

MONTHLY FULL REPORT ON MANUFACTURERS' SHIPMENTS, INVENTORIES AND ORDERS JULY 2019

Release Number: CB 19-123 M3-2 (19)-07

September 5, 2019 — The U.S. Census Bureau announces the July full report on manufacturers' shipments, inventories and orders:

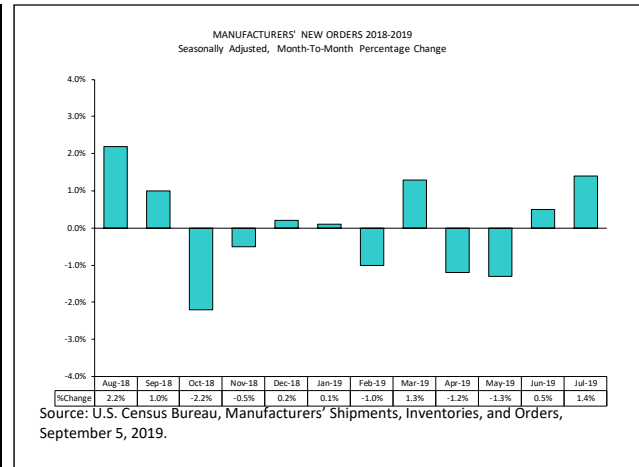


MANUFACTURED GOODS – NEW ORDERS

JULY 2019	\$500.3 billion	+1.4%°
JUNE 2019 (revised)	\$493.4 billion	+0.5%°

Next release: October 3, 2019

Data adjusted for seasonal variation but not for price changes. Statistical significance is not measurable for this survey. The Manufacturers' Shipments, Inventories, and Orders estimates are not based on a probability sample, so the sampling error of these estimates cannot be measured nor can the confidence intervals be computed.
Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories and Orders, September 5, 2019.



Summary

New orders for manufactured goods in July, up two consecutive months, increased \$6.9 billion or 1.4 percent to \$500.3 billion, the U.S. Census Bureau reported today. This followed a 0.5 percent June increase. Shipments, down following two consecutive monthly increases, decreased \$0.9 billion or 0.2 percent to \$504.0 billion. This followed a 0.1 percent June increase. Unfilled orders, up following three consecutive monthly decreases, increased \$0.6 billion or virtually unchanged to \$1,161.5 billion. This followed a 0.6 percent June decrease. The unfilled orders-to-shipments ratio was 6.67, up from 6.55 in June. Inventories, up ten of the last eleven months, increased \$1.2 billion or 0.2 percent to \$696.5 billion. This followed a 0.1 percent June increase. The inventories-to-shipments ratio was 1.38, unchanged from June.

New Orders

New orders for manufactured durable goods in July, up two consecutive months, increased \$5.0 billion or 2.0 percent to \$250.2 billion, down from the previously published 2.1 percent increase. This followed a 1.8 percent June increase. Transportation equipment, also up two consecutive months, drove the increase,

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\$5.7 billion or 7.0 percent to \$86.4 billion. New orders for manufactured nondurable goods increased \$2.0 billion or 0.8 percent to \$250.1 billion.

Shipments

Shipments of manufactured durable goods in July, down following two consecutive monthly increases, decreased \$2.9 billion or 1.1 percent to \$253.9 billion, unchanged from the previously published decrease. This followed a 0.9 percent June increase. Transportation equipment, also down following two consecutive monthly increases, led the decrease, \$1.8 billion or 2.0 percent to \$86.5 billion. Shipments of manufactured nondurable goods, up following two consecutive monthly decreases, increased \$2.0 billion or 0.8 percent to \$250.1 billion. This followed a 0.7 percent June decrease. Petroleum and coal products, also up following two consecutive monthly decreases, led the increase, \$1.3 billion or 2.4 percent to \$53.4 billion.

Unfilled Orders

Unfilled orders for manufactured durable goods in July, up following three consecutive monthly decreases, increased \$0.6 billion or virtually unchanged to \$1,161.5 billion, down from the previously published 0.1 percent increase. This followed a 0.6 percent June decrease. Fabricated metal products, up two consecutive months, led the increase, \$0.4 billion or 0.5 percent to \$86.5 billion.

Inventories

Inventories of manufactured durable goods in July, up twelve of the last thirteen months, increased \$1.4 billion or 0.3 percent to \$427.1 billion, down from the previously published 0.4 percent increase. This followed a 0.3 percent June increase. Transportation equipment, also up twelve of the last thirteen months, led the increase, \$1.4 billion or 1.0 percent to \$141.1 billion. Inventories of manufactured nondurable goods, down four consecutive months, decreased \$0.2 billion or 0.1 percent to \$269.4 billion. This followed a virtually unchanged June decrease. Chemical products, down following two consecutive monthly increases, drove the decrease, \$0.2 billion or 0.3 percent to \$90.7 billion. By stage of fabrication, July materials and supplies increased 0.1 percent in durable goods and decreased 0.7 percent in nondurable goods. Work in process increased 0.6 percent in durable goods and 0.2 percent in nondurable goods. Finished goods increased 0.3 percent in durable goods and 0.2 percent in nondurable goods.

