




MONTHLY ADVANCE ECONOMIC INDICATORS REPORT, MAY 2023

Release Number: CB23-109

June 28, 2023 — The U.S. Census Bureau announced the following international trade, wholesale inventories, and retail inventories advance statistics for May 2023:

	 ADVANCE INTERNATIONAL TRADE: GOODS DEFICIT	 ADVANCE WHOLESALE INVENTORIES	 ADVANCE RETAIL INVENTORIES
MAY 2023	\$91.1 Billion -6.1%°	\$912.9 Billion -0.1%*	\$778.7 Billion +0.8%
APRIL 2023	\$97.1 Billion	\$913.9 Billion (R)	\$772.5 Billion (R)
Next release: July 27, 2023.			
<small>* The 90 percent confidence interval includes zero. There is insufficient evidence to conclude that the actual change is different from zero. ° Statistical significance is not applicable or not measurable. Data adjusted for seasonality but not price changes. Source: U.S. Census Bureau; Advance Economic Indicators Report, June 28, 2023.</small>			

Advance International Trade in Goods

The international trade deficit was \$91.1 billion in May, down \$6.0 billion from \$97.1 billion in April. Exports of goods for May were \$162.8 billion, \$1.0 billion less than April exports. Imports of goods for May were \$254.0 billion, \$6.9 billion less than April imports.

Advance Wholesale Inventories

Wholesale inventories for May, adjusted for seasonal variations and trading day differences, but not for price changes, were estimated at an end-of-month level of \$912.9 billion, down 0.1 percent (± 0.2 percent)* from April 2023, and were up 3.6 percent (± 0.9 percent) from May 2022. The March 2023 to April 2023 percentage change was revised from down 0.1 percent (± 0.4 percent)* to down 0.3 percent (± 0.4 percent)*.

Advance Retail Inventories

Retail inventories for May, adjusted for seasonal variations and trading day differences, but not for price changes, were estimated at an end-of-month level of \$778.7 billion, up 0.8 percent (± 0.2 percent) from April 2023, and were up 7.0 percent (± 0.7 percent) from May 2022. The March 2023 to April 2023 percentage change was revised from up 0.1 percent (± 0.2 percent)* to up 0.3 percent (± 0.2 percent).

The June 2023 Advance report is scheduled for release on July 27, 2023. View the full schedule in the Economic Briefing Room: <www.census.gov/economic-indicators/>. The full text and tables of this release can be found at <www.census.gov/econ/indicators/>.

Data Inquiries

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EXPLANATORY NOTES

International Trade in Goods

Goods (Census Basis)

Data for goods on a Census basis are compiled from the documents collected by the U.S. Customs and Border Protection and reflect the movement of goods between foreign countries and the 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and U.S. Foreign Trade Zones. They include government and non-government shipments of goods and exclude shipments between the United States and its territories and possessions; transactions with U.S. military, diplomatic, and consular installations abroad; U.S. goods returned to the United States by its Armed Forces; personal and household effects of travelers; and in-transit shipments. Data for U.S. exports to Canada are derived from import data compiled by Canada. For more information on the data exchange and substitution please refer to the FT-900. The General Imports value reflects the total arrival of merchandise from foreign countries that immediately enters consumption channels, warehouses, or Foreign Trade Zones.

For imports, the value reported is the U.S. Customs and Border Protection appraised value of merchandise—generally, the price paid for merchandise for export to the United States. Import duties, freight, insurance, and other charges incurred in bringing merchandise to the United States are excluded.

Exports are valued at the free alongside ship value of merchandise at the U.S. port of export, based on the transaction price including inland freight, insurance, and other charges incurred in placing the merchandise alongside the carrier at the U.S. port of exportation.

Additional information on coverage and valuation are available in the Guide to Foreign Trade Statistics, <www.census.gov/foreign-trade/guide/sec2.html#coverage> and <www.census.gov/foreign-trade/guide/sec2.html#valuation>, respectively.

Nonsampling Errors

Goods data are a complete enumeration of documents collected by the U.S. Customs and Border Protection and are not subject to sampling errors. This report presents current month statistics which reflect nearly complete coverage. Current month statistics reflecting complete coverage will be published in the upcoming U.S. International Trade in Goods and Services report (FT-900). Statistics for other months shown reflect complete coverage and appear in the most recently published FT-900. Quality assurance procedures are performed at every stage of collection, processing, and tabulation. However, the data are still subject to several types of nonsampling errors. Information on nonsampling errors and other quality issues are available in the Guide to Foreign Trade Statistics, <www.census.gov/foreign-trade/guide/sec2.html>.

