## MANUFACTURING AND TRADE INVENTORIES AND SALES, DECEMBER 2016

Release Number: CB17-21
February 15, 2017 - The U.S. Census Bureau announced the following new manufacturing and trade statistics for December 2016:

| BUSINESS INVENTORIES |  |  |
| :---: | :---: | :---: |
| DECEMBER 2016 | \$1,835.7 billion | +0.4\% |
| NOVEMBER 2016 (revised) | \$1,829.0 billion | +0.8\% |
| Next release: March 15, 2017 |  |  |
| * The 90 percent confidence interval includes zero. There is insufficient evidence to conclude that the actual change is different from zero. Data adjusted for seasonality but not price changes. <br> Source: U.S. Census Bureau, Manufacturing and Trade Inventories and Sales, February 15, 2017. |  |  |



## Sales

The combined value of distributive trade sales and manufacturers’ shipments for December, adjusted for seasonal and trading-day differences but not for price changes, was estimated at $\$ 1,356.0$ billion, up 2.0 percent ( $\pm 0.2$ percent) from November 2016 and was up 5.2 percent ( $\pm 0.4$ percent) from December 2015.

## Inventories

Manufacturers' and trade inventories, adjusted for seasonal variations but not for price changes, were estimated at an end-of-month level of $\$ 1,835.7$ billion, up 0.4 percent ( $\pm 0.2$ percent) from November 2016 and were up 2.0 percent ( $\pm 0.5$ percent) from December 2015.

## Inventories/Sales Ratio

The total business inventories/sales ratio based on seasonally adjusted data at the end of December was 1.35. The December 2015 ratio was 1.40.

Intention to Revise: Revisions to the Wholesale and Retail adjusted and not adjusted monthly estimates for sales and inventories are scheduled for release in March 2017 and April 2017, respectively. Revised historical data from the Manufacturers' Shipments, Inventories, and Orders (M3) will be issued on May 18, 2017. Estimates will be revised to reflect the results of the 2015 Annual Wholesale, Annual Retail Trade Surveys, and Annual Survey of Manufacturers. Revisions to the Wholesale estimates will be reflected in the February 2017 Manufacturing and Trade Inventories and Sales (MTIS) release scheduled for April 14, 2017. Revisions to the Retail estimates will be reflected in the March 2017 MTIS release scheduled for May 12, 2017. Revisions to the Manufacturing estimates will be reflected in the April 2017 MTIS release scheduled for June 14, 2017.

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## General Information

The January 2017 Manufacturing and Trade Inventories and Sales Report is scheduled for release on March 15, 2017. View the full schedule in the Economic Briefing Room: <www.census.gov/economic-indicators/>.

## EXPLANATORY NOTES

## Reliability of Estimates

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.

## Description of the Survey

The Manufacturing and Trade Inventories 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. Data for the wholesale and manufacturing sectors are unrevised from the most recent Monthly Wholesale Trade Report and the Full Report on Manufacturers’ Shipments, Inventories and orders. Data from the Retail sector is revised and presented in more detail from the most recent Advance Economic Indicators Report. For more information on these surveys see the links below:
<www.census.gov/retail/>, <www.census.gov/wholesale/>, and <www.census.gov/manufacturing/m3/>.

## America's Economy Mobile App

The America's Economy app provides real-time updates for 19 key economic indicators from the Census Bureau, Bureau of Labor Statistics, and Bureau of Economic Analysis. <www.census.gov/mobile/economy/>

## API

The Census Bureau's application programming interface lets developers create custom apps to reach new users and makes key statistics more accessible than ever before. <www.census.gov/developers/>
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* The 90 percent confidence interval includes zero. There is insufficient evidence to conclude that the actual change is different from zero.


