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## MANUFACTURING AND TRADE INVENTORIES AND SALES SEPTEMBER 2016

Sales. The U.S. Census Bureau announced today that the combined value of distributive trade sales and manufacturers' shipments for September, adjusted for seasonal and trading-day differences but not for price changes, was estimated at $\$ 1,314.6$ billion, up 0.7 percent ( $\pm 0.2 \%$ ) from August 2016 and was up 0.8 percent ( $\pm 0.4 \%$ ) from September 2015 .

Inventories. Manufacturers' and trade inventories, adjusted for seasonal variations but not for price changes, were estimated at an end-of-month level of $\$ 1,818.7$ billion, up 0.1 percent ( $\pm 0.1 \%)^{*}$ from August 2016 and were up 0.6 percent ( $\left.\pm 0.6 \%\right)^{*}$ from September 2015.

Inventories/Sales Ratio. The total business inventories/sales ratio based on seasonally adjusted data at the end of September was 1.38. The September 2015 ratio was 1.39.

Total Business Inventories/Sales Ratios: 2007 to 2016
(Data adjusted for seasonal, holiday and trading-day differences but not for price changes)


The Manufacturing and Trade Inventories and Sales Report for October 2016 is scheduled to be released December 14, 2016 at 10:00 a.m. EST.
For additional information on this report, including customizable time series estimates by industry, visit www.census.gov/mtis.
To receive the latest updates on the nation's key economic indicators, download the America's Economy app for Apple and Android smartphones and tablets.

The U.S. Census Bureau updated its Application Programming Interface (API) with monthly and quarterly economic indicators. The API allows developers to combine Census Bureau statistics with other data sets to create tools for research on a variety of topics. For more information, visit www.census.gov/developers.

* The 90 percent confidence interval includes zero. The Census Bureau does not have sufficient statistical evidence to conclude that the actual change is different from zero.

Table 1. Estimated Monthly Sales and Inventories for Manufacturers, Retailers, and Merchant Wholesalers (In millions of dollars)

|  | Sales |  |  | Inventories |  |  | Inventories/Sales Ratios |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sep. 2016 | Aug. 2016 | Sep. 2015 | Sep. 2016 | Aug. 2016 | Sep. 2015 | Sep. 2016 | Aug. 2016 | Sep. 2015 |
|  | (p) | (r) | (r) | (p) | (r) | (r) | (p) | (r) | (r) |
| Adjusted ${ }^{1}$ |  |  |  |  |  |  |  |  |  |
| Total business. | 1,314,648 | 1,305,941 | 1,304,568 | 1,818,731 | 1,816,874 | 1,808,016 | 1.38 | 1.39 | 1.39 |
| Manufacturers ${ }^{2}$. | 463,012 | 459,111 | 465,982 | 621,350 | 621,552 | 633,129 | 1.34 | 1.35 | 1.36 |
| Retailers ${ }^{3}$. | 406,691 | 402,695 | 395,317 | 607,205 | 605,873 | 584,256 | 1.49 | 1.50 | 1.48 |
| Merchant wholesalers ${ }^{4}$. | 444,945 | 444,135 | 443,269 | 590,176 | 589,449 | 590,631 | 1.33 | 1.33 | 1.33 |
| Not Adjusted |  |  |  |  |  |  |  |  |  |
| Total business.. | 1,334,703 | 1,363,268 | 1,321,843 | 1,816,511 | 1,797,603 | 1,806,316 | 1.36 | 1.32 | 1.37 |
| Manufacturers ${ }^{2}$. | 484,622 | 480,925 | 487,337 | 621,341 | 626,826 | 633,336 | 1.28 | 1.30 | 1.30 |
| Retailers ${ }^{3}$. | 393,467 | 416,217 | 380,320 | 608,742 | 591,641 | 586,222 | 1.55 | 1.42 | 1.54 |
| Merchant wholesalers ${ }^{4}$. | 456,614 | 466,126 | 454,186 | 586,428 | 579,136 | 586,758 | 1.28 | 1.24 | 1.29 |

See footnotes and notes at the end of Table 3.
(p) Preliminary estimate.
(r) Revised estimate.

Table 2. Percent Changes for Sales and Inventories -- Manufacturers, Retailers, and Merchant Wholesalers

