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Abstract

In the fourth quarter the U.S. housing markets improved incrementally from quarter three. Total permits, single-family starts, new house sales, and single-family spending all improved modestly quarter-over-quarter. The majority of sectors increased on a year-over-year basis as well; only multifamily starts decreased, albeit minimally. Viewed from a recent historical context, all housing construction subsectors exceeded the record lows recorded in the 2008 to 2011 time period.

Keywords: Housing permits, starts, under construction, completions, construction spending, quarterly and annual construction averages, nominal and inflation adjusted construction spending, gross domestic product

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United States Housing, Fourth Quarter 2014

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Overview

In beginning of the fourth quarter of 2014, the U.S. housing construction market indicated marginal increases in all sectors; with the exception of home improvement spending. Traditionally, moderation and declines are anticipated in the fourth quarter because of the forthcoming winter season. Even with moderating data, construction and sales sectors exceeded the record lows recorded in the 2008 to 2011 time period. A robust housing industry remains the hope; however, headwinds include a tepid economy, declining real median incomes, strict lending standards, and in some areas, building lot availability. Positives for a return to improved housing markets include improving household formation numbers, “under building” of new housing units in the past three years, an aging housing stock, and multi-family housing construction.

Housing—new construction and remodeling—is an essential market for wood products. Wood framing was used in 94.2% of completed new single-family homes in 2013. This is less than the 95.2% used in 2010 and 95.0% in 2009 (Census Bureau 2015c). Wood products consumption for the improvement sector (or remodeling) used 25% of all sawnwood, 26% of structural panels, and 16% of nonstructural panels in 2013 (Fig. 1). New single-family attached and detached construction houses consumed 21% of all sawnwood, 30% of structural panels, and 16% of nonstructural panels in 2013. New multifamily apartment construction consumed 4% of all sawnwood, 4% of structural panels, and 5% of nonstructural panels in 2013. Manufactured housing consumed an estimated 1% of all sawnwood, 2% of structural panels, and 1% of nonstructural panels in 2013. In total, new housing construction consumed 26% of all sawnwood, 36% of structural panels, and 18% of nonstructural panels in 2013 (Fig. 2) (Howard and McKeever 2014).

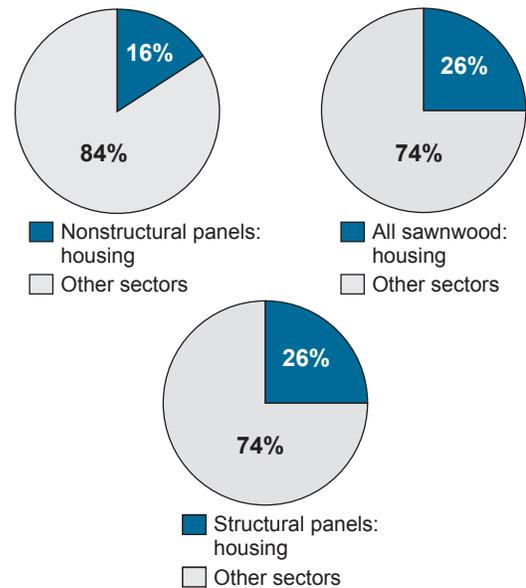


Figure 1. Repair and remodeling's percentage of wood products consumption. Data source: Howard and McKeever (2014).

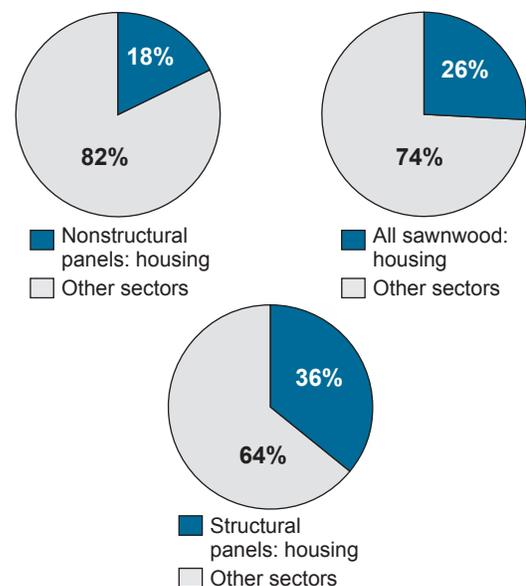


Figure 2. New construction's percentage of wood products consumption. Data source: Howard and McKeever (2014).

Housing Permits

Housing permits (see glossary for definitions of terms) are a leading indicator for gauging the current status of and the future housing construction market. Throughout the fourth quarter, seasonally adjusted annual rate (SAAR) issued permits were within a tight range; however, October recorded the greatest number of issued permits for 2014 (Table 1, Fig. 3). In addition to assessing monthly data, analysts also contrast quarterly data to assess the housing market. Issued permits increased moderately quarter-over-quarter (Q/Q) and year-over-year (Y/Y) (Table 2).

For additional comparison, permits issued in the fourth quarter were 75.5% of the 1960–2008 average and 79.7% of the 1959–2014 average (first quarter basis) (Table 11). The average annual number of permits issued in the quarter was 76.4% of the 1959–2008 average (annual rate, AR) and 79.9% of the 1959–2014 average (AR) (Table 12).

Historical quarterly and annual averages for the construction sectors reviewed in this note are presented in Tables 11 and 12. According to the U.S. Bureau of Census, a “seasonal adjustment” estimates and subtracts seasonal effects from a particular time series to reveal discrete nonseasonal features, such as underlying trends and business cycles.

Housing Starts

Housing starts also are a leading indicator of the housing construction market, because starts are generally regarded as integral in the production of economic activity. In the fourth quarter, total starts data were mixed, but December recorded the greatest number of total starts in 2014 (Table 1, Fig. 3). A quarterly contrast resulted in modest Y/Y and Q/Q increases (Table 2).

For further comparison, the average number of starts issued in the fourth quarter of 2014 was 31.1% less than in 1960–2008 and 27.7% less than the 1960–2013 averages (based on quarter three means) (Table 11). Contrasting quarter three’s annual averages, starts were 31.2% less than in 1959–2008 and 27.6% less than the 1959–2014 averages (AR) (Table 12).

