U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

U.S. Department of Housing
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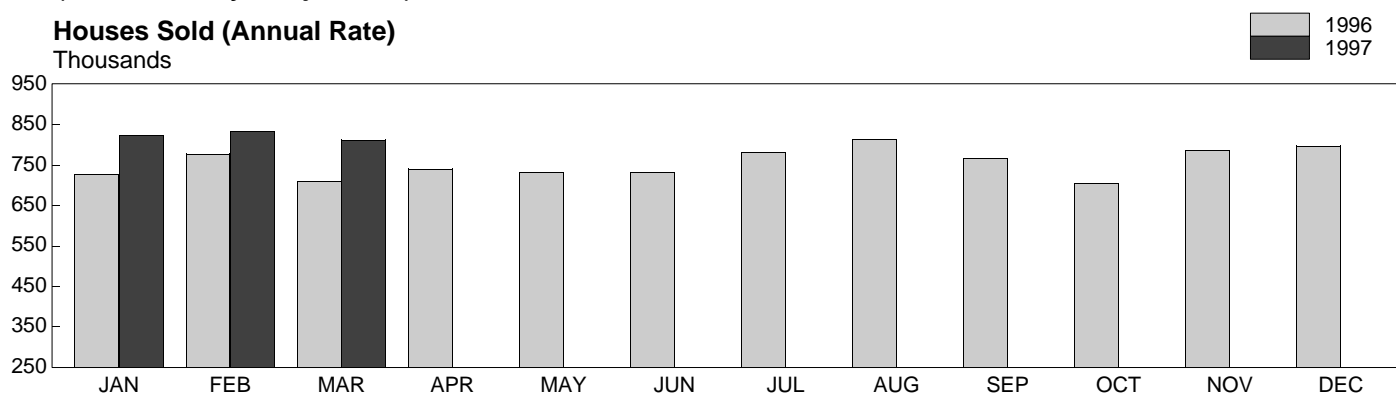# New One-Family Houses Sold

MARCH 1997

C25/97-3
Issued May 1997

Beginning with this report, we feature a new price index – The Fisher Ideal chain-type annual-weighted index. This index conforms with indexes being used for the Value of New Construction Put in Place series and the National Economic Accounts. Both the current and new indexes are shown in this report. See the appendix for a description of this new index.

New One-Family Houses Sold and For Sale and Months' Supply at Current Sales Rate
(Seasonally Adjusted)

Houses Sold (Annual Rate)
Thousands

1996
1997

Houses for Sale
Thousands
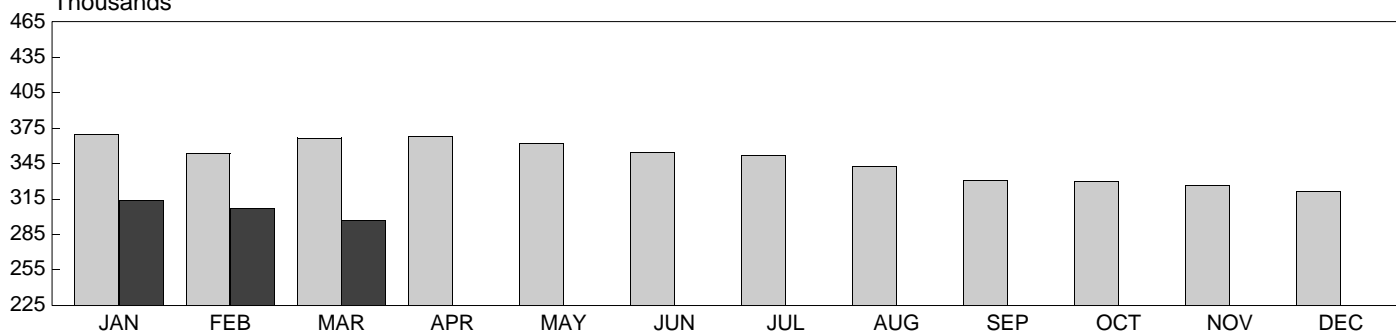
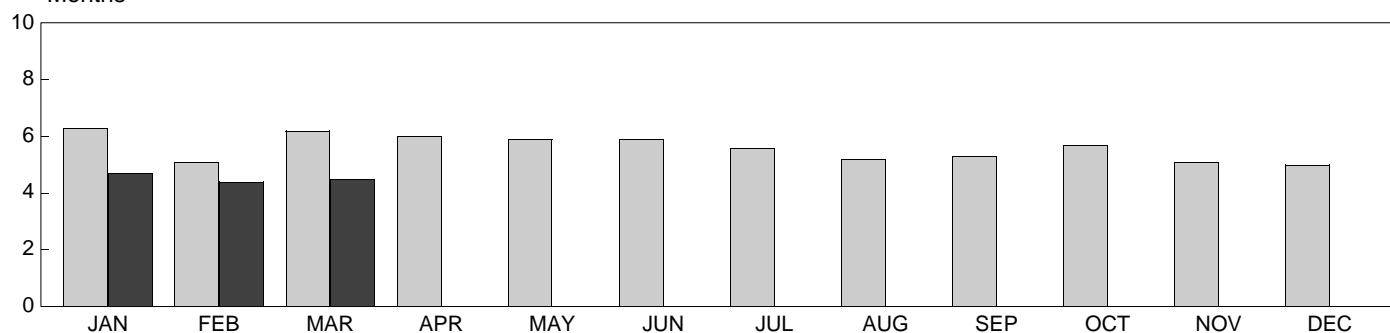**Number of Months Supply**[1]
Months

[1]Ratio of houses for sale to houses sold at current sales rate.
Source: U.S. Bureau of the Census, New One-Family Houses Sold.

Questions regarding these data may be directed to **Dale R. Jacobson, Residential Construction Branch, Telephone 301-457-4666.**
For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

NEW HOUSES SOLD AND FOR SALE IN MARCH 1997

This report provides statistics for new privately owned one-family houses sold and for sale. The Bureau of the Census and the U.S. Department of Housing and Urban Development jointly release this report.

Sales of new one-family houses in March 1997 were at a seasonally adjusted annual rate of 813,000 compared with the revised February rate of 834,000. The March 1996 rate was 711,000.

The median sales price of new houses sold in March 1997 was $142,500; the mean sales price was $171,500. Changes in median and average sales prices reflect changing proportions of houses with different locations, sizes, etc., as well as changes in the prices of houses with identical characteristics. For a measure of the change in the sales price of new houses sold which are the same with respect to important characteristics, refer to the fixed-weight price index found in Tables 12a through 14 of this report. Table 12 presents a new price index, a Fisher Ideal chain-type annual-weighted index that does not hold these important characteristics constant. For a description of these indexes, see the appendix in this report.

The seasonally adjusted estimate of new houses for sale at the end of March was 297,000. This represents a supply of 4.5 months at the current sales rate.

EXPLANATORY NOTES

The statistics in this report are estimated from sample surveys and are subject to sampling variability as well as errors of response and nonreporting. Estimated average relative standard errors for preliminary statistics for houses sold and for sale are shown in the tables. For monthly estimates they are based upon the latest 6-month period ending June or December (January-June or July-December). Quarterly estimates are based upon the more recent of the first 2 quarters or last 2 quarters of the most current year; annual estimates on the last 2 years.

For month-to-month comparisons of total houses sold, the range of the 90-percent confidence interval is ±9 percentage points from the estimated change. When the range of the confidence interval contains zero, it is uncertain whether there was an increase or decrease; that is, the change is not statistically significant. On average, the preliminary seasonally adjusted estimate of total sales is revised ±5 percent. This does not include the revisions made when new seasonal factors are computed.

In interpreting changes in the statistics in this report, note that month-to-month changes in seasonally adjusted statistics often show movements which may be irregular. It takes 4 months to establish an underlying trend for new houses sold.

Mobile homes are not included in these statistics. Mobile home data can be found in Current Construction Reports, *Housing Starts*, Series C20.

Historical statistics on new one-family houses sold and for sale from 1963 to date are available from the Residential Construction Branch, Manufacturing and Construction Division, Bureau of the Census, Washington, DC 20233-6900. Telephone 301-457-4666.

RELATED PUBLICATIONS

Current Construction Reports, *Characteristics of New Housing: 1995,* C25/95-A, Bureau of the Census and U.S. Department of Housing and Urban Development, Washington, DC 20233-6900.

Table 1. **Houses Sold and For Sale and Months' Supply at Current Sales Rate**

Period	Not seasonally adjusted			Seasonally adjusted		
	Number of houses (thousands)		Months' supply at current sales rate[1]	Number of houses (thousands)		Months' supply at current sales rate[1]
	Sold during period	For sale at end of period		Sold during period[2]	For sale at end of period	
ANNUAL DATA						
1987..	671	370	(X)	(X)	(X)	(X)
1988..	676	371	(X)	(X)	(X)	(X)
1989..	650	366	(X)	(X)	(X)	(X)
1990..	534	321	(X)	(X)	(X)	(X)
1991..	509	284	(X)	(X)	(X)	(X)
1992..	610	267	(X)	(X)	(X)	(X)
1993..	666	295	(X)	(X)	(X)	(X)
1994..	670	340	(X)	(X)	(X)	(X)
1995..	667	374	(X)	(X)	(X)	(X)
1996[r]..	757	326	(X)	(X)	(X)	(X)
MONTHLY DATA						
1994: January.................................	46	294	6.4	619	294	5.9
February	58	292	5.0	686	295	5.0
March....................................	74	296	4.0	747	298	4.8
April	65	296	4.5	692	297	5.2
May	65	301	4.6	691	302	5.3
June......................................	55	316	5.7	621	315	6.2
July.......................................	52	318	6.0	628	319	6.3
August	59	323	5.5	656	323	6.1
September	54	332	6.1	677	331	6.0
October	57	331	5.9	715	330	5.6
November	45	335	7.5	646	333	6.3
December	40	340	8.5	629	336	6.6
1995: January	47	340	7.3	633	341	6.7
February	47	341	7.2	565	345	7.2
March....................................	60	343	5.7	614	346	6.8
April	58	344	5.9	619	347	6.8
May	63	346	5.5	667	347	6.3
June......................................	64	349	5.4	718	348	5.9
July.......................................	64	343	5.3	769	345	5.6
August	63	350	5.5	703	351	6.1
September	54	354	6.5	682	353	6.4
October	54	361	6.7	688	360	6.4
November	46	371	8.0	673	367	6.7
December	45	374	8.4	697	370	6.5
1996: January	54	370	6.9	727	370	6.3
February	68	362	5.3	778	354	5.1
March....................................	70	362	5.2	711	367	6.2
April	70	366	5.2	741	368	6.0
May	69	360	5.2	732	362	5.9
June......................................	65	355	5.5	732	355	5.9
July.......................................	66	351	5.3	782	352	5.6
August	73	342	4.7	814	343	5.2
September	62	332	5.3	768	331	5.3
October	56	332	6.0	706	330	5.7
November	54	330	6.1	788	327	5.1
December[r]	51	326	6.4	794	322	5.0
1997: January[r]................................	61	314	5.2	825	314	4.7
February[r]...............................	70	303	4.3	834	307	4.4
March[p].................................	78	294	3.8	813	297	4.5
AVERAGE RELATIVE STANDARD ERRORS						
Annual............................. (percent)..	2	4	(X)	(X)	(X)	(X)
Monthly........................... (percent)..	6	4	7	6	4	7

[p]Preliminary.   [r]Revised.   X Not applicable.

[1]Ratio of houses for sale to houses sold.
[2]Annual rate.

Table 2. **Houses Sold and For Sale by Region**

[Thousands of houses. Components may not add to total because of rounding.]

