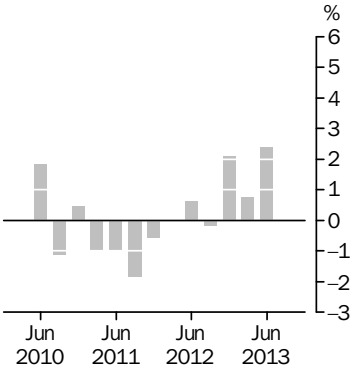
JUNE QUARTER 2013 6416.0

Australian Bureau of Statistics

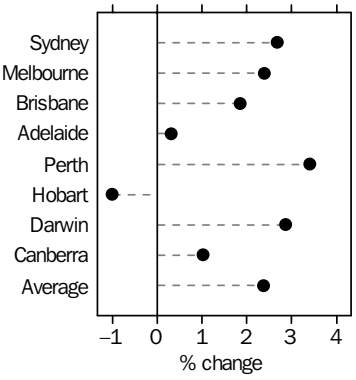
HOUSE PRICE INDEXES: EIGHT CAPITAL CITIES

EMBARGO: 11.30AM (CANBERRA TIME) TUES 6 AUG 2013

Established house prices
Weighted average of eight capital cities
Quarterly % change



Established house prices
Quarterly % change
June quarter 2013



KEY FIGURES

ESTABLISHED HOUSE PRICES	*Mar Qtr 13 to Jun Qtr 13* *% change*	*Jun Qtr 12 to Jun Qtr 13* *% change*
Weighted average of eight capital cities	**2.4**	**5.1**
Sydney	2.7	6.1
Melbourne	2.4	3.3
Brisbane	1.9	3.7
Adelaide	0.3	0.6
Perth	3.4	11.0
Hobart	–1.0	1.2
Darwin	2.9	7.7
Canberra	1.0	2.6

KEY POINTS

ESTABLISHED HOUSE PRICES

QUARTERLY CHANGES

- Preliminary estimates show that the price index for established houses for the weighted average of the eight capital cities rose 2.4% in the June quarter 2013.
- The capital city indexes rose in Sydney (+2.7%), Melbourne (+2.4%), Perth (+3.4%), Brisbane (+1.9%), Canberra (+1.0%), Adelaide (+0.3%) and Darwin (+2.9%) and fell in Hobart (–1.0%).

ANNUAL CHANGES (JUNE QUARTER 2012 TO JUNE QUARTER 2013)

- Preliminary estimates show that the price index for established houses for the weighted average of the eight capital cities rose 5.1% in the year to the June quarter 2013.
- Annually, house prices rose in Perth (+11.0%), Darwin (+7.7%), Sydney (+6.1%), Brisbane (+3.7%), Melbourne (+3.3%), Canberra (+2.6%), Hobart (+1.2%) and Adelaide (+0.6%).

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Neel Tikaram on Sydney (02) 9268 4792.

NOTES

FORTHCOMING ISSUES

ISSUE (Quarter)	RELEASE DATE
September 2013	4 November 2013
December 2013	4 February 2014
March 2014	6 May 2014
June 2014	5 August 2014

REVISIONS

Estimates for the two most recent quarters of the HPI series are preliminary and subject to revision (see paragraphs 15 to 19 of the Explanatory Notes).

CHANGES IN FUTURE ISSUES

From the December quarter 2013, a number of changes to the content and format of this publication will be made. Details about these changes will be available in the *Information Paper: Forthcoming changes to House Price Indexes: Eight Capital Cities* (cat. no. 6416.0.55.022) which is scheduled for release on 24 September 2013.

In summary:

- the current geography will be updated to align with the Australian Statistical Geography Standard (ASGS);
- the weights and the variables used to stratify the index will be updated using data from the 2011 Census;
- all index numbers will be calculated on a new index reference period of 2011-12=100;
- an Attached Dwellings Index and an aggregated Residential Property Price Index will be published in addition to the existing House Price Index;
- a measure for the total value of the dwelling stock has been developed and will be available.

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
CPI	Consumer Price Index
GCCSA	Greater Capital City Statistical Area
HPI	House Price Index
PPI	Producer Price Indexes
SD	statistical division
SEIFA	Socio-Economic Indexes for Areas
VGs	Valuers-General

Brian Pink
Australian Statistician

ANALYSIS

PRELIMINARY:
June Quarter 2013 (+2.4%)

The preliminary price index for established houses for the weighted average of the eight capital cities rose 2.4% in the June quarter 2013. The index rose 5.1% through the year to the June quarter 2013.

The positive movement in the June quarter 2013 was the result of rises in Sydney (+2.7%), Melbourne (+2.4%), Perth (+3.4%), Brisbane (+1.9%), Canberra (+1.0%), Adelaide (+0.3%) and Darwin (+2.9%). This was partially offset by a fall in Hobart (–1.0%).

The preliminary estimate for Sydney (+2.7%) follows a rise in the March quarter 2013 (+1.2%, revised from 0.0%). Clusters with median prices between $400,000 and $850,000 contributed most to the rise in the June quarter 2013. The index rose 6.1% through the year to the June quarter 2013, the fourth consecutive through the year rise.

The preliminary estimate for Melbourne (+2.4%) follows a rise in the March quarter 2013 (+0.1%, revised from +0.2%). The rise in Melbourne was consistent across a broad range of clusters. The index rose 3.3% through the year to the June quarter 2013. This is the second consecutive through the year rise.