Housing under Construction

Housing under construction is generally considered as a lagging indicator for assessing the housing market. For example, if starts are greater than current demand, a builder may decide to halt construction or slow fabrication time. In turn, these data also can be used to assess current construction employment and building material demand. As in quarter three, housing under construction increased steadily throughout the fourth quarter (Table 1, Fig. 3). This yielded a sizable Y/Y increase and a moderate Q/Q increase (Table 2).

Table 1. Housing permits, starts, under construction, and completions, by year and by month (2014)^{a,b}

	Permits	Starts	Under construction	Completions
2000	1,592.3	1,569	933.8	1,573.7
2001	1,636.7	1,603	959.4	1,570.8
2002	1,747.7	1,705	1,001.2	1,648.4
2003	1,889.2	1,848	1,141.4	1,678.7
2004	2,070.1	1,956	1,237.1	1,841.9
2005	2,155.3	2,068	1,355.9	1,931.4
2006	1,838.9	1,801	1,204.9	1,979.4
2007	1,398.4	1,355	1,025.0	1,502.8
2008	905.4	906	780.9	1,119.7
2009	583.0	554	495.4	794.4
2010	605.0	587	411.0	651.7
2011	610.7	609	417.7	585.2
2012	829.7	781	532.5	649.2
2013	990.8	925	688.7	764.4
		2014 ^c		
Jan	1,002	888	713	847
Feb	1,030	951	716	872
Mar	1,061	963	725	911
Apr	1,074	1,039	743	826
May	1,017	986	754	903
Jun	1,033	927	768	797
Jul	1,041	1,095	790	861
Aug	1,040	966	793	905
Sep	1,053	1,026	796	948
Oct	1,120	1,079	806	917
Nov	1,079	1,007	816	867
Dec	1,077	1,080	828	939

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data source: Census Bureau (2015a).

For further comparison, the fourth quarter’s housing under construction was 81.0% of the 1970–2008 quarter four average and 85.7% of the 1970–2014 quarter 4 average (Table 11). The average annual number of houses under construction in the fourth quarter was 83.7% of the 1969–2008 average and 86.4% of the 1969–2014 average (AR) (Table 12).

Housing Completions

Housing completions indicate the quantity of homes finished and available for sale or rent. Analysts may develop estimates for consumer-based products such as furniture and home appliances using these data. Generally, completions lag starts by about 5 to 6 months. Housing completions were mixed in the quarter, with November recording the greatest number (SAAR) of completions for the year (Table 1,

Fig. 3). Completions, on a Y/Y basis improved amply, whereas slight Q/Q increase was reported (Table 2).

For additional comparison, houses completed were 59.7% of the 1968–2008 average and 63.5% of the 1968–2014 quarter 4 average (Table 11). In the fourth quarter, the average number of completed houses was 59.2% of the 1958–2008 average and 63.0% of the 1968–2014 average (AR basis) (Table 12).

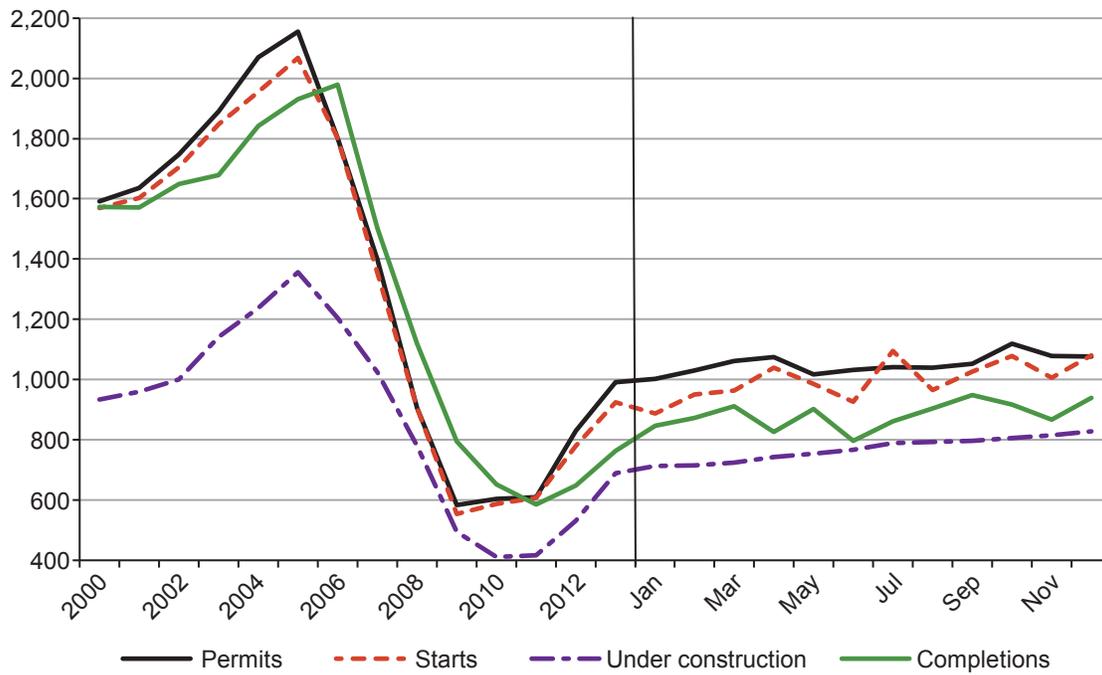


Figure 3. Total housing permits, starts, under construction, and completions, 2000–2014, in thousands. Seasonally adjusted annual rates for Quarter 4 (Q4) (2014) data. Data source: Census Bureau (2015a).

Table 2. Total quarterly and yearly comparisons, quarter four 2014 and 2013^{a,b,c}

	2014 3-month running average	Change quarter-over-quarter (%)	2013 3-month running average	Change year-over-year (%)
Permits	1,092.0	4.5	1,028.7	4.8
Starts	1,055.3	2.6	1,011.7	4.3
Under construction	816.7	3.0	689.7	18.4
Completions	907.7	0.3	804.0	12.9

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data source: Census Bureau (2015a).

Single-Family Housing

Single-family (SF) housing construction generally consumes more softwood, hardwood, and wood composite products than in any other type of building construction (Wood Products Council 2006). Historically, SF construction has contributed about 2.25% to the U.S. gross domestic product (GDP); however, since 2009, the SF portion has averaged about 1%. Thus, SF housing starts are a valuable data subset for assessing the current status of the housing market. Also, SF completions normally lag starts by 6 months to a year. SF data are used by the forest products industry, and many other industries, to gauge future housing activity.