Period	Sold during period										For sale at end of period (not seasonally adjusted)				
	Not seasonally adjusted					Seasonally adjusted annual rate									
	United States	North-east	Mid-west	South	West	United States	North-east	Mid-west	South	West	United States	North-east	Mid-west	South	West
ANNUAL DATA															
1987	671	117	97	271	186	(X)	(X)	(X)	(X)	(X)	370	103	39	149	79
1988	676	101	97	276	202	(X)	(X)	(X)	(X)	(X)	371	112	43	133	82
1989	650	86	102	260	202	(X)	(X)	(X)	(X)	(X)	366	108	41	123	93
1990	534	71	89	225	149	(X)	(X)	(X)	(X)	(X)	321	77	42	105	97
1991	509	57	93	215	144	(X)	(X)	(X)	(X)	(X)	284	62	41	97	83
1992	610	65	116	259	170	(X)	(X)	(X)	(X)	(X)	267	48	41	104	74
1993	666	60	123	295	188	(X)	(X)	(X)	(X)	(X)	295	53	48	121	73
1994	670	61	123	295	191	(X)	(X)	(X)	(X)	(X)	340	55	63	140	82
1995	667	55	125	300	187	(X)	(X)	(X)	(X)	(X)	374	62	69	158	86
1996[r]	757	74	137	337	209	(X)	(X)	(X)	(X)	(X)	326	38	67	146	74
MONTHLY DATA															
1994: January.........	46	3	8	21	13	619	50	128	273	168	294	52	46	122	73
February........	58	3	11	25	19	686	49	135	293	209	292	50	46	123	72
March	74	5	13	33	22	747	65	130	328	224	296	50	48	123	74
April...........	65	5	13	28	18	692	62	127	310	192	296	50	49	122	74
May	65	6	12	29	18	691	63	125	312	192	301	51	51	123	76
June	55	5	11	23	16	621	54	119	263	185	316	52	55	129	79
July	52	4	9	24	16	628	51	108	282	188	318	54	55	129	80
August	59	7	10	24	18	656	72	112	270	201	323	54	57	134	79
September......	54	7	9	23	15	677	83	111	296	187	332	53	61	139	80
October.........	57	6	11	23	16	715	67	141	302	206	331	52	62	137	80
November	45	5	9	19	12	646	64	126	275	181	335	53	62	139	81
December	40	4	7	20	10	629	49	113	303	165	340	55	63	140	82
1995: January.........	47	4	7	22	14	633	66	114	279	174	340	55	62	143	81
February........	47	4	9	23	11	565	62	108	270	125	341	54	62	143	82
March	60	5	12	27	16	614	60	121	268	166	343	55	62	146	80
April...........	58	5	13	24	16	619	55	127	264	173	344	56	61	148	80
May	63	5	12	26	20	667	53	122	283	208	346	58	61	149	79
June	64	7	12	26	19	718	74	134	297	214	349	57	62	151	78
July	64	5	11	31	17	769	53	138	376	202	343	58	63	145	77
August	63	4	12	28	19	703	49	135	310	208	350	59	64	149	78
September......	54	4	10	24	17	682	40	131	306	206	354	60	64	151	78
October.........	54	5	10	25	15	688	52	126	314	197	361	62	66	153	79
November	46	3	9	21	13	673	43	131	304	195	371	64	69	156	82
December	45	6	7	20	12	697	79	120	305	193	374	62	69	158	86
1996: January.........	54	3	10	24	17	727	50	158	308	212	370	61	66	158	85
February........	68	5	11	31	21	778	65	132	352	229	362	58	66	157	81
March	70	4	13	32	20	711	51	131	322	206	362	59	66	159	79
April...........	70	6	13	30	21	741	61	124	330	226	366	59	67	163	77
May	69	5	14	32	19	732	57	138	341	196	360	61	67	158	74
June	65	7	12	28	18	732	75	133	323	202	355	59	66	156	74
July	66	7	12	29	18	782	82	139	345	217	351	56	65	155	75
August	73	8	14	33	19	814	84	160	365	205	342	51	64	153	74
September......	62	9	10	27	17	768	93	129	341	205	332	45	65	148	73
October.........	56	6	9	26	15	706	69	113	329	195	332	42	68	147	76
November	54	6	9	25	14	788	78	127	368	216	330	41	69	147	73
December[r]......	51	6	9	23	13	794	76	152	356	210	326	38	67	146	74
1997: January[r]	61	7	9	30	15	825	111	137	380	198	314	35	66	140	73
February[r]	70	8	9	34	19	834	112	120	392	209	303	31	65	137	71
March[p]	78	7	13	34	25	813	94	123	351	246	294	29	65	133	67
AVERAGE RELATIVE STANDARD ERRORS															
Annual ..... (percent). .	2	6	7	3	4	(X)	(X)	(X)	(X)	(X)	3	10	6	4	6
Monthly .... (percent). .	6	20	12	10	9	6	20	12	10	9	4	15	8	5	5

[p]Preliminary.   [r]Revised.   X Not applicable.

Table 3. **Houses Sold and For Sale by Stage of Construction**

[Thousands of houses. Components may not add to total because of rounding.]

Period	Sold during period				For sale at end of period			
	Total	Completed	Under construc-tion	Not started	Total	Completed	Under construc-tion	Not started
ANNUAL DATA								
1987.................................	671	201	289	182	370	100	212	57
1988.................................	676	213	286	177	371	111	204	57
1989.................................	650	215	263	172	366	109	188	69
1990.................................	534	193	199	142	321	119	145	57
1991.................................	509	184	172	154	284	104	130	51
1992.................................	610	196	211	202	267	86	135	46
1993.................................	666	198	225	243	295	83	166	47
1994.................................	670	220	230	220	340	108	189	42
1995.................................	667	238	223	205	374	123	199	52
1996[r].................................	757	275	254	228	326	101	185	40
MONTHLY DATA								
1994: January........................	46	16	14	15	294	83	162	48
February......................	58	16	18	24	292	84	160	47
March	74	21	27	26	296	81	168	46
April	65	19	23	23	296	80	169	46
May	65	20	22	23	301	83	175	43
June...........................	55	17	19	20	316	88	180	47
July	52	17	19	17	318	92	185	40
August.........................	59	20	21	18	323	92	188	43
September	54	18	20	16	332	96	191	46
October........................	57	20	19	17	331	102	186	43
November......................	45	16	16	12	335	105	187	42
December......................	40	17	12	11	340	108	189	42
1995: January........................	47	17	15	15	340	112	186	42
February......................	47	14	16	17	341	116	185	40
March	60	21	19	20	343	117	182	44
April	58	19	20	20	344	119	184	42
May	63	24	21	18	346	118	186	43
June...........................	64	23	22	20	349	117	186	46
July	64	23	21	21	343	116	183	44
August.........................	63	22	23	19	350	116	187	47
September	54	21	19	14	354	116	187	51
October........................	54	19	19	16	361	119	194	48
November......................	46	17	14	15	371	122	199	50
December......................	45	17	14	13	374	123	199	52
1996: January........................	54	19	17	18	370	122	196	51
February......................	68	21	21	26	362	120	192	50
March	70	22	23	24	362	120	189	53
April	70	22	27	22	366	119	195	51
May	69	25	24	20	360	114	195	52
June...........................	65	24	21	20	355	113	193	48
July	66	27	21	18	351	111	191	49
August.........................	73	26	27	20	342	106	192	44
September	62	23	22	17	332	103	185	43
October........................	56	21	19	15	332	103	186	43
November......................	54	20	17	17	330	101	189	40
December[r]	51	20	15	17	326	101	185	40
1997: January[r]	61	22	20	19	314	98	178	38
February[r].....................	70	23	24	24	303	96	169	38
March[p]........................	78	24	29	25	294	93	162	38
AVERAGE RELATIVE STANDARD ERRORS								
Annual .... (percent). .	2	4	3	5	4	6	4	5
Monthly.................. (percent). .	6	9	6	14	4	6	4	5

[p]Preliminary.   [r]Revised.

Table 4. **Houses Sold by Sales Price**

[Thousands of houses. Components may not add to total because of rounding. Percents computed from unrounded figures.]

Period	Total	Number of houses[1]						Percent distribution[2]						Median sales price (dollars)	Average sales price (dollars)
		Under $80,000	$80,000 to $99,999	$100,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 and over	Under $80,000	$80,000 to $99,999	$100,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 and over		
ANNUAL DATA															
1992	610	100	117	79	111	97	107	16	19	13	18	16	17	121,500	144,100
1993	666	87	115	95	133	122	115	13	17	14	20	18	17	126,500	147,700
1994	670	72	108	93	140	129	127	11	16	14	21	19	19	130,000	154,500
1995	667	58	101	99	144	127	138	9	15	15	22	19	21	133,900	158,700
1996ʳ	757	59	104	101	159	160	175	8	14	13	21	21	23	140,000	166,400
MONTHLY DATA															
1995: January	47	5	8	6	9	10	7	12	18	14	20	20	16	127,900	147,400
February	47	4	8	7	8	9	11	9	16	15	18	19	24	135,000	160,200
March	60	7	9	8	15	11	10	11	15	14	25	18	17	130,000	153,300
April	58	5	8	9	13	11	12	8	14	16	23	19	21	134,000	157,800
May	63	5	9	11	13	12	13	8	14	18	20	19	21	133,900	158,000
June	64	5	9	10	15	12	15	7	14	15	23	18	23	133,700	160,200
July	64	7	11	10	12	12	13	10	17	15	19	19	20	131,000	154,200
August	63	5	10	9	14	11	15	8	16	14	22	17	23	134,900	162,000
September	54	4	9	9	13	9	10	8	17	16	24	17	17	130,000	155,600
October	54	5	8	7	12	11	10	8	15	14	23	20	19	135,200	156,200
November	46	4	7	7	10	10	9	8	15	14	23	21	19	137,000	160,700
December	45	3	6	6	9	9	11	8	14	14	20	20	24	138,600	165,600
1996: January	54	4	10	8	11	10	11	8	18	15	20	19	20	131,900	155,300
February	68	6	10	9	14	14	15	9	14	14	20	20	22	139,400	163,700
March	70	6	10	9	15	14	15	8	14	13	22	20	22	137,000	162,100
April	70	5	11	8	14	16	15	7	16	11	21	23	22	140,000	170,000
May	69	6	9	10	15	15	15	9	12	14	22	22	21	136,400	163,300
June	65	5	8	9	14	14	15	8	13	14	22	22	22	140,000	166,500
July	66	4	8	9	14	15	15	7	12	14	22	23	23	144,200	168,400
August	73	6	11	11	15	15	16	8	14	15	21	20	21	137,000	159,700
September	62	7	9	8	13	10	16	11	15	12	20	17	26	139,000	167,400
October	56	4	7	7	12	12	13	7	12	13	22	22	24	143,800	168,400
November	54	4	7	7	12	11	14	7	14	12	22	20	25	143,500	172,000
Decemberʳ	51	4	7	6	10	11	13	7	13	13	20	22	26	144,900	171,800
1997: Januaryʳ	61	3	8	8	14	13	15	6	13	14	22	21	24	145,000	171,100
Februaryʳ	70	6	9	10	14	14	17	8	13	14	21	20	25	141,000	169,900
Marchᵖ	78	7	9	12	14	17	19	9	12	15	18	21	24	142,500	171,500
AVERAGE RELATIVE STANDARD ERRORS															
Annual . . . . (percent) . .	2	7	5	6	5	5	5	7	5	6	5	5	5	2	2
Monthly . . . . (percent) . .	6	25	14	11	10	10	11	24	13	9	8	8	9	5	4

ᵖPreliminary.   ʳRevised.

