

HOUSE PRICE INDEXES: EIGHT CAPITAL CITIES

EMBARGO: 11.30AM (CANBERRA TIME) FRI 2 DEC 2005

KEY FIGURES

ESTABLISHED HOUSE PRICES

	Jun Qtr 05 to Sep Qtr 05 % change	Sep Qtr 2004 to Sep Qtr 2005 % change
Weighted average of eight capital cities	-1.0	1.0
Sydney	-2.3	-4.7
Melbourne	-1.5	1.4
Brisbane	-0.9	2.9
Adelaide	0.7	4.2
Perth	3.1	17.7
Hobart	-3.0	2.9
Darwin	7.7	21.9
Canberra	-0.2	2.4

KEY POINTS

ESTABLISHED HOUSE PRICES

QUARTERLY CHANGES

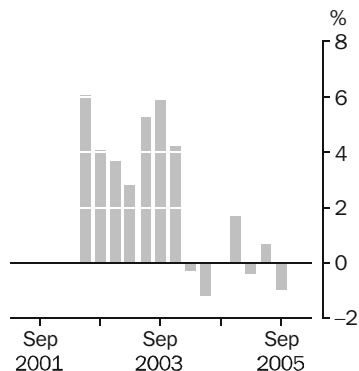
- Preliminary estimates show the price index for established houses in Australia fell 1.0% in the September quarter 2005, compared with an increase of 0.7% in the June quarter 2005.
- House prices fell in Hobart (-3.0%), Sydney (-2.3%), Melbourne (-1.5%), Brisbane (-0.9%) and Canberra (-0.2%) and rose in Darwin (+7.7%), Perth (+3.1%) and Adelaide (+0.7%).

ANNUAL CHANGES (SEPTEMBER QUARTER 2004 TO SEPTEMBER QUARTER 2005)

- Over the twelve months to September quarter 2005, preliminary estimates show that established house prices rose 1.0%.
- Annually, house prices rose in Darwin (+21.9%), Perth (+17.7%), Adelaide (+4.2%), Brisbane (+2.9%), Hobart (+2.9%), Canberra (+2.4%) and Melbourne (+1.4%). House prices fell in Sydney by 4.7%.

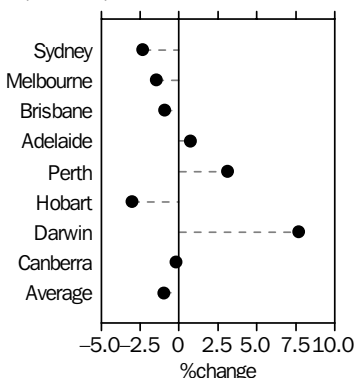
Established house prices

Weighted average of eight capital cities
Quarterly % change



Established house prices

Quarterly % change
September quarter 2005



INQUIRIES

For further information about these and related statistics, contact Merry Branson on Canberra (02) 6252 6006 or the National Information and Referral Service on 1300 135 070.

NOTE:
There are a number of changes in this issue. See page 2 for details.

NOTES

FORTHCOMING ISSUES

<i>ISSUE (Quarter)</i>	<i>RELEASE DATE</i>
December 2005	24 February 2006
March 2006	25 May 2006



CHANGES IN THIS ISSUE

This issue introduces a new methodology for compiling the established house price index.

New established house price index

Since late last year the ABS has been working on improving the established house price index. Broadly, the improvements are:

- to change the pricing point of the series from date of final settlement to date of exchange of contracts;
- to improve the methodology to minimise the 'quality' effect by using more detailed regional stratification to control for compositional change in the houses priced;
- to incorporate mortgage lenders' loan approvals data to produce 'leading indicator' terms for the most recent two quarters;
- to introduce series for quarterly median prices of established house transfers (unstratified) for each capital city (new table 7); and
- to introduce series for quarterly numbers of established house transfers for each capital city (new table 8).

Refer to *Information Paper: Renovating the Established House Price Index* (cat. no. 6417.0) released on 30 November 2005, for a more detailed discussion of the improvements.

The new established house price index commences from March quarter 2002 and has a reference base of 2003-04 = 100.0.