SF permits increased steadily in quarter four; starts were mixed. SF houses under construction also increased progressively, and SF completions were mixed in the fourth quarter (Table 3, Fig. 4). Quarter four contrasts resulted in SF permits increasing slightly from the third quarter, with a moderate Y/Y increase. Starts and housing under construction yielded moderate Q/Q and Y/Y increases. Completions yielded slight Q/Q and moderate Y/Y increases (Table 4).

For fourth quarter 2014 comparisons, SF permits were 70.3% (1960–2008) and 74.3% (1960–2014); SF starts, 64.3% (1959–2008) and 67.4% (1959–2014); SF houses under construction, 59.8 % (1970–2008) and 63.7% (1970–2014); and SF completions, 57.3% (1968–2008) and 60.8% (1968–2014) of historical quarter four averages (Table 11).

For additional long-term contrasts, 2014 fourth quarter averages compared to annual averages in SF permits issued were 71.0% of the 1960–2008 average and 74.2% of the 1960–2014 average; SF starts, 64.1% (1959–2008) and 67.4% (1959–2014); SF houses under construction, 63.3% (1970–2008) and 65.7% (1970–2014); and SF completions, 57.0% (1968–2008) and 60.6% (1968–2014) (all AR) (Table 12).

Table 3. Single-family (SF) housing permits, starts, under construction, and completions, by year (annual rate) and by month (seasonally adjusted annual rate) (2014)^{a,b}

	SF permits	SF starts	SF under construction	SF completions
2000	1,198.1	1,231	623.4	1,241.8
2001	1,235.6	1,273	638.3	1,255.9
2002	1,332.6	1,359	668.8	1,325.1
2003	1,460.9	1,499	772.9	1,386.3
2004	1,613.4	1,611	850.3	1,531.5
2005	1,682.0	1,716	929.1	1,635.9
2006	1,378.2	1,465	764.7	1,654.5
2007	979.9	1,046	579.1	1,218.4
2008	575.6	622	377.3	818.8
2009	441.1	445	283.1	520.1
2010	447.0	471	247.3	496.3
2011	413.6	431	221.6	446.3
2012	518.7	535	267.7	483.0
2013	620.8	618	319.4	569.1
		2014 ^c		
Jan	621	577	334	609
Feb	613	604	334	625
Mar	622	649	336	636
Apr	622	639	339	597
May	626	637	342	627
Jun	648	597	343	585
Jul	640	657	344	630
Aug	643	643	349	613
Sep	653	661	350	627
Oct	652	705	357	611
Nov	663	670	360	609
Dec	685	724	363	665

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data source: Census Bureau (2015a).

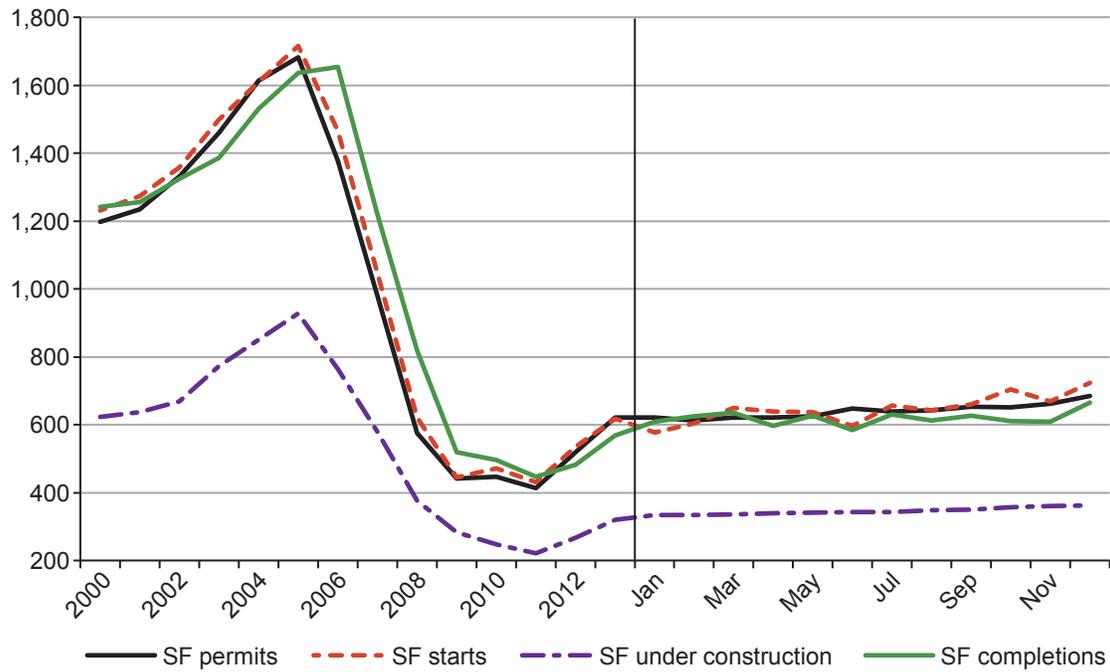


Figure 4. Total single-family housing permits, starts, under construction, and completions, 2000–2014, in thousands. Seasonally adjusted annual rates for Q4 2014 data. Data source: Census Bureau (2015a).

Table 4. Single-family (SF) quarterly and yearly comparisons, quarter four of 2014 and 2013^{a,b,c}

	2014 3-month running average	Change quarter-over-quarter (%)	2013 3-month running average	Change year-over-year (%)
SF permits	666.7	3.3	627.0	6.2
SF starts	699.7	7.0	652.7	7.2
SF under construction	360.0	3.5	319.7	12.6
SF completions	628.3	0.8	587.0	7.0

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data source: Census Bureau (2015a).

Multifamily Housing

In the fourth quarter of 2014, multifamily (MF) housing continued to be a sizeable component of the overall housing market, though overall numbers of units built in this quarter were considerably less than the early and mid-1970s construction levels. In the 1970s, MF construction was the greatest recorded in U.S. history. In historical and typical MF fashion, October through December MF housing permits, starts, and completions were varied on a SAAR basis (Table 5; Fig. 5).