The preliminary estimate for Perth (+3.4%) follows rises in the previous six quarters (+0.5%, +0.9%, +0.6%, +1.2%, +3.5% and +2.5% in the December quarter 2011, the March to December quarters 2012 and the March quarter 2013 respectively). Clusters with median prices below $750,000 contributed most to the rise in the June quarter 2013. The index rose 11.0% through the year to the June quarter 2013, the fifth consecutive through the year rise.

REVISED:
March Quarter 2013 (+0.8%)

The preliminary price index for established houses for the weighted average of the eight capital cities rose 0.8% in the March quarter 2013. This was revised from a preliminary estimated rise of 0.1%. The through the year movement has been revised from a preliminary estimated rise of 2.6% to an estimated rise of 3.3%.

The positive movement in the March quarter 2013 was the result of rises in Sydney (+1.2%, revised from 0.0%), Perth (+2.5%, revised from +1.2%), Hobart (+2.2%, revised from –0.3%), Melbourne (+0.1%, revised from +0.2%), Adelaide (+0.1%, revised from –0.1%), and Darwin (+0.8%, revised from +1.9%). This was offset by falls in Canberra (–1.2%, revised from +0.2%) and Brisbane (–0.2%, revised from –0.3%).

The preliminary estimate for Sydney (+1.2%) follows a rise in the December quarter 2012 (+2.4%, revised from +2.3%). The rise in Sydney was consistent across a broad range of clusters. Sydney rose 4.9% through the year to the March quarter 2013.

FINAL:
December Quarter 2012 (+2.1%)

The final price index for established houses for the weighted average of the eight capital cities rose 2.1% in the December quarter 2012. This was revised from a preliminary estimated rise of 2.0%. The index rose 2.5% through the year to the December quarter 2012.

The positive movement in the December quarter 2012 was the result of rises in Sydney (+2.4%, revised from +2.3%), Melbourne (+2.0%, revised from +1.8%), Perth (+3.5%, revised from +3.1%), Brisbane (+1.0%, unchanged), Canberra (+2.3%, revised from +2.8%), Adelaide (+0.7%, revised from +1.1%) and Darwin (+3.5%, revised from

December Quarter 2012 (+2.1%) continued

+3.0%). The final result for Hobart (–0.2%, revised from –0.5%) was the only fall in the December quarter 2012.

ABS HOUSE PRICE METHODOLOGY

The ABS uses a stratification approach to control for compositional change in the sample of houses used to compile the House Price Indexes each quarter. This approach stratifies (clusters) houses according to two characteristics: the long-term level of prices for the suburb in which the house is located, and the neighbourhood characteristics of the suburb, as represented by the ABS Socio-Economic Indexes for Areas (SEIFA).

Each cluster of houses in a capital city contributes a proportion of the total value of the housing stock in that capital city. The proportion of the total value is referred to as the cluster's weight. Some clusters have a large weight; some have a small weight.

Each quarter, the clusters are re-valued by applying a price relative which is derived by comparing the current median price of the cluster to the previous median price of the cluster. The current period values of each cluster are then summed to derive the current value of the total housing stock in the capital city. Index numbers are subsequently derived from the total values.

Thus the movement of a particular index is determined by both the movements of the median prices of the clusters and the weights of the clusters in the index structure.

Low numbers of price observations can affect the reliability of the cluster medians, and therefore index movements.

For more detailed information, please refer to the Explanatory Notes in this issue, or to *Information Paper: House Price Indexes: Concepts, Sources and Methods* (cat. no. 6464.0).

LIST OF TABLES

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HOUSE PRICE INDEXES

ADDITIONAL TABLE AVAILABLE ON ABS WEBSITE

1 ESTABLISHED HOUSE PRICE INDEX NUMBERS(a)

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Weighted average of eight capital cities
2010–11	116.7	174.3	150.2	160.8	200.2	158.5	219.9	147.6	147.5
2011–12	114.2	166.4	143.5	155.5	195.2	150.5	223.6	144.4	142.7
2012–13	p118.9	p167.0	p146.2	p155.6	p209.0	p148.7	p243.1	p146.1	p146.6
2009									
December	110.6	163.7	151.9	157.6	202.0	156.8	218.5	140.6	142.2
2010									
March	114.2	172.2	153.8	159.7	208.7	160.1	220.2	147.2	147.1
June	117.3	177.2	154.3	162.8	208.3	156.2	223.6	146.6	149.8
September	117.0	174.0	152.0	162.3	202.8	156.4	222.4	147.0	148.1
December	116.7	176.6	151.9	163.3	202.7	161.7	223.8	148.0	148.8
2011									
March	116.4	174.2	149.1	160.6	200.6	160.6	220.2	147.8	147.3
June	116.6	172.2	147.7	157.1	194.5	155.1	213.2	147.7	145.8
September	114.4	168.7	143.5	156.0	193.3	151.5	214.7	142.3	143.1
December	113.0	166.7	143.7	156.0	194.3	153.8	218.3	145.3	142.3
2012									
March	113.9	164.9	143.6	154.6	196.0	149.4	227.8	146.3	142.3
June	115.6	165.4	143.1	155.4	197.1	147.4	233.4	143.5	143.2
September	115.3	163.5	144.5	154.5	199.4	147.7	234.2	144.1	142.9
December	r118.1	r166.7	146.0	r155.6	r206.3	r147.4	r242.4	r147.4	r145.9
2013									
March	p119.5	p166.8	p145.7	p155.8	p211.5	p150.6	p244.4	p145.7	p147.0
June	p122.7	p170.8	p148.4	p156.3	p218.7	p149.1	p251.4	p147.2	p150.5

p preliminary figure or series subject to revision
r revised

(a) Index reference period of each index: 2003–04 = 100.0.