[1]Houses for which sales price was not reported have been distributed proportionally to those for which sales price was reported.
[2]Total equals 100 percent.

Note: The sales price includes the land.

Table 5. Current Seasonal Factors

Month and year	New houses sold					New houses for sale	Months' supply at current sales rate	Median months from start to—	
	United States implicit factor	Northeast	Midwest	South	West			Sale	End of month
1996: December^r	77.0	92.2	71.0	78.1	73.9	101.2	126.8	108.7	100.3
1997: January^r	88.6	74.0	80.4	93.7	92.6	100.2	110.4	115.2	105.2
February^r	100.7	89.2	92.6	103.5	106.3	98.7	99.5	110.2	108.0
March^p....................	115.7	93.5	121.8	116.6	119.7	98.9	83.4	103.6	109.5

^pPreliminary.   ^rRevised.

These are the seasonal factors used to adjust the most current preliminary and revised estimates. The factors are produced by running each series through the Census Method II X-11 ARIMA version seasonal adjustment program. For new houses sold, only the four regional series are run through this program. The resulting seasonally adjusted estimates are then added to produce an estimate for the United States. The implicit factor is the result of dividing the unadjusted estimate by the seasonally adjusted estimate. It provides an indication of the overall seasonality for the particular month.

Table 6. Median Number of Months on Sales Market

[Houses not started are excluded. Medians computed from unrounded figures.]

Period	Houses sold, measured from month of start		Houses for sale		
			Measured from month of start		Measured from month of completion (not seasonally adjusted)
	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	
ANNUAL DATA					
1987	3.9	(X)	5.4	(X)	4.8
1988	4.0	(X)	5.9	(X)	4.7
1989	4.3	(X)	6.5	(X)	5.5
1990	4.5	(X)	7.8	(X)	5.7
1991	4.4	(X)	6.8	(X)	6.9
1992	3.5	(X)	5.2	(X)	6.3
1993	3.6	(X)	4.4	(X)	4.6
1994	3.8	(X)	4.9	(X)	4.1
1995	4.3	(X)	5.3	(X)	5.5
1996^r..............	4.2	(X)	4.8	(X)	4.6
MONTHLY DATA					
1994					
January............	4.3	3.8	4.7	4.4	4.7
February	4.1	3.7	4.8	4.5	4.8
March	3.6	3.6	4.7	4.4	5.2
April...............	3.8	3.8	4.7	4.4	5.1
May................	3.7	3.8	4.1	4.0	4.6
June	3.3	3.6	3.8	4.0	3.9
July...............	3.5	3.8	4.0	4.4	3.6
August.............	3.8	4.1	4.1	4.5	3.7
September	3.6	3.9	4.4	4.7	3.8
October............	4.0	4.2	4.6	4.8	3.9
November	4.2	4.1	4.8	4.9	4.1
December	4.6	4.1	4.9	4.9	4.1
1995					
January............	4.7	4.1	5.3	5.0	4.3
February	4.4	4.0	5.6	5.2	4.5
March	4.5	4.4	5.8	5.3	4.8
April...............	4.7	4.8	5.9	5.6	4.8
May................	4.9	5.0	5.8	5.6	4.9
June	4.3	4.7	5.6	5.9	5.1
July...............	4.6	4.8	5.3	5.7	5.1
August.............	3.9	4.4	5.0	5.4	5.2
September	4.0	4.2	5.1	5.4	5.4
October............	3.8	4.2	5.0	5.3	5.5
November	4.3	4.2	5.0	5.2	5.4
December	4.2	3.8	5.3	5.3	5.5
1996					
January............	4.7	4.1	5.5	5.2	5.7
February	4.5	3.9	5.7	5.1	5.7
March	4.4	4.2	5.8	5.3	5.5
April...............	4.2	4.2	5.6	5.3	5.7
May................	4.4	4.5	5.4	5.3	5.8
June	4.3	4.7	4.9	5.1	5.4
July...............	4.2	4.4	4.5	4.9	4.9
August.............	3.4	3.6	4.4	4.8	5.0
September	4.1	4.6	4.5	4.7	4.8
October............	4.0	4.4	4.5	4.7	4.4
November	4.3	4.0	4.5	4.7	4.6
December^r	4.4	4.1	4.8	4.8	4.6
1997					
January^r	4.9	4.2	5.1	4.9	4.9
February^r...........	4.6	4.1	5.3	4.9	4.8
March^p	3.9	3.8	5.5	5.0	4.8
AVERAGE RELATIVE STANDARD ERRORS					
Annual . . . (percent). .	3	(X)	7	(X)	13
Monthly . . (percent). .	10	10	7	7	13

^pPreliminary.   ^rRevised.   X Not applicable.

Table 7. **Houses Sold by Sales Price**

[Components may not add to total because of rounding. Value of improved lot included in sales price. Percents computed from unrounded figures.]

Period	Total	Under $60,000	$60,000 to $69,999	$70,000 to $79,999	$80,000 to $89,999	$90,000 to $99,999	$100,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 to $249,999	$250,000 and over
					Number of houses (thousands)						
ANNUAL DATA											
1991.........................	509	30	26	43	47	41	65	86	82	35	54
1992.........................	610	25	30	45	61	56	79	111	97	47	60
1993.........................	666	20	25	41	59	56	95	133	122	53	62
1994.........................	670	16	21	35	51	57	93	140	129	55	72
1995......................	667	11	15	32	50	51	99	144	127	63	75
1996[r]	757	11	15	33	47	57	101	159	160	79	96
QUARTERLY DATA											
1991											
1st quarter	121	8	6	9	11	9	16	19	20	8	14
2nd quarter..................	145	8	7	12	13	12	20	23	22	10	16
3rd quarter	127	7	6	11	11	11	16	23	21	8	12
4th quarter	117	6	7	10	11	10	14	21	18	9	12
1992											
1st quarter	160	7	7	12	16	16	22	28	25	12	15
2nd quarter..................	158	7	8	11	16	16	18	26	25	12	17
3rd quarter	159	6	7	12	17	15	21	29	27	10	14
4th quarter	133	5	8	9	11	9	18	26	21	13	13
1993											
1st quarter	154	5	6	12	14	14	20	30	28	12	12
2nd quarter..................	184	6	6	10	16	15	26	37	32	17	18
3rd quarter	169	5	6	11	13	14	24	34	33	13	15
4th quarter	160	5	6	9	15	13	23	32	29	11	16
1994											
1st quarter	177	3	7	10	14	16	26	35	34	15	18
2nd quarter..................	185	5	6	11	13	15	26	41	34	16	20
3rd quarter	166	6	4	8	14	14	23	34	32	13	17
4th quarter	141	3	5	6	11	13	19	31	27	11	16
1995											
1st quarter	154	4	4	9	12	13	22	33	29	14	15
2nd quarter..................	185	3	4	8	13	13	30	40	35	18	22
3rd quarter	182	3	4	9	15	16	27	39	32	17	20
4th quarter	145	2	3	7	11	10	20	32	30	14	17
1996											
1st quarter	191	3	4	10	13	16	27	40	38	20	22
2nd quarter..................	204	3	4	9	13	15	26	43	45	19	25
3rd quarter	201	3	4	9	14	14	28	42	40	22	24
4th quarter[r].................	161	2	3	6	8	12	21	34	35	18	22
1997											
1st quarter[p].................	209	3	5	9	13	13	30	42	43	21	30
AVERAGE RELATIVE STANDARD ERRORS											
Annual .... (percent)..	2	11	9	7	7	6	6	5	5	6	6
Quarterly .... (percent)..	4	20	25	22	14	9	7	6	6	7	9

See footnotes at end of table.

Table 7. **Houses Sold by Sales Price**—Con.

[Components may not add to total because of rounding. Value of improved lot included in sales price. Percents computed from unrounded figures.]

Period	Total	Under $60,000	$60,000 to $69,999	$70,000 to $79,999	$80,000 to $89,999	$90,000 to $99,999	$100,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 to $249,999	$250,000 and over
						Percent distribution					
ANNUAL DATA											
1991.........................	100	6	5	9	9	8	13	17	16	7	11
1992.........................	100	4	5	7	10	9	13	18	16	8	10
1993.........................	100	3	4	6	9	8	14	20	18	8	9
1994.........................	100	2	3	5	8	9	14	21	19	8	11
1995.........................	100	2	2	5	7	8	15	22	19	9	11
1996[r]	100	1	2	4	6	8	13	21	21	10	13
QUARTERLY DATA											
1991											
1st quarter	100	7	5	8	9	7	13	16	17	6	12
2nd quarter..................	100	5	5	9	9	8	14	16	16	7	11
3rd quarter	100	5	5	9	9	9	12	18	17	7	10
4th quarter	100	5	6	8	10	8	12	18	15	8	10
1992											
1st quarter	100	4	5	8	10	10	14	18	16	7	9
2nd quarter..................	100	5	5	7	10	10	12	17	16	8	11
3rd quarter	100	4	4	8	11	10	13	18	17	6	9
4th quarter	100	3	6	7	9	7	14	20	16	10	10
1993											
1st quarter	100	3	4	8	9	9	13	19	18	8	8
2nd quarter..................	100	4	3	6	9	8	14	20	18	9	10
3rd quarter	100	3	4	6	8	8	14	20	19	8	9
4th quarter	100	3	4	6	10	8	15	20	18	7	10
1994											
1st quarter	100	2	4	6	8	9	14	20	19	8	10
2nd quarter..................	100	3	3	6	7	8	14	22	18	9	11
3rd quarter	100	4	2	5	8	9	14	20	19	8	10
4th quarter	100	2	3	5	7	9	14	22	19	8	11
1995											
1st quarter	100	3	3	6	8	8	14	22	19	9	10
2nd quarter..................	100	1	2	4	7	7	16	22	19	10	12
3rd quarter	100	1	2	5	8	9	15	22	18	9	11
4th quarter	100	1	2	5	7	7	14	22	20	9	12
1996											
1st quarter	100	1	2	5	7	9	14	21	20	10	11
2nd quarter..................	100	2	2	4	6	7	13	21	22	9	12
3rd quarter	100	2	2	4	7	7	14	21	20	11	12
4th quarter[r].................	100	1	2	4	5	8	13	21	22	11	14
1997											
1st quarter[p].................	100	1	2	4	6	6	14	20	21	10	14
AVERAGE RELATIVE STANDARD ERRORS											
Annual .... (percent)..	(X)	9	7	6	5	5	5	5	4	5	5
Quarterly .... (percent)..	(X)	20	25	22	13	8	6	4	4	6	8

[p]Preliminary. [r]Revised.   X Not applicable.

Table 8. **Houses Sold by Sales Price Within Region**

[Thousands of houses. Components may not add to total because of rounding. Value of improved lot included in sales price.]

