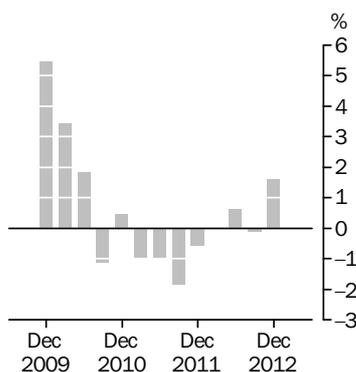


# HOUSE PRICE INDEXES: EIGHT CAPITAL CITIES

EMBARGO: 11.30AM (CANBERRA TIME) TUES 5 FEB 2013

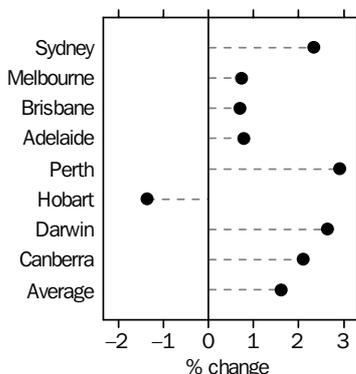
## Established house prices

Weighted average of eight capital cities  
Quarterly % change



## Established house prices

Quarterly % change  
December quarter 2012



## INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Ben Faulkner on Sydney (02) 9268 4052.

## KEY FIGURES

### ESTABLISHED HOUSE PRICES

	Sep Qtr 12 to Dec Qtr 12 % change	Dec Qtr 11 to Dec Qtr 12 % change
<b>Weighted average of eight capital cities</b>	<b>1.6</b>	<b>2.1</b>
Sydney	2.3	4.2
Melbourne	0.7	-0.2
Brisbane	0.7	0.7
Adelaide	0.8	-0.4
Perth	2.9	5.6
Hobart	-1.4	-6.1
Darwin	2.6	10.1
Canberra	2.1	0.3

## KEY POINTS

### ESTABLISHED HOUSE PRICES

#### QUARTERLY CHANGES

- Preliminary estimates show the price index for established houses for the weighted average of the eight capital cities rose 1.6% in the December quarter 2012.
- The capital city indexes rose in Sydney (+2.3%), Perth (+2.9%), Melbourne (+0.7%), Brisbane (+0.7%), Adelaide (+0.8%), Canberra (+2.1%) and Darwin (+2.6%) and fell in Hobart (-1.4%).

#### ANNUAL CHANGES (DECEMBER QUARTER 2011 TO DECEMBER QUARTER 2012)

- Preliminary estimates show that the price index for established houses for the weighted average of the eight capital cities rose 2.1% in the year to the December quarter 2012.
- Annually, house prices rose in Darwin (+10.1%), Perth (+5.6%), Sydney (+4.2%), Brisbane (+0.7%) and Canberra (+0.3%) and fell in Hobart (-6.1%), Adelaide (-0.4%) and Melbourne (-0.2%).

# NOTES

## FORTHCOMING ISSUES

<i>ISSUE (Quarter)</i>	<i>RELEASE DATE</i>
March 2013	7 May 2013
June 2013	6 August 2013
September 2013	4 November 2013
December 2013	4 February 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).

## 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:

*December Quarter 2012*  
(+1.6%)

The preliminary price index for established houses for the weighted average of the eight capital cities rose 1.6% in the December quarter 2012. The index rose 2.1% through the year to the December quarter 2012.

The positive movement in the December quarter 2012 was the result of rises in Sydney (+2.3%), Perth (+2.9%), Melbourne (+0.7%), Brisbane (+0.7%), Adelaide (+0.8%), Canberra (+2.1%) and Darwin (+2.6%). This was partially offset by a fall in Hobart (-1.4%).

The preliminary estimate for Sydney (+2.3%) follows a fall in the September quarter 2012 (-0.5%). Clusters with median prices below \$750,000 contributed most to the rise in the December quarter 2012. The index rose 4.2% through the year to the December quarter 2012, the second consecutive through the year rise after falls in the previous five quarters.

The preliminary estimate for Perth (+2.9%) follows rises in the previous four quarters (+0.5%, +0.9%, +0.6% and +1.1% in the December quarter 2011 and the March to September quarters 2012 respectively). The rise in the December quarter 2012 was consistent across a range of clusters. The index rose 5.6% through the year to the December quarter 2012, following rises in the preceding two quarters (+1.3% and +3.1% in the June and September quarters 2012 respectively).