Re-referencing the house price indexes

The established house price index is now on a reference base of 2003-04 = 100.0, and the index for construction industry total hourly rates of pay is already on this base. The ABS has decided to re-reference the other indexes presented in the publication to the same base year. Details about the re-referencing process and how to convert the rebased quarterly series of index numbers back to the previous reference base of 1989-90 = 100.0 are included in an appendix to this issue. A consequence of re-referencing price indexes can be that period-to-period percentage changes calculated using re-referenced index number series may differ slightly from those calculated using the original series. These differences do not constitute a revision of the index but simply reflect the effect of rounding.

Re-weighting the project home price index

A new weighting pattern has been introduced to combine the capital city indexes to the weighted average of eight capital cities for the project home price index from September quarter 2005. For more details, see paragraph 20-21 of the Explanatory Notes. The index series for periods prior to September quarter 2005 are not affected by this re-weighting.

Dennis Trewin
Australian Statistician

ESTABLISHED HOUSE PRICE INDEX NUMBERS (a) (b)

<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>
2002-03	89.3	89.9	75.5	83.1	84.4	69.0	87.7	82.7	86.6
2003-04	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2004-05	p96.2	p101.7	p104.5	p106.5	p114.3	p111.9	p115.9	p100.2	p101.3
2002									
March	75.9	79.3	61.9	69.7	75.5	56.3	81.6	66.5	74.3
June	81.6	84.3	64.5	73.3	77.2	57.6	81.6	70.7	78.8
September	85.4	86.3	69.3	76.1	79.0	60.5	84.1	74.9	82.0
December	88.5	88.3	72.5	80.3	82.4	63.9	86.0	80.1	85.0
2003									
March	89.7	90.2	77.1	85.5	85.9	71.9	89.3	84.7	87.4
June	93.7	94.9	83.1	90.5	90.2	79.7	91.3	90.9	92.0
September	98.4	99.0	93.3	97.0	94.0	91.4	93.6	97.7	97.4
December	102.4	102.0	100.6	99.6	98.8	99.3	98.5	101.7	101.5
2004									
March	101.5	99.6	102.3	101.0	102.3	101.6	104.8	100.3	101.2
June	97.7	99.4	103.8	102.4	104.9	107.8	103.0	100.3	100.0
September	97.1	99.7	102.6	104.5	106.9	108.6	108.2	98.7	100.0
December	97.6	102.4	104.0	106.5	111.8	111.4	112.7	100.3	101.7
2005									
March	95.5	102.0	104.8	107.0	116.3	112.5	120.1	100.6	101.3
June	p94.7	p102.6	p106.6	p108.1	p122.0	p115.2	p122.5	p101.3	p102.0
September	p92.5	p101.1	p105.6	p108.9	p125.8	p111.7	p131.9	p101.1	p101.0

p preliminary figure or series subject to revision

(a) Reference base of each index: 2003-04 = 100.0.

(b) Estimates for the two most recent quarters are experimental (see paragraph 12 and 13 of the Explanatory Notes).