The fourth quarter contrasts resulted in MF permits increasing moderately from the third quarter, with a small Y/Y increase. Starts yielded a Q/Q decrease and a slight Y/Y increase. MF housing under construction yielded a small Q/Q improvement and a substantial Y/Y increase. Similar to starts, MF completions decreased slightly Q/Q and with a substantial Y/Y increase (Table 6).

For fourth quarter 2014 comparisons, MF permits were 85.2% (1959–2008) and 90.2% (1959–2014) of historical quarter four averages; MF starts, 80.5% (1959–2008) and 84.5% (1959–2014); MF houses under construction were 12.5% greater than the 1970–2008 average and 17.9% greater than the 1970–2014 average; and MF completions, 66.0% (1969–2008) and 70.4% (1968–2014) of the long-term quarter four averages (Table 11).

For additional long-term comparisons, 2014 fourth quarter averages contrasted to annual averages resulted in MF permits issued were 86.7% of the 1960–2008 average and 91.1% of the 1960–2014 average; MF starts, 79.4% (1959–2008) and 84.2% (1968–2014); MF houses under construction, 12.3% greater than in 1970–2008 and 15.0% greater than in 1970–2014 time-periods; and MF completions, 64.9% (1968–2008) and 69.2% (1968–2014) (all AR basis) (Table 12).

Table 5. Multifamily (MF) housing permits, starts, under construction, and completions, by year (annual rate) and by month (seasonally adjusted annual rate) (2014)^{a,b}

	MF permits	MF starts	MF under construction	MF completions
2000	394.2	338	310.4	334
2001	401.1	329	321.0	332
2002	415.1	346	332.3	315
2003	428.3	349	368.6	323
2004	456.6	345	386.8	292
2005	473.3	353	426.8	310
2006	460.7	336	440.2	296
2007	418.5	309	445.9	325
2008	329.8	284	403.7	284
2009	141.8	109	212.3	301
2010	157.0	116	163.8	274
2011	197.1	178	196.2	155
2012	267.7	245	264.9	166
2013	370.0	307	369.3	195
			2014 ^c	
Jan	381	311	379	238
Feb	417	347	382	247
Mar	439	314	389	275
Apr	452	400	404	229
May	391	349	412	276
Jun	385	330	425	212
Jul	401	422	446	231
Aug	397	306	444	292
Sep	400	365	446	321
Oct	468	357	449	306
Nov	416	328	456	258
Dec	392	336	465	274

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data source: Census Bureau (2015a).

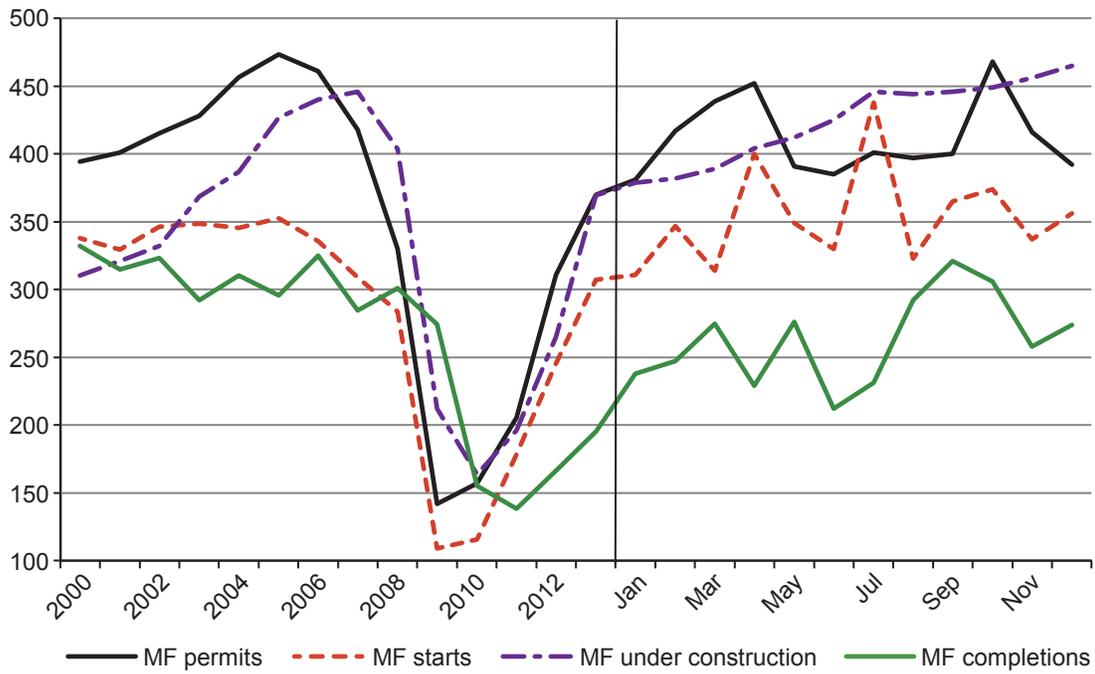


Figure 5. Multifamily housing permits, starts, under construction, and completions, 2000–2014, in thousands. Seasonally adjusted annual rate for Q4 2014. Data source: Census Bureau (2015a).

Table 6. Multifamily (MF) quarterly and yearly comparisons, quarter four of 2014 and 2013^{a,b,c}

	2014 3-month running average	Change quarter-over-quarter (%)	2013 3-month running average	Change year-over-year (%)
MF permits	425.3	6.5	401.0	6.1
MF starts	355.7	-5.2	359.0	-0.9
MF under construction	456.7	2.5	360.3	26.7
MF completions	279.3	-0.7	217.0	28.7

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data source: Census Bureau (2015a).

House Sales

New and existing house sales, in addition to other housing indicators, are important for the entirety of the forest products industry and U.S. economy, and they provide an indirect metric for assessing the overall U.S. economy.

Historically, new house sales are about 10% of total house sales. Typically, new housing is an essential market for the forest products industry, because new houses utilize substantially more softwoods and wood composites in the framing structure and subfloor and hardwoods in flooring, cabinets, and mouldings than the residential renovation and multifamily subsectors.

New house sales were mixed in the fourth quarter, and on a historical basis, new house sales and December sales were the greatest reported for 2014 (Table 7, Fig. 6). The quarterly and annual comparisons resulted in a robust Q/Q and Y/Y increase (Table 8).