2 ESTABLISHED HOUSE PRICE INDEXES, Percentage Changes

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Weighted average of eight capital cities
PERCENTAGE CHANGE (from previous financial year)									
2010–11	4.5	4.6	–1.0	1.8	–1.1	2.1	1.5	4.2	2.8
2011–12	–2.1	–4.5	–4.5	–3.3	–2.5	–5.0	1.7	–2.2	–3.3
2012–13	p4.1	p0.4	p1.9	p0.1	p7.1	p–1.2	p8.7	p1.2	p2.7
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
2009									
December	13.8	19.5	10.1	7.5	10.7	11.2	15.9	15.3	13.9
2010									
March	19.5	26.3	11.2	10.1	14.9	14.4	14.3	20.5	18.8
June	16.9	22.8	8.5	9.3	12.4	7.7	13.2	16.0	16.0
September	11.6	13.3	3.6	6.9	6.2	5.7	8.9	11.4	9.9
December	5.5	7.9	0.0	3.6	0.3	3.1	2.4	5.3	4.6
2011									
March	1.9	1.2	–3.1	0.6	–3.9	0.3	0.0	0.4	0.1
June	–0.6	–2.8	–4.3	–3.5	–6.6	–0.7	–4.7	0.8	–2.7
September	–2.2	–3.0	–5.6	–3.9	–4.7	–3.1	–3.5	–3.2	–3.4
December	–3.2	–5.6	–5.4	–4.5	–4.1	–4.9	–2.5	–1.8	–4.4
2012									
March	–2.1	–5.3	–3.7	–3.7	–2.3	–7.0	3.5	–1.0	–3.4
June	–0.9	–3.9	–3.1	–1.1	1.3	–5.0	9.5	–2.8	–1.8
September	0.8	–3.1	0.7	–1.0	3.2	–2.5	9.1	1.3	–0.1
December	r4.5	r0.0	1.6	r–0.3	r6.2	r–4.2	r11.0	r1.4	r2.5
2013									
March	p4.9	p1.2	p1.5	p0.8	p7.9	p0.8	p7.3	p–0.4	p3.3
June	p6.1	p3.3	p3.7	p0.6	p11.0	p1.2	p7.7	p2.6	p5.1
PERCENTAGE CHANGE (from previous quarter)									
2009									
December	5.5	6.6	3.5	3.8	5.8	6.0	7.0	6.6	5.5
2010									
March	3.3	5.2	1.3	1.3	3.3	2.1	0.8	4.7	3.4
June	2.7	2.9	0.3	1.9	–0.2	–2.4	1.5	–0.4	1.8
September	–0.3	–1.8	–1.5	–0.3	–2.6	0.1	–0.5	0.3	–1.1
December	–0.3	1.5	–0.1	0.6	0.0	3.4	0.6	0.7	0.5
2011									
March	–0.3	–1.4	–1.8	–1.7	–1.0	–0.7	–1.6	–0.1	–1.0
June	0.2	–1.1	–0.9	–2.2	–3.0	–3.4	–3.2	–0.1	–1.0
September	–1.9	–2.0	–2.8	–0.7	–0.6	–2.3	0.7	–3.7	–1.9
December	–1.2	–1.2	0.1	0.0	0.5	1.5	1.7	2.1	–0.6
2012									
March	0.8	–1.1	–0.1	–0.9	0.9	–2.9	4.4	0.7	0.0
June	1.5	0.3	–0.3	0.5	0.6	–1.3	2.5	–1.9	0.6
September	–0.3	–1.1	1.0	–0.6	1.2	0.2	0.3	0.4	–0.2
December	r2.4	r2.0	1.0	r0.7	r3.5	r–0.2	r3.5	r2.3	r2.1
2013									
March	p1.2	p0.1	p–0.2	p0.1	p2.5	p2.2	p0.8	p–1.2	p0.8
June	p2.7	p2.4	p1.9	p0.3	p3.4	p–1.0	p2.9	p1.0	p2.4

p preliminary figure or series subject to revision r revised

3 PROJECT HOME PRICE INDEX NUMBERS(a)

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Weighted average of eight capital cities
2010–11	124.9	122.3	132.8	125.4	159.9	140.4	162.5	124.6	130.7
2011–12	127.8	123.4	132.1	124.3	163.0	140.4	165.2	124.7	132.1
2012–13	133.5	123.2	138.2	125.2	167.1	135.0	171.1	124.6	135.3
2009									
December	120.9	118.3	129.2	122.7	154.5	135.4	156.6	120.8	126.6
2010									
March	122.1	118.9	130.3	123.8	156.6	136.3	157.8	121.2	127.7
June	122.6	120.1	130.8	124.3	158.6	136.8	158.3	122.9	128.6
September	122.8	120.7	131.3	124.8	159.2	140.3	160.1	124.1	129.2
December	124.3	121.6	132.5	125.1	159.6	140.3	162.6	124.1	130.2
2011									
March	125.6	123.2	133.2	126.0	160.0	140.5	163.3	125.1	131.3
June	127.0	123.7	134.1	125.7	160.6	140.6	163.9	125.1	132.1
September	126.7	124.2	132.0	124.4	161.7	140.8	163.7	125.1	131.8
December	127.6	123.8	132.0	124.5	162.4	140.8	163.9	125.1	132.1
2012									
March	127.8	123.6	131.7	124.1	163.3	141.1	165.6	124.5	132.1
June	129.2	122.0	132.7	124.2	164.4	138.7	167.5	124.0	132.4
September	131.3	121.7	136.5	124.5	164.7	134.7	168.8	124.4	133.5
December	133.1	119.2	138.5	125.4	165.6	134.7	169.6	124.7	133.9
2013									
March	134.4	125.4	137.6	125.3	167.8	134.9	171.8	124.8	136.2
June	135.3	126.3	140.3	125.6	170.4	135.6	174.1	124.6	137.5

(a) Index reference period of each index: 2003–04 = 100.0.