## Data Inquiries

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

|  | Sales |  |  | Inventories |  |  | Inventories/Sales Ratios |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Dec. 2016 | Nov. 2016 | Dec. 2015 | Dec. 2016 | Nov. 2016 | Dec. 2015 | Dec. 2016 | Nov. 2016 | Dec. 2015 |
|  | (p) | (r) | (r) | (p) | (r) | (r) | (p) | (r) | (r) |
| Adjusted ${ }^{1}$ |  |  |  |  |  |  |  |  |  |
| Total business. | 1,355,990 | 1,328,817 | 1,288,683 | 1,835,742 | 1,828,971 | 1,800,368 | 1.35 | 1.38 | 1.40 |
| Manufacturers ${ }^{2}$.......... | 475,843 | 465,427 | 456,311 | 625,585 | 625,011 | 626,044 | 1.31 | 1.34 | 1.37 |
| Retailers ${ }^{3}$. | 415,242 | 410,174 | 396,893 | 609,010 | 608,687 | 588,432 | 1.47 | 1.48 | 1.48 |
| Merchant wholesalers ${ }^{4}$ | 464,905 | 453,216 | 435,479 | 601,147 | 595,273 | 585,892 | 1.29 | 1.31 | 1.35 |
| Not Adjusted |  |  |  |  |  |  |  |  |  |
| Total business. | 1,420,220 | 1,325,047 | 1,366,947 | 1,814,744 | 1,868,169 | 1,776,966 | 1.28 | 1.41 | 1.30 |
| Manufacturers ${ }^{2}$.... | 466,743 | 454,305 | 451,055 | 609,286 | 625,743 | 608,314 | 1.31 | 1.38 | 1.35 |
| Retailers ${ }^{3}$. | 484,678 | 415,243 | 463,668 | 602,475 | 640,946 | 581,931 | 1.24 | 1.54 | 1.26 |
| Merchant wholesalers ${ }^{4}$ | 468,799 | 455,499 | 452,224 | 602,983 | 601,480 | 586,721 | 1.29 | 1.32 | 1.30 |

(p) Preliminary estimate.
(r) Revised estimate.

Data adjusted for seasonality but not price changes. Explanations of confidence intervals and sampling variability can be found on our website at <www.census.gov/mtis/how_surveys_are_collected.html>.
Source: U.S. Census Bureau, Manufacturing and Trade Inventories and Sales, February 15, 2017.

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


See footnotes and notes at the end of Table 3.
Data adjusted for seasonality but not for price changes. Explanations of confidence intervals and sampling variability can be found on our website at <www.census.gov/mtis/how_surveys_are_collected.html>.
Source: U.S. Census Bureau, Manufacturing and Trade Inventories and Sales, February 15, 2017.