The Advance Report on durable goods for August is scheduled for release on September 27, 2019 at 8:30 a.m. EDT and the Full Report on October 3, 2019 at 10:00 a.m. EDT. 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/m3>.

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EXPLANATORY NOTES

Figures in text are adjusted for seasonality, but not for inflation. Figures on new and unfilled orders exclude data for semiconductor manufacturing.

“Virtually unchanged” indicates that the change is less than 0.05 percent for a percent increase or decrease.

Description of the survey

This report is compiled from results of the U.S. Census Bureau’s Manufacturers’ Shipments, Inventories, and Orders (M3) survey, which is a voluntary survey authorized by Title 13 of the United States Code. This survey provides statistics on a calendar-month basis for manufacturers' value of shipments, new orders (net of cancellations), end-of-month order backlog (unfilled orders), end-of-month total inventory (at current cost or market value), and inventories by stage of fabrication (materials and supplies, work-in-process, and finished goods). Data published from the M3 survey are based on a panel of approximately 5,000 reporting units that represent approximately 3,100 companies and provide an indication of month-to-month change for the Manufacturing Sector. These reporting units may be divisions of diversified large companies, large homogenous companies, or single-unit manufacturers in 92 industry categories, which are combined into 65 publication levels due to the small monthly panel size. The survey methodology assumes that the month-to-month changes of the total operations of the reporting units in the M3 panel effectively represent the month-to-month movements of all establishments that make up the category. The companies for which shipments data are currently reported or imputed in the M3 survey represent approximately 64 percent of the total value of shipments for manufacturing establishments in the 2012 Economic Census, and these companies include almost two-thirds of the manufacturing companies with \$500 million or more in shipments in the 2012 Economic Census. The companies for which shipments data are currently reported in the M3 survey represent approximately 57 percent of the total value of shipments for manufacturing establishments in the 2012 Economic Census. Statistics based on the M3 panel differ from the results that would be obtained from a complete enumeration of all manufacturing companies. The M3 panel is not based on a probability sample; therefore, the sampling errors that are normally provided with sample surveys cannot be measured. Nonsampling errors are attributable to many sources. The use of company or divisional reports to estimate the monthly change for establishments is one source of nonsampling error. The use of primarily large companies to represent the month-to-month movement of all companies is another potential source. Any corrections will be published in the full report. Corrections received after the full report will be released in the next month’s advance report. Any

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revisions made later than two months will be reflected in the annual benchmark publication. Additional survey documentation can be found on our web site:

www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html.

RESOURCES

API

The Census Bureau's application programming interface (API) 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/.

NEW TIME SERIES

Beginning with the release of June 2018 data on July 26, 2018, historical estimates of the Monthly Advance Report on Manufacturers' Shipments, Inventories and Orders are available on a seasonally adjusted basis as well as a not seasonally adjusted basis at: <https://www.census.gov/econ/currentdata/>.

FRED Mobile App



Receive the latest updates on the nation's key economic indicators by downloading the FRED App <https://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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Table 2. Value of Manufacturers' New Orders for Industry Groups¹

