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## Abstract

September housing data were tepid, with several monthly declines in starts, permits, completions, and new single-family sales. Total private residential construction spending was minimally positive; conversely, single-family construction expenditures declined slightly on a monthly basis. All housing start data were positive on year-over-year starts. Housing under construction remained positive, except for yearly multifamily data. Single-family housing completions were negative on a month-over-month and positive on a yearly basis. Existing sales continued their stagnant trend, monthly and yearly.

**Keywords:** housing permits, starts, under construction, completions, construction spending, new sales, existing sales, regional housing data, economic indicators

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# United States Housing Brief, September 2018

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## Summary

New single-family construction is the largest value-added wood-products-consuming sector and is a leading coincident economic indicator of the U.S. economy. The aggregate U.S. housing market was tepid in September, with declines noted for total, single-, and multifamily starts. On a positive note, single-family permits were positive on both month-over-month and yearly bases. New single-family sales declined on both monthly and yearly bases.

This housing brief includes housing starts, permits, houses under construction, completions, sales, and construction spending data available from the U.S. Department of Commerce and the National Association of Realtors. The data are compared on month-over-month (M/M) and year-over-year (Y/Y) bases. For more detailed information and commentary, the monthly “Virginia Tech–U.S. Forest Service Housing Commentary” is available at <http://woodproducts.sbio.vt.edu/housing-report>. Additionally, in-depth semi-annual and annual housing construction research is available via Treesearch (<https://www.fs.usda.gov/treesearch/>) and inputting “Alderman”.

## September 2018 Housing Scorecard

| Category <sup>a</sup>                     | Month-over-month change | Year-over-year change |
|-------------------------------------------|-------------------------|-----------------------|
| Housing starts (total)                    | ▼ 5.3%                  | ▲ 3.7%                |
| Single-family                             | ▼ 0.9%                  | ▲ 4.8%                |
| Multi-family                              | ▼ 15.2%                 | ▲ 0.9%                |
| Housing permits (total)                   | ▼ 0.6%                  | ▼ 1.0%                |
| Single-family                             | ▲ 2.9%                  | ▲ 2.4%                |
| Multi-family                              | ▼ 7.6%                  | ▼ 7.8%                |
| Housing under construction (total)        | ▲ 0.3%                  | ▲ 3.7%                |
| Single-family                             | ▲ 0.4%                  | ▲ 9.2%                |
| Multi-family                              | ▲ 0.2%                  | ▼ 0.7%                |
| Housing completions (total)               | ▼ 4.1%                  | ▲ 7.0%                |
| Single-family                             | ▼ 8.7%                  | ▲ 8.6%                |
| Multi-family                              | ▼ 10.7%                 | ▲ 2.9%                |
| New single-family house sales             | ▼ 5.5%                  | ▼ 13.2%               |
| Private residential construction spending | ▲ 0.6%                  | ▲ 5.1%                |
| Single-family construction spending       | ▼ 0.8%                  | ▲ 3.1%                |
| Existing house sales <sup>b</sup>         | ▼ 3.4%                  | ▼ 4.1%                |

<sup>a</sup> Data from U.S. Census Bureau–Construction.

<sup>b</sup> Data from Federal Reserve Bank of St. Louis (FRED).

## Starts

Total starts in September 2018 were at a seasonally adjusted annual rate (SAAR) of 1,201,000. This was 5.3% less than August 2018 and 3.7% greater than September 2017. Single-family (SF) starts were 871,000, which was 0.9% less than August 2018. Multifamily (MF) starts of two to four units were 6,000 and five units or more were 324,000 (Census Bureau 2018a). September 2018 total starts were less than the 58-year average of 1,439,000 (Fig. 1).

Regionally, the South remained the strongest market, where total starts were 567,000, of which 441,000 were SF and 126,000 were MF. The West followed with total starts of 354,000, of which 244,000 were SF and 110,000 were MF. Total Midwest starts were 160,000, of which 130,000 were SF and 30,000 were MF. The Northeast recorded total starts of 120,000, of which 56,000 were SF and 64,000 were MF (Census Bureau 2018a). Table 1 provides housing start data for each start category for September 2018.