The preliminary estimate for Adelaide (+0.8%) follows a fall in the September quarter 2012 (-0.8%). Clusters with median prices between \$350,000 and \$450,000 contributed to the rise in the December quarter 2012. The index fell 0.4% through the year to the December quarter 2012, the seventh consecutive through the year fall.

### REVISED:

*September Quarter 2012*  
(-0.1%)

The preliminary price index for established houses for the weighted average of the eight capital cities fell 0.1% in the September quarter 2012. This was revised from a preliminary estimated rise of 0.3%. The through the year movement has been revised from an estimated rise of 0.3% to an estimated fall of 0.1%.

The negative movement in the September quarter 2012 was the result of falls in Sydney (-0.5%, revised from +0.3%), Adelaide (-0.8%, revised from -0.6%), Melbourne (-0.1%, revised from +0.2%), Canberra (-0.6%, revised from -1.1%) and Hobart (-0.7%, revised from +0.2%). This was partially offset by rises in Perth (+1.1%, revised from +1.8%), Brisbane (+0.4%, unchanged) and Darwin (+0.3%, revised from -0.5%).

The preliminary estimate for Sydney (-0.5%) follows a rise in the June quarter 2012 (+1.5%, unchanged). The fall in Sydney was due to falls in clusters with median prices below \$600,000. Sydney rose 0.5% through the year to the September quarter 2012.

### FINAL:

*June Quarter 2012*  
(+0.6%)

The final price index for established houses for the weighted average of the eight capital cities rose 0.6% in the June quarter 2012. There was no revision from the second preliminary estimate published last quarter. The movement through the year to the June quarter 2012 was revised from a fall of 1.9% to a fall of 1.8%.

## ANALYSIS *continued*

---

*June Quarter 2012*  
*(+0.6%) continued*

The June quarter 2012 result was due to rises in Sydney (+1.5%, unchanged), Melbourne (+0.3%, revised from -0.2%), Perth (+0.6%, revised from +1.2%), Adelaide (+0.5%, revised from +0.4%) and Darwin (+2.5%, unchanged). These rises were partially offset by falls in Canberra (-1.9%, revised from -1.2%), Brisbane (-0.3%, revised from -0.2%) and Hobart (-1.3%, revised from -1.0%).

### 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

---

*page*

### HOUSE PRICE INDEXES

<b>1</b>	Established house price index numbers . . . . .	6
<b>2</b>	Established house price indexes, percentage changes . . . . .	7
<b>3</b>	Project home price index numbers . . . . .	8
<b>4</b>	Project home price indexes, percentage changes . . . . .	9
<b>5</b>	Selected housing price index numbers, Australia . . . . .	10
<b>6</b>	Selected housing price index numbers, Australia, percentage changes . . . . .	11
<b>7</b>	Median price of established house transfers (unstratified) . . . . .	12
<b>8</b>	Number of established house transfers . . . . .	13
<b>9</b>	Revisions to established house price index series, weighted average of eight capital cities . . . . .	14

### ADDITIONAL TABLE AVAILABLE ON ABS WEBSITE

<b>10</b>	Established house price index numbers, pre-September quarter 2005 methodology	
-----------	----------------------------------------------------------------------------------	--

## ESTABLISHED HOUSE PRICE INDEX NUMBERS (a)

<i>Period</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Canberra</i>	<i>Weighted average of eight capital cities</i>
<b>2009–10</b>	111.7	166.7	151.7	158.0	202.5	155.3	216.6	141.6	143.5
<b>2010–11</b>	116.7	174.3	150.2	160.8	200.2	158.5	219.9	147.6	147.5
<b>2011–12</b>	114.2	r166.4	143.5	155.5	r195.2	r150.5	223.6	r144.4	142.7
<b>2009</b>									
June	100.3	144.3	142.2	149.0	185.3	145.0	197.5	126.4	129.1
September	104.8	153.6	146.7	151.8	191.0	147.9	204.2	131.9	134.8
December	110.6	163.7	151.9	157.6	202.0	156.8	218.5	140.6	142.2
<b>2010</b>									
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
<b>2011</b>									
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
<b>2012</b>									
March	113.9	164.9	143.6	154.6	196.0	149.4	227.8	146.3	142.3
June	115.6	r165.4	r143.1	r155.4	r197.1	r147.4	233.4	r143.5	r143.2
September	p115.0	p165.2	p143.7	p154.1	p199.3	p146.4	p234.2	p142.7	p143.0
December	p117.7	p166.4	p144.7	p155.3	p205.1	p144.4	p240.4	p145.7	p145.3