|  | Adjusted |  |  |  |  |  | Not Adjusted |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Sales |  |  | Inventories |  |  | Sales |  |  | Inventories |  |  |
|  | Sep. 16/ <br> Aug. 16 | Aug. 16/ <br> Jul. 16 | $\begin{array}{\|c} \hline \text { Sep. } 16 / \\ \text { Sep. } 15 \\ \hline \end{array}$ | Sep. 16/ <br> Aug. 16 | $\begin{array}{\|c\|} \hline \text { Aug. } 16 / \\ \text { Jul. } 16 \end{array}$ | $\begin{array}{\|c} \hline \text { Sep. } 16 / \\ \text { Sep. } 15 \\ \hline \end{array}$ | Sep. 16/ <br> Aug. 16 | Aug. 16/ <br> Jul. 16 | $\begin{array}{\|c} \hline \text { Sep. } 16 / \\ \text { Sep. } 15 \\ \hline \end{array}$ | Sep. 16/ <br> Aug. 16 | $\begin{gathered} \hline \text { Aug. } 16 / \\ \text { Jul. } 16 \end{gathered}$ | $\begin{gathered} \hline \text { Sep. } 16 / \\ \text { Sep. } 15 \\ \hline \end{gathered}$ |
| Total business........... | 0.7 | 0.3 | 0.8 | 0.1 | 0.2 | 0.6 | -2.1 | 7.7 | 1.0 | 1.1 | 0.0 | 0.6 |
| Manufacturers ${ }^{2}$. | 0.8 | 0.2 | -0.6 | 0.0 | 0.1 | -1.9 | 0.8 | 10.2 | -0.6 | -0.9 | 0.3 | -1.9 |
| Retailers ${ }^{3}$. | 1.0 | -0.1 | 2.9 | 0.2 | 0.6 | 3.9 | -5.5 | 2.6 | 3.5 | 2.9 | 0.9 | 3.8 |
| Merchant wholesalers ${ }^{4}$. | 0.2 | 0.7 | 0.4 | 0.1 | -0.1 | -0.1 | -2.0 | 10.1 | 0.5 | 1.3 | -1.0 | -0.1 |

Table 3. Estimated Monthly Retail Sales, Inventories, and Inventories/Sales Ratios, By Kind of Business
(In millions of dollars)

| NAICS <br> Code | Kind of Business | Sales |  |  | Inventories ${ }^{3}$ |  |  | Percent Change <br> In Inventories |  |  | Inventories/Sales Ratios |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\text { Sep. } 2016$ <br> (p) | $\begin{gathered} \text { Aug. } 2016 \\ \text { (r) } \\ \hline \end{gathered}$ | Sep. 2015 <br> (r) | $\begin{gathered} \text { Sep. } 2016 \\ \text { (p) } \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { Aug. } 2016 \\ (\mathrm{r}) \\ \hline \end{array}$ | $\text { Sep. } 2015$ <br> (r) | Sep. $16 /$ <br> Aug. 16 | $\begin{array}{\|c\|} \hline \text { Aug. } 16 / \\ \text { Jul. } 16 \\ \hline \end{array}$ | Sep. 16/ <br> Sep. 15 | Sep. 16 <br> (p) | Aug. 16 <br> (r) | $\begin{array}{\|c\|} \hline \text { Sep. } 15 \\ \text { (r) } \\ \hline \end{array}$ |
|  | ```Adjusted ' Retail trade, total. \|..................................... Total (excl. motor veh. & parts)``` | $\begin{aligned} & 406,691 \\ & 310,902 \end{aligned}$ | $\begin{aligned} & 402,695 \\ & 308,694 \end{aligned}$ | $\begin{aligned} & 395,317 \\ & 303,003 \end{aligned}$ | $\begin{aligned} & 607,205 \\ & 393,097 \end{aligned}$ | $\begin{aligned} & 605,873 \\ & 393,231 \end{aligned}$ | $\begin{aligned} & 584,256 \\ & 387,770 \end{aligned}$ | $\begin{aligned} & 0.2 \\ & 0.0 \end{aligned}$ | 0.6 0.3 | $\begin{aligned} & 3.9 \\ & 1.4 \end{aligned}$ | 1.49 1.26 | 1.50 1.27 | $\begin{aligned} & 1.48 \\ & 1.28 \end{aligned}$ |
| 441 | Motor vehicle \& parts dealers. | 95,789 | 94,001 | 92,314 | 214,108 | 212,642 | 196,486 | 0.7 | 1.3 | 9.0 | 2.24 | 2.26 | 2.13 |
| 442,3 | Furniture,home furn., elect. \& appl. stores........ | 17,517 | 17,497 | 17,643 | 27,158 | 27,324 | 27,569 | -0.6 | 0.2 | -1.5 | 1.55 | 1.56 | 1.56 |
| 444 | Building materials, garden equip \& supplies... | 29,594 | 29,073 | 27,857 | 53,867 | 53,835 | 51,818 | 0.1 | 0.6 | 4.0 | 1.82 | 1.85 | 1.86 |
| 445 | Food \& beverage stores.. | 59,155 | 58,793 | 57,791 | 45,879 | 45,765 | 44,831 | 0.2 | 0.3 | 2.3 | 0.78 | 0.78 | 0.78 |
| 448 | Clothing \& clothing access. stores. | 21,430 | 21,377 | 21,233 | 53,839 | 53,875 | 53,287 | -0.1 | 0.0 | 1.0 | 2.51 | 2.52 | 2.51 |
| 452 | General merchandise stores. | 54,784 | 55,269 | 56,592 | 80,680 | 81,181 | 82,902 | -0.6 | -0.4 | -2.7 | 1.47 | 1.47 | 1.46 |
| 4521 | Dept. strs. (excl. leased depts.)................. | 12,748 | 12,846 | 13,659 | 27,054 | 27,267 | 29,059 | -0.8 | -1.7 | -6.9 | 2.12 | 2.12 | 2.13 |
|  | Not Adjusted |  |  |  |  |  |  |  | 0.9 | 3.8 |  | 1.42 | 154 |
|  | Total (excl. motor veh. \& parts) | 393,467 | 416,217 313,943 | 380,320 290,205 | 608,742 401,987 | 591,641 388,895 | 586,222 396,595 | 2.9 3.4 | 1.4 | 3.8 1.4 | 1.55 1.34 | 1.42 1.24 | $1.37$ |
| 441 | Motor vehicle \& parts dealers. | 93,862 | 102,274 | 90,115 | 206,755 | 202,746 | 189,627 | 2.0 | -0.1 | 9.0 | 2.20 | 1.98 | 2.10 |
| 442,3 | Furniture,home furn., elect. \& appl. stores.. | 17,285 | 17,748 | 17,260 | 27,239 | 26,778 | 27,597 | 1.7 | 0.8 | -1.3 | 1.58 | 1.51 | 1.60 |
| 444 | Building materials, garden equip \& supplies..... | 29,194 | 30,257 | 27,377 | 53,221 | 52,651 | 51,144 | 1.1 | 1.0 | 4.1 | 1.82 | 1.74 | 1.87 |
| 445 | Food \& beverage stores.. | 57,813 | 59,036 | 56,109 | 46,010 | 44,959 | 44,954 | 2.3 | 0.0 | 2.3 | 0.80 | 0.76 | 0.80 |
| 448 | Clothing \& clothing access. stores. | 19,573 | 22,086 | 19,080 | 56,477 | 54,252 | 55,951 | 4.1 | 2.0 | 0.9 | 2.89 | 2.46 | 2.93 |
| 452 | General merchandise stores. | 50,417 | 54,859 | 51,588 | 84,425 | 79,173 | 86,883 | 6.6 | 1.7 | -2.8 | 1.67 | 1.44 | 1.68 |
| 4521 | Dept. strs. (excl. leased depts.). | 11,339 | 12,628 | 12,023 | 29,029 | 26,176 | 31,209 | 10.9 | 0.3 | -7.0 | 2.56 | 2.07 | 2.60 |