**Table 1—National and regional U.S. housing starts for September 2018 in comparison to August 2018 and September 2017**

|                         | Total starts <sup>a</sup> | Single-family | Multi-family (2–4 units) <sup>b</sup> | Multi-family (≥5 units) |
|-------------------------|---------------------------|---------------|---------------------------------------|-------------------------|
| Sep-18                  | 1,201,000                 | 871,000       | 6,000                                 | 324,000                 |
| Aug-18                  | 1,268,000                 | 879,000       | 17,000                                | 372,000                 |
| Sep-17                  | 1,158,000                 | 831,000       | 17,000                                | 310,000                 |
| Month-over-month change | –5.3%                     | –0.9%         | –64.7%                                | –12.9%                  |
| Year-over-year change   | 3.7%                      | 4.8%          | –64.7%                                | 4.5%                    |
|                         | Northeast                 | Midwest       | South                                 | West                    |
| Sep-18                  | 120,000                   | 160,000       | 567,000                               | 354,000                 |
| Aug-18                  | 93,000                    | 186,000       | 657,000                               | 332,000                 |
| Sep-17                  | 101,000                   | 186,000       | 543,000                               | 328,000                 |
| Month-over-month change | 29.0%                     | –14.0%        | –13.7%                                | 6.6%                    |
| Year-over-year change   | 18.8%                     | –14.0%        | 4.4%                                  | 7.9%                    |

<sup>a</sup> Source: U.S. Department of Commerce–Construction (SAAR).

<sup>b</sup> Multifamily two- to four-unit starts are not reported directly but are an estimation: 2 to 4 starts = (Total starts – (SF starts + MF ≥5 starts)).

## Permits

Total building permits issued in September 2018 were at a SAAR of 1,241,000. This is 0.6% less than August 2018 and 1.0% less than September 2017. SF permits were 851,000, which was 2.9% greater than August 2018. MF permits of two to four units were 39,000 and five units or more were 351,000 (Census Bureau 2018a). Historically, MF permits can be extremely variable, M/M and Y/Y.

Regionally, the South remained the strongest market, where total permits issued were 654,000, of which 457,000 were SF and 197,000 were MF. The West followed with total permits of 341,000, of which 219,000 were SF and 122,000 were MF. Midwest total permits were 154,000, of which 117,000 were SF and 37,000 were MF. In the Northeast, total permits were 92,000, of which 58,000 were SF and 34,000 were MF (Census Bureau 2018a). Table 2 provides permit data for each permit category for September 2018.

**Table 2—National and regional U.S. housing permits for September 2018 in comparison to August 2018 and September 2017**

|                         | Total permits <sup>a</sup> | Single-family | Multi-family (2–4 units) <sup>b</sup> | Multi-family (≥5 units) |
|-------------------------|----------------------------|---------------|---------------------------------------|-------------------------|
| Sep-18                  | 1,241,000                  | 851,000       | 39,000                                | 351,000                 |
| Aug-18                  | 1,249,000                  | 827,000       | 35,000                                | 387,000                 |
| Sep-17                  | 1,254,000                  | 831,000       | 36,000                                | 387,000                 |
| Month-over-month change | –0.6%                      | 2.9%          | 11.4%                                 | –9.3%                   |
| Year-over-year change   | –1.0%                      | 2.4%          | 8.3%                                  | –9.3%                   |
|                         | Northeast                  | Midwest       | South                                 | West                    |
| Sep-18                  | 92,000                     | 154,000       | 654,000                               | 341,000                 |
| Aug-18                  | 102,000                    | 190,000       | 650,000                               | 307,000                 |
| Sep-17                  | 120,000                    | 189,000       | 612,000                               | 333,000                 |
| Month-over-month change | –9.8%                      | –18.9%        | 0.6%                                  | 11.1%                   |
| Year-over-year change   | –23.3%                     | –18.5%        | 6.9%                                  | 2.4%                    |

<sup>a</sup> Source: U.S. Census Bureau–Construction (SAAR).

<sup>b</sup> Multifamily two- to four-unit permits are not reported directly but are an estimation: 2 to 4 permits = (Total permits – (SF permits + MF ≥5 permits)).

## Housing under Construction

Total housing under construction (HUC) issued in September 2018 was at a SAAR of 1,129,000. This was 0.3% greater than August 2018 and 3.7% greater than September 2017. SF HUC was 522,000, which was 0.4% greater than August 2018. MF HUC of two to four units was 12,000 and five units or more was 595,000 (Census Bureau 2018a).

Regionally, the South remained the strongest market, where total HUC was 456,000, of which 240,000 were SF and 216,000 were MF. The West followed with a total HUC of 333,000 units, of which 141,000 were SF and 192,000 were MF. The Northeast total HUC was 189,000, of which 59,000 were SF and 130,000 were MF. Midwest total HUC was 151,000, of which 82,000 were SF and 69,000 were MF (Census Bureau 2018a). Table 3 provides HUC data for September 2018.