p preliminary figure or series subject to revision  
r revised

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

## ESTABLISHED HOUSE PRICE INDEXES, Percentage Changes

Period									Weighted average of eight capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	
PERCENTAGE CHANGE (from previous financial year)									
<b>2009-10</b>	14.0	19.9	8.5	7.6	10.1	9.8	13.9	14.9	13.8
<b>2010-11</b>	4.5	4.6	-1.0	1.8	-1.1	2.1	1.5	4.2	2.8
<b>2011-12</b>	-2.1	r-4.5	-4.5	-3.3	r-2.5	r-5.0	1.7	r-2.2	-3.3
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
<b>2009</b>									
June	-0.8	0.8	-2.7	1.4	-2.9	1.3	11.1	-0.2	-0.6
September	6.1	10.9	4.4	3.3	2.4	5.9	12.3	7.8	6.6
December	13.8	19.5	10.1	7.5	10.7	11.2	15.9	15.3	13.9
<b>2010</b>									
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
<b>2011</b>									
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
<b>2012</b>									
March	-2.1	-5.3	-3.7	-3.7	-2.3	-7.0	3.5	-1.0	-3.4
June	-0.9	r-3.9	r-3.1	r-1.1	r1.3	r-5.0	9.5	r-2.8	r-1.8
September	p0.5	p-2.1	p0.1	p-1.2	p3.1	p-3.4	p9.1	p0.3	p-0.1
December	p4.2	p-0.2	p0.7	p-0.4	p5.6	p-6.1	p10.1	p0.3	p2.1
PERCENTAGE CHANGE (from previous quarter)									
<b>2009</b>									
June	4.9	5.9	2.8	2.7	2.0	3.6	2.5	3.4	4.3
September	4.5	6.4	3.2	1.9	3.1	2.0	3.4	4.4	4.4
December	5.5	6.6	3.5	3.8	5.8	6.0	7.0	6.6	5.5
<b>2010</b>									
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
<b>2011</b>									
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
<b>2012</b>									
March	0.8	-1.1	-0.1	-0.9	0.9	-2.9	4.4	0.7	0.0
June	1.5	r0.3	r-0.3	r0.5	r0.6	r-1.3	2.5	r-1.9	0.6
September	p-0.5	p-0.1	p0.4	p-0.8	p1.1	p-0.7	p0.3	p-0.6	p-0.1
December	p2.3	p0.7	p0.7	p0.8	p2.9	p-1.4	p2.6	p2.1	p1.6
p preliminary figure or series subject to revision									
r revised									

## PROJECT HOME PRICE INDEX NUMBERS (a)

<i>Period</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Canberra</i>	<i>Weighted average of eight capital cities</i>
<b>2009–10</b>	121.4	118.6	129.9	123.3	156.0	135.9	157.2	121.4	127.2
<b>2010–11</b>	124.9	122.3	132.8	125.4	159.9	140.4	162.5	124.6	130.7
<b>2011–12</b>	127.8	123.4	132.1	124.3	163.0	140.4	165.2	124.7	132.1
<b>2009</b>									
June	119.1	113.5	129.1	121.3	153.6	130.4	155.9	119.6	124.3
September	119.9	117.2	129.2	122.3	154.1	135.2	156.2	120.8	125.9
December	120.9	118.3	129.2	122.7	154.5	135.4	156.6	120.8	126.6
<b>2010</b>									
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
<b>2011</b>									
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
<b>2012</b>									
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

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

## PROJECT HOME PRICE INDEXES, Percentage Changes

<i>Period</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Canberra</i>	<i>Weighted average of eight capital cities</i>
PERCENTAGE CHANGE (from previous financial year)									
<b>2009-10</b>	3.7	5.1	1.2	2.4	1.7	4.6	2.9	2.4	3.2
<b>2010-11</b>	2.9	3.1	2.2	1.7	2.5	3.3	3.4	2.6	2.8
<b>2011-12</b>	2.3	0.9	-0.5	-0.9	1.9	0.0	1.7	0.1	1.1
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
<b>2009</b>									
June	3.7	0.2	3.6	4.0	2.4	1.6	6.3	5.0	2.6
September	3.5	2.8	1.3	2.8	1.0	4.2	4.7	2.1	2.5
December	3.6	5.2	0.2	1.7	0.3	4.4	3.1	2.2	2.8
<b>2010</b>									
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
<b>2011</b>									
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
<b>2012</b>									
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
PERCENTAGE CHANGE (from previous quarter)									
<b>2009</b>									
June	2.1	2.2	0.9	0.5	0.1	0.5	1.1	1.2	1.5
September	0.7	3.3	0.1	0.8	0.3	3.7	0.2	1.0	1.3
December	0.8	0.9	0.0	0.3	0.3	0.1	0.3	0.0	0.6
<b>2010</b>									
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
<b>2011</b>									
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
<b>2012</b>									
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