ESTABLISHED HOUSE 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)									
2002-03	..	..	..	..	..	..	..	..	..
2003-04	12.0	11.2	32.5	20.3	18.5	44.9	14.0	20.9	15.5
2004-05	p-3.8	p1.7	p4.5	p6.5	p14.3	p11.9	p15.9	p0.2	p1.3
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
2002									
March	..	..	..	..	..	..	..	..	..
June	..	..	..	..	..	..	..	..	..
September	..	..	..	..	..	..	..	..	..
December	..	..	..	..	..	..	..	..	..
2003									
March	18.2	13.7	24.6	22.7	13.8	27.7	9.4	27.4	17.6
June	14.8	12.6	28.8	23.5	16.8	38.4	11.9	28.6	16.8
September	15.2	14.7	34.6	27.5	19.0	51.1	11.3	30.4	18.8
December	15.7	15.5	38.8	24.0	19.9	55.4	14.5	27.0	19.4
2004									
March	13.2	10.4	32.7	18.1	19.1	41.3	17.4	18.4	15.8
June	4.3	4.7	24.9	13.1	16.3	35.3	12.8	10.3	8.7
September	-1.3	0.7	10.0	7.7	13.7	18.8	15.6	1.0	2.7
December	-4.7	0.4	3.4	6.9	13.2	12.2	14.4	-1.4	0.2
2005									
March	-5.9	2.4	2.4	5.9	13.7	10.7	14.6	0.3	0.1
June	p-3.1	p3.2	p2.7	p5.6	p16.3	p6.9	p18.9	p1.0	p2.0
September	p-4.7	p1.4	p2.9	p4.2	p17.7	p2.9	p21.9	p2.4	p1.0
PERCENTAGE CHANGE (from previous quarter)									
2002									
March	..	..	..	..	..	..	..	..	..
June	7.5	6.3	4.2	5.2	2.3	2.3	0.0	6.3	6.1
September	4.7	2.4	7.4	3.8	2.3	5.0	3.1	5.9	4.1
December	3.6	2.3	4.6	5.5	4.3	5.6	2.3	6.9	3.7
2003									
March	1.4	2.2	6.3	6.5	4.2	12.5	3.8	5.7	2.8
June	4.5	5.2	7.8	5.8	5.0	10.8	2.2	7.3	5.3
September	5.0	4.3	12.3	7.2	4.2	14.7	2.5	7.5	5.9
December	4.1	3.0	7.8	2.7	5.1	8.6	5.2	4.1	4.2
2004									
March	-0.9	-2.4	1.7	1.4	3.5	2.3	6.4	-1.4	-0.3
June	-3.7	-0.2	1.5	1.4	2.5	6.1	-1.7	0.0	-1.2
September	-0.6	0.3	-1.2	2.1	1.9	0.7	5.0	-1.6	0.0
December	0.5	2.7	1.4	1.9	4.6	2.6	4.2	1.6	1.7
2005									
March	-2.2	-0.4	0.8	0.5	4.0	1.0	6.6	0.3	-0.4
June	p-0.8	p0.6	p1.7	p1.0	p4.9	p2.4	p2.0	p0.7	p0.7
September	p-2.3	p-1.5	p-0.9	p0.7	p3.1	p-3.0	p7.7	p-0.2	p-1.0
..	not applicable								
p	preliminary figure or series subject to revision								

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>
2002-03	96.1	96.2	88.4	94.0	91.4	92.2	94.8	91.6	93.1
2003-04	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2004-05	105.3	103.3	105.5	103.6	111.9	111.6	109.5	102.0	106.1
2002									
March	93.5	93.0	82.8	90.0	88.9	84.1	90.2	86.5	89.5
June	94.5	93.7	84.1	91.2	89.2	87.0	92.1	88.1	90.4
September	95.0	94.0	86.0	92.6	89.6	88.7	93.3	89.0	91.3
December	95.5	94.7	87.2	93.8	90.5	89.8	93.3	90.2	92.1
2003									
March	96.7	96.7	88.4	94.5	91.6	93.7	96.2	92.0	93.5
June	97.2	99.2	91.9	95.2	94.0	96.4	96.3	95.3	95.6
September	98.4	99.6	96.2	96.9	96.9	96.9	96.4	98.7	97.7
December	99.2	99.4	99.6	99.4	98.9	98.2	99.3	99.8	99.3
2004									
March	100.4	100.0	101.1	101.5	100.8	100.9	100.4	100.4	100.7
June	102.0	101.0	103.1	102.2	103.3	104.0	104.0	101.1	102.3
September	103.1	102.4	103.8	102.2	105.7	105.9	106.9	101.6	103.6
December	104.8	102.7	105.6	103.8	109.5	111.5	107.6	101.6	105.4
2005									
March	106.1	104.1	106.0	104.1	114.2	114.0	110.1	101.8	107.1
June	107.0	104.0	106.5	104.4	118.3	115.1	113.2	102.9	108.2
September	107.4	106.2	106.3	105.2	122.7	115.4	114.7	103.7	109.1