Period	Northeast						Midwest					
	Total sold	Under $80,000	$80,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 and over	Total sold	Under $80,000	$80,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 and over
ANNUAL DATA												
1991	57	2	11	13	14	17	93	22	29	15	14	13
1992	65	2	10	13	19	21	116	22	39	21	17	18
1993	60	2	12	12	15	19	123	15	40	27	22	20
1994	61	2	10	11	17	21	123	10	37	28	25	22
1995	55	2	8	9	13	23	125	6	41	27	25	26
1996[r]	74	2	9	11	18	33	137	6	41	32	29	29
QUARTERLY DATA												
1991												
1st quarter	11	(B)	2	3	2	3	22	5	7	3	3	4
2nd quarter	16	(B)	4	3	4	5	28	7	9	4	5	3
3rd quarter	15	(B)	3	4	4	4	23	5	8	4	3	3
4th quarter	15	(B)	3	3	4	5	20	5	6	3	3	3
1992												
1st quarter	13	(B)	2	3	3	5	32	7	11	5	5	4
2nd quarter	17	(B)	2	3	5	6	32	6	10	6	4	6
3rd quarter	18	(B)	3	3	6	5	31	6	12	5	5	3
4th quarter	16	(B)	2	5	4	5	23	4	7	5	4	4
1993												
1st quarter	13	(B)	2	3	3	3	27	4	9	5	5	4
2nd quarter	21	(B)	4	4	4	8	34	4	11	8	6	6
3rd quarter	14	(B)	3	3	4	4	30	3	8	7	6	5
4th quarter	13	(B)	3	2	3	4	32	3	11	6	6	5
1994												
1st quarter	12	(B)	2	2	3	4	32	4	9	6	7	6
2nd quarter	16	(B)	2	3	5	5	36	3	11	9	7	7
3rd quarter	18	(B)	4	3	4	6	27	2	8	7	5	5
4th quarter	14	(B)	2	3	4	5	26	2	9	6	5	5
1995												
1st quarter	13	(B)	2	3	3	5	28	2	9	7	6	5
2nd quarter	17	(B)	2	3	4	7	37	2	12	8	7	8
3rd quarter	12	(B)	2	2	2	6	33	2	12	7	6	7
4th quarter	14	(B)	2	2	3	6	26	(B)	9	6	5	5
1996												
1st quarter	12	(B)	2	2	3	5	35	2	11	8	6	8
2nd quarter	18	(B)	2	2	4	9	39	2	11	10	9	8
3rd quarter	23	(B)	3	3	6	10	35	2	12	9	7	6
4th quarter[r]	17	(B)	2	2	4	9	27	(B)	7	6	6	6
1997												
1st quarter[p]	22	(B)	2	3	5	12	31	(B)	10	7	7	6
AVERAGE RELATIVE STANDARD ERRORS												
Annual .... (percent)	6	25	17	9	10	13	7	12	14	15	13	14
Quarterly .... (percent)	11	42	27	25	19	23	9	27	15	14	16	13

See footnotes at end of table.

Table 8. **Houses Sold by Sales Price Within Region**—Con.

[Thousands of houses. Components may not add to total because of rounding. Value of improved lot included in sales price.]

Period	South						West					
	Total sold	Under $80,000	$80,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 and over	Total sold	Under $80,000	$80,000 to $119,999	$120,000 to $149,999	$150,000 to $199,999	$200,000 and over
ANNUAL DATA												
1991..............................	215	62	73	32	24	24	144	12	40	27	29	36
1992..............................	259	63	91	41	33	32	170	13	56	36	28	36
1993..............................	295	58	100	51	47	39	188	12	58	44	38	37
1994..............................	295	52	101	54	46	41	191	8	53	47	41	42
1995..............................	300	42	98	63	49	47	187	8	53	44	40	42
1996ʳ..............................	337	44	108	69	61	55	209	6	46	47	51	59
QUARTERLY DATA												
1991												
1st quarter	52	15	17	8	6	6	37	4	10	5	8	9
2nd quarter........................	60	17	21	8	7	7	41	3	12	8	8	11
3rd quarter	53	15	18	8	6	5	35	3	10	7	7	9
4th quarter	49	14	17	7	6	6	32	3	9	7	6	7
1992												
1st quarter	67	15	24	11	8	9	48	3	17	9	9	9
2nd quarter........................	68	18	23	10	9	8	41	3	15	8	7	9
3rd quarter	65	16	24	11	8	6	45	3	14	11	8	10
4th quarter	58	13	20	9	8	8	36	4	10	8	6	8
1993												
1st quarter	71	15	25	12	11	8	43	4	13	10	8	8
2nd quarter........................	77	15	26	14	12	11	51	3	16	12	10	10
3rd quarter	76	16	25	13	13	10	48	3	15	11	10	9
4th quarter	68	13	24	12	11	9	47	3	14	12	9	9
1994												
1st quarter	80	13	28	14	13	11	54	2	16	13	11	12
2nd quarter........................	80	15	27	15	12	12	52	3	14	14	10	11
3rd quarter	72	14	25	12	11	9	49	2	14	12	11	10
4th quarter	62	11	22	13	9	8	38	1	10	9	9	9
1995												
1st quarter	72	13	24	14	11	10	41	2	12	10	9	8
2nd quarter........................	76	11	25	17	12	12	55	2	17	12	12	13
3rd quarter	84	11	30	17	13	13	53	2	14	13	11	12
4th quarter	65	8	20	14	13	10	40	2	11	10	9	9
1996												
1st quarter	87	12	29	16	17	14	58	2	14	14	13	15
2nd quarter........................	89	12	29	18	17	13	58	2	12	13	16	15
3rd quarter	89	14	29	19	14	14	53	(B)	12	12	13	16
4th quarterʳ........................	74	9	23	17	14	12	42	(B)	8	10	10	13
1997												
1st quarterᵖ	98	13	34	19	18	14	58	(B)	10	14	14	19
AVERAGE RELATIVE STANDARD ERRORS												
Annual .... (percent). .	3	6	7	9	9	7	3	16	9	7	7	6
Quarterly .... (percent). .	6	24	8	9	9	8	6	28	12	10	10	9

B Withheld because estimate did not meet publication standards on the basis of sample size.   ᵖPreliminary.   ʳRevised.

Table 9. **Median and Average Sales Price of Houses Sold by Region**

[Dollars]

Period	Median sales price					Average sales price				
	United States	Northeast	Midwest	South	West	United States	Northeast	Midwest	South	West
ANNUAL DATA										
1991	120,000	155,900	110,000	100,000	141,100	147,200	188,800	134,500	123,000	176,400
1992	121,500	169,000	115,600	105,500	130,400	144,100	194,900	136,400	126,900	157,800
1993	126,500	162,600	125,000	115,000	135,000	147,700	183,600	143,100	133,600	161,900
1994	130,000	169,000	132,900	116,900	140,400	154,500	200,500	152,700	136,800	168,900
1995	133,900	180,000	134,000	124,500	141,000	158,700	216,600	157,200	142,000	169,800
1996ʳ	140,000	186,000	138,000	126,200	153,900	166,400	226,100	158,900	144,200	186,200
QUARTERLY DATA										
1991										
1st quarter	120,000	153,900	115,000	101,300	145,000	151,100	188,100	143,200	122,600	186,500
2nd quarter	119,900	150,000	110,000	100,900	143,500	148,200	197,700	131,500	124,700	176,200
3rd quarter	120,000	155,200	107,000	99,700	144,000	145,400	183,900	129,000	122,000	175,800
4th quarter	120,000	169,000	112,900	100,000	136,000	144,400	188,200	135,100	123,100	164,000
1992										
1st quarter	119,500	166,900	112,400	106,500	129,900	144,500	209,000	131,300	130,900	156,500
2nd quarter	120,000	175,000	120,000	101,000	129,000	145,300	197,800	141,500	126,000	160,500
3rd quarter	120,000	170,000	110,000	102,000	134,500	141,700	189,000	130,600	121,200	161,000
4th quarter	126,000	165,000	125,000	110,000	132,300	147,200	191,200	142,600	131,600	156,300
1993										
1st quarter	125,000	150,000	123,800	109,000	134,000	144,700	175,200	142,500	131,200	160,400
2nd quarter	127,000	175,000	125,000	115,500	135,000	148,900	185,000	140,700	136,100	160,300
3rd quarter	127,000	155,000	127,500	114,000	136,600	148,000	178,200	150,900	131,700	163,500
4th quarter	127,000	162,600	124,400	115,000	135,200	148,300	198,200	138,800	132,700	164,300
1994										
1st quarter	130,000	159,900	133,000	116,200	140,000	153,600	191,000	151,000	138,300	169,300
2nd quarter	130,000	172,000	131,800	118,500	137,000	154,200	202,400	150,600	138,700	167,000
3rd quarter	129,700	165,000	133,300	113,700	140,000	152,800	200,700	152,900	133,300	165,000
4th quarter	132,000	169,000	130,000	117,900	148,000	156,100	205,500	153,500	133,300	176,100
1995										
1st quarter	130,000	179,900	130,000	118,000	139,400	153,500	217,100	153,100	135,900	164,600
2nd quarter	133,900	179,900	136,000	124,500	140,000	158,900	209,400	160,500	140,500	169,300
3rd quarter	132,000	179,900	131,000	121,000	143,000	157,700	217,100	152,500	140,800	173,600
4th quarter	138,000	183,500	135,000	127,000	143,000	160,900	217,500	160,000	144,200	169,500
1996										
1st quarter	137,000	179,000	135,200	125,500	148,200	161,100	217,500	160,200	143,800	177,200
2nd quarter	139,900	199,700	138,200	125,000	155,900	166,000	238,400	155,900	140,900	189,400
3rd quarter	140,000	181,000	134,900	123,900	154,800	164,000	211,600	153,500	141,000	187,900
4th quarterʳ	144,100	200,000	145,000	127,900	160,000	171,000	245,400	162,700	146,000	190,800
1997										
1st quarterᵖ	143,000	215,000	141,900	124,500	160,000	170,800	235,700	160,100	143,200	196,100
AVERAGE RELATIVE STANDARD ERRORS										
Annual . . . .(percent). .	2	7	4	2	2	2	7	4	3	3
Quarterly . . . . (percent). .	4	7	2	3	3	2	8	3	3	4

ᵖPreliminary. ʳRevised.

Table 10. Houses Sold by Type of Financing

[Components may not add to total because of rounding. Percents computed from unrounded figures.]

| Period | Number of houses (thousands) | | | | | | Percent distribution[1] | | | | | |
| | | Type of financing[1] | | | | | | | | | | |
	Total sold	FHA insured	VA guaran-teed	Conven-tional[2]	Rural Hous. Serv.	Cash	Total	FHA insured	VA guaran-teed	Conven-tional[2]	Rural Hous. Serv.	Cash
ANNUAL DATA												
1991	509	92	36	329	9	43	100	18	7	65	2	8
1992	610	86	48	428	7	41	100	14	8	70	1	7
1993	666	92	55	476	6	37	100	14	8	71	1	6
1994	670	78	51	490	9	41	100	12	8	73	1	6
1995	667	79	50	490	9	39	100	12	7	73	1	6
1996[r]	757	89	51	570	9	38	100	12	7	75	1	5
QUARTERLY DATA												
1991												
1st quarter	121	26	7	74	4	10	100	21	6	61	3	9
2nd quarter	145	26	10	94	3	13	100	18	7	65	2	9
3rd quarter	127	22	10	81	2	13	100	17	8	64	1	10
4th quarter	117	19	8	81	2	7	100	16	7	69	1	6
1992												
1st quarter	160	29	11	110	2	9	100	18	7	69	1	6
2nd quarter	158	22	12	110	2	13	100	14	8	69	1	8
3rd quarter	159	20	15	112	2	11	100	12	9	70	1	7
4th quarter	133	16	10	97	2	8	100	12	8	73	1	6
1993												
1st quarter	154	21	14	110	2	8	100	14	9	71	1	5
2nd quarter	184	27	15	129	2	10	100	15	8	70	1	6
3rd quarter	169	24	14	120	(B)	9	100	14	8	71	(B)	6
4th quarter	160	20	13	117	2	9	100	13	8	73	1	6
1994												
1st quarter	177	23	16	129	(B)	8	100	13	9	73	(B)	5
2nd quarter	185	22	14	134	3	12	100	12	8	72	1	6
3rd quarter	166	19	12	122	4	10	100	12	7	73	2	6
4th quarter	141	15	10	105	2	10	100	11	7	74	1	7
1995												
1st quarter	154	19	12	112	2	9	100	12	8	73	2	6
2nd quarter	185	22	14	136	2	11	100	12	8	74	1	6
3rd quarter	182	21	14	134	3	11	100	11	8	74	2	6
4th quarter	145	16	11	108	(B)	9	100	11	8	74	(B)	6
1996												
1st quarter	191	26	17	139	2	8	100	14	9	73	1	4
2nd quarter	204	23	14	154	3	10	100	12	7	75	1	5
3rd quarter	201	21	14	154	3	10	100	10	7	76	1	5
4th quarter[r]	161	19	8	124	(B)	9	100	12	5	77	(B)	5
1997												
1st quarter[p]	209	25	15	156	(B)	11	100	12	7	75	(B)	5
AVERAGE RELATIVE STANDARD ERRORS												
Annual (percent)	2	6	8	3	26	6	(X)	6	10	3	28	6
Quarterly (percent)	4	9	27	4	39	10	(X)	8	27	3	39	9

B Withheld because estimate did not meet publication standards on the basis of sample size. [p]Preliminary. [r]Revised. X Not applicable.