## SELECTED HOUSING PRICE INDEX NUMBERS (a), Australia

<i>Period</i>	<i>Established houses(b)</i>	<i>Project homes(b)</i>	<i>Input to the House construction industry(c)(d)</i>	<i>Construction industry total hourly rates of pay</i>	<i>National accounts private housing investment(b)</i>
<b>2009–10</b>	143.5	127.2	121.8	130.8	128.9
<b>2010–11</b>	147.5	130.7	124.4	135.9	132.5
<b>2011–12</b>	r142.7	132.1	126.2	141.4	134.4
<b>2009</b>					
June	129.1	124.3	122.2	128.7	125.9
September	134.8	125.9	121.3	129.4	127.4
December	142.2	126.6	121.3	130.2	128.4
<b>2010</b>					
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
<b>2011</b>					
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
<b>2012</b>					
March	142.3	132.1	126.0	142.2	134.4
June	r143.2	132.4	126.5	143.4	134.6
September	p143.0	133.5	127.2	144.4	135.7
December	p145.3	133.9	127.6	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 Explanatory Notes.

## SELECTED HOUSING PRICE INDEX NUMBERS, Australia—Percentage Changes

<i>Period</i>	<i>Established houses(a)</i>	<i>Project homes(a)</i>	<i>Input to the House construction industry(b)(c)</i>	<i>Construction industry total hourly rates of pay</i>	<i>National accounts private housing investment(a)</i>
---------------	------------------------------	-------------------------	-------------------------------------------------------	--------------------------------------------------------	--------------------------------------------------------

## PERCENTAGE CHANGE (from previous financial year)

<b>2009–10</b>	13.8	3.2	0.9	3.2	2.9
<b>2010–11</b>	2.8	2.8	2.1	3.9	2.8
<b>2011–12</b>	-3.3	1.1	1.4	4.0	1.4

## PERCENTAGE CHANGE (from corresponding quarter of previous year)

<b>2009</b>					
June	-0.6	2.6	5.8	4.5	2.6
September	6.6	2.5	2.4	3.6	2.5
December	13.9	2.8	0.9	3.4	2.3
<b>2010</b>					
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
<b>2011</b>					
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
<b>2012</b>					
March	-3.4	0.6	1.4	4.2	1.1
June	r-1.8	0.2	0.6	4.2	0.5
September	p-0.1	1.3	1.0	3.7	1.1
December	p2.1	1.4	1.2	nya	nya

## PERCENTAGE CHANGE (from previous quarter)

<b>2009</b>					
June	4.3	1.5	0.4	1.2	0.4
September	4.4	1.3	-0.7	0.5	1.2
December	5.5	0.6	0.0	0.6	0.8
<b>2010</b>					
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
<b>2011</b>					
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
<b>2012</b>					
March	0.0	0.0	-0.1	1.0	0.1
June	0.6	0.2	0.4	0.8	0.1
September	p-0.1	0.8	0.6	0.7	0.8
December	p1.6	0.3	0.3	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 Explanatory Notes.

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

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
<i>Period</i>	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>2009</b>								
June	490.0	400.0	420.0	363.0	455.0	310.0	465.0	455.0
September	500.0	422.0	430.0	370.0	473.0	310.1	490.0	456.0
December	595.0	477.5	455.0	398.8	505.0	350.0	520.0	509.0
<b>2010</b>								
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	r488.3	460.0	400.0	500.0	340.0	535.0	r530.0
December	620.0	520.0	460.0	410.0	500.0	345.0	545.0	535.0
<b>2011</b>								
March	575.0	485.0	450.0	400.0	500.0	338.0	510.0	530.0
June	595.0	r502.5	442.0	395.0	r485.2	330.0	500.0	r535.0
September	565.0	480.0	r433.5	387.0	470.0	335.0	507.8	530.0
December	r527.5	r487.1	r432.5	385.0	482.0	340.0	505.0	r527.8
<b>2012</b>								
March	605.0	r470.0	r433.0	r383.0	r489.0	r345.0	547.3	r534.5
June	605.2	480.0	437.0	385.0	500.0	330.5	547.0	525.0
September	nya	nya	nya	nya	nya	nya	nya	nya
December	nya	nya	nya	nya	nya	nya	nya	nya