(a) Reference base 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)									
2002-03	2.9	3.6	7.2	5.1	3.2	9.2	5.6	6.1	4.4
2003-04	4.1	4.0	13.1	6.4	9.4	8.5	5.5	9.2	7.4
2004-05	5.3	3.3	5.5	3.6	11.9	11.6	9.5	2.0	6.1
PERCENTAGE CHANGE (from corresponding quarter of previous year)									
2002									
March	2.3	3.1	1.1	5.3	2.8	2.9	1.6	5.4	2.5
June	2.7	4.2	3.6	5.4	2.2	5.5	4.8	5.3	3.3
September	2.7	2.7	5.5	5.9	1.9	6.9	6.0	5.5	3.6
December	2.5	1.6	6.7	5.5	2.4	7.7	4.9	4.9	3.6
2003									
March	3.4	4.0	6.8	5.0	3.0	11.4	6.7	6.4	4.5
June	2.9	5.9	9.3	4.4	5.4	10.8	4.6	8.2	5.8
September	3.6	6.0	11.9	4.6	8.1	9.2	3.3	10.9	7.0
December	3.9	5.0	14.2	6.0	9.3	9.4	6.4	10.6	7.8
2004									
March	3.8	3.4	14.4	7.4	10.0	7.7	4.4	9.1	7.7
June	4.9	1.8	12.2	7.4	9.9	7.9	8.0	6.1	7.0
September	4.8	2.8	7.9	5.5	9.1	9.3	10.9	2.9	6.0
December	5.6	3.3	6.0	4.4	10.7	13.5	8.4	1.8	6.1
2005									
March	5.7	4.1	4.8	2.6	13.3	13.0	9.7	1.4	6.4
June	4.9	3.0	3.3	2.2	14.5	10.7	8.8	1.8	5.8
September	4.2	3.7	2.4	2.9	16.1	9.0	7.3	2.1	5.3
PERCENTAGE CHANGE (from previous quarter)									
2002									
March	0.3	-0.2	1.3	1.2	0.6	0.8	1.5	0.6	0.7
June	1.1	0.8	1.6	1.3	0.3	3.4	2.1	1.8	1.0
September	0.5	0.3	2.3	1.5	0.4	2.0	1.3	1.0	1.0
December	0.5	0.7	1.4	1.3	1.0	1.2	0.0	1.3	0.9
2003									
March	1.3	2.1	1.4	0.7	1.2	4.3	3.1	2.0	1.5
June	0.5	2.6	4.0	0.7	2.6	2.9	0.1	3.6	2.2
September	1.2	0.4	4.7	1.8	3.1	0.5	0.1	3.6	2.2
December	0.8	-0.2	3.5	2.6	2.1	1.3	3.0	1.1	1.6
2004									
March	1.2	0.6	1.5	2.1	1.9	2.7	1.1	0.6	1.4
June	1.6	1.0	2.0	0.7	2.5	3.1	3.6	0.7	1.6
September	1.1	1.4	0.7	0.0	2.3	1.8	2.8	0.5	1.3
December	1.6	0.3	1.7	1.6	3.6	5.3	0.7	0.0	1.7
2005									
March	1.2	1.4	0.4	0.3	4.3	2.2	2.3	0.2	1.6
June	0.8	-0.1	0.5	0.3	3.6	1.0	2.8	1.1	1.0
September	0.4	2.1	-0.2	0.8	3.7	0.3	1.3	0.8	0.8

SELECTED HOUSING PRICE INDEX NUMBERS (a), Australia

<i>Period</i>	<i>Established houses</i>	<i>Project homes</i>	<i>Materials used in house building</i>	<i>Construction industry total hourly rates of pay</i>	<i>National accounts private housing investment</i>
2002-03	86.6	93.1	97.2	96.3	93.6
2003-04	100.0	100.0	100.0	100.0	100.0
2004-05	p101.3	106.1	103.4	105.1	105.8
2002					
March	74.3	89.5	93.9	93.5	90.4
June	78.8	90.4	95.2	93.8	91.0
September	82.0	91.3	95.9	95.1	92.0
December	85.0	92.1	96.9	95.7	92.8
2003					
March	87.4	93.5	97.5	96.9	93.9
June	92.0	95.6	98.4	97.4	95.7
September	97.4	97.7	99.0	98.8	97.7
December	101.5	99.3	99.5	99.1	99.4
2004					
March	101.2	100.7	100.1	100.3	100.8
June	100.0	102.3	101.4	101.7	102.2
September	100.0	103.6	102.2	103.2	103.6
December	101.7	105.4	103.0	104.6	105.0
2005					
March	101.3	107.1	103.8	105.9	106.6
June	p102.0	108.2	104.7	106.7	107.8
September	p101.0	109.1	105.0	108.1	nya

nya not yet available

p preliminary figure or series subject to revision

(a) Reference base of index 2003-04 = 100.0.

