain some of the variation.

- Past guides expectations for houses but less so units!

Future capital gains explain a lot less

- Ratios are poor forecasters for housing but good for units!

This is only preliminary observation more to be done.

Even if expectations matter, can be wrong. Focus today more on framework for understanding the on

Can user cost help explain relationship between prices and rental yields?

Let us see if we disaggregate user cost between land and structure.

User cost for housing = + + + − = —

Where is discount rate (interest plus risk premium), is rates, taxes and insurance, is depreciation, is maintenance and is growth rate in house prices (house rent)

In long-term equilibrium, that is other variables constant, growth rate for prices and rents need to equate.

In short-

User cost for land and structure

User cost for land component:

— = + −

User cost for structure component:

— = + + + + −

In Tables 8 and 9 we generate some estimates of the user cost for land and structure.

In Table 11, we see how different land-structure ratio can
-price yields

Table 9 - User cost of Structure

User cost for structure component: — = + + + + –

Variable	Data	% of value of structure
Discount rate	As per Land user cost.	3.4
Plus depreciation and maintenance	Related to the value of the structure. For the period 1971-2011, ABS national accounts data indicate an average 2.2% and 0.8% respectively.	+3.0
plus Rates on land	Insurance is related to structure and a component of utility services is related to occupation (presence/use of structure). ABS HES data suggests a ballpark about 0.5%.	+ 0.5
plus Transaction costs	As per Land user cost.	+ 0.7
less expected capital gains	Over the period 1971-2011, ABS national accounts estimates have real residential construction costs rising an average 0.8% per annum.	- 0.8
= Total user cost for land		= 6.8

Table 10 - User Cost of House with hypothetical scenarios

User costs based on assumptions in Tables 8 & 9. Critical here is land user cost assumption on capital gain. Lower

Table 11 - Indicative Evidence on Trends in Land-Structure Ratio 1971-2011

Land as Ratio of House Value in LGAs*				
	Outer LGAs (9/10)			

* Note: this is ratio of mean value of vacant blocks sold to mean value of houses sold in the same year for LGAs.

Key observations on Melbourne Property Part 3

Significant difference between user cost of structure (high) and land (low)

It follows that we would expect to observe lower r/p ratios for LGAs with a high land component

If this is the explanation, we would expect to observe a positive relationship between land ratio and prices (or yields) Table 11 points in that direction.

But while explaining long-