4 PROJECT HOME PRICE INDEXES, Percentage Changes

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Weighted average of eight capital cities
PERCENTAGE CHANGE (from previous financial year)									
2010–11	2.9	3.1	2.2	1.7	2.5	3.3	3.4	2.6	2.8
2011–12	2.3	0.9	–0.5	–0.9	1.9	0.0	1.7	0.1	1.1
2012–13	4.5	–0.2	4.6	0.7	2.5	–3.8	3.6	–0.1	2.4
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
2009									
December	3.6	5.2	0.2	1.7	0.3	4.4	3.1	2.2	2.8
2010									
March	4.6	7.0	1.9	2.6	2.1	5.1	2.3	2.5	4.2
June	2.9	5.8	1.3	2.5	3.3	4.9	1.5	2.8	3.5
September	2.4	3.0	1.6	2.0	3.3	3.8	2.5	2.7	2.6
December	2.8	2.8	2.6	2.0	3.3	3.6	3.8	2.7	2.8
2011									
March	2.9	3.6	2.2	1.8	2.2	3.1	3.5	3.2	2.8
June	3.6	3.0	2.5	1.1	1.3	2.8	3.5	1.8	2.7
September	3.2	2.9	0.5	–0.3	1.6	0.4	2.2	0.8	2.0
December	2.7	1.8	–0.4	–0.5	1.8	0.4	0.8	0.8	1.5
2012									
March	1.8	0.3	–1.1	–1.5	2.1	0.4	1.4	–0.5	0.6
June	1.7	–1.4	–1.0	–1.2	2.4	–1.4	2.2	–0.9	0.2
September	3.6	–2.0	3.4	0.1	1.9	–4.3	3.1	–0.6	1.3
December	4.3	–3.7	4.9	0.7	2.0	–4.3	3.5	–0.3	1.4
2013									
March	5.2	1.5	4.5	1.0	2.8	–4.4	3.7	0.2	3.1
June	4.7	3.5	5.7	1.1	3.6	–2.2	3.9	0.5	3.9
PERCENTAGE CHANGE (from previous quarter)									
2009									
December	0.8	0.9	0.0	0.3	0.3	0.1	0.3	0.0	0.6
2010									
March	1.0	0.5	0.9	0.9	1.4	0.7	0.8	0.3	0.9
June	0.4	1.0	0.4	0.4	1.3	0.4	0.3	1.4	0.7
September	0.2	0.5	0.4	0.4	0.4	2.6	1.1	1.0	0.5
December	1.2	0.7	0.9	0.2	0.3	0.0	1.6	0.0	0.8
2011									
March	1.0	1.3	0.5	0.7	0.3	0.1	0.4	0.8	0.8
June	1.1	0.4	0.7	–0.2	0.4	0.1	0.4	0.0	0.6
September	–0.2	0.4	–1.6	–1.0	0.7	0.1	–0.1	0.0	–0.2
December	0.7	–0.3	0.0	0.1	0.4	0.0	0.1	0.0	0.2
2012									
March	0.2	–0.2	–0.2	–0.3	0.6	0.2	1.0	–0.5	0.0
June	1.1	–1.3	0.8	0.1	0.7	–1.7	1.1	–0.4	0.2
September	1.6	–0.2	2.9	0.2	0.2	–2.9	0.8	0.3	0.8
December	1.4	–2.1	1.5	0.7	0.5	0.0	0.5	0.2	0.3
2013									
March	1.0	5.2	–0.6	–0.1	1.3	0.1	1.3	0.1	1.7
June	0.7	0.7	2.0	0.2	1.5	0.5	1.3	–0.2	1.0

5 SELECTED HOUSING PRICE INDEX NUMBERS(a), Australia

Period	*Established houses*(b)	*Project homes*(b)	*Input to the House construction industry*(c)(d)	*Construction industry total hourly rates of pay*	*National accounts private housing investment*(b)
2010–11	147.5	130.7	124.4	135.9	132.5
2011–12	142.7	132.1	126.2	141.4	134.4
2012–13	p146.6	135.3	127.6	nya	nya
2009					
December	142.2	126.6	121.3	130.2	128.4
2010					
March	147.1	127.7	121.7	131.0	129.3
June	149.8	128.6	123.0	132.4	130.4
September	148.1	129.2	123.5	134.1	131.2
December	148.8	130.2	124.2	135.4	132.0
2011					
March	147.3	131.3	124.3	136.5	133.0
June	145.8	132.1	125.7	137.6	133.9
September	143.1	131.8	126.0	139.3	134.2
December	142.3	132.1	126.1	140.8	134.3
2012					
March	142.3	132.1	126.0	142.2	134.4
June	143.2	132.4	126.5	143.4	134.5
September	142.9	133.5	127.2	144.4	134.9
December	r145.9	133.9	127.6	145.8	135.4
2013					
March	p147.0	136.2	127.7	146.4	136.8
June	p150.5	137.5	128.0	nya	nya

nya not yet available
p preliminary figure or series subject to revision
r revised
(a) Index reference period of each index: 2003–04 = 100.0.
(b) Weighted average of eight capital cities.
(c) Weighted average of six capital cities.
(d) Previously named Materials used in house building. See paragraph 29 of the Explantory Notes.