[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Seasonally Adjusted						Not Seasonally Adjusted						
	Monthly			Percent Change			Monthly				Year to date		
	July 2019 ^p	June 2019 ^f	May 2019	June - July	May - June	Apr. - May	July 2019 ^p	June 2019 ^f	May 2019	July 2018	2019 ^p	2018	% Change 2019/2018
All manufacturing industries ²	500,278	493,351	490,693	1.4	0.5	-1.3	486,027	510,292	505,259	477,354	3,459,902	3,446,535	0.4
Excluding transportation ²	413,919	412,663	413,163	0.3	-0.1	0.0	411,963	423,873	428,452	408,497	2,878,889	2,858,597	0.7
Excluding defense ²	486,609	481,535	476,266	1.1	1.1	-0.8	475,940	494,571	492,263	467,329	3,362,951	3,353,268	0.3
With unfilled orders ²	174,786	169,906	167,262	2.9	1.6	-3.6	164,364	179,975	168,369	159,968	1,212,326	1,228,559	-1.3
Durable goods industries ²	250,181	245,231	240,923	2.0	1.8	-2.3	233,644	258,174	244,687	226,653	1,727,305	1,722,631	0.3
Primary metals.....	20,198	20,419	20,369	-1.1	0.2	-0.6	19,933	20,853	20,938	21,284	148,212	152,635	-2.9
Iron and steel mills.....	10,201	10,223	10,318	-0.2	-0.9	-0.1	10,292	10,537	10,555	10,957	75,714	76,938	-1.6
Aluminum and nonferrous metals.....	8,530	8,727	8,590	-2.3	1.6	-0.3	8,217	8,792	8,838	8,970	61,791	65,824	-6.1
Ferrous metal foundries.....	1,467	1,469	1,461	-0.1	0.5	-5.6	1,424	1,524	1,545	1,357	10,707	9,873	8.4
Fabricated metal products.....	33,899	34,178	33,577	-0.8	1.8	0.4	33,569	34,618	35,618	32,469	239,156	234,722	1.9
Machinery.....	32,836	33,100	32,560	-0.8	1.7	0.1	31,623	34,339	33,545	31,661	232,387	231,498	0.4
Construction machinery.....	2,839	2,866	2,692	-0.9	6.5	1.5	2,529	2,634	2,691	2,567	19,935	20,602	-3.2
Mining, oil field, and gas field machinery.....	1,405	1,392	1,453	0.9	-4.2	-0.1	1,358	1,377	1,405	1,448	9,506	10,201	-6.8
Industrial machinery.....	2,689	2,666	2,609	0.9	2.2	-2.6	2,570	3,022	2,396	2,460	18,207	17,890	1.8
Photographic equipment.....	461	589	543	-21.7	8.5	-0.5	477	632	453	633	3,426	3,441	-0.4
Ventilation, heating, air-conditioning, and refrigeration equipment.....	4,007	4,058	4,119	-1.3	-1.5	-0.9	4,254	4,820	4,694	4,295	30,120	28,261	6.6
Metalworking machinery.....	2,734	2,561	2,583	6.8	-0.9	1.5	2,610	2,492	2,573	2,352	17,600	19,048	-7.6
Turbines, generators, and other power transmission equipment.....	4,453	4,460	4,260	-0.2	4.7	-3.4	4,255	4,504	4,428	4,106	30,608	28,661	6.8
Material handling equipment.....	2,900	3,142	2,839	-7.7	10.7	1.6	2,749	3,366	2,917	2,814	20,013	19,972	0.2
Computers and electronic products ²	23,780	23,691	24,053	0.4	-1.5	0.5	21,362	26,239	22,659	21,168	160,822	155,445	3.5
Computers.....	584	563	606	3.7	-7.1	-7.6	542	707	591	831	4,143	5,343	-22.5
Nondefense communications equipment.....	3,635	3,591	3,512	1.2	2.2	3.1	2,953	4,212	3,162	2,769	23,362	22,207	5.2
Defense communications equipment.....	277	249	191	11.2	30.4	-15.5	243	233	197	267	1,734	1,898	-8.6
Electronic components.....	3,607	3,586	3,584	0.6	0.1	1.3	3,675	3,779	3,612	3,546	24,915	24,993	-0.3
Nondefense search and navigation equipment.....	1,572	1,585	1,737	-0.8	-8.8	9.7	1,501	1,724	1,614	1,411	11,466	10,943	4.8
Defense search and navigation equipment.....	2,895	3,060	3,080	-5.4	-0.6	-2.2	2,328	3,478	2,718	2,295	20,368	18,276	11.4
Electromedical, measuring, and control instruments.....	9,301	9,124	9,385	1.9	-2.8	-0.6	8,429	9,881	9,014	8,564	62,569	62,010	0.9
Electrical equipment, appliances, and components.....	12,017	11,963	11,881	0.5	0.7	1.3	11,529	12,553	12,150	10,719	81,536	78,021	4.5
Electric lighting equipment.....	1,126	1,123	1,191	0.3	-5.7	13.4	1,084	1,199	1,217	1,010	7,500	7,354	2.0
Household appliances.....	1,749	1,753	1,782	-0.2	-1.6	2.5	1,634	1,777	1,883	1,506	11,783	11,742	0.3
Electrical equipment.....	3,245	3,242	3,126	0.1	3.7	0.4	3,101	3,549	3,163	2,948	22,217	21,489	3.4
Transportation equipment.....	86,359	80,688	77,530	7.0	4.1	-7.5	74,064	86,419	76,807	68,857	581,013	587,938	-1.2
Motor vehicle bodies, parts, and trailers.....	28,286	28,262	27,975	0.1	1.0	0.6	24,857	28,013	29,784	23,155	196,868	186,458	5.6
Nondefense aircraft and parts.....	10,613	7,183	3,567	47.8	101.4	-52.0	11,419	8,673	795	8,742	61,446	95,007	-35.3
Defense aircraft and parts.....	3,530	2,628	4,240	34.3	-38.0	-20.9	2,548	5,375	2,745	3,566	29,463	30,157	-2.3
Ships and boats.....	1,822	1,045	2,647	74.4	-60.5	-7.1	388	1,857	2,888	1,569	18,799	21,664	-13.2
Furniture and related products.....	6,879	6,903	6,883	-0.3	0.3	2.9	6,778	6,963	7,131	6,376	47,912	46,150	3.8
Nondurable goods industries.....	250,097	248,120	249,770	0.8	-0.7	-0.3	252,383	252,118	260,572	250,701	1,732,597	1,723,904	0.5

^p Preliminary

^f Revised data due to late receipts and concurrent seasonal adjustment.

¹ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.

² Data on new orders are not available for the semiconductor industry. Estimates and percent changes for new orders exclude semiconductor industry data.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting.

Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at

<www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 3. Value of Manufacturers' Unfilled Orders for Industry Groups¹

[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Seasonally Adjusted						Not Seasonally Adjusted				% Change July 2019/ 2018
	Monthly			Percent Change			Monthly				
	July 2019 ^p	June 2019 ^f	May 2019	June - July	May - June	Apr. - May	July 2019 ^p	June 2019 ^f	May 2019	July 2018	
All manufacturing industries ²	1,161,545	1,160,974	1,168,212	0.0	-0.6	-0.8	1,164,535	1,164,549	1,172,756	1,168,975	-0.4
Excluding transportation ²	368,372	367,692	367,397	0.2	0.1	-0.2	370,709	370,773	372,586	366,608	1.1
Excluding defense ²	964,459	962,875	967,057	0.2	-0.4	-0.9	966,936	964,236	972,193	985,211	-1.9
Durable goods industries ²	1,161,545	1,160,974	1,168,212	0.0	-0.6	-0.8	1,164,535	1,164,549	1,172,756	1,168,975	-0.4
Primary metals.....	31,236	31,209	31,207	0.1	0.0	-0.6	31,767	31,632	31,742	31,590	0.6
Iron and steel mills.....	16,100	15,984	15,939	0.7	0.3	-1.4	16,685	16,414	16,336	17,295	-3.5
Aluminum and nonferrous metals.....	11,681	11,753	11,795	-0.6	-0.4	0.9	11,635	11,767	11,899	11,011	5.7
Ferrous metal foundries.....	3,455	3,472	3,473	-0.5	0.0	-1.6	3,447	3,451	3,507	3,284	5.0
Fabricated metal products.....	86,526	86,132	85,779	0.5	0.4	-0.1	87,779	87,351	87,781	85,460	2.7
Machinery.....	103,059	103,033	103,379	0.0	-0.3	-0.7	103,119	103,008	104,207	104,856	-1.7
Construction machinery.....	5,195	5,291	5,575	-1.8	-5.1	-6.9	4,884	5,095	5,731	5,896	-17.2
Mining, oil field, and gas field machinery.....	3,701	3,760	3,909	-1.6	-3.8	-3.5	3,701	3,760	3,909	4,253	-13.0
Industrial machinery.....	7,838	7,913	8,119	-0.9	-2.5	-1.6	7,858	7,929	8,203	8,502	-7.6
Photographic equipment.....	1,286	1,365	1,323	-5.8	3.2	0.2	1,204	1,267	1,258	1,536	-21.6
Ventilation, heating, air-conditioning, and refrigeration equipment.....	8,048	8,054	8,091	-0.1	-0.5	-0.6	8,048	8,142	8,391	7,000	15.0
Metalworking machinery.....	6,916	6,857	6,893	0.9	-0.5	-0.6	6,974	6,865	7,021	7,927	-12.0
Turbines, generators, and other power transmission equipment.....	28,696	28,614	28,586	0.3	0.1	-0.4	28,696	28,614	28,586	29,638	-3.2
Material handling equipment.....	13,073	13,060	12,766	0.1	2.3	0.1	13,272	13,289	12,733	12,863	3.2
Computers and electronic products ²	118,386	118,301	118,202	0.1	0.1	0.1	118,451	118,957	119,056	115,323	2.7
Computers.....	2,137	2,147	2,181	-0.5	-1.6	-1.5	2,137	2,147	2,181	2,033	5.1
Nondefense communications equipment.....	24,594	24,569	24,565	0.1	0.0	-0.2	24,434	24,636	24,807	24,628	-0.8
Defense communications equipment.....	1,085	1,114	1,181	-2.6	-5.7	-7.2	1,080	1,120	1,187	1,459	-26.0
Electronic components.....	12,793	12,787	12,850	0.0	-0.5	-0.1	12,790	12,682	12,952	12,648	1.1
Nondefense search and navigation equipment.....	20,390	20,390	20,369	0.0	0.1	0.7	20,536	20,444	20,385	19,624	4.6
Defense search and navigation equipment.....	29,319	29,275	29,029	0.2	0.8	0.8	29,345	29,620	29,176	26,987	8.7
Electromedical, measuring, and control instruments.....	28,068	28,019	28,027	0.2	0.0	-0.2	28,129	28,308	28,368	27,944	0.7
Electrical equipment, appliances, and components.....	20,049	19,827	19,684	1.1	0.7	0.9	20,163	20,077	20,090	19,811	1.8
Electric lighting equipment.....	1,623	1,561	1,501	4.0	4.0	7.2	1,663	1,626	1,502	1,435	15.9
Household appliances.....	1,255	1,224	1,189	2.5	2.9	4.4	1,279	1,246	1,242	1,374	-6.9
Electrical equipment.....	8,024	7,996	7,975	0.4	0.3	-0.3	8,038	7,975	8,101	7,800	3.1
Transportation equipment.....	793,173	793,282	800,815	0.0	-0.9	-1.1	793,826	793,776	800,170	802,367	-1.1
Motor vehicle bodies, parts, and trailers.....	26,913	26,962	27,045	-0.2	-0.3	-0.4	26,343	26,758	27,535	26,090	1.0
Nondefense aircraft and parts.....	581,130	579,787	583,672	0.2	-0.7	-1.2	581,877	578,590	583,241	601,547	-3.3
Defense aircraft and parts.....	79,817	80,850	82,792	-1.3	-2.3	-0.6	80,721	82,078	81,870	73,018	10.5
Ships and boats.....	28,500	29,307	31,151	-2.8	-5.9	-1.1	28,537	30,560	31,801	29,246	-2.4
Furniture and related products.....	8,539	8,623	8,595	-1.0	0.3	0.6	8,853	9,181	9,159	8,929	-0.9

^p Preliminary

^f Revised data due to late receipts and concurrent seasonal adjustment.