nya not yet available  
r revised

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

## NUMBER OF ESTABLISHED HOUSE TRANSFERS (a)

	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Canberra</i>
<i>Period</i>	no.	no.	no.	no.	no.	no.	no.	no.
<b>2009-10</b>	51 303	62 688	31 421	16 897	25 801	3 771	1 448	4 883
<b>2010-11</b>	r44 051	r49 812	r25 135	r15 514	r20 893	r3 232	1 140	r4 544
<b>2011-12</b>	43 412	46 162	24 752	14 487	22 595	2 794	1 462	3 918
<b>2009</b>								
June	14 318	15 315	8 806	4 877	7 148	1 001	469	1 319
September	14 816	16 313	9 068	4 473	7 701	1 033	436	1 381
December	12 786	16 586	7 844	4 234	6 635	921	363	1 297
<b>2010</b>								
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	r11 334	r13 632	6 930	r4 128	r5 131	r840	278	r1 042
December	r11 698	r13 063	r6 383	r4 008	r4 959	r837	277	r1 322
<b>2011</b>								
March	r9 898	r10 642	r5 873	r3 714	r5 661	849	270	r1 000
June	r11 121	r12 475	r5 949	r3 664	r5 142	r706	315	r1 180
September	r10 864	r11 352	r6 365	r3 559	r5 436	r671	326	r987
December	r13 347	r12 140	r6 116	r3 596	r5 769	r756	397	r1 028
<b>2012</b>								
March	r9 087	r11 032	r6 479	r3 619	r5 954	r723	394	r934
June	10 114	11 638	5 792	3 713	5 436	644	345	969
September	nya	nya	nya	nya	nya	nya	nya	nya
December	nya	nya	nya	nya	nya	nya	nya	nya

nya not yet available

r revised

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

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		
<b>2010</b>					
December	150.5	149.3	148.8	-1.7	-0.5
<b>2011</b>					
March	146.8	147.1	147.3	0.5	0.2
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
<b>2012</b>					
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	nya	nya	nya
December	145.3	nya	nya	nya	nya
ANNUAL PERCENTAGE CHANGE (b)			PERCENTAGE POINTS		
<b>2010</b>					
December	5.8	5.0	4.6	-1.2	-0.4
<b>2011</b>					
March	-0.2	0.0	0.1	0.3	0.1
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
<b>2012</b>					
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	nya	nya	nya
December	2.1	nya	nya	nya	nya
QUARTERLY PERCENTAGE CHANGE (c)			PERCENTAGE POINTS		
<b>2010</b>					
December	0.7	0.8	0.5	-0.2	-0.3
<b>2011</b>					
March	-1.7	-1.1	-1.0	0.7	0.1
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
<b>2012</b>					
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	nya	nya	nya
December	1.6	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.

## EXPLANATORY NOTES *continued*

### 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.

## EXPLANATORY NOTES *continued*

*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 March quarter 2008 mean prices. Prior to

## EXPLANATORY NOTES *continued*

- Established houses continued* this, the values were obtained by combining 2001 Population Census house counts with March quarter 2002 mean prices. 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 Product* (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).

## EXPLANATORY NOTES *continued*

### *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 numbers 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. Therefore, the HPI, the medians and the numbers of house transfers are calculated from the same set of price information only in the most recent quarter of HPI final benchmark estimates.

### 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
<i>less</i> September Quarter 2011	161.7
<i>equals</i> change in index points	0.7
Percentage change	$0.7/161.7 \times 100 = 0.4\%$ (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.

### RELATED PUBLICATIONS

**40** Current publications and other products released by the ABS are listed on the ABS website <<http://www.abs.gov.au>>. The ABS also issues a daily Release Advice on the website which details products to be released in the week ahead.

## FOR MORE INFORMATION . . .

*INTERNET*      **www.abs.gov.au** the ABS website is the best place for data from our publications and information about the ABS.

### INFORMATION AND REFERRAL SERVICE

Our consultants can help you access the full range of information published by the ABS that is available free of charge from our website. Information tailored to your needs can also be requested as a 'user pays' service. Specialists are on hand to help you with analytical or methodological advice.

*PHONE*                      1300 135 070

*EMAIL*                      [client.services@abs.gov.au](mailto:client.services@abs.gov.au)

*FAX*                              1300 135 211

*POST*                          Client Services, ABS, GPO Box 796, Sydney NSW 2001

## FREE ACCESS TO STATISTICS

All statistics on the ABS website can be downloaded free of charge.

*WEB ADDRESS*      [www.abs.gov.au](http://www.abs.gov.au)