**Table 3—National and regional U.S. housing under construction for September 2018 in comparison to August 2018 and September 2017**

|                         | Total HUC <sup>a</sup> | Single-family | Multi-family (2–4 units) <sup>b</sup> | Multi-family (≥5 units) |
|-------------------------|------------------------|---------------|---------------------------------------|-------------------------|
| Sep-18                  | 1,129,000              | 522,000       | 12,000                                | 595,000                 |
| Aug-18                  | 1,126,000              | 520,000       | 13,000                                | 593,000                 |
| Sep-17                  | 1,089,000              | 478,000       | 10,000                                | 601,000                 |
| Month-over-month change | 0.3%                   | 0.4%          | –7.7%                                 | 0.3%                    |
| Year-over-year change   | 3.7%                   | 9.2%          | 20.0%                                 | –1.0%                   |
|                         | Northeast              | Midwest       | South                                 | West                    |
| Sep-18                  | 189,000                | 151,000       | 456,000                               | 333,000                 |
| Aug-18                  | 190,000                | 153,000       | 453,000                               | 330,000                 |
| Sep-17                  | 189,000                | 152,000       | 445,000                               | 303,000                 |
| Month-over-month change | –0.5%                  | –1.3%         | 0.7%                                  | 0.9%                    |
| Year-over-year change   | 0.0%                   | –0.7%         | 2.5%                                  | 9.9%                    |

<sup>a</sup> Source: U.S. Department of Commerce–Construction (SAAR).

<sup>b</sup> Multifamily two- to four-unit HUC are not reported directly but are an estimation: 2 to 4 HUC = (Total HUC – (SF HUC + MF ≥5 HUC)).

## Housing Completions

Total completions in September 2018 were at a SAAR of 1,162,000. This was 4.1% less than August 2018 and 7.0% greater than September 2017. SF completions were 844,000, which was 8.7% less than August 2018. MF completions of two to four units were 6,000 and five units or more were 312,000 (Census Bureau 2018a).

The South remained the strongest market, where total completions were 553,000, of which 430,000 were SF and 123,000 were MF. The West followed with total completions of 312,000 units, of which 220,000 were SF and 92,000 were MF. Midwest total completions were 184,000, of which 131,000 were SF and 53,000 were MF. Total Northeast completions were 113,000, of which 63,000 were SF and 50,000 were MF (Census Bureau 2018a). Table 4 provides housing completion data for September 2018.

**Table 4—National and regional U.S. housing completions for September 2018 in comparison to August 2018 and September 2017**

|                         | Total completions <sup>a</sup> | Single-family | Multi-family (2–4 units) <sup>b</sup> | Multi-family (≥5 units) |
|-------------------------|--------------------------------|---------------|---------------------------------------|-------------------------|
| Sep-18                  | 1,162,000                      | 844,000       | 6,000                                 | 312,000                 |
| Aug-18                  | 1,212,000                      | 924,000       | 5,000                                 | 283,000                 |
| Sep-17                  | 1,086,000                      | 777,000       | 7,000                                 | 302,000                 |
| Month-over-month change | –4.1%                          | –8.7%         | 20.0%                                 | 10.2%                   |
| Year-over-year change   | 7.0%                           | 8.6%          | –14.3%                                | 3.3%                    |
|                         | Northeast                      | Midwest       | South                                 | West                    |
| Sep-18                  | 113,000                        | 184,000       | 553,000                               | 312,000                 |
| Aug-18                  | 89,000                         | 202,000       | 640,000                               | 281,000                 |
| Sep-17                  | 80,000                         | 179,000       | 595,000                               | 232,000                 |
| Month-over-month change | 27.0%                          | –8.9%         | –13.6%                                | 11.0%                   |
| Year-over-year change   | 41.3%                          | 2.8%          | –7.1%                                 | 34.5%                   |

<sup>a</sup> Source: U.S. Department of Commerce–Construction (SAAR).

<sup>b</sup> Multifamily two- to four-unit completions are not reported directly but are an estimation: 2 to 4 completions = (Total completions – (SF completions + MF ≥5 completions)).

## New Single-Family House Sales

Total new house sales in September 2018 were estimated at a SAAR of 553,000 units. This was a decrease of 5.5% from August 2018 and 13.2% from September 2017. Regionally, the South remained the strongest market with total new SF house sales of 318,000, followed by the West with 139,000. The Midwest had 77,000 sales, and the Northeast had 19,000.