[1]Houses not reporting type of financing have been distributed proportionally to those reporting type of financing.
[2]Includes houses reporting other types of financing.

Table 11. **Median and Average Sales Price of Houses Sold by Type of Financing**
[Dollars]

Period	Median sales price						Average sales price					
		Type of financing						Type of financing				
	Total sold[1]	FHA insured	VA guaran- teed	Conven- tional[2]	Rural Hous. Serv.	Cash	Total sold [1]	FHA insured	VA guaran- teed	Conven- tional[2]	Rural Hous. Serv.	Cash
ANNUAL DATA												
1991.	120,000	84,500	92,400	142,400	46,000	120,000	147,200	87,700	103,200	169,400	57,700	142,300
1992.	121,500	86,500	99,000	138,000	46,500	116,500	144,100	89,900	107,000	161,100	51,500	137,100
1993.	126,500	90,900	100,900	140,000	49,900	120,700	147,700	95,500	108,600	162,700	58,600	148,700
1994.	130,000	95,000	105,400	145,000	54,500	125,500	154,500	101,000	111,400	169,100	59,700	153,000
1995.	133,900	95,900	107,000	148,500	71,000	127,000	158,700	100,700	112,800	173,800	75,700	154,900
1996[r]	140,000	99,900	108,000	155,000	76,800	140,000	166,400	105,700	112,600	182,100	84,100	169,600
QUARTERLY DATA												
1991												
1st quarter.	120,000	86,000	93,500	152,000	55,000	119,700	151,100	88,200	102,600	184,300	53,400	142,400
2nd quarter.	119,900	83,500	94,000	142,800	43,000	116,000	148,200	86,200	104,800	170,000	56,100	137,900
3rd quarter	120,000	84,500	94,000	139,000	46,000	119,000	145,400	87,200	105,100	162,900	63,100	145,600
4th quarter	120,000	84,000	89,000	140,000	43,000	129,000	144,400	89,400	99,500	162,200	66,300	140,500
1992												
1st quarter.	119,500	87,000	104,000	137,000	46,500	120,000	144,500	94,000	110,200	163,800	47,200	130,900
2nd quarter.	120,000	85,000	94,400	139,000	46,900	100,400	145,300	88,400	102,100	164,500	52,700	130,000
3rd quarter	120,000	86,500	100,000	135,000	45,000	120,000	141,700	87,700	107,400	156,900	53,100	137,900
4th quarter	126,000	87,200	100,000	139,000	46,500	118,000	147,200	91,300	106,700	161,100	49,600	152,000
1993												
1st quarter.	125,000	86,900	101,100	137,000	48,900	119,900	144,700	92,000	110,400	160,700	53,700	146,000
2nd quarter.	127,000	93,000	105,000	143,400	54,000	119,800	148,900	96,400	110,100	164,900	53,500	146,400
3rd quarter	127,000	91,000	100,900	144,000	(S)	120,700	148,000	95,400	108,400	164,100	(S)	146,700
4th quarter	127,000	92,000	96,300	136,600	49,900	129,500	148,300	98,000	105,100	159,600	56,000	150,700
1994												
1st quarter.	130,000	94,900	107,400	145,900	(S)	115,000	153,600	98,400	112,000	169,500	(S)	154,300
2nd quarter.	130,000	96,900	105,400	145,000	57,200	129,200	154,200	100,100	109,400	168,500	59,600	155,100
3rd quarter	129,700	94,900	110,000	144,500	52,000	117,700	152,800	98,600	114,000	167,800	58,300	149,400
4th quarter	132,000	94,000	98,000	142,000	54,500	136,000	156,100	107,600	110,300	168,600	62,200	156,100
1995												
1st quarter.	130,000	96,900	102,000	145,000	56,000	120,500	153,500	100,700	111,600	169,300	59,000	143,700
2nd quarter.	133,900	95,000	107,000	150,000	77,200	130,000	158,900	99,500	113,500	175,700	75,900	156,200
3rd quarter	132,000	93,900	107,500	145,000	75,500	124,600	157,700	99,600	112,900	172,100	84,200	151,900
4th quarter	138,000	98,500	110,900	150,000	(S)	130,300	160,900	103,200	112,500	174,300	(S)	156,500
1996												
1st quarter.	137,000	97,000	104,000	151,300	73,000	147,000	161,100	102,900	112,100	177,600	80,800	166,700
2nd quarter.	139,900	100,000	113,900	153,900	80,600	130,000	166,000	105,600	115,800	180,400	86,200	180,000
3rd quarter	140,000	100,000	105,000	151,900	75,100	135,000	164,000	106,700	109,800	178,800	86,500	155,100
4th quarter[r]	144,100	104,700	108,600	155,800	(S)	146,400	171,000	108,800	113,900	183,700	(S)	172,900
1997												
1st quarter[p].	143,000	104,000	112,000	160,000	(S)	136,500	170,800	105,000	112,000	188,400	(S)	164,000
AVERAGE RELATIVE STANDARD ERRORS												
Annual . . . .(percent). .	2	3	6	2	13	2	2	2	2	2	7	4
Quarterly. . . . . (percent). .	4	3	8	3	2	4	2	2	7	2	11	10

[p]Preliminary. [r]Revised. S Withheld because estimate did not meet publication standards on the basis of response rate, associated standard error, or a consistency review.

[1]Includes houses not reporting type of financing.
[2]Includes houses reporting other types of financing.

Table 12. **Chain-Type Annual-Weighted Index (Fisher Ideal) of New One-Family Houses Sold Including Value of Lot**

[1992=100.0. Index based on kinds of house sold in 1992.]

Year	Annual	First quarter	Second quarter	Third quarter	Fourth quarter	Northeast	Midwest	South	West
1979	59.5	56.2	59.2	60.1	62.6	47.1	64.4	63.6	59.6
1980	65.4	63.8	64.8	66.4	66.5	51.2	67.6	70.7	66.1
1981	70.3	69.3	70.2	70.3	71.3	56.0	72.3	76.3	70.1
1982	73.2	73.4	73.5	73.2	72.8	58.4	75.5	80.3	71.5
1983	75.3	74.6	74.8	76.0	75.8	61.7	75.0	82.6	73.8
1984	78.1	76.2	77.8	78.7	79.7	67.1	79.2	84.7	76.2
1985	80.1	79.9	79.8	79.6	81.2	73.6	78.5	86.6	77.2
1986	83.8	81.8	83.8	85.2	84.5	84.8	83.0	88.9	78.7
1987	88.7	86.8	88.3	89.8	90.1	96.8	88.6	91.8	82.6
1988	92.1	91.3	91.7	92.7	92.7	99.8	92.7	94.0	87.2
1989	95.8	94.5	96.4	96.3	95.9	102.1	94.8	97.0	92.9
1990	97.4	97.8	96.7	98.0	96.9	98.1	95.4	97.3	98.3
1991	98.6	97.2	99.3	100.0	97.8	96.2	97.8	98.9	99.2
1992	100.0	98.9	99.7	100.1	101.3	100.0	100.0	100.0	100.0
1993	104.5	101.9	105.3	105.9	104.8	98.0	107.0	104.7	103.8
1994	109.6	108.1	109.7	110.0	110.5	100.0	112.8	108.4	111.1
1995	112.5	111.2	112.4	112.8	113.7	103.0	116.5	111.7	113.2
1996	114.9	115.3	114.5	115.6	115.1	104.7	119.3	113.0	117.2
1997		P117.3							

PPreliminary.

Table 12a. **Fixed-Weighted Price Index (Laspeyres) of New One-Family Houses Sold including Value of Lot**

[1992=100.0. Index based on kinds of house sold in 1992.]

Year	Annual	First quarter	Second quarter	Third quarter	Fourth quarter	Northeast	Midwest	South	West
1979	61.8	58.8	62.1	63.1	65.5	46.3	64.0	62.9	61.1
1980	68.1	66.7	67.7	69.4	69.8	50.5	67.1	70.2	68.2
1981	73.5	73.0	74.0	74.0	74.7	55.3	73.9	76.7	72.9
1982	75.2	76.4	76.0	75.3	74.7	56.7	75.1	79.5	73.5
1983	76.8	76.5	76.7	77.9	77.9	60.3	75.2	81.4	75.2
1984	79.9	78.6	80.3	81.1	81.9	66.0	80.2	84.6	77.3
1985	80.9	81.6	81.1	80.7	82.1	74.5	78.4	86.6	78.0
1986	84.1	82.7	84.7	86.0	85.2	84.5	82.5	89.4	80.9
1987	88.6	87.4	88.8	90.2	90.4	97.6	88.8	92.3	84.8
1988	91.9	91.7	92.1	93.1	93.0	100.5	92.8	94.3	87.6
1989	95.6	94.8	96.6	96.6	96.2	102.1	94.9	97.2	92.2
1990	97.4	98.2	97.2	98.6	97.5	99.3	95.5	97.4	98.1
1991	98.7	97.8	99.9	100.6	98.3	96.4	97.7	98.9	99.1
1992	100.0	99.3	100.1	100.3	r101.0	100.0	100.0	100.0	100.0
1993	104.3	101.8	105.1	105.6	104.6	r97.1	r106.7	r104.7	r103.6
1994	109.3	108.0	109.6	109.9	110.2	r98.4	r112.0	r108.5	r110.9
1995	112.4	110.8	111.9	112.2	113.0	r100.7	r116.3	r111.9	r112.7
1996	114.5	114.7	113.8	115.0	114.6	r104.1	r118.6	r112.6	r116.8
1997		P116.6							

PPreliminary.   rRevised.

Note: Regional indexes from 1993 through 1996 have been revised.