SELECTED HOUSING PRICE INDEX NUMBERS, Australia—Percentage Changes

<i>Period</i>	<i>Established houses</i>	<i>Project homes</i>	<i>Materials used in house building</i>	<i>Construction industry total hourly rates of pay</i>	<i>National accounts private housing investment</i>
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PERCENTAGE CHANGE (from previous financial year)

2002-03	. .	4.4	3.6	3.4	4.0
2003-04	15.5	7.4	2.9	3.8	6.8
2004-05	p1.3	6.1	3.4	5.1	5.8

PERCENTAGE CHANGE (from corresponding quarter of previous year)

2002					
March	. .	2.5	1.5	3.4	2.5
June	. .	3.3	2.7	2.7	2.9
September	. .	3.6	3.2	3.0	3.6
December	. .	3.6	3.9	3.1	3.5
2003					
March	17.6	4.5	3.8	3.6	3.9
June	16.8	5.8	3.4	3.8	5.2
September	18.8	7.0	3.2	3.9	6.2
December	19.4	7.8	2.7	3.6	7.1
2004					
March	15.8	7.7	2.7	3.5	7.3
June	8.7	7.0	3.0	4.4	6.8
September	2.7	6.0	3.2	4.5	6.0
December	0.2	6.1	3.5	5.5	5.6
2005					
March	0.1	6.4	3.7	5.6	5.8
June	p2.0	5.8	3.3	4.9	5.5
September	p1.0	5.3	2.7	4.7	nya

PERCENTAGE CHANGE (from previous quarter)

2002					
March	. .	0.7	0.6	0.8	0.8
June	6.1	1.0	1.4	0.3	0.7
September	4.1	1.0	0.7	1.4	1.1
December	3.7	0.9	1.0	0.6	0.9
2003					
March	2.8	1.5	0.6	1.3	1.2
June	5.3	2.2	0.9	0.5	1.9
September	5.9	2.2	0.6	1.4	2.1
December	4.2	1.6	0.5	0.3	1.7
2004					
March	-0.3	1.4	0.6	1.2	1.4
June	-1.2	1.6	1.3	1.4	1.4
September	0.0	1.3	0.8	1.5	1.4
December	1.7	1.7	0.8	1.4	1.4
2005					
March	-0.4	1.6	0.8	1.2	1.5
June	p0.7	1.0	0.9	0.8	1.1
September	p-1.0	0.8	0.3	1.3	nya

nya not yet available

. . not applicable

— nil or rounded to zero (including null cells)

p preliminary figure or series subject to revision

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
2002								
March	365.0	241.0	185.0	166.0	190.0	123.3	180.0	245.0
June	393.0	260.0	182.5	175.0	190.0	116.0	180.0	258.0
September	413.0	265.0	197.6	181.0	195.0	124.0	186.0	275.0
December	444.0	280.0	208.0	195.0	205.8	128.0	195.0	291.0
2003								
March	434.0	270.0	225.0	208.0	216.0	144.3	198.0	300.0
June	460.0	287.4	240.0	219.0	225.0	148.0	195.0	330.0
September	480.0	295.0	269.0	230.0	236.0	165.0	208.0	355.0
December	520.0	320.0	297.0	245.0	250.0	182.8	220.9	373.0
2004								
March	523.0	305.0	302.0	250.0	255.0	200.0	221.5	375.0
June	498.0	307.0	305.0	255.0	262.0	225.0	225.0	374.3
September	500.0	301.8	304.7	257.5	259.9	227.4	235.0	351.0
December	515.0	320.0	310.0	265.0	280.0	240.0	247.0	372.0
2005								
March	485.0	309.0	312.5	267.0	290.0	240.0	255.0	375.0
June	nya	nya	nya	nya	nya	nya	nya	nya
September	nya	nya	nya	nya	nya	nya	nya	nya

nya not yet available

(a) See paragraph 25 of the Explanatory Notes.