The median sales price of new houses sold in September 2018 was \$320,000, and the mean sales price was \$377,200 (Census Bureau 2018b). Table 5 provides new SF sales data for September 2018.

**Table 5—National and regional new U.S. housing sales for September 2018 in comparison to August 2018 and September 2017**

|                         | New SF sales <sup>a</sup> | Median price | Mean price | Month's supply |
|-------------------------|---------------------------|--------------|------------|----------------|
| Sep-18                  | 553,000                   | \$320,000    | \$377,200  | 7.1            |
| Aug-18                  | 585,000                   | \$319,200    | \$384,500  | 6.5            |
| Sep-17                  | 637,000                   | \$331,500    | \$379,300  | 5.3            |
| Month-over-month change | −5.5%                     | 0.3%         | −1.9%      | 9.2%           |
| Year-over-year change   | −13.2%                    | −3.5%        | −0.6%      | 34.0%          |
|                         | Northeast                 | Midwest      | South      | West           |
| Sep-18                  | 19,000                    | 77,000       | 318,000    | 139,000        |
| Sep-18                  | 32,000                    | 72,000       | 323,000    | 158,000        |
| Sep-17                  | 39,000                    | 74,000       | 359,000    | 165,000        |
| Month-over-month change | −40.6%                    | 6.9%         | −1.5%      | −12.0%         |
| Year-over-year change   | −51.3%                    | 4.1%         | −11.4%     | −15.8%         |

<sup>a</sup> Source: U.S. Department of Commerce—Construction (SAAR).

## Private Residential Construction Spending

New SF starts and sales are vital to the wood products industry because new units consume more value-added products than any other wood-consuming sector. Aggregate new housing construction spending has generally lagged the overall economy since 2010. New construction and spending are two of the factors often mentioned for the subdued economic recovery, and September's expenditure data bear this out. Total private residential construction spending for September 2018 was \$556,424 million, a 0.6% increase from August 2018 and a 5.1% increase from September 2017. SF construction spending was \$283,238 million, and MF construction spending was \$64,228 million. Improvement, or remodeling, spending was \$208,958 million (Census Bureau 2018c). Table 6 provides data for each construction spending category for September 2018.

**Table 6—National U.S. housing construction spending for September 2018 in comparison to August 2018 and September 2017**

|                         | Total private residential construction spending <sup>a, b</sup> | Single-family | Multi-family | Improvement <sup>c</sup> |
|-------------------------|-----------------------------------------------------------------|---------------|--------------|--------------------------|
| Sep-18                  | \$556,424                                                       | \$283,238     | \$64,228     | \$208,958                |
| Aug-18                  | \$553,372                                                       | \$285,528     | \$59,078     | \$208,766                |
| Sep-17                  | \$529,404                                                       | \$274,695     | \$59,370     | \$195,339                |
| Month-over-month change | 0.6%                                                            | −0.8%         | 8.7%         | 0.1%                     |
| Year-over-year change   | 5.1%                                                            | 3.1%          | 8.2%         | 7.0%                     |

<sup>a</sup> Reported in nominal U.S. dollars, millions of dollars, and SAAR.

<sup>b</sup> Source: U.S. Census Bureau—Construction.

<sup>c</sup> The U.S. DOC Census Bureau does not report improvement spending directly. This is a monthly estimation: Improvement spending = (Total private spending − (SF spending + MF spending)).

## Existing House Sales

Existing house sales in September 2018 were at a SAAR of 5,150,000 units. This is a 3.4% decrease from August 2018 and a 4.1% decrease from September 2017. Regionally, the South remained the strongest market, with total existing house sales of 2,110,000 units, followed by the West at 1,080,000 units. The Midwest had total existing sales of 1,280,000 units, and the Northeast had 680,000 units (FRED 2018). Table 7 provides existing house sales data for September 2018.

**Table 7—National and regional U.S. existing housing sales for September 2018 in comparison to August 2018 and September 2017**

|                         | Existing sales <sup>a</sup> | Median price | Mean price | Month's supply |
|-------------------------|-----------------------------|--------------|------------|----------------|
| Sep-18                  | 5,150,000                   | \$258,100    | \$296,800  | 4.4            |
| Aug-18                  | 5,330,000                   | \$265,600    | \$304,000  | 4.3            |
| Sep-17                  | 5,370,000                   | \$247,600    | \$289,600  | 4.2            |
| Month-over-month change | −3.4%                       | −6.0%        | −2.4%      | 2.3%           |
| Year-over-year change   | −4.1%                       | 4.1%         | 2.5%       | 4.8%           |

|                         | Northeast | Midwest   | South     | West      |
|-------------------------|-----------|-----------|-----------|-----------|
| Sep-18                  | 680,000   | 1,280,000 | 2,110,000 | 1,080,000 |
| Aug-18                  | 700,000   | 1,280,000 | 2,230,000 | 1,120,000 |
| Sep-17                  | 720,000   | 1,300,000 | 2,120,000 | 1,230,000 |
| Month-over-month change | −2.9%     | 0.0%      | −5.4%     | −3.6%     |
| Year-over-year change   | −5.6%     | −1.5%     | −0.5%     | −12.2%    |

<sup>a</sup> Source: Federal Reserve Bank of St. Louis (FRED).