For further comparison, fourth quarter new house sales were 67.6% of the 1963–2007 average and 70.9% of the 1963–2013 average (quarterly basis) (Table 11). Annual comparisons indicated that new sales were 67.6% of the 1963–2007 average and 71.8% of the 1963–2014 average (AR basis) (Table 12).

Existing house sales also provide insight for the home improvement industry and, by extension, for the forest products industry. On average, existing sales are about 90% of aggregate sales but tend to have less economic impact from a wood products utilization perspective. Existing house sales also may be used to predict future remodeling demand and sales of associated items (such as furniture). From October to December, existing house sales were mixed and ended the year in with a somewhat positive note (Table 7, Fig. 6). On a Q/Q basis, existing sales improved very minimally, and on a Y/Y basis existing sales increased slightly (Table 8).

For additional comparison, fourth quarter existing house sales were 86.7% of the 1999–2007 average and 95.3% of the 1999–2013 average (quarterly basis) (Table 11). Fourth quarter annual comparisons indicated that existing sales were 86.1% of the 1999–2007 average and 95.5% of the 1999–2013 average (Table 12).

Table 7. New and existing house sales, by year (annual rate) and by month (seasonally adjusted annual rate) (2014)^{a,b}

	New house sales	Existing house sales
2000	877	5,173
2001	908	5,333
2002	973	5,631
2003	1,086	6,176
2004	1,203	6,778
2005	1,283	7,076
2006	1,051	6,478
2007	776	5,040
2008	485	4,110
2009	375	4,340
2010	323	4,190
2011	306	4,260
2012	368	4,660
2013	429	5,090
	2014 ^c	
Jan	442	4,670
Feb	417	4,660
Mar	410	4,700
Apr	410	4,750
May	457	4,900
Jun	408	5,010
Jul	403	5,070
Aug	454	5,000
Sep	459	5,100
Oct	472	5,160
Nov	449	4,950
Dec	495	5,070

^aIn thousands, annual and monthly data

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data sources: Census Bureau (2015b), National Association of Realtors (2015).

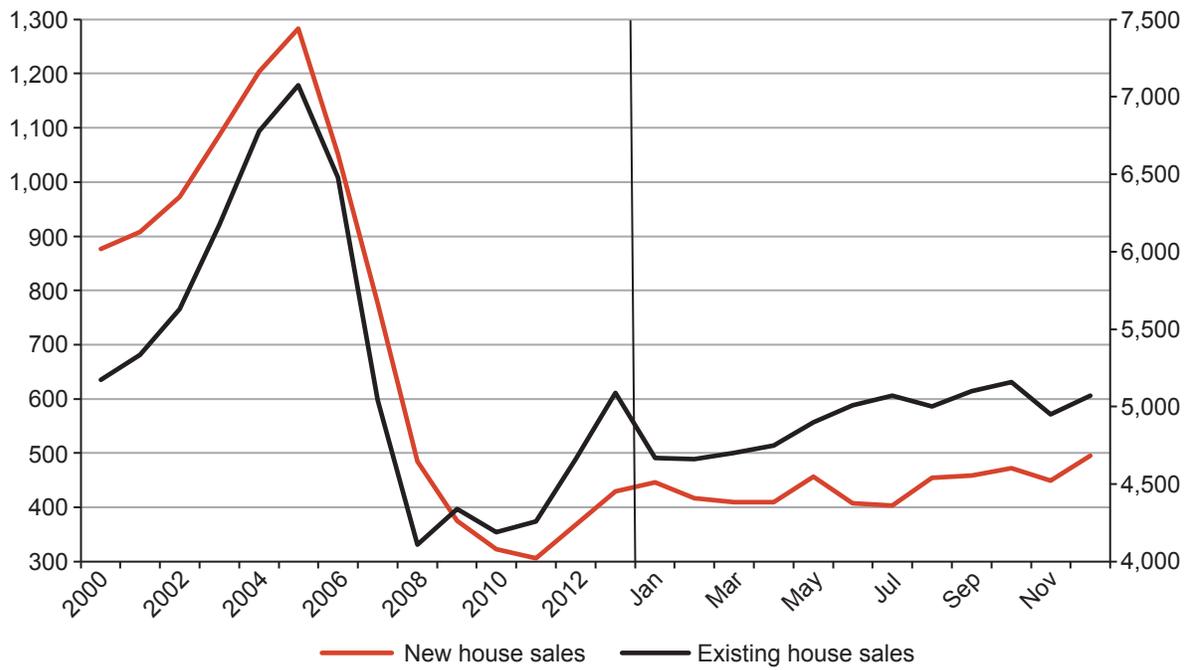


Figure 6. New and existing house sales, 2000–2014, in thousands. Seasonally adjusted annual rate for Q4 2014. Existing house sales (right-hand scale) and new house sales (left-hand scale). Data sources: Census Bureau (2015b), National Association of Realtors (2015).

Table 8. New and existing house sales, quarterly and yearly comparisons, quarter four of 2014 and 2013^{a,b,c}

	2014 3-month running average	Change quarter-over-quarter (%)	2013 3-month running average	Change year-over-year (%)
New sales	472.0	7.6	445.7	6.4
Existing sales	5,060.0	0.1	4,943.3	2.4

^aIn thousands, annual and monthly data.

^bData are for conventional housing and do not include mobile home shipments.

^cSeasonally adjusted annual rate.

Data sources: Census Bureau (2015a), National Association of Realtors (2015).

Residential Construction Spending

Private residential construction (PRC) spending is an important statistic for the overall condition of the housing market and is used in computing the U.S. GDP. In the fourth quarter of 2014, PRC spending was consistent in the quarter, but less than its first quarter level. SF and MF expenditures increased throughout the quarter and recorded yearly highs. Improvement or remodeling expenditures decreased through the quarter and declined substantially from the first quarter (Table 9, Fig. 7). PRC expenditures indicated a minimal Q/Q increase and a slight Y/Y decrease. SF and MF spending resulted in a moderate Q/Q increase and a slight and a large Y/Y increase. Improvement expenditures indicated a sharp Q/Q decrease and a substantial Y/Y decrease (Table 10).