(p) Preliminary estimate.
(r) Revised estimate.
${ }^{1}$ Adjusted for seasonal variations and, in the case of sales, for trading-day differences and holiday variations. Concurrent seasonal adjustment is being used to adjust all sales, shipment and inventory estimates. Concurrent seasonal adjustment uses all available unadjusted estimates as input to the X-13ARIMA-SEATS program. The factors derived from the program are applied to the current and previous month estimates and for retail and wholesale estimates a year ago as well. For retail sales, concurrent seasonal adjustment is also used to adjust the advance estimates (published one month before the preliminary estimates) and the estimates one year before the advance month. This explains the revision to retail estimates from a year ago.
${ }^{2}$ Manufacturers sales refer to the value of shipments by manufacturers. The shipments data from individual manufacturers are adjusted prior to tabulation for the number of trading days as well as for any variations in the length of the reporting period.
${ }^{3}$ Adjusted and not adjusted inventories for aggregate levels retail trade total, total excluding motor vehicles and parts, and motor vehicle and parts dealers are revised from the Advance Economic Indicators Report.
${ }^{4}$ The 2007 North American Industry Classification System (NAICS) defines merchant wholesalers as including manufacturers' sales branches and offices. However, the estimates included in this release exclude manufacturers' sales branches and offices. Note that this is not a change in coverage from prior releases and is consistent with the description used in the Monthly Wholesale Trade Survey data products.

Note: U.S. and group totals include kinds of business not shown. The Manufacturing and Trade Inventory and Sales estimates are based on data from three surveys: the Monthly Retail Trade Survey, the Monthly Wholesale Trade Survey, and the Manufacturers' Shipments, Inventories, and Orders Survey. The sampling variability for retailers and merchant wholesalers can be used to construct a 90 percent confidence interval for the estimates. Over all possible samples, 90 percent of such intervals will cover the true estimate. These intervals are given in parentheses for the estimates on the front page. If, for example, the estimate is up 0.8 percent and the margin of sampling error is $\pm 1.2$ percent, the 90 percent confidence interval is -0.4 percent to +2.0 percent. If the range contains 0 , it is uncertain whether there was an increase or decrease. Measures of reliability for Retail and Wholesale sales and inventory levels and changes are included in the detailed monthly press releases for those Industries. Manufacturers do not contribute to estimates of sampling variability because the manufacturer's mail panel is not a probability sample from a known frame and standard errors of the industry estimates cannot be calculated. Estimates from all three surveys are also subject to nonsampling errors, which can arise in any stage of the survey. Such errors include coverage error (failure to accurately represent all population units in the sample) response errors, coding errors, and nonresponse. Although no direct measurement of these errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