NUMBER OF ESTABLISHED HOUSE TRANSFERS (a)

	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra
<i>Period</i>	no.	no.	no.	no.	no.	no.	no.	no.
2002-03	62 190	62 855	49 938	21 081	34 313	6 095	2 111	5 805
2003-04	50 860	57 349	41 228	19 354	29 544	5 149	2 671	4 621
2004-05	nya	nya	nya	nya	nya	nya	nya	nya
2002								
March	13 033	15 877	11 008	5 534	8 920	1 474	473	1 550
June	15 520	17 120	11 927	5 574	8 280	1 465	524	1 764
September	16 706	15 722	11 742	4 983	7 328	1 484	540	1 407
December	15 398	16 137	11 547	5 139	7 662	1 463	469	1 497
2003								
March	13 700	14 558	13 566	5 438	9 434	1 595	497	1 352
June	16 386	16 438	13 083	5 521	9 889	1 553	605	1 549
September	16 993	17 064	14 480	5 117	8 237	1 584	680	1 363
December	11 809	14 359	9 196	4 771	6 876	1 246	668	1 181
2004								
March	10 183	12 571	9 153	4 800	7 667	1 246	644	987
June	11 875	13 355	8 399	4 666	6 764	1 073	679	1 090
September	10 174	13 694	8 481	4 591	8 495	948	693	814
December	10 737	14 510	8 119	4 735	7 632	972	672	1 158
2005								
March	8 831	12 675	7 552	4 503	8 485	820	699	992
June	nya	nya	nya	nya	nya	nya	nya	nya
September	nya	nya	nya	nya	nya	nya	nya	nya

nya not yet available

(a) See paragraph 25 of the Explanatory Notes.

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 the reference base 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 House purchase expenditure class of the Consumer Price Index (CPI). The index for Established Houses, 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 materials used in house building, construction industry hourly rates of pay and private housing investment (from the Australian National Accounts). For information on the derivation of series in these tables see paragraphs 18-24.

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 Established house price indexes for each city, because they are compiled using data stratified by groups of suburbs in each city. Numbers of established house transfers recorded each quarter by the VGs are presented in Table 8.

DEFINITIONS

Established houses

5 The price index for established houses 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

6 Project homes are dwellings available for construction on a client's block of land. Price changes relate only to the cost of constructing the dwelling (excluding land).

PRICE INDEXES

7 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.

8 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.

9 This standard procedure for constructing price indexes is not viable in the case of established houses as the observable prices in each period invariably relate to a different set of dwellings. The issue is how to utilise prices for an essentially heterogeneous set of dwellings to construct measures of price change for characteristic or homogeneous dwellings? The ABS *Information Paper: Renovating the Established House Price Index* (cat. no. 6417.0) provides a more detailed background.

EXPLANATORY NOTES *continued*

Controlling for the 'quality' effect

10 The ABS uses regional stratification to control for the 'quality' effect and compositional change. The approach uses location (suburb, postcode) to define regional strata that group together (or 'cluster') houses that are 'similar' in terms of their price determining characteristics. Apart from their physical characteristics, houses that are close share the same neighbourhood characteristics and so 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 observed property sales will occur. So 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. Ideally, each suburb would form its own cluster as this would maximise the homogeneity of the cluster. However, there are insufficient numbers of observations from quarter to quarter to support this methodology. The ABS has grouped similar suburbs to form clusters with sufficient ongoing observations to determine a reliable median price.

11 Analysis was undertaken to identify which characteristics were the most significant determinants of price. Many of the primary determinants of price were highly correlated with the Socio-Economic Indexes for Areas (SEIFA) index, meaning that the variability in price was largely described by this index. The result was that clusters could be most effectively compiled using the SEIFA index, the percentage of three bedroom houses and the geographical location of the suburb.