Table 13. Average Sales Price of Kinds One-Family Houses Sold in 1992 Compared With That of Houses Actually Sold Based on the Laspeyres Price Index

[In dollars]

Period	Average sales price of kinds of houses sold in 1992 (estimated from price index) Price	Period-to-period percent change[1]	Average sales price of houses sold Price	Period-to-period percent change
ANNUAL DATA				
1977	67,400	(X)	54,200	(X)
1978	77,400	14.8	62,500	15.3
1979	89,100	14.9	71,800	14.9
1980	98,100	10.3	76,400	6.4
1981	105,900	7.9	83,000	8.6
1982	108,400	2.4	83,900	1.1
1983	110,700	2.1	89,800	7.0
1984	115,100	4.1	97,600	8.7
1985	116,600	1.2	100,800	3.3
1986	121,200	3.9	111,900	11.0
1987	127,700	5.3	127,200	13.7
1988	132,400	3.8	138,300	8.7
1989	137,800	4.0	148,800	7.6
1990	140,400	1.9	149,800	0.7
1991	142,200	1.3	147,200	−1.7
1992	144,100	1.4	144,100	−2.1
1993	150,300	4.3	147,700	2.5
1994	157,500	4.7	154,500	4.6
1995	161,900	2.8	158,700	2.7
1996	165,100	2.0	ʳ166,400	ʳ4.9
QUARTERLY DATA				
1977: First quarter	64,200	(X)	51,600	(X)
Second quarter	67,400	5.0	54,300	5.2
Third quarter	68,700	1.9	54,000	−0.6
Fourth quarter	72,700	5.9	57,500	6.5
1978: First quarter	73,900	1.7	59,300	3.1
Second quarter	76,700	3.8	61,600	3.9
Third quarter	79,800	4.0	63,500	3.2
Fourth quarter	82,200	3.1	66,400	4.4
1979: First quarter	84,800	3.1	68,300	2.9
Second quarter	89,500	5.6	72,400	6.0
Third quarter	91,000	1.6	74,200	2.5
Fourth quarter	94,600	3.8	72,700	−2.0
1980: First quarter	96,200	1.8	73,600	1.2
Second quarter	97,600	1.5	74,400	1.1
Third quarter	100,100	2.5	77,500	4.2
Fourth quarter	100,600	0.5	80,000	3.2
1981: First quarter	105,200	4.5	80,900	1.1
Second quarter	106,600	1.3	84,300	4.2
Third quarter	106,700	0.1	83,800	−0.6
Fourth quarter	107,600	0.9	83,700	−0.1
1982: First quarter	110,000	2.2	81,200	−3.0
Second quarter	109,500	−0.4	85,700	5.5
Third quarter	108,600	−0.9	83,900	−2.1
Fourth quarter	107,700	−0.8	84,600	0.8
1983: First quarter	110,200	2.3	86,700	2.5
Second quarter	110,600	0.4	89,100	1.8
Third quarter	112,300	1.6	92,500	3.8
Fourth quarter	112,200	−0.1	90,800	−1.8
1984: First quarter	113,200	0.9	94,700	4.3
Second quarter	115,700	2.2	99,200	4.8

Period	Average sales price of kinds of houses sold in 1992 (estimated from price index) Price	Period-to-period percent change[1]	Average sales price of houses sold Price	Period-to-period percent change
Third quarter	116,900	1.0	98,500	−0.7
Fourth quarter	118,000	0.9	97,800	−0.7
1985: First quarter	117,600	−0.4	98,500	0.7
Second quarter	116,900	−0.6	100,500	2.0
Third quarter	116,300	−0.5	100,500	0.0
Fourth quarter	118,300	1.7	103,800	3.3
1986: First quarter	119,100	0.7	106,300	2.3
Second quarter	122,100	2.5	112,300	5.4
Third quarter	123,900	1.4	114,400	2.1
Fourth quarter	122,700	−0.9	115,600	1.0
1987: First quarter	125,900	2.6	120,800	4.5
Second quarter	128,000	1.6	126,100	4.4
Third quarter	129,900	1.5	129,900	3.0
Fourth quarter	130,300	0.3	133,500	2.8
1988: First quarter	132,100	1.4	137,900	3.3
Second quarter	132,700	0.5	134,800	−2.2
Third quarter	134,100	1.0	141,500	5.0
Fourth quarter	134,000	−0.1	140,400	−0.8
1989: First quarter	136,700	2.0	144,300	2.8
Second quarter	139,100	1.8	146,800	1.7
Third quarter	139,200	0.0	150,200	2.3
Fourth quarter	138,600	−0.4	151,200	0.7
1990: First quarter	141,500	2.1	149,500	−1.1
Second quarter	140,100	−1.0	151,200	1.1
Third quarter	142,200	1.5	145,500	−3.8
Fourth quarter	140,500	−1.1	150,100	3.2
1991: First quarter	140,900	0.2	151,100	0.7
Second quarter	144,000	2.2	148,200	−1.9
Third quarter	145,000	0.7	145,400	−1.9
Fourth quarter	141,700	−2.3	144,400	−0.7
1992: First quarter	143,100	1.0	144,500	0.1
Second quarter	144,200	0.8	145,300	0.6
Third quarter	144,500	0.2	141,700	−2.5
Fourth quarter	145,600	0.8	147,200	3.9
1993: First quarter	146,800	0.8	144,700	−1.7
Second quarter	151,400	3.2	148,900	2.9
Third quarter	152,100	0.5	148,000	−0.6
Fourth quarter	150,800	−0.9	148,300	0.2
1994: First quarter	155,700	3.3	153,600	3.6
Second quarter	158,000	1.5	154,200	0.4
Third quarter	158,300	0.2	152,800	−0.9
Fourth quarter	158,800	0.3	156,100	2.2
1995: First quarter	159,600	0.5	153,500	−1.7
Second quarter	161,300	1.1	158,900	3.5
Third quarter	161,600	0.2	157,700	−0.8
Fourth Quarter	162,800	0.7	160,900	2.0
1996: First quarter	165,200	1.5	161,100	0.1
Second quarter	164,000	−0.7	166,000	3.0
Third quarter	166,400	1.4	164,000	−1.2
Fourth quarter	165,100	−0.4	ʳ171,000	4.3
1997: First quarterᵖ	168,000	1.8	170,800	−0.1

ᵖPreliminary.   ʳRevised.   X Not applicable.

[1]Derived from unrounded figures.

Table 14. **Average Sales Price of Kinds of New One-Family Houses Sold in 1992 Compared With That of Houses Actually Sold by Region Based on the Laspeyres Price Index**

[In dollars]

Period	Average sales price of kinds of houses sold in 1992 (estimated from price index)		Average sales price of houses sold		Period	Average sales price of kinds of houses sold in 1992 (estimated from price index)		Average sales price of houses sold	
	Price	Period-to-period percent change[1]	Price	Period-to-period percent change		Price	Period-to-period percent change[1]	Price	Period-to-period percent change
NORTHEAST					**SOUTH**				
1977	70,800	(X)	54,800	(X)	1977	63,200	(X)	48,100	(X)
1978	77,600	9.5	63,000	15.0	1978	70,300	11.3	55,600	15.6
1979	88,700	14.4	71,500	13.5	1979	80,900	15.0	63,800	14.7
1980	97,500	10.0	80,300	12.3	1980	90,300	11.7	69,100	8.3
1981	105,700	8.4	88,500	10.2	1981	98,200	8.7	75,600	9.4
1982	109,400	3.5	88,600	0.1	1982	101,300	3.2	78,300	3.6
1983	116,300	6.3	96,200	8.6	1983	104,100	2.8	83,000	6.0
1984	126,200	8.5	107,400	11.6	1984	107,400	3.2	86,000	3.6
1985	138,900	10.1	121,900	13.5	1985	109,700	2.1	88,900	3.4
1986	159,400	14.8	151,300	24.1	1986	113,000	3.1	95,300	7.2
1987	181,100	13.6	170,900	13.0	1987	117,000	3.5	106,600	11.9
1988	185,500	2.4	179,300	4.9	1988	119,700	2.3	114,800	7.7
1989	191,000	3.0	188,600	5.2	1989	123,000	2.8	123,100	7.2
1990	187,100	−2.1	190,500	1.0	1990	123,300	0.2	123,500	0.3
1991	181,000	−3.3	188,800	−0.9	1991	125,600	1.9	123,000	−0.4
1992	194,900	7.7	194,900	3.2	1992	126,900	1.0	126,900	3.2
1993	ʳ189,300	ʳ−2.9	183,600	−5.8	1993	ʳ132,900	ʳ4.7	133,600	5.3
1994	ʳ191,800	ʳ1.3	200,500	9.2	1994	ʳ137,700	ʳ3.6	136,800	2.4
1995	ʳ196,300	ʳ2.4	216,600	8.0	1995	ʳ142,000	3.2	142,000	3.8
1996ʳ	202,900	3.3	226,100	4.4	1996ʳ	142,800	0.6	144,200	1.5
MIDWEST					**WEST**				
1977	68,500	(X)	55,200	(X)	1977	68,900	(X)	60,700	(X)
1978	78,500	14.6	64,200	16.3	1978	82,400	19.6	70,100	15.5
1979	87,900	12.0	73,000	13.7	1979	96,100	16.6	82,000	17.0
1980	91,900	4.5	74,400	1.9	1980	107,500	11.9	89,400	9.0
1981	100,500	9.3	82,500	10.9	1981	114,300	6.3	95,800	7.2
1982	103,300	2.9	87,700	6.3	1982	115,600	1.1	92,600	−3.3
1983	103,200	−0.2	97,600	11.3	1983	117,900	2.0	97,200	5.0
1984	109,200	5.9	107,800	10.5	1984	122,100	3.6	109,400	12.6
1985	107,400	−1.6	95,400	−11.5	1985	123,000	0.7	111,800	2.2
1986	113,600	5.7	102,600	7.5	1986	126,100	2.5	116,100	3.8
1987	121,100	6.7	115,500	12.6	1987	132,700	5.3	134,600	15.9
1988	126,500	4.4	123,700	7.1	1988	139,800	5.4	155,700	15.7
1989	129,400	2.3	130,600	5.6	1989	148,700	6.3	173,900	11.7
1990	130,500	1.1	133,000	1.8	1990	155,900	4.8	180,600	3.9
1991	133,900	2.6	134,500	1.1	1991	156,900	0.7	176,400	−2.3
1992	136,400	1.9	136,400	1.4	1992	157,800	0.6	157,800	−10.5
1993	ʳ145,500	ʳ6.7	143,100	4.9	1993	ʳ163,500	ʳ3.6	161,900	2.6
1994	ʳ152,700	ʳ4.9	152,700	6.7	1994	ʳ174,900	ʳ7.0	168,900	4.3
1995	ʳ158,600	ʳ3.9	157,200	2.9	1995	ʳ177,900	1.7	169,800	0.5
1996ʳ	161,800	2.0	158,900	1.1	1996ʳ	184,300	3.6	186,200	9.7

ᵖPreliminary.   ʳRevised.   X Not applicable.

[1]Derived from unrounded figures.

Note: Regional prices from 1993 through 1996 have been revised.

Appendix A.
Description of Price Indexes

The data used for computing the price index are obtained from the Bureau's Housing Sales Survey. The survey collects information on the physical characteristics and the sales prices of new one-family houses sold. This is done through monthly interviews with the builders or owners of a national sample of these houses. The size of the sample is currently about 13,000 observations per year.

PRICE INDEXES FOR NEW ONE-FAMILY HOUSES

Cost-of-living index theory asserts that a price index should measure the change in the cost of what you need to pay to maintain a fixed, or constant, standard of living. Any changes in prices that exceed this price index can be interpreted as an increase in the standard of living. Conversely, if prices rise slower than the price index, the standard of living is falling. For single family houses, the standard of living is measured by the quality of the houses built, and the index measures the change in the price needed to purchase the same quality house. Thus a rise in new house prices that equals the price index indicates that the quality of housing has not changed. A rise in new house prices that exceeds the price index indicates that the quality of the new housing has increased. Conversely new house prices rising slower than the index indicates that the quality of the new housing has decreased.

Until 1997, constant quality for the single family price index was measured by fixing the characteristics of the houses over an extended period of time. The price of the house with the fixed characteristics would be estimated in each time period and the index constructed from these estimated prices. However, cost-of-living theory stresses that the same standard of living can be reached in more than one way. Consumers may substitute between commodities that serve similar general purposes or even dissimilar ones. Substitution implies that different collections of goods and services may still represent equivalent standards of living. For new houses, house buyers may substitute between different features such as a house with 2,000 square feet and two bathrooms for a house with 1800 square feet and three bathrooms or a small house in a close in neighborhood for a large house in an outer suburb. Thus, housing with different characteristics may still represent the same quality. Economic theory suggests that an index that truly tracks the price of the same quality of housing should not hold quantities fixed as the buyers' preferences shift.