The U.S. Census Bureau recommends that data users incorporate this information into their analyses, as nonsampling errors could impact the conclusion drawn from the results. For a detailed discussion of errors affecting the goods data, see U.S. Merchandise Trade Statistics: A Quality Profile (October 2014), available at

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<www.census.gov/foreign-trade/aip/quality_profile10032014.pdf> or from the Economic Indicators Division, U.S. Census Bureau.

Adjustments for Seasonal and Trading-Day Variations

Goods data are presented on a seasonally adjusted and not seasonally adjusted basis. Seasonally adjusted (and/or trading day adjusted data) are produced using X-13ARIMA-SEATS software to develop monthly adjustment factors. Goods data are initially classified under the Harmonized Commodity Description and Coding System (Harmonized System), which is an internationally accepted standard for the commodity classification of traded goods. Combining trade into approximately 140 export and 140 import end-use categories makes it possible to examine goods according to their principal uses. These categories are used as the basis for computing the seasonal and trading-day adjusted data. These adjusted data are then summed to the six end-use aggregates for publication.

For more information, visit the seasonal adjustment section of the Guide to Foreign Trade here:

<www.census.gov/foreign-trade/guide/sec2.html#seasonal>.

Retail and Wholesale Inventories

National estimates of end-of-month inventories are based on data from the Monthly Retail Trade Survey and the Monthly Wholesale Trade Survey. Additional information for each survey can be found at <www.census.gov/retail> and <www.census.gov/wholesale>. The advance estimates contained in this report are not incorporated into the full MRTS and MWTS time series.

The MRTS and MWTS samples selected to measure inventories consist of a stratified simple random sampling method of approximately 11,000 retail firms and 4,200 wholesale firms located in the United States. The retail and wholesale samples include firms of all sizes and are updated on a quarterly basis to account for new retail and wholesale firms, deaths, and other changes to the universe.

Data for nonresponding firms are imputed based on data for similar-sized firms classified in the same kind of business. For surveyed Retail companies, approximately 44.4 percent provided data for this reporting period resulting in a total quantity response rate of 52.8 percent. For surveyed Wholesale companies, approximately 54.8 percent provided data for this reporting period resulting in a total quantity response rate of 59.8 percent.

MRTS estimates cover companies with one or more establishments that sell merchandise and related services to final consumers. Nonemployers are represented in the retail estimates through benchmarking to prior annual survey estimates that include nonemployer sales based on administrative records.

MWTS estimates cover wholesale merchants who sell goods on their own account and include such businesses as wholesale merchants or jobbers, industrial distributors, exporters, and importers. Sales offices and branches maintained by manufacturing, refining, or mining firms for the purpose of marketing their products are not covered in this report. Also excluded is NAICS Industry Group 4251: Wholesale Electronic Markets and Agents and Brokers.

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Reliability of Estimates

Because the retail and wholesale estimates are based on a sample survey, they contain sampling error and nonsampling error.

Sampling error is the difference between the estimate and the result that would be obtained from a complete enumeration of the sampling frame conducted under the same survey conditions. This error occurs because only a subset of the entire sampling frame is measured in a sample survey. Standard errors and coefficients of variation are estimated measures of sampling variation.

The margin of sampling error gives a range about the estimate which is a 90 percent confidence interval. If, for example, the percentage change estimate is +1.2 percent and its estimated standard error is 0.9 percent, then the margin of sampling error is $\pm 1.753 \times 0.9$ percent or ± 1.6 percent, and the 90 percent confidence interval is -0.4 percent to +2.8 percent. If the interval contains 0, then one does not have sufficient evidence to conclude at the 90 percent confidence level that the change is different from zero and therefore the change is not statistically significant. Estimated changes are statistically significant unless otherwise noted. For a monthly total, the estimated coefficient of variation is given. The resulting confidence interval is the estimated value $\pm 1.753 \times CV \times$ (the estimated monthly total).

Nonsampling error encompasses all other factors that contribute to the total error of a sample survey estimate. This type of error can occur because of nonresponse, insufficient coverage of the universe of businesses, mistakes in the recording and coding of data, and other errors of collection, response, coverage, or processing. Although nonsampling error is not measured directly, the Census Bureau employs quality control procedures throughout the process to minimize this type of error.

The U.S. Census Bureau recommends that individuals using retail and wholesale estimates incorporate this information into their analyses, as sampling error and nonsampling error could affect the conclusions drawn from the estimates.