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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 the units in the buildings are counted as completed when 50% 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. 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 January 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, whether or not permits are required.

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

**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, semi-detached (semi-attached, side-by-side), row houses, and townhouses.

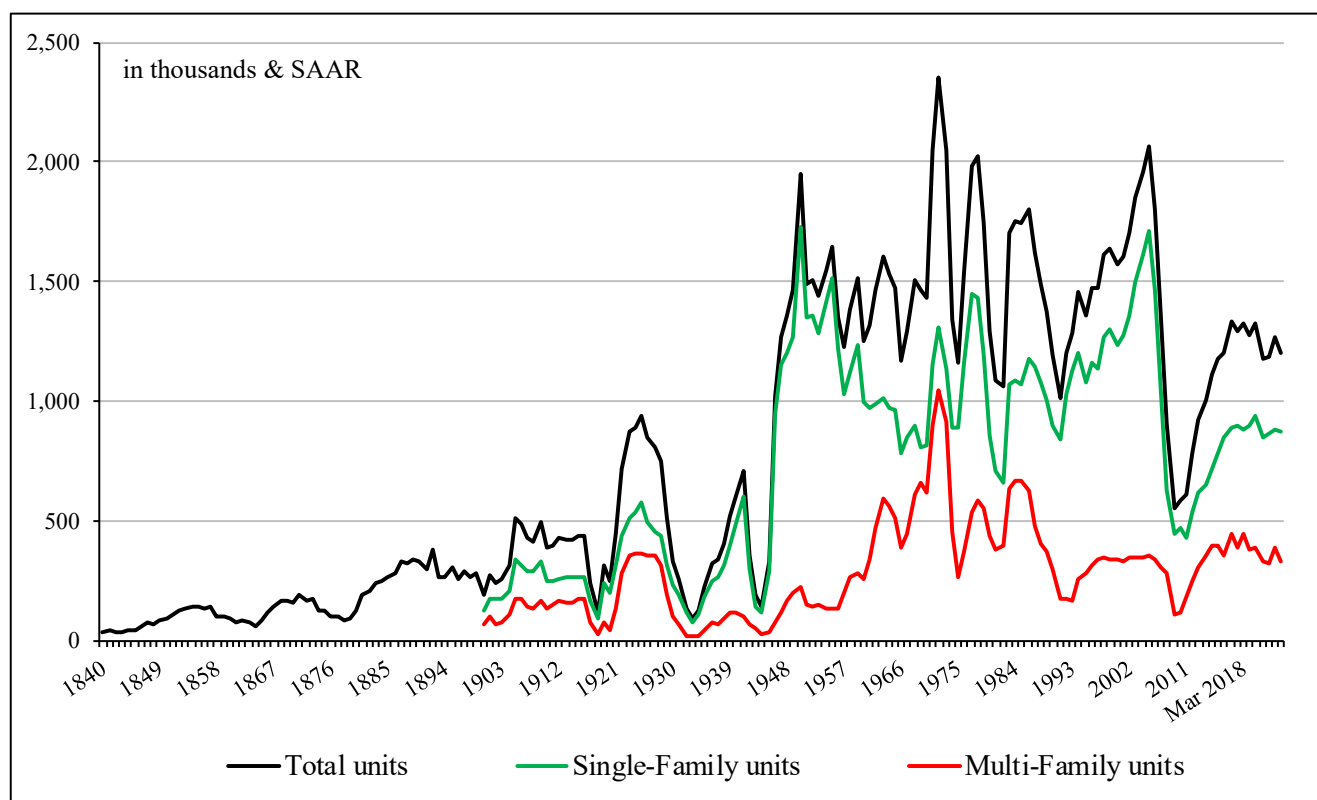


Figure 1. U.S. housing units and starts: 1840 to September 2018. Sources: Carliner (2010), Census Bureau (2018a), and Gottlieb (1964).