¹ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.

² Data on unfilled orders are not available for the semiconductor industry. Estimates and percent changes for unfilled orders exclude semiconductor industry data.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 4. Value of Manufacturers' Inventories for Industry Groups¹

[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Seasonally Adjusted						Not Seasonally Adjusted				
	Monthly			Percent Change			Monthly				% Change
	July 2019 ^p	June 2019 ^r	May 2019	June - July	May - June	Apr. - May	July 2019 ^p	June 2019 ^r	May 2019	July 2018	
All manufacturing industries.....	696,484	695,281	694,247	0.2	0.1	0.2	700,858	691,897	698,116	680,361	3.0
Excluding transportation.....	555,398	555,585	555,749	0.0	0.0	-0.1	558,233	553,603	558,687	548,040	1.9
Excluding defense.....	668,103	667,206	666,395	0.1	0.1	0.2	672,362	663,786	670,109	652,923	3.0
With unfilled orders.....	348,176	347,113	346,243	0.3	0.3	0.5	351,458	345,652	348,666	336,057	4.6
Durable goods industries.....	427,068	425,643	424,560	0.3	0.3	0.5	430,621	423,472	427,216	412,243	4.5
Wood products.....	12,121	12,169	12,242	-0.4	-0.6	-0.1	11,929	11,919	12,062	12,087	-1.3
Nonmetallic mineral products.....	15,023	14,955	14,964	0.5	-0.1	0.0	15,087	15,117	15,215	14,575	3.5
Primary metals.....	35,645	35,775	36,178	-0.4	-1.1	-0.7	35,969	35,711	36,081	35,987	-0.1
Iron and steel mills.....	19,807	20,046	20,261	-1.2	-1.1	-1.0	19,931	19,966	19,964	20,298	-1.8
Aluminum and nonferrous metals.....	13,708	13,564	13,723	1.1	-1.2	-0.7	13,905	13,588	13,904	13,668	1.7
Ferrous metal foundries.....	2,130	2,165	2,194	-1.6	-1.3	2.7	2,133	2,157	2,213	2,021	5.5
Fabricated metal products.....	54,523	54,639	54,575	-0.2	0.1	-0.1	55,105	54,626	54,778	54,065	1.9
Machinery.....	72,385	72,129	71,862	0.4	0.4	0.1	72,622	71,553	72,365	68,735	5.7
Farm machinery.....	4,289	4,067	3,839	5.5	5.9	0.2	4,112	4,029	3,851	3,454	19.1
Construction machinery.....	5,948	5,793	5,763	2.7	0.5	-0.9	5,898	5,734	5,764	5,464	7.9
Mining, oil field, and gas field machinery.....	5,495	5,459	5,484	0.7	-0.5	-0.4	5,480	5,435	5,512	5,413	1.2
Industrial machinery.....	8,464	8,475	8,392	-0.1	1.0	-0.3	8,452	8,465	8,338	8,396	0.7
Photographic equipment.....	1,748	1,772	1,777	-1.4	-0.3	-1.4	1,785	1,742	1,780	1,731	3.1
Ventilation, heating, air-conditioning, and refrigeration equipment.....	5,591	5,595	5,535	-0.1	1.1	-0.7	5,635	5,624	5,934	5,005	12.6
Metalworking machinery.....	6,130	6,102	6,124	0.5	-0.4	0.0	6,178	6,040	6,128	5,986	3.2
Turbines, generators, and other power transmission equipment.....	9,571	9,675	9,762	-1.1	-0.9	-0.4	9,737	9,536	9,917	9,758	-0.2
Material handling equipment.....	5,975	6,071	6,110	-1.6	-0.6	1.2	6,097	6,084	6,120	5,767	5.7
Computers and electronic products ²	43,317	43,415	43,408	-0.2	0.0	-0.2	43,764	43,343	44,064	43,770	0.0
Computers.....	1,583	1,579	1,528	0.3	3.3	1.3	1,627	1,618	1,536	1,531	6.3
Computer storage devices.....	1,119	1,104	1,102	1.4	0.2	-0.5	1,174	1,109	1,124	1,075	9.2
Other peripheral equipment.....	1,093	1,123	1,129	-2.7	-0.5	0.4	1,119	1,089	1,166	1,184	-5.5
Nondefense communications equipment.....	4,837	4,836	4,823	0.0	0.3	-0.7	4,847	4,814	4,939	4,729	2.5
Defense communications equipment.....	721	719	716	0.3	0.4	2.1	721	719	716	677	6.5
Audio and video equipment.....	658	665	660	-1.1	0.8	1.1	653	638	619	560	16.6
Electronic components.....	7,315	7,361	7,398	-0.6	-0.5	0.0	7,372	7,390	7,444	7,418	-0.6
Nondefense search and navigation equipment.....	2,692	2,683	2,670	0.3	0.5	0.1	2,736	2,669	2,678	2,615	4.6
Defense search and navigation equipment.....	2,524	2,534	2,549	-0.4	-0.6	-0.4	2,565	2,545	2,636	2,671	-4.0