Adjustments for Seasonal Variations

Concurrent seasonal adjustment is used to adjust the retail and wholesale inventories estimates for seasonal variations. 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 retail and wholesale estimates of current and previous month inventories and for inventories estimates a year ago as well.

Statement Regarding Natural Disasters: For information on the impact of natural disasters, including hurricanes, on the compilation of this report, please see <[Wholesale Natural Disaster FAQs](#)> and <[Retail Natural Disaster FAQs](#)>.

Data Availability

The Advance Economic Indicators Report is available at <www.census.gov/econ/indicators/index.html>. For archived versions of the Advance Economic Indicators Report please visit the Historical Data tab at the following: <www.census.gov/econ/indicators/historical_data.html>.

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RESOURCES

API

The Census Bureau's application programming interface lets developers create custom apps to reach new users and makes key demographic, socio-economic and housing statistics more accessible than ever before.

<www.census.gov/developers>

FRED Mobile App



Receive the latest updates on the nation's key economic indicators by downloading the FRED App <fred.stlouisfed.org/fred-mobile> for both Apple and Android devices. FRED, the signature database of the Federal Reserve Bank of St. Louis, now incorporates the Census Bureau's 13 economic indicators.

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* The 90 percent confidence interval includes zero. There is insufficient statistical evidence to conclude that the actual change is different from zero.

° Statistical significance is not applicable or not measurable for this survey.

(R) Revised from the last published Monthly Retail Trade Report and Monthly Wholesale Trade: Sales and Inventories Report

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Table 1. U.S. International Trade in Goods by Principal End-Use Category (1)

In millions of dollars. Details may not equal totals due to seasonal adjustment and rounding. (X) – Not applicable

	Goods - Census Basis (2)						
	Monthly				Percent change		
	May 2023 (a)	April 2023	March 2023	May 2022	May 2023/ April 2023	April 2023/ March 2023	May 2023/ May 2022
Seasonally Adjusted							
Balance	-91,133	-97,095	-82,467	-102,610	(X)	(X)	(X)
Exports	162,844	163,824	172,990	175,994	-0.6	-5.3	-7.5
Foods, Feeds, & Beverages	12,319	14,357	14,312	15,603	-14.2	0.3	-21.1
Industrial Supplies (3)	56,914	58,667	64,785	72,773	-3.0	-9.4	-21.8
Capital Goods	49,703	49,183	49,516	47,299	1.1	-0.7	5.1
Automotive Vehicles, etc.	15,404	14,178	14,207	13,251	8.7	-0.2	16.3
Consumer Goods	21,673	20,770	22,490	21,097	4.3	-7.6	2.7
Other Goods	6,831	6,669	7,679	5,971	2.4	-13.2	14.4
Imports	253,977	260,919	255,456	278,604	-2.7	2.1	-8.8
Foods, Feeds, & Beverages	15,896	16,389	16,832	17,863	-3.0	-2.6	-11.0
Industrial Supplies (3)	55,996	59,536	57,679	71,857	-5.9	3.2	-22.1
Capital Goods	71,805	70,904	70,695	71,420	1.3	0.3	0.5
Automotive Vehicles, etc.	37,487	37,140	35,185	33,561	0.9	5.6	11.7
Consumer Goods	61,422	66,293	64,470	73,691	-7.3	2.8	-16.6
Other Goods	11,371	10,657	10,595	10,213	6.7	0.6	11.3
Not Seasonally Adjusted							
Balance	-96,681	-88,283	-78,136	-106,341	(X)	(X)	(X)
Exports	167,462	162,388	184,621	179,048	3.1	-12.0	-6.5
Foods, Feeds, & Beverages	12,517	13,046	14,563	15,177	-4.1	-10.4	-17.5
Industrial Supplies (3)	59,585	59,035	67,382	75,628	0.9	-12.4	-21.2
Capital Goods	49,572	48,699	53,983	46,545	1.8	-9.8	6.5
Automotive Vehicles, etc.	16,638	14,509	15,957	14,225	14.7	-9.1	17.0
Consumer Goods	22,174	20,451	24,723	21,405	8.4	-17.3	3.6
Other Goods	6,976	6,647	8,012	6,068	4.9	-17.0	15.0
Imports	264,143	250,670	262,756	285,388	5.4	-4.6	-7.4
Foods, Feeds, & Beverages	17,360	16,536	18,065	19,345	5.0	-8.5	-10.3
Industrial Supplies (3)	60,494	59,575	59,121	76,026	1.5	0.8	-20.4
Capital Goods	73,884	68,159	73,799	72,487	8.4	-7.6	1.9
Automotive Vehicles, etc.	38,440	36,752	38,165	34,010	4.6	-3.7	13.0
Consumer Goods	62,545	59,244	61,857	73,453	5.6	-4.2	-14.9
Other Goods	11,419	10,404	11,749	10,066	9.8	-11.5	13.4

(a) Advance statistics

(1) For a listing of the detail included in each end-use category, see <www.census.gov/foreign-trade/reference/codes/enduse/exeumstr.txt>.