6 SELECTED HOUSING PRICE INDEX NUMBERS, Australia—Percentage Changes

Period	*Established houses*(a)	*Project homes*(a)	*Input to the House construction industry*(b)(c)	*Construction industry total hourly rates of pay*	*National accounts private housing investment*(a)
	PERCENTAGE CHANGE (from previous financial year)				
2010–11	2.8	2.8	2.1	3.9	2.8
2011–12	–3.3	1.1	1.4	4.0	1.4
2012–13	p2.7	2.4	1.1	nya	nya
	PERCENTAGE CHANGE (from corresponding quarter of previous year)				
2009					
December	13.9	2.8	0.9	3.4	2.3
2010					
March	18.8	4.2	0.0	3.0	3.1
June	16.0	3.5	0.7	2.9	3.6
September	9.9	2.6	1.8	3.6	3.0
December	4.6	2.8	2.4	4.0	2.8
2011					
March	0.1	2.8	2.1	4.2	2.9
June	–2.7	2.7	2.2	3.9	2.7
September	–3.4	2.0	2.0	3.9	2.3
December	–4.4	1.5	1.5	4.0	1.7
2012					
March	–3.4	0.6	1.4	4.2	1.1
June	–1.8	0.2	0.6	4.2	0.4
September	–0.1	1.3	1.0	3.7	0.5
December	2.5	1.4	1.2	3.6	0.8
2013					
March	p3.3	3.1	1.3	3.0	1.8
June	p5.1	3.9	1.2	nya	nya
	PERCENTAGE CHANGE (from previous quarter)				
2009					
December	5.5	0.6	0.0	0.6	0.8
2010					
March	3.4	0.9	0.3	0.6	0.7
June	1.8	0.7	1.1	1.1	0.9
September	–1.1	0.5	0.4	1.3	0.6
December	0.5	0.8	0.6	1.0	0.6
2011					
March	–1.0	0.8	0.1	0.8	0.8
June	–1.0	0.6	1.1	0.8	0.7
September	–1.9	–0.2	0.2	1.2	0.2
December	–0.6	0.2	0.1	1.1	0.1
2012					
March	0.0	0.0	–0.1	1.0	0.1
June	0.6	0.2	0.4	0.8	0.1
September	–0.2	0.8	0.6	0.7	0.3
December	r2.1	0.3	0.3	1.0	0.4
2013					
March	p0.8	1.7	0.1	0.4	1.0
June	p2.4	1.0	0.2	nya	nya

nya not yet available

p preliminary figure or series subject to revision

r revised

(a) Weighted average of eight capital cities.

(b) Weighted average of six capital cities.

(c) Previously named Materials used in house building. See paragraph 29 of the Explantory Notes.

7 MEDIAN PRICE OF ESTABLISHED HOUSE TRANSFERS (UNSTRATIFIED)(a)

Period	Sydney $'000	Melbourne $'000	Brisbane $'000	Adelaide $'000	Perth $'000	Hobart $'000	Darwin $'000	Canberra $'000
2009								
December	595.0	477.5	455.0	398.8	505.0	350.0	520.0	509.0
2010								
March	583.0	468.0	460.0	402.0	518.0	350.5	529.0	530.0
June	612.5	500.0	465.0	410.0	510.0	343.8	530.0	516.2
September	598.0	488.3	460.0	400.0	500.0	340.0	535.0	530.0
December	620.0	520.0	460.0	410.0	500.0	345.0	545.0	534.5
2011								
March	575.0	485.0	450.0	400.0	500.0	338.0	510.0	530.0
June	r591.8	r502.2	442.0	395.0	485.0	330.0	500.0	r534.0
September	r564.7	480.0	433.0	387.0	470.0	335.0	507.8	530.0
December	528.0	r487.0	r432.0	385.0	r482.3	340.0	505.0	527.0
2012								
March	r602.0	470.0	r433.0	383.0	489.0	345.0	547.3	r532.3
June	r600.0	480.0	437.0	385.0	500.0	331.5	547.0	r522.5
September	580.0	r472.5	437.0	386.0	r493.0	r318.8	548.0	530.0
December	640.0	500.0	445.0	392.0	515.0	334.0	568.0	547.8
2013								
March	nya	nya	nya	nya	nya	nya	nya	nya
June	nya	nya	nya	nya	nya	nya	nya	nya

nya not yet available

r revised

(a) See paragraphs 32 to 35 of the Explanatory Notes.

8 NUMBER OF ESTABLISHED HOUSE TRANSFERS(a)

Period	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
	no.	no.	no.	no.	no.	no.	no.	no.
2010–11	r44 117	r50 149	r25 142	r15 522	r20 895	r3 234	1 140	r4 553
2011–12	r43 785	r47 210	r24 875	r14 575	r22 670	r2 808	1 462	r3 997
2012–13	nya	nya	nya	nya	nya	nya	nya	nya
2009								
December	12 786	16 586	7 844	4 234	6 635	921	363	1 297
2010								
March	11 091	14 148	7 640	3 993	6 401	976	339	971
June	12 610	15 641	6 869	4 197	5 064	841	310	1 234
September	11 334	13 632	6 930	4 128	5 131	840	278	1 042
December	11 704	13 141	6 385	4 009	4 959	837	277	1 324
2011								
March	r9 917	r10 767	5 874	r3 719	5 661	849	270	r1 001
June	r11 162	r12 609	r5 953	r3 666	5 144	r708	315	r1 186
September	r10 897	r11 464	r6 370	3 560	5 436	r672	326	997
December	r13 399	r12 299	r6 127	r3 636	r5 772	756	397	r1 039
2012								
March	r9 177	r11 294	r6 520	r3 637	r5 965	r730	394	r964
June	r10 312	r12 153	r5 858	r3 742	r5 497	r650	345	r997
September	r10 908	r11 437	r7 330	r3 558	r6 023	r658	384	r925
December	11 517	12 898	6 915	3 701	6 115	762	400	1 029
2013								
March	nya	nya	nya	nya	nya	nya	nya	nya
June	nya	nya	nya	nya	nya	nya	nya	nya

nya not yet available

r revised

(a) See paragraphs 32 to 35 of the Explanatory Notes.