'Leading Indicator'

12 'Leading indicator' terms are compiled for the most recent two quarters using early VGs' data combined with mortgage lenders' data. These terms are labelled with a 'p' indicating a preliminary estimate. These terms will initially carry an 'experimental' tag until the ABS has sufficient historical data to fully analyse the relationship between these preliminary data and the benchmark series that they are being used to project.

13 It is important to note that the price indexes, and therefore the percentage changes, for the two most recent quarters are subject to revision as more complete data sets are obtained from the Valuers' General. Until greater experience has been gained with these data sets, the ABS is unable to provide any indication of the likely magnitudes of the revisions.

Available data

14 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 government agencies 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.

15 The delivery of government agency 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 on government agency data after approximately six months.

LIMITATIONS OF HOUSE
PRICE INDEXES

16 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 indexes for established houses as the number of price observations available depends on market activity in each quarter. This is most apparent in the established house price indexes for the smaller capital cities (Hobart, Darwin and Canberra).

EXPLANATORY NOTES *continued*

LIMITATIONS OF HOUSE PRICE INDEXES *continued*

17 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.

NATIONAL HOUSE PRICE AND OTHER INDEXES

18 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

19 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. The values were obtained by combining 2001 Population Census house counts with March quarter 2002 mean prices.

Project homes

20 The series for project homes is derived by weighting together the indexes for each of the eight capital cities. In September quarter 2005, data on housing finance collected by the Australian Prudential Regulatory Authority was used to update the aggregate expenditure on secured finance commitments for the purchase of new dwellings by owner occupiers in 2004-05. The city weights were allocated using data from the Building Activity survey and census data. From June quarter 1996 to June quarter 2005 the value of commitments in 1994-95 was used. The source of weighting information was unpublished data from the ABS survey of Housing Finance for Owner Occupation. Between 1985-86 and June quarter 1996 the value of secured finance commitments to individuals in each of the states and territories for the construction of houses was used.

21 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 respective series at the national level are not directly comparable. The weighting pattern used in the CPI House purchase index differs from that described above for the project homes index. The weights used for CPI purposes relate to the net acquisition of dwellings (excluding land) by private households in each of the eight capital cities (i.e. they include dwellings acquired from the government and business sectors and alterations and additions to existing dwellings).

Materials used in house building

22 The series for materials used in house building is based on that published for the weighted average of the six state capital cities in *Producer Price Indexes, Australia* (cat.no.6427.0), re-referenced to 2003-04 = 100.0.

Construction industry total hourly rates of pay

23 The index for the construction industry total hourly rates of pay excluding bonuses, private and public, is that published in *Labour Price Index, Australia* (cat.no.6345.0).

Private Housing Investment

24 This series for the private housing investment is the annually-reweighted chain Laspeyres price index for private capital expenditure (houses), as used (but not separately published) in *Australian National Accounts: National Income, Expenditure and Product* (cat. no. 5206.0), referenced to 2003-04 = 100.0.

ACTIVITY BASED SERIES

25 Included in this publication are two activity based tables for unstratified (city-wide) median prices and sales counts for established houses. Table 7 presents unstratified median prices by city by quarter. Table 8 presents the number of established house sales by city by quarter. Both of these tables use VGs' data only, and there is a delay of several months in obtaining a sufficiently complete set of these data. Consequently the data presented in tables 7 and 8 will not be available for the most recent two quarters. As the ABS receives more data, these figures will be revised as necessary. The data on median

EXPLANATORY NOTES *continued*

ACTIVITY BASED SERIES

continued

ANALYSIS OF CHANGES IN INDEX NUMBERS

prices are not directly comparable with the established house price indexes (which are compiled in strata and weighted by the value of housing stock).

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

27 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.

28 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: Sydney index numbers—

September Quarter 2005	107.4 (see table 3)
less June Quarter 2005	107.0 (see table 3)
Change in index points	0.4
Percentage change	$0.4/107.0 \times 100 = 0.4\%$

29 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

30 Users may also wish to refer to the following publications which are available from the ABS website:

- *Information Paper: Renovating the Established House Price Index*, (cat. no. 6417.0)
- *Australian National Accounts: National Income, Expenditure and Product*, (cat. no. 5206.0) – issued quarterly
- *Building Activity, Australia*, (cat. no. 8752.0) – issued quarterly
- *Building Approvals, Australia*, (cat. no. 8731.0) – issued monthly
- *Consumer Price Index Australia*, (cat. no. 6401.0) – issued quarterly
- *Housing Finance for Owner Occupation, Australia*, (cat. no. 5609.0) – issued monthly
- *Producer Price Indexes, Australia*, (cat. no. 6427.0) – issued quarterly.