(2) Data are presented on a Census basis. The information needed to convert to a balance of payment basis is not available.

(3) Includes petroleum and petroleum products.

NOTES:

* Current month statistics reflect nearly complete coverage; current month statistics reflecting complete coverage will be published in the upcoming U.S. International Trade in Goods and Services report (FT-900). Statistics for other months shown reflect complete coverage and appear in the most recently published FT-900.

* For information on data sources, nonsampling errors, and definitions, see the explanatory notes in this release or at <www.census.gov/econ/indicators/advance_report.pdf>.

Source: U.S. Census Bureau; Advance Economic Indicators Report, June 28, 2023.

Table 2. Levels and Percent Changes for Inventories

Inventories estimates are shown in millions of dollars. Estimates are based on data from the Monthly Wholesale Trade Survey and the Monthly Retail Trade Survey.

	Inventories					
	Monthly			Percent change		
	May 2023 (a)	April 2023 (r)	May 2022 (r)	May 2023/ April 2023	April 2023/ March 2023	May 2023/ May 2022
Adjusted¹						
Merchant wholesale ² trade, total	912,928	913,931	880,823	-0.1	-0.3	3.6
Durable goods	566,272	563,646	517,194	0.5	0.6	9.5
Nondurable goods	346,656	350,285	363,629	-1.0	-1.7	-4.7
Retail trade, total	778,688	772,513	728,010	0.8	0.3	7.0
Total (excl. motor veh. & parts)	560,553	560,441	556,680	0.0	-0.3	0.7
Motor vehicle & parts dealers	218,135	212,072	171,330	2.9	1.6	27.3
Not Adjusted						
Merchant wholesale ² trade, total	904,890	918,678	870,117	-1.5	-0.8	4.0
Durable goods	566,367	563,821	517,346	0.5	1.1	9.5
Nondurable goods	338,523	354,857	352,771	-4.6	-3.6	-4.0
Retail trade, total	772,734	772,104	720,925	0.1	-0.3	7.2
Total (excl. motor veh. & parts)	552,603	556,607	548,515	-0.7	-0.7	0.7
Motor vehicle & parts dealers	220,131	215,497	172,410	2.2	0.5	27.7

(a) Advance estimate

(r) Revised estimate

See footnotes and notes at the end of Table 3.

Table 3. Estimated Measures of Sampling Variability

Estimates are shown as percents and are based on data from the Monthly Wholesale Trade Survey and the Monthly Retail Trade Survey.

	Inventories					
	Monthly			Standard Error of		
	Coefficient of Variation			Percent Change		
	May 2023 (a)	April 2023 (r)	May 2022 (r)	May 2023/ April 2023	April 2023/ March 2023	May 2023/ May 2022
Merchant wholesale ² trade, total	2.0	2.0	1.7	0.1	0.2	0.5
Durable goods	3.0	2.9	2.6	0.2	0.2	0.7
Nondurable goods	1.7	1.7	1.6	0.3	0.2	0.8
Retail trade, total	1.3	1.3	0.9	0.1	0.1	0.4
Total (excl. motor veh. & parts)	1.5	1.5	1.0	0.1	0.1	0.4
Motor vehicle & parts dealers	1.8	1.9	1.5	0.2	0.2	1.3

(a) Advance estimate

(r) Revised estimate

(1) Estimates are concurrently adjusted for seasonal variation and trading day differences, but not for price changes. Concurrent seasonal adjustment uses all available not adjusted estimates as input to the X-13ARIMA-SEATS program. The factors derived from the program are used in calculating all seasonally adjusted estimates shown in this table.

(2) The 2012 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.

NOTES:

Estimated measures of sampling variability are based on estimates not adjusted for seasonal variation. Additional information on confidentiality protection, sampling error, nonsampling error, sample design, and definitions may be found at www.census.gov/wholesale/www/how_surveys_are_collected/monthly_methodology.html for wholesale and at www.census.gov/retail/mrts/how_surveys_are_collected.html for retail.