9 REVISIONS TO ESTABLISHED HOUSE PRICE INDEX SERIES, Weighted average of eight capital cities(a)(b)(c)

Period	1st estimate	2nd estimate	Final estimate	DIFFERENCE BETWEEN FINAL ESTIMATE AND: 1st estimate	2nd estimate
	INDEX NUMBER(a)			INDEX POINTS	
2011					
June	147.0	146.5	145.8	–1.2	–0.7
September	144.8	143.1	143.1	–1.7	0.0
December	141.6	142.1	142.3	0.7	0.2
2012					
March	140.6	142.1	142.3	1.7	0.2
June	142.8	143.1	143.2	0.4	0.1
September	143.6	143.0	142.9	–0.7	–0.1
December	145.3	145.8	145.9	0.6	0.1
2013					
March	146.0	147.0	nya	nya	nya
June	150.5	nya	nya	nya	nya
	ANNUAL PERCENTAGE CHANGE(b)			PERCENTAGE POINTS	
2011					
June	–1.9	–2.2	–2.7	–0.8	–0.5
September	–2.2	–3.4	–3.4	–1.2	0.0
December	–4.8	–4.5	–4.4	0.4	0.1
2012					
March	–4.5	–3.5	–3.4	1.1	0.1
June	–2.1	–1.9	–1.8	0.3	0.1
September	0.3	–0.1	–0.1	–0.4	0.0
December	2.1	2.5	2.5	0.4	0.0
2013					
March	2.6	3.3	nya	nya	nya
June	5.1	nya	nya	nya	nya
	QUARTERLY PERCENTAGE CHANGE(c)			PERCENTAGE POINTS	
2011					
June	–0.1	–0.5	–1.0	–0.9	–0.5
September	–1.2	–1.9	–1.9	–0.7	0.0
December	–1.0	–0.7	–0.6	0.4	0.1
2012					
March	–1.1	–0.1	0.0	1.1	0.1
June	0.5	0.6	0.6	0.1	0.0
September	0.3	–0.1	–0.2	–0.5	–0.1
December	1.6	2.0	2.1	0.5	0.1
2013					
March	0.1	0.8	nya	nya	nya
June	2.4	nya	nya	nya	nya

nya not yet available

(a) Index reference period of each index: 2003–04 = 100.0.

(b) Percentage change from corresponding quarter of previous year.

(c) Percentage change from previous quarter.

EXPLANATORY NOTES

INTRODUCTION

1 This publication provides estimates of changes in house prices for each of the eight capital cities of Australia. The information is presented in the form of price indexes constructed separately for Established Houses and for Project Homes (see below for definitions). It is calculated on an index reference period of 2003-04 = 100.0 for each of the eight capital cities as well as a weighted average of them. The capital city indexes measure price movements over time in each city individually. They do not measure differences in price levels between cities.

2 The index for Project Homes is compiled for use in calculating the New dwelling purchase by owner-occupiers expenditure class of the Consumer Price Index (CPI). The index for Established Houses (referred to from now on as the HPI), while not contributing to the CPI, is compiled and published along with the Project Homes index in recognition of the widespread interest in information specifically relating to housing prices.

3 To assist in the analysis of housing price movements at the national level, aggregated series have also been compiled and are presented in Tables 5 and 6 along with series for prices of input to the house construction industry, construction industry hourly rates of pay and private housing investment. For information on the derivation of series in these tables see paragraphs 25-31.

4 Table 7 presents a city-wide median price (unstratified) of house sales data available from the State/Territory Land Titles Office or Valuers-General (VGs) Office in each capital city. These median prices are 'raw' medians from the available data set and quarterly changes in them will not concord with the published HPIs for each city which are compiled in strata and weighted by the value of housing stock. Numbers of established house transfers recorded each quarter by the VGs are presented in Table 8.

5 For more detailed information on house price indexes than is provided in these explanatory notes refer to *Information Paper, House Price Indexes: Concepts, Sources and Methods, Australia, 2009* (cat. no. 6464.0).

DEFINITIONS

Capital City

6 Capital City Statistical Divisions (SDs) are predominantly urban in character and represent the State/Territory capital cities in the wider sense. A Capital City SD is defined to contain the anticipated urban development of a capital city and it delimits an area which is stable for general statistical purposes.

7 Currently, HPI Capital City SDs are based on the *2006 Australian Standard Geographical Classification (ASGC)* (cat. no. 1216.0). The ASGC will be replaced by the *Australian Statistical Geography Standard (ASGS)* (Vol 1, cat. no. 1270.0.55.001) from July 2011. HPI geographic coverage will be defined by the ASGS Greater Capital City Statistical Areas (GCCSA) during the next index review. The December quarter 2013 HPI publication is expected to be the first release of the HPI series based on the ASGS.

Established houses

8 The HPI covers transactions in detached residential dwellings on their own block of land regardless of age (i.e. including new houses sold as a house/land package as well as second-hand houses). Price changes therefore relate to changes in the total price of dwelling and land.

Project homes

9 Project homes are dwellings available for construction on an existing block of land. Price changes therefore relate only to the price of the dwelling (i.e. excluding land).

PRICE INDEXES

10 A price index is concerned with measuring pure price change – that is, it is concerned with isolating and measuring that element of price change which is not brought about by any change to either the quantity or the quality of the goods or services for which the index is required.