A cost-of-living index cannot be calculated directly but can be approximated by a "superlative index number" of which the Fisher Ideal index is one. The superlative indexes accommodate substitution while holding living standards constant. The Fisher Ideal index is the geometric mean of the fixed-weighted Laspeyres and Paasche indexes. The geometric mean is the square root of the product of the two indexes. The Laspeyres index measures the price change of an average new home built during some time period in the past. The Paasche index measures the price change from some period in the past of the average house built during the current time period. The fixed-weighted Laspeyres index had been the sole index published in the C25 before 1997. It will continue to be published.

Economic theory indicates the preferred index formulae for comparisons between two periods but gives less guidance for forming a time series of indexes covering three or more times periods. In the past, the single family price index has used the fixed-weighted Laspeyres index with the weights (average characteristics in a base year) held constant for 5 years. Fixed-weighted indexes following this base year are calculated using these weights. Until the last revision in 1996, the historical indexes also were recalculated using these fixed weights. The advantage of this approach is that it allows a direct comparison of the price changes in the houses built in the base year. The disadvantage of this approach is that it does not provide the best measure of the price change of the houses built in any two intervening years. For this purpose, weights specific to the two periods being compared would be more appropriate. Also, use of fixed-weighted measures for periods other than those close to the base period results in a substitution bias that causes overstatement of quality change for periods after the base year and understatement of quality change for periods before the base year.

The new featured index, *chain-type annual-weighted Fisher Ideal index,* uses a chain index calculation. The Fisher Ideal index for two adjacent years, e.g., 1992 to 1993, 1993 to 1994, etc., is calculated using the weights for these 2 years. These annual indexes (also called *index relatives*) are multiplied together to form the new featured index. The quarterly indexes are trended from the quarterly fixed-weighted Laspeyres index so that the average quarterly index for a year equals the annual chain-type annual-weighted index.

The discussion in this section has been paraphrased from J.E. Triplett, "Economic Theory and BEA's Alternative Quantity and Price Indexes," *Survey of Current Business* (April 1992): 49-52.

|PRICE INDEX COMPUTATION

This section describes the models used to estimate the prices and average characteristics; the computations of Laspeyres, Paasche, and Fisher Ideal indexes; and the computations of the published chain-type annual-weighted and fixed-weighted indexes.

Price models. There are five separate models used to calculate the price indexes. There are four models for detached units, one for each of the census regions (Northeast, Midwest, South and West) and one model for attached houses in the United States. Each of these models is designed to measure the contributions of important physical and geographic characteristics to the prices of new houses sold. The characteristics used in each model are described later in this appendix. All characteristics except for floor area are divided into categories as shown in Tables A-1 and A-2. For example, each house is classified by whether it has less than three bedrooms, three bedrooms, or more than three bedrooms; whether it has no garage, a one or two car garage, or a garage for three or more cars; etc. Each category is treated qualitatively in that a value of "1" indicates that the house has that characteristic and "0" indicates that the house does not have it. One category from each of the qualitative characteristics must be omitted to avoid an over determined system. The price and floor area are treated quantitatively, insofar as the logarithm of the actual values are used directly in the model building. Weighted-regression models are used to estimate each of the price models where the logarithm of the sales price is the dependent variable and the logarithm of the floor area is used as one of the independent variables. The weights are the survey weights used in the Housing Sales Survey. The regression model has the following form:

$$Y_i = b_o + b_1X_{1i} + b_2X_{2i} + ... + b_mX_{mi} + e_i$$

where:

Y_i is the logarithm of the sales price for house i (i=1, 2, ..., n) where n is the number of observations that passed the edit checks;

X_{1i} is the logarithm of the floor area for house i;

X_{2i} through X_{mi} are the values of the qualitative variables (1 or 0);

b_1 through b_m are the regression coefficients corresponding to each of the characteristics and b_0 is the constant in the regression;

e_i is the unexplained variation (error term).

The regression coefficients (b_1 through b_m) are estimated using a resistant regression technique using Tukey's biweight. The coefficients are not implicit dollar values associated with each variable but logarithms of implicit proportionality factors. For the qualitative variable, antilog(b_i) is a multiplicative factor that represents a proportionate increase (b_i is positive) or decrease (b_i is negative)

in the sales price of a house when that characteristic is present. For the floor area variable, b_1 is one when sales price is strictly proportional to floor area for houses that have the same qualitative characteristics, greater than one when sales price increases faster than floor area, and less than one when sales price increases slower.

Since the regression does not include all of the characteristics which explain price variability and because the characteristics are dependent, the estimated regression coefficients should not be regarded as estimates of the true proportionality factors.

Laspeyres index. The Laspeyres index is the ratio of the estimated current period price for houses built in some past or future base time period to the actual price for those houses. Using the estimated regression coefficients, the current period Laspeyres index number for each of the price models is calculated from the following formula for a Laspeyres index:

$$L_{m;t,s} = \frac{antilog\{\sum_i b_i(t) \, Q_i(s)\}}{antilog\{\sum_i b_i(s) \, Q_i(s)\}} \times 100$$

where:

m is an indicator for each of the price models;

t is the current time period;

s is some past or future base time period;

$b_i(t)$ are the regression coefficients for the current time period;

$b_i(s)$ are the regression coefficients for the base time period;

$Q_i(s)$ are the proportions of the qualitative variables and the mean of the logarithm of the floor area in the base time period; and

antilog{.} indicates the antilog of the quantity in the braces. For example, the logarithm (natural) of 4 is 1.38629 and the antilog of 1.38629 is 4.

The Laspeyres index for the United States is a weighted average of the indexes computed from the four regional detached price models and the attached price model. The weight for each index is the proportion of all housing units sold in the base year "s" represented by the price model. The formula for the Laspeyres index for the United States is:

$$L_{t,s} = \frac{\sum\limits_{m=1}^{5} L_{m;t,s} \times W_{m;s}}{\sum\limits_{m=1}^{5} W_{m;s}}$$

where:

$W_{m;s}$ is the proportion of all housing units sold in the base year "s" represented by the price model "m".

In addition to United States indexes, this report also shows annual indexes for each of the four census regions. Each regional Laspeyres index is a weighted average of the detached regional index, used in the annual United States index, and a hybrid attached index. The weights for these two indexes are the proportions in the region of attached housing units sold and of detached housing units sold. The hybrid attached regional index is constructed from the regression coefficients derived for the annual attached model but uses quantities, $Q_i(s)$, for the attached houses which are region specific.

Paasche index. The Paasche index is the ratio of the price for houses built in the current period to the estimated base year price for those houses. Using the estimated regression coefficients, the current period Paasche index number for each of the price models is calculated from the following formula:

$$P_{m;t,s} = \frac{\text{antilog}\{\sum_i b_i(t)\, Q_i(t)\}}{\text{antilog}\{\sum_i b_i(s)\, Q_i(t)\}} \times 100$$

where in addition to the symbols defined for the Laspeyres index:

$Q_i(t)$ are the proportions of the qualitative variables and the mean of the logarithm of the floor area in the current time period.

The Paasche index for the United States is a weighted average of the indexes computed from the four regional detached price models and the attached price model. Instead of a simple weighted average, a harmonic average is used. The weight for each index is the proportion of all housing units sold in the current period "t" represented by the price model. The formula for the Paasche index for the United States is:

$$P_{t,s} = \frac{\displaystyle\sum_{m=1}^{5} W_{m;t}}{\displaystyle\sum_{m=1}^{5} \frac{W_{m;t}}{P_{m;t,s}}}$$

where $W_{m;t}$ is the proportion of all housing units sold in the current period t represented by the price model "m".

For the computation of the regional Fisher Ideal indexes, annual Paasche indexes are needed for each of the four census regions. Each regional Paasche index is a harmonic, weighted average of the detached regional index and a hybrid attached index. The weights for these two indexes are the proportions in the region of attached housing units sold and of detached housing units sold in the current time period. The hybrid attached regional index is constructed from the regression coefficients derived for the annual attached model but uses quantities, $Q_i(t)$, for the attached houses which are region specific.

Fisher Ideal index. A Fisher Ideal index is the geometric mean of a Laspeyres and a Paasche index. The formula for a Fisher Ideal index is:

$$F_{t,s} = \sqrt{L_{t,s} \times P_{t,s}}$$

For the single family price indexes, the Fisher Ideal index is calculated only for annual time periods and for only the United States and the four regional indexes.

Chain-type annual-weighted index. The featured index is formed by chaining together (i.e., multiplying) the Fisher Ideal indexes for each pair of succeeding years. These year over year indexes are called index relatives. The annual index relative is given by $F_{t,t-1}$ where "s" in the above formula is the year before year "t". To form the chain-type annual weighted index from some initial period, multiply the annual index relatives together according to the following formula:

$$I_{t,0} = F_{t,t-1} F_{t-1,t-2} \ldots F_{2,1} F_{1,0}$$

where the number 0 represents the initial year for the index.

The chain-type annual weighted index series for any base period, such as the base year "b" equal to 1992 used in the current revision, is found by dividing the above index series by the corresponding index for the base period.

$$I_{t,b} = I_{t,0} / I_{b,0}$$

The annual-weighted, quarterly index series are derived by distributing annual indexes into quarterly indexes based on the quarter-to-quarter change in the fixed-weighted index (described below). This is done so that the average of the quarterly indexes in a year equals the annual index.

Fixed-weighted index. The fixed-weighted index is a Laspeyres type index. For this current revision, the base year for this index is 1992. The weights for the individual price models are given in Tables A-1 and A-2. The weights used to combine these five indexes to form the United States index and the weights used to form the regional indexes are given in the following two tables.

Weights Used in Calculating the United States Index

[In percent]

Detached houses				Attached houses
Northeast	Midwest	South	West	
4.9	19.3	39.3	28.6	8.0

Weights Used in Calculating the Regional Indexes

[In percent]

Northeast		Midwest		South		West	
De-tached	At-tached	De-tached	At-tached	De-tached	At-tached	De-tached	At-tached
75.4	24.6	91.8	8.2	92.2	7.8	95.6	4.4

Limitations of price indexes. Although price indexes are designed to measure price changes, keeping quality constant, houses may vary from one time period to the next due to workmanship, materials, and mechanical equipment which are not measured. Hence, it should be kept in mind that the price indexes in this report only account for such quality characteristics insofar as they may be correlated with the characteristics actually used. These characteristics account for from 60 to 80 percent of the variation in the logarithm of the sales prices.

Since a price index applies to the total sales price, it covers not only cost of labor, materials, but also land cost, direct and indirect selling expenses, and the seller's profits. An index is thus conceptually broader in coverage than a cost index. Reflecting the sales price, the price index is affected by all factors which influence movement of house prices both supply factors such as wage rates, material costs and productivity, and demand factors such as demographic changes, income, and availability of mortgage money.

A price index is computed from actual transaction prices including value of developed lot, of housing built for sale and actually sold by the merchant or speculative builders. Excluded from an index are houses built for the exclusive use of the land owner who either hires a general contractor to build the house or acts as his own general contractor.

A house is defined as sold when a sales contract is signed or deposit accepted regardless of the stage of construction. The month of sales refers to the contract or deposit date.