For fourth quarter 2014 comparisons, PRC spending was 92.8% of the 1993–2007 average, 25.3% greater than the 2008–2013 average, and 88.6% of the 1993–2013 average. SF spending was 83.1% of the 1993–2007 average, 51.6% greater than the 2008–2013 average, and 85.3% of the 1993–2013 average. MF spending was 53.4% greater than the 1993–2008 average, 84.9% greater than the 2009–2013 average, and 41.5% greater than the 1993–2013 average. Improvement spending was 0.7% greater than the 1993–2007 average, 81.1% of the 2008–2013 average, and 81.4% greater than the 1993–2013 average (all on a quarter one and nominal basis) (Table 11). Note that the U.S. Census Bureau does not report improvement spending directly and these expenditures were interpolated.

Contrasting 2014 fourth quarter annual expenditure averages, PRC spending was 91.7% of the 1993–2007 average and 98.9% of the 1993–2013 average. SF spending was 80.9% of the 1993–2007 average and 93.2% of the 1993–2013 average. MF spending was 53.4% greater than the 1993–2008 average and 58.5% greater than the 1993–2013 average. Improvement spending was 2.7% greater than the 1993–2007 average and 95.2% of the 1993–2013 average (all AR basis) (Table 12).

Comparing inflation-adjusted quarterly averages, PRC spending was 67.4% of the 1993–2007 average, 97.9% greater than the 2008–2013 average, and 74.3% of the 1993–2013 average. SF spending was 60.1% of the 1993–2007 average, 7.9% greater than the 1993–2008 average, and 69.2% of the 1993–2013 average. Improvement spending was 73.5% of the 1993–2007 average, 71.6% of the 2008–2013 average, and 73.0% of the 1993–2013 average (all on a quarter four basis) (Table 11).

Comparing inflation-adjusted annual averages, PRC spending was 65.9% of the 1993–2007 average and 74.3% of the 1993–2013 average. SF spending was 58.1% of the 1993–2007 average and 69.2% of the 1993–2013 average. MF spending was 14.1% greater than the 1993–2008 average and 21.1% greater than the 1993–2013 average. Improvement spending was 73.7% of the 1993–2007 average and 73.0% of the 1993–2013 average (AR basis) (Table 12).

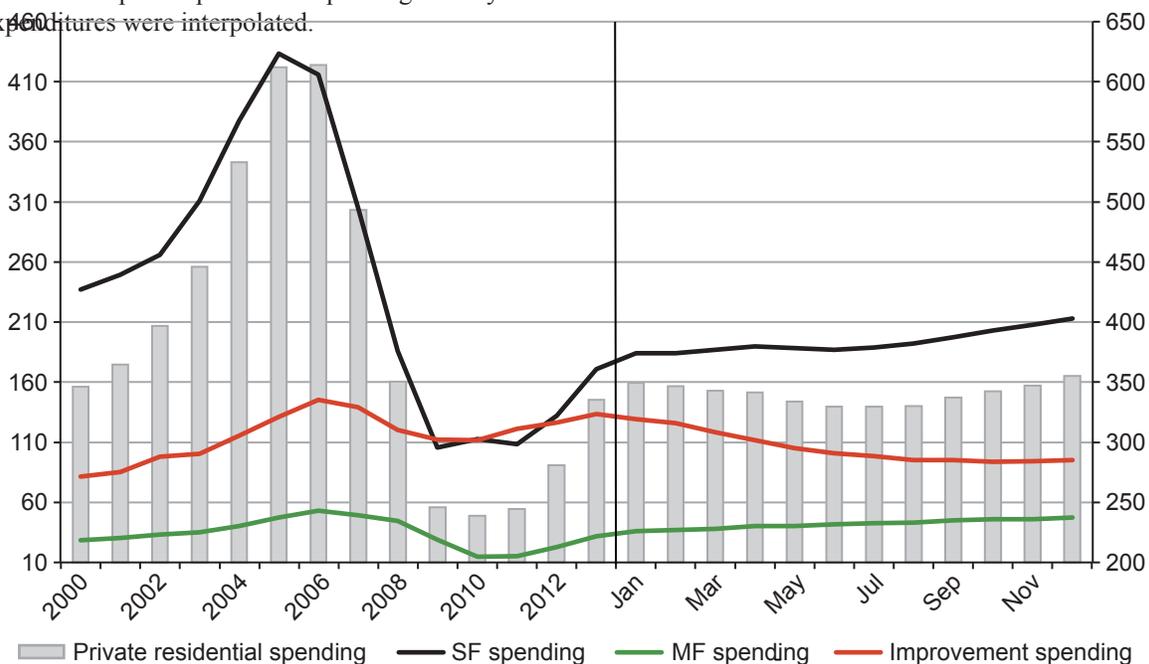


Figure 7. Construction spending, in millions of dollars, for total private residential, single-family, multifamily, and improvement spending, 2000–2014. Seasonally adjusted annual rate (nominal) for Q4 2014. Private residential spending (right-hand scale) and SF, MF, and IM (left-hand scale). Data sources: Census Bureau (2015c,d).

Table 9. Construction spending for total private residential spending, single-family (SF), multifamily (MF), and improvements by year (annual rate) and by month (seasonally adjusted annual rate) (2014)^{a,b}

	Private residential spending ^c		SF spending		MF spending		Improvement spending	
	Reported ^d	Adjusted ^e	Reported	Adjusted	Reported	Adjusted	Reported	Adjusted
2000	346.1	521.4	236.8	356.7	28.3	42.6	81.1	122.2
2001	364.4	524.1	249.1	358.2	30.3	43.6	85.0	122.3
2002	396.7	556.7	265.9	373.1	33.0	46.2	97.9	137.3
2003	446.0	597.6	310.6	416.1	35.1	47.1	100.3	134.5
2004	532.9	667.3	377.6	472.8	39.9	50.0	115.4	144.5
2005	611.9	715.0	433.5	506.5	47.3	55.3	131.1	153.2
2006	613.7	677.6	416.0	459.3	52.8	58.3	144.9	160.0
2007	493.2	537.6	305.2	332.6	49.0	53.4	139.1	151.6
2008	350.3	387.4	185.8	205.5	44.3	49.0	120.1	132.9
2009	245.9	281.9	105.3	120.7	28.5	32.7	112.0	128.4
2010	238.8	274.7	112.6	129.5	14.7	16.9	111.6	128.3
2011	244.1	278.7	108.2	123.5	15.0	17.2	120.9	138.1
2012	280.6	317.4	132.0	149.3	22.5	25.5	126.1	142.6
2013	335.4	361.2	170.8	183.9	31.5	33.9	133.1	143.3
2014 ^f								
Jan	349.1		184.1		36.0		129.0	
Feb	346.4		184.2		36.6		125.6	
Mar	342.6		186.7		37.8		118.2	
Apr	341.1		189.5		40.0		111.6	
May	333.5		188.3		40.4		104.9	
Jun	329.5		186.9		41.7		100.9	
Jul	329.5		188.7		42.6		98.3	
Aug	330.2		191.9		42.9		95.2	
Sep	337.1		197.2		44.8		95.2	
Oct	342.1		203.1		45.7		93.4	
Nov	347.2		207.4		45.7		94.0	
Dec	354.8		212.7		47.2		94.9	