PRICE INDEXES *continued*

11 The techniques used to construct a price index for project homes are similar to those used for most other goods. A representative sample of project home models is selected in each city, prices are obtained each quarter and the price movements for each model are weighted together. Constant quality is preserved by calculating price movements on a matched sample basis (i.e. the price movements between adjacent quarters are based on the same models in each quarter). If the specification of an individual model changes substantially or a price is unable to be obtained then that model is excluded from the calculation of price movement. Adjustments are made to raw prices to compensate for any minor changes in specifications.

12 This standard procedure for constructing price indexes is not viable in the case of established houses as the observable prices in each period relate to a different set of dwellings for each period. The challenge is how to utilise prices for a heterogeneous set of dwellings to construct measures of price change for characteristic or homogeneous dwellings.

Controlling for the compositional change effect

13 The ABS uses stratification to control for this 'compositional' effect by grouping (or 'clustering') houses according to a set of characteristics. The finer the level of stratification available, the more similar or homogenous the cluster of houses will be. However, the finer the level of stratification, the fewer the property sales in the period. Therefore, the clusters defined have to balance the homogeneity of housing characteristics and the number of observations required to produce a reliable median price. The lowest level geographical classification that is commonly available across data sets is the suburb. Therefore, suburbs are the building blocks on which the clusters are based.

14 Analysis by the ABS has found that the most effective stratification approach uses two characteristics: the long term level of prices for the suburb in which the house is located, and neighbourhood characteristics of the suburb, as represented by the ABS produced Socio-Economic Indexes for Areas (SEIFA). A new set of clusters produced with this stratification method was introduced in the December quarter 2008 issue of 6416.0, together with updated housing stock weights derived using quantity data from the 2006 Census of Population and Housing. The link period for these changes was the March quarter 2008. Therefore, only the index numbers from the June quarter 2008 onwards reflect the new weights and stratification. The new approach is a refinement of the previous stratification method, which was based on structural attributes of dwellings within suburbs, the physical location of the dwelling, and neighbourhood characteristics of suburbs.

Benchmark and Leading Indicator series

15 Though more comprehensive coverage of property sales data is eventually obtained from the State/Territory Land Titles Office or Valuers-General (VGs) Office in each capital city, this data is not available on a timely basis for the most recent quarters. As a result, the ABS has adopted a two-stage approach to produce the HPI to allow the compilation and publication of a more timely estimate of price change. The first stage is to compile the benchmark series based on the complete, or near complete, VGs dataset for each quarter. This will be the third most recent quarter in any publication. The second stage, referred to as the leading indicator series, involves compiling price indexes for the two most recent quarters based on a combination of mortgage lenders' data and the VGs data available at that point in time. It should be noted that for Darwin, mortgage lenders' data is combined with VGs data for the most recent quarter only.

16 The index numbers for the leading indicator series are preliminary estimates and are revised as more data are progressively received from VGs. These index numbers are labelled with a "p" indicating a preliminary estimate. The benchmark series (labelled with an "r" if it has been revised since the previous quarter's leading indicator estimate) are final estimates and will not be subject to further revision once published.

Benchmark and Leading Indicator series continued

17 The revisions to price indexes and percentage changes are reported in Table 9, Revisions to Established House Price Index Series, Australia. This table displays, for each time period, the preliminary and final estimates, and the corresponding annual and quarterly percentage changes. The table also displays the size of the revisions made to preliminary estimates of house price index movements.

18 The columns titled 'Difference between final estimate and first and second estimate' are calculated by subtracting the initial estimates from the final estimate. Consequently, no revisions information will be available until a final estimate has been published. As the HPI series was first published with respect to the September quarter 2005, the first period for which preliminary data can be compared with final data is the June quarter 2005. No preliminary estimates exist prior to this period.

19 Revisions to the weighted average of the eight capital cities are included in this publication. Revisions made to each of the individual capital cities are available on the ABS website <http://www.abs.gov.au> (refer to the time series spreadsheets under the 'Downloads' tab for *House Price Indexes: Eight Capital Cities* (cat. no. 6416.0)).

Available data

20 Price information for project homes is obtained each month from a sample of project home builders in each capital city. Sales prices of established houses are obtained from VGs and home mortgage lenders, and are based on the exchange date of the sales. The exchange date most closely approximates the time at which the market price is determined. Exchange date information is available for all cities except Adelaide and Darwin. For these cities, a modelled exchange date is used.

21 The delivery of VGs data relating to exchange date is delayed by the normal contract settlement and reporting processes. It is only possible to publish reliable house price movements based solely on VGs data after approximately six months.

LIMITATIONS OF HOUSE PRICE INDEXES

22 The reliability of each index is largely dependent upon the availability of sufficient pricing information each quarter. While not a problem for project homes, difficulties are sometimes encountered when compiling the HPI. Although the HPI clusters have been defined to balance the homogeneity of housing characteristics and the number of observations required to produce a reliable median price, the number of price observations available depends on market activity in each quarter and there may be occasions when clusters have low numbers of price observations. This is most apparent in the established house price indexes for the smaller capital cities (Hobart, Darwin and Canberra).

23 The series most affected by limited market scope is the Darwin established house price index. As can be seen from the data in Table 8, the series for Darwin is affected by a relatively low number of transactions in any quarter. Rather than suppress publication, the series are included here because it is believed that the long term trends are reliable. However, because of the limitations in the reliability of individual quarter-to-quarter movements, users are advised to exercise due care when analysing such movements.

24 It should be noted that when the number of price observations available for a cluster is nil or extremely low in a quarter, a price movement for the cluster is derived using imputation methods based on price movements of other clusters.