Electromedical, measuring and control instruments.....	15,559	15,573	15,569	-0.1	0.0	-0.2	15,724	15,498	15,882	15,473	1.6
Electrical equipment, appliances, and components.....	20,380	20,307	20,283	0.4	0.1	-0.1	20,745	20,411	20,576	19,214	8.0
Electric lighting equipment.....	2,255	2,248	2,248	0.3	0.0	-1.0	2,305	2,263	2,275	2,278	1.2
Household appliances.....	2,948	2,946	2,926	0.1	0.7	0.6	3,033	2,956	2,996	2,890	4.9
Electrical equipment.....	5,712	5,737	5,718	-0.4	0.3	-0.1	5,788	5,687	5,804	5,308	9.0
Batteries.....	1,958	1,960	1,960	-0.1	-1.5	-0.5	2,050	2,041	2,048	1,911	7.3
Transportation equipment.....	141,086	139,696	138,498	1.0	0.9	1.6	142,625	138,294	139,429	132,321	7.8
Automobiles.....	4,923	4,795	4,691	2.7	2.2	8.4	5,012	4,652	4,544	4,176	20.0
Light trucks and utility vehicles.....	4,843	4,904	4,907	-1.2	-0.7	0.0	5,082	4,621	4,968	4,766	6.6
Heavy duty trucks.....	2,212	2,161	2,171	2.4	-0.5	-0.5	2,297	2,210	2,274	2,303	-0.3
Motor vehicle bodies, parts, and trailers.....	26,443	26,522	26,532	-0.3	0.0	-0.3	26,736	26,100	26,452	25,818	3.6
Nondefense aircraft and parts.....	73,131	72,120	71,153	1.4	1.4	2.5	73,655	71,652	72,132	67,085	9.8
Defense aircraft and parts.....	13,396	13,357	13,269	0.3	0.7	-0.8	13,403	13,299	13,356	12,943	3.6
Ships and boats.....	3,316	3,238	3,353	2.4	-3.4	3.5	3,397	3,289	3,330	3,036	11.9
Furniture and related products.....	8,015	8,004	8,042	0.1	-0.5	-0.2	8,198	8,196	8,133	8,076	1.5
Miscellaneous durable goods.....	24,573	24,554	24,508	0.1	0.2	0.4	24,577	24,302	24,513	23,413	5.0
Nondurable goods industries.....	269,416	269,638	269,687	-0.1	0.0	-0.2	270,237	268,425	270,900	268,118	0.8
Food products.....	54,472	54,375	54,058	0.2	0.6	0.0	54,159	53,172	52,852	53,482	1.3
Grain and oilseed milling.....	5,369	5,222	5,129	2.8	1.8	-0.8	5,204	5,135	4,913	5,130	1.4
Dairy products.....	7,811	7,822	7,745	-0.1	1.0	0.7	8,057	8,079	7,993	7,804	3.2
Meat, poultry, and seafood products.....	9,506	9,448	9,271	0.6	1.9	-0.5	9,711	9,371	9,294	9,373	3.6
Beverage and tobacco products.....	25,300	25,227	25,072	0.3	0.6	0.4	24,410	24,638	25,044	23,651	3.2
Beverages.....	20,801	20,702	20,541	0.5	0.8	0.6	20,247	20,321	20,602	19,392	4.4
Tobacco.....	4,499	4,525	4,531	-0.6	-0.1	-0.4	4,163	4,317	4,442	4,259	-2.3
Textile mills.....	3,375	3,339	3,341	1.1	-0.1	-0.8	3,387	3,336	3,360	3,264	3.8
Textile products.....	3,568	3,548	3,546	0.6	0.1	-0.1	3,554	3,523	3,547	3,463	2.6
Apparel.....	1,926	1,955	1,984	-1.5	-1.5	0.7	2,012	1,952	1,933	2,024	-0.6
Leather and allied products.....	768	771	774	-0.4	-0.4	0.4	779	780	784	804	-3.1
Paper products.....	16,254	16,355	16,447	-0.6	-0.6	0.3	16,365	16,325	16,385	16,202	1.0
Pulp, paper, and paperboard mills.....	6,791	6,840	6,873	-0.7	-0.5	0.5	6,800	6,826	6,890	6,533	4.1
Paperboard containers.....	5,067	5,102	5,115	-0.7	-0.3	0.7	5,108	5,087	5,082	5,130	-0.4
Printing.....	5,542	5,547	5,554	-0.1	-0.1	-0.9	5,524	5,492	5,513	5,447	1.4
Petroleum and coal products.....	40,252	40,281	41,011	-0.1	-1.8	-2.2	41,344	40,632	42,341	43,043	-3.9
Petroleum refineries.....	34,491	34,542	35,254	-0.1	-2.0	-2.7	35,515	34,884	36,530	37,284	-4.7
Chemical products.....	90,742	90,981	90,707	-0.3	0.3	0.5	91,488	91,318	91,710	90,163	1.5
Pesticides, fertilizers, and other agricultural chemicals.....	5,097	5,071	5,019	0.5	1.0	1.4	4,819	4,750	4,957	4,335	11.2
Pharmaceuticals and medicines.....	37,044	37,187	37,078	-0.4	0.3	1.2	37,464	37,879	37,734	36,927	1.5
Paints, coatings, and adhesives.....	3,872	3,864	3,865	0.2	0.0	-0.9	3,882	3,910	3,947	3,919	-0.9
Plastics and rubber products.....	27,217	27,259	27,193	-0.2	0.2	-0.1	27,215	27,257	27,431	26,575	2.4