^aIn millions of dollars, annual and monthly data.^bData are for conventional housing and do not include mobile home shipments.^cPrivate residential spending = Single-family + Multifamily + Improvement.^dAs provided by the Census Bureau's Survey of Construction.^eSeasonally adjusted annual rate.^fAnnual spending estimated adjusted for the third quarter of 2014. BEA, table 1.1.9. Implicit price deflators for gross private domestic product, residential fixed investment [index numbers, 2009 = 100, seasonally adjusted]; revised June 24, 2015.

Data sources: Census Bureau (2015c), Bureau of Economic Analysis (2015).

Table 10. Construction expenditure comparisons, quarter four of 2014 and 2013^{a,b,c}

	Q4 2014 3-month running average	Change quarter-over-quarter (%)	Q4 2013 3-month running average	Change year-over-year (%)
Private residential ^d	348.0	4.8	349.8	-0.5
Single-family	207.7	7.9	176.6	17.6
Multifamily	46.2	6.4	35.4	30.4
Improvement	94.1	-2.2	137.8	-31.7

^aIn millions of dollars, annual and monthly data.^bData are for conventional housing and do not include mobile home shipments.^cSeasonally adjusted annual rate.^dPrivate residential spending = Single-family + Multifamily + Improvement.

Data source: Census Bureau (2015a).

Housing as a Component of Gross Domestic Product

Housing is a critical component of the U.S. GDP and the overall economy. Historically, residential investment has averaged approximately 5% of GDP, whereas housing services have averaged between 12% and 13%, for a combined 17% to 19% of the GDP—at times slightly more. These proportions have a tendency to fluctuate during business cycles. Housing contributions to GDP are valued in two discrete means: (1) private residential investment and (2) consumption spending of housing services. Residential investment

includes construction of new single-family and multifamily structures, residential remodeling, manufactured home production, and brokers’ fees. Consumption spending on housing services includes gross rents (which include utilities) paid by renters and owners’ imputed rent.

Housing construction’s aggregate share of U.S. GDP remains less than the historical average, and quarter four data indicate a decrease. In quarter four of 2014, housing was estimated to be 15.2% of the U.S. GDP (residential fixed investment was 3.1% and housing services was 12.1%) (Fig. 8) (National Association of Homebuilders 2015).

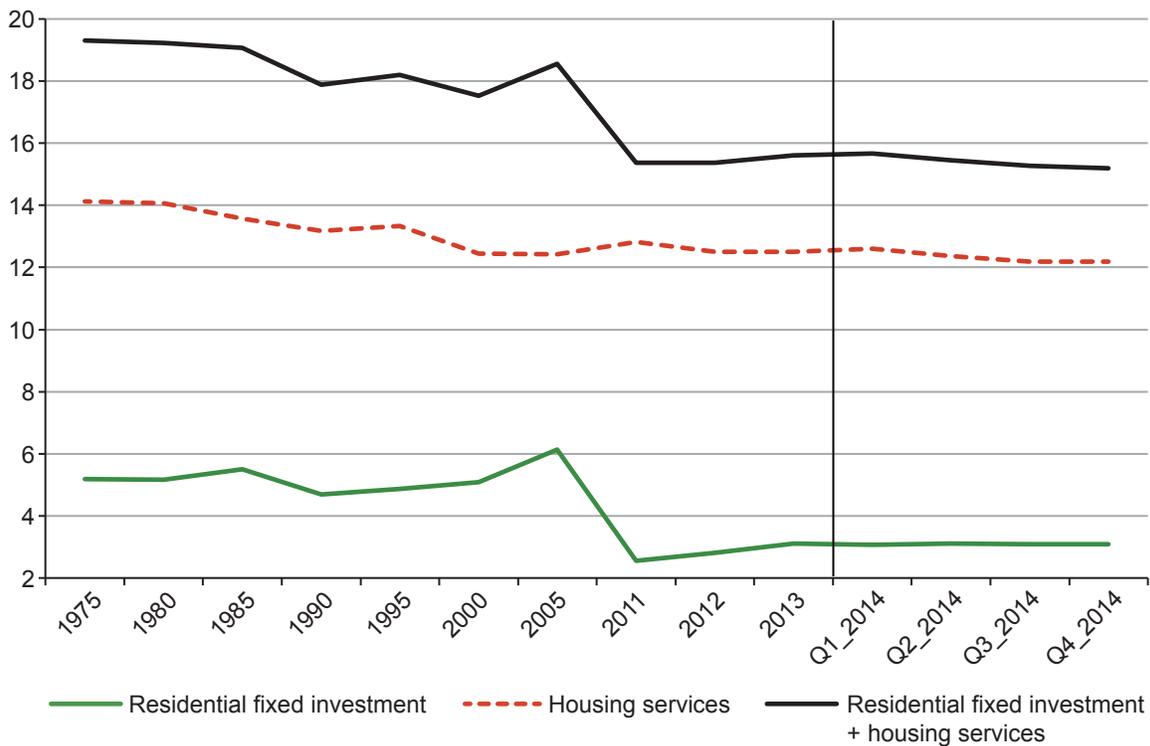


Figure 8. Contribution of housing to GDP, in percentage of total GDP, 1976–2014, seasonally adjusted annual rate for Q4 2014. Data sources: Bureau of Economic Analysis (2015); National Association of Homebuilders (2015).