NATIONAL HOUSE PRICE AND OTHER INDEXES

25 These series are presented to facilitate analysis of price movements at a national level. Although coverage is not strictly national in all cases, this does not significantly impair their usefulness. The derivation or source of each series is set out below.

Established houses

26 The series for established houses is derived by weighting together the indexes for each of the eight capital cities according to the relative value of housing stock in each capital city. From the June quarter 2008 onwards, the values were obtained by combining 2006 Population Census house counts with mean prices from the March quarter 2008.

Established houses continued

Prior to this, the values were obtained by combining 2001 Population Census house counts with mean prices from the March quarter 2002. It is important to understand that in the compilation of this index (and other fixed weighted indexes) it is not the housing stock values that are held constant from period to period. What is held constant is the quantity (e.g. number of houses) underpinning these values.

Project homes

27 The series for project homes is derived by weighting together the indexes for each of the eight capital cities. The city weights are derived from the value of net additions to the number of owner-occupier households, calculated by applying the average value of private dwelling completions from Building Activity statistics to quantity data calculated from Census 2006 counts of owner-occupied houses moved forward using data from *Household and Family Projections, Australia* (cat. no. 3236.0). As extensions and renovations are conceptually part of the CPI expenditure class, their value is included in the calculation of the weights. No prices specifically relating to these activities are collected as their prices are assumed to move similarly to those of new houses.

28 Although the capital city price indexes for project homes are compiled for use in calculating the House purchase expenditure class of the CPI, price movements exhibited in the published CPI series are not comparable to those published with the established house price index because the CPI for house purchase is a broader aggregate which also covers fixed appliances and an adjustment for government subsidies directly related to house purchase.

Input to the house construction industry

29 The index for input to the house construction industry is that published for the weighted average of the six state capital cities in *Producer Price Indexes, Australia* (PPI) (cat. no. 6427.0), re-referenced to 2003-04 = 100.0. From the September quarter 2012, the PPI was published on a new index reference period of 2011-12 = 100. HPI will continue to publish this index re-referenced to 2003-04 = 100 for ease of comparison with other series. Index and period-to-period percentage changes in this publication may differ slightly to those previously published in this publication. These differences are due to re-referencing and rounding of the PPI series and do not constitute a revision. From the September quarter 2012, this series has also been renamed. It was previously known as the materials used in house building index. For more information on this index refer to *Producer and International Trade Price Indexes: Concepts, Sources and Methods, 2006* (cat. no. 6429.0).

Construction industry total hourly rates of pay

30 The index for the construction industry total hourly rates of pay excluding bonuses, private and public, is that published in *Wage Price Index, Australia* (cat. no. 6345.0), re-referenced to 2003-04 = 100.0 for ease of comparison with other series. For more information on this index refer to *Wage Price Index: Concepts, Sources and Methods, 2012* (cat. no. 6351.0.55.001).

Private Housing Investment

31 The index for private housing investment is the annually reweighted chain Laspeyres price index for private capital expenditure on new and used dwellings, as used (but not separately published) in *Australian National Accounts: National Income, Expenditure and Produc*t (cat. no. 5206.0), re-referenced to 2003-04 = 100.0. Index numbers and period-to-period percentage changes in this publication may differ slightly from numbers previously published in this publication. These differences are due to the reweighting of the Australian National Accounts series and do not constitute a revision. For more information on this index refer to *Australian System of National Accounts: Concepts, Sources and Methods, Edition 3* (cat. no. 5216.0).

Established house transfer prices and counts

32 As well as the price indexes based on stratified weights for each city, the ABS publishes the median price of all established house transfers, and the number of established house transfers. Both these series are based on the house sales data from the State/Territory Land Titles Office or Valuers-General (VGs) Office in each capital city, and are only available for those quarters for which final index estimates are available.

33 The median prices presented in Table 7 are calculated using all available VGs records for each city each quarter, with no stratification or weighting applied. These 'raw' medians will not correspond to the published index numbers and will not produce price movements that are consistent with those numbers.

34 The number of transfers of established houses recorded each quarter by the VG in each capital city is presented in Table 8 to provide an indication of the level of sales activity for the capital city each quarter.

35 As the ABS receives more VGs data, the median prices and the number of house transfers are revised as necessary. The usual practice is to update the most recent eight quarters of published figures. This practice is distinct from the HPI which is not revised once published as a final benchmark estimate, even if additional data are available. The medians and numbers of house transfers presented in Table 7 and Table 8 reflect transfers that occurred within the capital city boundaries as defined at the previous Census, including those that occurred in new suburbs. Users should exercise caution when interpreting figures over time.

ANALYSIS OF CHANGES IN INDEX NUMBERS

36 Each of the indexes presented in this publication is calculated on a quarterly basis with an index reference period of 2003-04 = 100.0. In compiling these indexes quarterly, the objective is to measure the change in price levels between quarters.

37 Index numbers are also presented for financial years where the index numbers for financial years are simple (arithmetic) averages of the quarterly index numbers. Index numbers for calendar years may be derived in the same way.

38 Movements in indexes from one period to another can be expressed either as changes in index points or as percentage changes. The following example illustrates the method of calculating index points changes and percentage changes between any two periods:

Project Homes: Perth index numbers —

December Quarter 2011	162.4
less September Quarter 2011	161.7
equals change in index points	0.7
Percentage change	0.7/161.7 X 100 = 0.4% (see Table 4)

39 In this publication, percentage changes are calculated to illustrate three different kinds of movements in index numbers:

- movements between consecutive financial years (change between average price levels during one financial year and average price levels during the next financial year)
- movements between corresponding quarters of consecutive years
- movements between consecutive quarters.

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