COMPARING THE PRICE INDEX WITH AVERAGE SALES PRICE MOVEMENTS

The price indexes measure the price change in new single family homes while controlling the effects of quality change. For the fixed-weighted index, quality is held to be the average kind of house built during the base time period. For the chain-type annual-weighted index, the price change between two succeeding years is measured by holding the quality equal to the average kind of house built in those 2 years. Unlike these indexes, the average sales price of new houses sold may change from one period to the next not only because of price changes which are independent of quality but also because of shifts in quality; that is, the proportions of new houses with the different characteristics. For example, the United States chain-type annual-weighted index increases 4.5 percent and the fixed-weighted

index increases 4.3 percent from 1992 to 1993 whereas the average price of new houses sold increases 2.5 percent. This difference is due to an overall shift towards the construction of smaller houses, houses with fewer amenities, or houses located in different geographic areas, that is, the houses that were actually built were lower quality or shifted to less expensive geographic areas.

The comparison may be clearer if one were to think of the fixed-weighted index in terms of the prices shown in the first column of Table 13. The fixed-weighted index indicates that new houses sold in 1992, which has an average sales price of $144,100, would sell for $150,300 in 1993. However, the actual average price of new houses sold in 1993 is $147,700. The difference of $2,600, as stated above, may be attributed to the shift towards smaller houses, houses with fewer amenities, or less expensive geographic areas.

LIMITATIONS OF THE DATA

Sampling error

Sampling error reflects the fact that only a particular sample was surveyed rather than the entire population. A price index in a given period is calculated from a particular sample of houses sold. If a separate index number were calculated from each of all possible samples of identical size that could have been selected, using the particular procedure for calculating the index that is used for single-family houses, each of these numbers would differ from one another. The standard error, or sampling error, of a survey estimate is a measure of the variation among the estimates from all possible samples and, thus, is a measure of the precision with which an estimate from a particular sample approximates the average from all possible samples. The relative standard error equals the standard error divided by the estimated value to which it refers.

The relative standard error of the annual index for the United States is 0.5 percent. The relative standard errors for the quarterly index as well as for the Midwest, South, and West regions annual indexes are about 1.0 percent. The Northeast annual index has a relative standard error of about 2.0 percent.

The sample estimate and an estimate of its relative standard error allow us to construct interval estimates with prescribed confidence that the interval includes the average result of all possible samples with the same size and design. A 90-percent confidence interval is defined to be from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate. If all possible samples were selected and surveyed under essentially the same conditions and all the respective 90-percent confidence intervals were generated, then approximately one-tenth would not include this average estimate. For example, Table 12 of this report shows the 1993 annual price index to be 104.5. Multiplying 104.5 by the relative standard error of 0.5

percent, we obtain 0.5 as the standard error. To obtain a 90-percent confidence interval, multiply 0.5 by 1.6, yielding limits of 103.7 and 105.3 (104.5 plus or minus 0.8). The average estimate of this annual price index may or may not be contained in this computed interval; but in 9 out of 10 samples, the interval calculated in this manner will contain the average estimate from all possible samples.

Nonsampling error

As calculated for this report, the estimated relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors for the Housing Sales Survey can be attributed to many sources: inability to obtain information about all cases in the sample, definitional difficulties, differences in interpretation of questions, inability or unwillingness of respondents to provide correct information, and errors made in processing the data. Nonsampling errors for the price index can result from excluding important characteristics like the quality of building materials from the regression, high correlation among regression characteristics, and use of an improper regression model. These nonsampling errors also occur in complete censuses. It is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency. The regression model was chosen to minimize the amount of nonsampling error associated with the price index.

Editing

The reported data for each house in the sample are edited before being used in index computation. First, if the sales price or any characteristic is not reported, that sample case is rejected. Second, a resistant regression procedure is used which incorporates Tukey's biweight. Resistant regression significantly reduces the influence on the model of houses with unusual characteristics, price, or location by reducing the survey weight of each such case. In this way a case with an extreme value resulting from incorrect reporting or processing has small impact upon an index. This allows consistent editing over time without the need to update edit parameters.

Table A-1. **Price Index (Laspeyres) of New One-Family Houses Sold: 1992 Base Weights for Detached Houses**

Characteristic	Northeast	Midwest	South	West
SIZE OF HOUSE (FLOOR AREA)[1]				
Average logarithm of square feet............................	7.60	7.53	7.60	7.55
Average square feet...	2,172	1,974	2,083	1,950
GEOGRAPHIC LOCATION				
New England	41.5	(X)	(X)	(X)
Middle Atlantic	58.5	(X)	(X)	(X)
South Atlantic (except Florida)	(X)	(X)	43.2	(X)
Florida..	(X)	(X)	18.5	(X)
East South Central	(X)	(X)	12.1	(X)
West South Central.......................................	(X)	(X)	26.2	(X)
Mountain (except Arizona and Nevada)	(X)	(X)	(X)	22.1
Southwest (Arizona and Nevada)	(X)	(X)	(X)	20.4
Pacific (except California and Hawaii	(X)	(X)	(X)	15.7
California and Hawaii.....................................	(X)	(X)	(X)	41.8
METROPOLITAN AREA LOCATION				
Inside MSA..	(X)	90.3	(X)	(X)
Outside MSA	(X)	9.7	(X)	(X)
NUMBER OF BEDROOMS				
Less than three bedrooms	12.2	8.1	4.0	6.9
Three bedrooms	46.5	56.8	60.6	57.3
Four or more bedrooms...................................	41.3	35.1	35.4	35.8
NUMBER OF BATHROOMS				
Less than two bathrooms	(X)	(X)	4.6	(X)
Two or two and one-half bathrooms	(X)	(X)	82.3	(X)
Less than three bathrooms................................	91.0	90.4	(X)	83.4
Three or more bathrooms	9.0	9.6	13.1	16.6
NUMBER OF FIREPLACES				
No fireplace	36.1	28.4	28.4	21.5
One fireplace	57.7	67.0	68.5	71.6
Two or more fireplaces....................................	6.2	4.6	3.1	6.9
TYPE OF PARKING FACILITY				
No garage...	11.7	1.9	15.3	1.0
One or two-car garage....................................	82.6	79.8	81.2	76.8
Three or more car garage.................................	5.7	18.3	3.5	22.2
TYPE OF FOUNDATION				
No basement	23.8	27.3	86.7	84.1
Unfinished basement	76.2	72.7	13.3	15.9
PRESENCE OF A DECK				
Deck	56.6	40.3	30.5	19.9
No deck...	43.5	59.7	69.5	80.1
CONSTRUCTION METHOD				
Stick-Built	(X)	94.4	(X)	(X)
Modular, precut, or panelized	(X)	5.6	(X)	(X)
PRIMARY EXTERIOR WALL MATERIAL				
Vinyl..	55.1	(X)	(X)	(X)
Everything (except vinyl)	44.9	(X)	(X)	(X)
Vinyl..	(X)	37.0	(X)	(X)
Wood..	(X)	37.3	(X)	(X)
Everything (except vinyl and wood).........................	(X)	25.7	(X)	(X)
Brick in West South Central and South Atlantic, including Florida...	(X)	(X)	32.1	(X)
Stucco houses...	(X)	(X)	15.2	(X)

See footnotes at end of table.

Table A-1. **Price Index (Laspeyres) of New One-Family Houses Sold: 1992 Base Weights for Detached Houses**—Con.

Characteristic	Northeast	Midwest	South	West
Vinyl, aluminum, and other in South Atlantic, excluding Florida .	(X)	(X)	15.6	(X)
Wood, brick in East South Central, and vinyl, aluminum, and other in West South Central, East South Central, and Florida .	(X)	(X)	37.1	(X)
Wood..	(X)	(X)	(X)	34.5
Everything (except wood)	(X)	(X)	(X)	65.5
HEATING SYSTEM AND CENTRAL AIR-CONDITIONING				
Gas steam heat with central air-conditioning.................	6.	(X)	(X)	(X)
Gas steam heat without central air-conditioning..............	7.7	(X)	(X)	(X)
Heating system other than gas steam heat, with central air-conditioning	41.9	(X)	(X)	(X)
Heating system other than gas steam heat, without central air-conditioning	43.8	(X)	(X)	(X)
Central air-conditioning in California and Hawaii	(X)	(X)	(X)	35.3
Central air-conditioning in Mountain, Southwest, and West without California and Hawaii.............................	(X)	(X)	(X)	24.3
No central air-conditioning.................................	(X)	(X)	(X)	40.4

X Not applicable.

[1]The base weight is the average logarithm of the square feet. The average number of square feet is a weighted average. All other base weights are given as percentages.

Table A-2. **Price Index (Laspeyres) of New One-Family Houses Sold: 1992 Base Weights for Attached Houses**

Characteristic	United States	Characteristic	United States
SIZE OF HOUSE (FLOOR AREA)[1]		**TYPE OF FOUNDATION**	
Average logarithm of square feet....................	7.40	No basement or finished basement.................	75.4
Average square feet................................	1,658	Unfinished basement	24.6
GEOGRAPHIC LOCATION		**TYPE OF OWNERSHIP**	
Northeast	20.1	Condominium in the Northeast and West, including California and Hawaii.............................	23.2
Midwest...	21.5		
South...	41.8	Condominium in the Midwest and South and not a condominium	76.8
West (except California and Hawaii).................	10.5		
California and Hawaii	6.1		
METROPOLITAN AREA LOCATION		**PRESENCE OF A DECK**	
Inside MSA..	88.7	Deck in the Northeast.............................	12.4
Outside MSA	11.3	Deck in the Midwest..............................	12.8
		Deck in the South	10.7
		Deck in the West and all houses without a deck	64.1
NUMBER OF BEDROOMS			
Less than three bedrooms..........................	48.6		
Three or more bedrooms...........................	51.4	**EXTERIOR WALL MATERIALS**	
NUMBER OF BATHROOMS		Wood in the South	6.6
Less than two bathrooms	19.8	Wood in the Northeast and West, including California and Hawaii	13.3
Two or more bathrooms............................	80.2	Vinyl...	30.4
NUMBER OF FIREPLACES		Stucco...	12.8
No fireplace	42.0	Wood in the Midwest and all brick, aluminum, and other	36.9
One or more fireplaces	58.0		
TYPE OF PARKING FACILITY		**CENTRAL AIR-CONDITIONING**	
No garage...	28.3	No central air-conditioning.........................	11.8
One or more car garage	71.7	Central air-conditioning	88.2

[1]The base weight is the average logarithm of the square feet. The average number of square feet is a weighted average. All other base weights are given as percentages.

GEOGRAPHIC REGIONS

A list of the States in the four regions used in the tables of this report are–

Northeast	South	Midwest	West
Maine	Delaware	Ohio	Montana
New Hampshire	Maryland	Indiana	Idaho
Vermont	District of Columbia	Illinois	Wyoming
Massachusetts	Virginia	Michigan	Colorado
Rhode Island	West Virginia	Wisconsin	New Mexico
Connecticut	North Carolina	Minnesota	Arizona
New York	South Carolina		Utah
New Jersey	Georgia	Iowa	Oregon
Pennsylvania	Kentucky	Missouri	Nevada
	Florida	North Dakota	Washington
	Tennessee	South Dakota	California
	Alabama	Nebraska	Alaska
	Mississippi	Kansas	Hawaii
	Arkansas		
	Louisiana		
	Oklahoma		
	Texas		

A NOTE ABOUT CALCULATING INDEX CHANGES

Movement of a price index from one period to another is expressed as a percentage change rather than as a change in index points because index point changes are affected by the level of the index in relation to its base period while percent changes are not. The example in the accompanying box illustrates the computation of index point and percent changes.

Index Point Change		**Percent Change**	
		Index point difference,	5.2
		Divided by the previous index,	105.4
Price index	110.6	Equals	0.049
Less previous price index	105.4	Results multiplied by one hundred	0.049 x 100
Equals index point change:	5.2	Equals percent change:	4.9