Table 11. Fourth quarter construction averages^{a,b,c,d}

	Time period	Quarter 4	Quarter 4 2014	Time period	Quarter 4	
Total permits	1960–2007	1,447.3	1,092.0	1960–2013	1,369.4	
Total starts	1959–2008	1,530.6	1,055.3	1959–2013	1,458.8	
Total under construction	1970–2008	1,007.7	816.7	1970–2013	952.7	
Total completions	1968–2008	1,520.1	907.7	1968–2013	1,429.6	
SF permits	1960–2007	948.0	666.7	1960–2013	897.9	
SF starts	1959–2008	1,088.6	699.7	1959–2013	1,037.9	
SF under construction	1970–2008	601.8	360.0	1970–2013	565.5	
SF completions	1968–2008	1,096.6	628.3	1968–2013	1,032.8	
MF permits	1960–2007	499.3	425.3	1960–2013	471.7	
MF starts	1959–2008	442.0	355.7	1959–2013	420.9	
MF under construction	1970–2008	405.9	456.7	1970–2013	387.3	
MF completions	1968–2008	423.5	279.3	1968–2013	396.8	
New house sales	1963–2008	696.7	471.0	1963–2013	664.3	
Existing house sales ^e	1999–2007	5,834.8	5,060.0	1999–2013	5,311.8	
	Time period	Reported	Adjusted ^g	Time period	Reported	Adjusted ^g
Private residential spending ^f	1993–2007	379.5	527.8	2008–2013	282.7	319.6
SF spending	1993–2007	256.7	357.4	2008–2013	138.6	156.6
MF spending	1993–2007	91.6	127.6	2008–2013	116.6	132.1
Improvement spending	1993–2009	31.1	41.8	2010–2013	25.8	29.0
	Time period	Reported	Adjusted ^g	Quarter 4 2014		
Private residential spending ^f	1993–2013	351.8	468.4	348.0		
SF spending		222.9	300.0	207.7		
MF spending		30.1	39.4	94.1		
Improvement spending		98.8	128.9	47.7		

^aThe time periods selected begin with initiation of modern data collection and end with the year generally recognized as the start of the housing crash.

^bAnnualized monthly data, in thousands and in millions of dollars.

^cData are for conventional housing and do not include mobile home shipments.

^dAverage of quarter four monthly data.

^eNational Association of Realtors (2015); not seasonally adjusted.

^fPrivate residential spending = Single-family + Multifamily + Improvement; in millions.

^gAnnual spending estimates, adjusted for the fourth quarter of 2014. BEA, table 1.1.9. Implicit price deflators for gross private domestic investment, residential fixed investment [index numbers, 2009 = 100, seasonally adjusted]; revised June 24, 2015.

Data source: Census Bureau (2015a); Bureau of Economic Analysis (2015a).

Table 12. Historic annual construction averages^{a,b,c,d}

	Average by time period				
	1959–2008	1969–2007	1969–2008		
Total permits	1,430.0				
Total starts	1,534.1				
Total under construction		975.7			
Total completions			1,532.0		
	1959–2013	1969–2013	1968–2013		
Total permits	1,366.1				
Total starts	1,457.4				
Total under construction		944.8			
Total completions			1,440.3		
	1959–2008	1969–2007	1969–2008		
SF permits	939.4				
SF starts	1,092.2				
SF under construction		569.1			
SF completions			1,101.8		
	1959–2013	1969–2013	1968–2013		
SF permits	898.5				
SF starts	1,038.4				
SF under construction		547.8			
SF completions			1,036.7		
	1959–2008	1969–2007	1969–2008		
MF permits	490.7				
MF starts	447.8				
MF under construction		406.6			
MF completions			430.1		
	1959–2013	1963–2013	1969–2013	1968–2013	
MF permits	467.1				
MF starts		422.2			
MF under construction			397.0		
MF completions				403.6	
	1963–2007	1963–2013	1999–2007	1999–2013	
New house sales	697.7	655.6			
Existing house sales ^e			5,873.6	5,300.8	
	1993–2007	Adjusted ^g	1993–2013	Adjusted ^g	Quarter 4 2014
Private residential spending ^f	379.5	527.8	379.5	527.8	348.0
SF spending	256.7	357.	256.7	357.4	207.7
Improvement spending	91.6	127.6	91.6	127.6	94.1
	1993–2008	Adjusted	1993–2013	Adjusted	Quarter 4 2014
MF spending	31.1		30.1	39.4	47.7

^aThe time periods selected begin with initiation of modern data collection and end with the year generally recognized as the start of the housing crash.

^bAnnualized monthly data; in thousands and in millions of dollars.

^cData are for conventional housing and do not include mobile home shipments.

^dAverage of quarter four monthly data.

^eNational Association of Realtors (2015); not seasonally adjusted.

^fPrivate residential spending = Single-family + Multifamily + Improvement.

^gAnnual spending estimates, adjusted for the fourth quarter of 2014. BEA, table 1.1.9. Implicit price deflators for gross private domestic investment, residential fixed investment [index numbers, 2009 = 100, seasonally adjusted]; revised June 24, 2015.

Data sources: Census Bureau (2015a); Bureau of Economic Analysis (2015).

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Glossary

Housing completions—A house is defined as completed when all finished flooring has been installed (or carpeting if used in place of finished flooring). If the building is occupied before all construction is finished, it is classified as completed at the time of occupancy. In privately-owned buildings with two or more housing units, all of the units in the buildings are counted as completed when 50 percent or more of the units are occupied or available for occupancy. Housing completions are estimated for all areas of the United States, regardless of whether permits are required.

Housing permits—The approval given by a local jurisdiction to proceed on a construction project. Note that not all areas of the country require a permit for construction.

Housing starts—Start of construction occurs when excavation begins for the footings or foundation of a building. All housing units in a multifamily building are defined as being started when this excavation begins. Beginning with data for September 1992, estimates of housing starts include units in structures being totally rebuilt on an existing foundation.

Housing under construction—Estimates of housing units started, but not yet completed, are estimated for all areas of the United States, regardless of whether permits are required.

Seasonally adjusted annual rate—Seasonal adjustment is the process of estimating and removing seasonal effects from a time series to better reveal certain non-seasonal features such as underlying trends and business cycles. Seasonal adjustment procedures estimate effects that occur in the same calendar month with similar magnitude and direction from year to year. In series whose seasonal effects come primarily from weather, the seasonal factors are estimates of average weather effects for each month.

Single-family housing—Dwellings that include fully detached, semidetached (semi-attached, side-by-side), row houses, and townhouses.