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 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Dec. 2016 <br> (p) | Nov. 2016 <br> (r) | $\begin{gathered} \text { Dec. } 2015 \\ (r) \\ \hline \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { Dec. } 2016 \\ (p) \\ \hline \end{array}$ | Nov. 2016 <br> (r) | Dec. 2015 <br> (r) | $\begin{array}{\|l\|} \hline \text { Dec. } 16 / \\ \text { Nov. } 16 \\ \hline \end{array}$ | $\left\|\begin{array}{c} \text { Nov. } 16 / \\ \text { Oct. } 16 \end{array}\right\|$ | $\left\|\begin{array}{c} \text { Dec. } 16 / \\ \text { Dec. } 15 \end{array}\right\|$ | Dec. 16 (p) | Nov. 16 (r) | Dec. 15 (r) |
|  | Adjusted ${ }^{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Retail trade, total. | 415,242 | 410,174 | 396,893 | 609,010 | 608,687 | 588,432 | 0.1 | 0.9 | 3.5 | 1.47 | 1.48 | 1.48 |
|  | Total (excl. motor veh. \& parts) | 315,891 | 313,906 | 304,346 | 395,719 | 394,198 | 390,279 | 0.4 | 0.5 | 1.4 | 1.25 | 1.26 | 1.28 |
| 441 | Motor vehicle \& parts dealers | 99,351 | 96,268 | 92,547 | 213,291 | 214,489 | 198,153 | -0.6 | 1.6 | 7.6 | 2.15 | 2.23 | 2.14 |
| 442,3 | Furniture, home furn., elect. \& appl. stores | 17,222 | 17,390 | 17,458 | 26,795 | 26,883 | 27,352 | -0.3 | 0.1 | -2.0 | 1.56 | 1.55 | 1.57 |
| 444 | Building materials, garden equip \& supplies. | 30,198 | 29,838 | 29,201 | 54,944 | 54,770 | 52,392 | 0.3 | 1.0 | 4.9 | 1.82 | 1.84 | 1.79 |
| 445 | Food \& beverage stores | 59,249 | 59,379 | 57,848 | 46,225 | 45,866 | 44,920 | 0.8 | 0.4 | 2.9 | 0.78 | 0.77 | 0.78 |
| 448 | Clothing \& clothing access. stores. | 21,481 | 21,458 | 21,224 | 54,209 | 54,050 | 53,765 | 0.3 | 0.8 | 0.8 | 2.52 | 2.52 | 2.53 |
| 452 | General merchandise stores | 55,300 | 55,522 | 56,821 | 80,809 | 80,629 | 82,378 | 0.2 | 0.3 | -1.9 | 1.46 | 1.45 | 1.45 |
| 4521 | Dept. strs. (excl. leased depts.). | 12,591 | 12,665 | 13,754 | 26,997 | 26,955 | 28,567 | 0.2 | -0.1 | -5.5 | 2.14 | 2.13 | 2.08 |
|  | Not Adjusted |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Retail trade, total | 484,678 | 415,243 | 463,668 | 602,475 | 640,946 | 581,931 | -6.0 | 1.7 | 3.5 | 1.24 | 1.54 | 1.26 |
|  | Total (excl. motor veh. \& parts). | 385,105 | 326,439 | 371,352 | 386,537 | 422,579 | 380,982 | -8.5 | 1.0 | 1.5 | 1.00 | 1.29 | 1.03 |
| 441 | Motor vehicle \& parts dealers. | 99,573 | 88,804 | 92,316 | 215,938 | 218,367 | 200,949 | -1.1 | 3.1 | 7.5 | 2.17 | 2.46 | 2.18 |
| 442,3 | Furniture,home furn., elect. \& appl. stores. | 23,334 | 19,876 | 23,695 | 27,036 | 30,754 | 27,626 | -12.1 | 5.6 | -2.1 | 1.16 | 1.55 | 1.17 |
| 444 | Building materials, garden equip \& supplies........ | 27,522 | 29,053 | 27,044 | 52,032 | 53,072 | 49,615 | -2.0 | -0.8 | 4.9 | 1.89 | 1.83 | 1.83 |
| 445 | Food \& beverage stores. | 65,048 | 59,290 | 62,673 | 46,867 | 48,071 | 45,558 | -2.5 | 1.8 | 2.9 | 0.72 | 0.81 | 0.73 |
| 448 | Clothing \& clothing access. stores.. | 34,333 | 23,438 | 33,123 | 51,119 | 58,320 | 50,647 | -12.3 | 0.5 | 0.9 | 1.49 | 2.49 | 1.53 |
| 452 | General merchandise stores. | 75,135 | 60,535 | 76,391 | 77,439 | 91,171 | 78,928 | -15.1 | 0.3 | -1.9 | 1.03 | 1.51 | 1.03 |
| 4521 | Dept. strs. (excl. leased depts.)... | 21,687 | 15,210 | 23,425 | 25,188 | 31,915 | 26,624 | -21.1 | -1.7 | -5.4 | 1.16 | 2.10 | 1.14 |

(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.
Data adjusted for seasonality but not price changes. Explanations of confidence intervals and sampling variability can be found on our website at <www.census.gov/mtis/how_surveys_are_collected.html>.
Source: U.S. Census Bureau, Manufacturing and Trade Inventories and Sales, February 15, 2017.


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