^p Preliminary

^r Revised data due to late receipts and concurrent seasonal adjustment.

¹ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.

² Estimates of inventories for the semiconductor industry data are included in computers and electronic products, and all other applicable aggregate totals.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 5. Value of Manufacturers' Shipments, New Orders, Unfilled Orders, and Total Inventories for Topical Series^{1,2}

[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Seasonally Adjusted						Not Seasonally Adjusted						
	Monthly			Percent Change			Monthly			Year to date		% Change ⁶	
	July 2019 ^p	June 2019 ^f	May 2019	June - July	May - June	Apr. - May	July 2019 ^p	June 2019 ^f	May 2019	July 2018	2019 ^p		2018
SHIPMENTS													
All manufacturing industries.....	504,021	504,952	504,257	-0.2	0.1	0.1	490,370	522,474	522,423	482,868	3,503,339	3,440,413	1.8
Construction materials and supplies.....	52,161	52,509	52,156	-0.7	0.7	0.4	54,586	56,246	56,411	53,191	364,614	356,408	2.3
Information technology.....	25,520	25,370	25,685	0.6	-1.2	-0.4	23,732	28,061	24,705	23,203	172,027	162,882	5.6
Computers and related products.....	1,699	1,735	1,789	-2.1	-3.0	-2.0	1,542	2,262	1,600	1,834	11,611	11,917	-2.6
Motor vehicle and parts.....	62,725	62,404	60,766	0.5	2.7	0.8	53,552	63,556	63,245	50,005	427,177	399,031	7.1
Capital goods.....	87,067	89,636	89,065	-2.9	0.6	0.4	81,382	97,120	88,992	80,297	614,113	600,363	2.3
Nondefense capital goods ³	74,463	76,735	76,030	-3.0	0.9	0.4	70,394	83,402	76,120	70,150	527,905	523,770	0.8
Excluding aircraft.....	69,503	69,913	69,915	-0.6	0.0	0.4	66,185	74,714	70,153	64,912	480,532	466,270	3.1
Defense capital goods ⁴	12,604	12,901	13,035	-2.3	-1.0	0.6	10,988	13,718	12,872	10,147	86,208	76,593	12.6
Consumer goods.....	214,111	211,521	212,031	1.2	-0.2	-0.4	208,209	213,839	219,663	206,275	1,464,714	1,446,819	1.2
Consumer durable goods.....	45,214	44,818	43,343	0.9	3.4	1.0	38,124	45,855	44,430	36,188	302,961	287,824	5.3
Consumer nondurable goods.....	168,897	166,703	168,688	1.3	-1.2	-0.8	170,085	167,984	175,233	170,087	1,161,753	1,158,995	0.2
NEW ORDERS													
All manufacturing industries ⁵	500,278	493,351	490,693	1.4	0.5	-1.3	486,027	510,292	505,259	477,354	3,459,902	3,446,535	0.4
Construction materials and supplies.....	52,537	52,851	52,185	-0.6	1.3	0.9	54,807	55,939	56,945	53,310	368,198	363,084	1.4
Information technology.....	25,621	25,601	25,904	0.1	-1.2	0.1	23,008	28,226	24,525	22,628	173,503	165,149	5.1
Computers and related products.....	1,689	1,701	1,755	-0.7	-3.1	-3.1	1,532	2,228	1,566	1,849	11,553	12,072	-4.3
Motor vehicle and parts.....	62,676	62,321	60,665	0.6	2.7	0.9	53,137	62,779	63,197	49,681	426,328	398,614	7.0
Capital goods.....	87,556	82,553	81,668	6.1	1.1	-6.6	82,197	89,501	78,275	78,652	597,910	615,102	-2.8
Nondefense capital goods ³	75,764	72,246	68,774	4.9	5.0	-5.0	73,436	77,033	66,132	70,230	513,837	536,611	-4.2
Excluding aircraft.....	69,580	69,431	68,794	0.2	0.9	0.2	65,612	73,224	68,649	65,224	480,381	473,074	1.5
Defense capital goods ⁴	11,792	10,307	12,894	14.4	-20.1	-14.2	8,761	12,468	12,143	8,422	84,073	78,491	7.1
Consumer goods.....	214,107	211,676	212,170	1.1	-0.2	-0.4	208,304	213,798	219,706	206,369	1,464,964	1,447,103	1.2
Consumer durable goods.....	45,210	44,973	43,482	0.5	3.4	1.3	38,219	45,814	44,473	36,282	303,211	288,108	5.2
Consumer nondurable goods.....	168,897	166,703	168,688	1.3	-1.2	-0.8	170,085	167,984	175,233	170,087	1,161,753	1,158,995	0.2
UNFILLED ORDERS													