31 Current publications and other products by the ABS are listed in the *Catalogue of Publications and Products* (cat. no. 1101.0). The Catalogue is available from any ABS office or the ABS web site <<http://www.abs.gov.au>>. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

APPENDIX RE-REFERENCING HOUSE PRICE INDEXES

REFERENCE BASE

The reference base of an index series is that period for which the value of the index is set to 100.0. For the house price indexes, 1989–90 has previously been used as the reference base. With the introduction of the new methodology for its calculation, the *established house price index* will now be presented on a reference base of 2003–04. The price index for *construction industry total hourly rates of pay* is already presented on a reference base of 2003–04 so, for ease of comparison, it has been decided to re-reference the remaining indexes presented in this publication to the same reference base. Accordingly, the price indexes for *project homes*, *materials used in house building* and *national accounts private housing investment* will also now be presented on a reference base of 2003–04.

CONVERTING A SERIES TO THE NEW REFERENCE BASE

The conversion of series from the old base to the new base involves rescaling the index numbers. The conversion factor that should be applied to the index numbers is calculated by obtaining the ratio of the index numbers on the old and new bases for the new reference period.

The conversion factor is calculated using the unrounded index number for the 2003–04 financial year. The calculation of financial year indexes is outlined in paragraph 29 of the Explanatory Notes.

For example, for the project home price index for Australia, an arithmetic conversion factor is obtained as follows:

Index number for year 2003–04 (on base 1989–90 = 100.0) is 154.775

Index number for year 2003–04 (on base 2003–04 = 100.0) is 100.0

Conversion factor $100/154.775 = 0.64610$

The factor 0.64610 may be multiplied by any project home price index number for Australia on the old reference base to give the corresponding number on the new reference base. The procedure shown in the above example may be followed in respect of any specific index series for which index numbers have been published on the old reference base.

ROUNDING

Index numbers and percentage changes are always published to one decimal place, with the percentage changes being calculated from the rounded index numbers. Index numbers for periods longer than a single quarter (e.g. for financial years) are calculated as the simple arithmetic average of the relevant rounded quarterly index numbers. The conversion factor described above is applied to the rounded index numbers.

A consequence of re-referencing price indexes can be that period-to-period percentage changes calculated using re-referenced index number series may differ slightly from those calculated using the original series. These differences do not constitute a revision of the index but simply reflect the effect of rounding.

CONVERTING THE RE-REFERENCED SERIES BACK TO THE PREVIOUS BASE

The conversion of series from the new base to the old base also involves rescaling the index numbers. The rescaling factor is obtained by taking the inverse of the previously described scaling factor.

For example, for the project home price index for Australia, the rescaling factor is obtained as follows:

Index number for year 2003–04 (on base 1989–90 = 100.0) is 154.775

Index number for year 2003–04 (on base 2003–04 = 100.0) is 100.0

Conversion factor $154.775/100 = 1.54775$

The factor 1.54775 may be multiplied by any project home price index number for Australia on the new reference base to give the corresponding number on the old reference base.

APPENDIX RE-REFERENCING HOUSE PRICE INDEXES *continued*

CONVERTING THE
RE-REFERENCED SERIES
BACK TO THE PREVIOUS
BASE *continued*

Factors used to convert the published project homes, materials used in house building and national accounts private housing investment index numbers from the old reference base, 1989-90 = 100.0, to the new reference base, 2003-04 = 100.0, are as follows:

Project homes	
Sydney	0.66159
Melbourne	0.65327
Brisbane	0.61833
Adelaide	0.60295
Perth	0.68799
Hobart	0.58148
Darwin	0.56689
Canberra	0.53476
Weighted average of eight capital cities	0.64610
Materials used in house building	0.74488
National accounts private housing investment	0.64010

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