All manufacturing industries ⁵	1,161,545	1,160,974	1,168,212	0.0	-0.6	-0.8	1,164,535	1,164,549	1,172,756	1,168,975	(X)	(X)	-0.4
Construction materials and supplies.....	60,334	59,958	59,616	0.6	0.6	0.0	61,389	61,168	61,475	59,247	(X)	(X)	3.6
Information technology.....	116,026	115,925	115,694	0.1	0.2	0.2	116,048	116,772	116,607	113,413	(X)	(X)	2.3
Computers and related products.....	2,137	2,147	2,181	-0.5	-1.6	-1.5	2,137	2,147	2,181	2,033	(X)	(X)	5.1
Motor vehicle and parts.....	26,913	26,962	27,045	-0.2	-0.3	-0.4	26,343	26,758	27,535	26,090	(X)	(X)	1.0
Capital goods.....	849,381	848,892	855,975	0.1	-0.8	-0.9	850,994	850,179	857,798	863,832	(X)	(X)	-1.5
Nondefense capital goods ³	693,525	692,224	696,713	0.2	-0.6	-1.0	695,352	692,310	698,679	715,653	(X)	(X)	-2.8
Excluding aircraft.....	218,645	218,568	219,050	0.0	-0.2	-0.5	219,194	219,767	221,257	221,294	(X)	(X)	-0.9
Defense capital goods ⁴	155,856	156,668	159,262	-0.5	-1.6	-0.1	155,642	157,869	159,119	148,179	(X)	(X)	5.0
Consumer goods.....	4,736	4,740	4,585	-0.1	3.4	3.1	4,736	4,641	4,682	5,095	(X)	(X)	-7.0
Consumer durable goods.....	4,736	4,740	4,585	-0.1	3.4	3.1	4,736	4,641	4,682	5,095	(X)	(X)	-7.0
TOTAL INVENTORIES													
All manufacturing industries.....	696,484	695,281	694,247	0.2	0.1	0.2	700,858	691,897	698,116	680,361	(X)	(X)	3.0
Construction materials and supplies.....	73,428	73,459	73,707	0.0	-0.3	-0.3	73,785	73,395	74,441	72,807	(X)	(X)	1.3
Information technology.....	40,279	40,240	40,166	0.1	0.2	-0.1	40,755	40,133	40,767	39,315	(X)	(X)	3.7
Computers and related products.....	3,795	3,806	3,759	-0.3	1.3	0.5	3,920	3,816	3,826	3,790	(X)	(X)	3.4
Motor vehicle and parts.....	38,421	38,382	38,331	0.1	0.1	0.7	39,127	37,583	38,238	37,063	(X)	(X)	5.6
Capital goods.....	214,585	212,848	211,489	0.8	0.6	0.9	216,367	212,289	213,747	203,374	(X)	(X)	6.4
Nondefense capital goods ³	190,587	189,154	187,996	0.8	0.6	1.0	192,261	188,501	190,186	180,310	(X)	(X)	6.6
Excluding aircraft.....	129,986	129,528	129,241	0.4	0.2	0.1	131,138	129,009	130,352	125,182	(X)	(X)	4.8
Defense capital goods ⁴	23,998	23,694	23,493	1.3	0.9	0.5	24,106	23,788	23,561	23,064	(X)	(X)	4.5
Consumer goods.....	203,763	203,850	204,025	0.0	-0.1	0.0	204,474	202,328	204,375	202,286	(X)	(X)	1.1
Consumer durable goods.....	31,998	31,974	31,924	0.1	0.2	1.3	32,308	31,289	31,745	30,514	(X)	(X)	5.9
Consumer nondurable goods.....	171,765	171,876	172,101	-0.1	-0.1	-0.2	172,166	171,039	172,630	171,772	(X)	(X)	0.2

^x Not Applicable

^p Preliminary

^f Revised data due to late receipts and concurrent seasonal adjustment.

¹ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.

² Topical series are regroupings of the separate industry categories.

³ Nondefense capital goods industries include: small arms and ordnance; farm machinery and equipment; construction machinery; mining, oil, and gas field machinery; industrial machinery; vending, laundry, and other machinery; photographic equipment; metalworking machinery; turbines and generators; other power transmission equipment; pumps and compressors; material handling equipment; all other machinery; electronic computers; computer storage devices; other computer peripheral equipment; communications equipment; search and navigation equipment; electromedical, measuring, and control instruments; electrical equipment; other electrical equipment, appliances, and components; heavy duty trucks; aircraft; railroad rolling stock; ships and boats; office and institutional furniture; and medical equipment and supplies.

⁴ Defense capital goods industries include: small arms and ordnance; communications equipment; aircraft; missiles, space vehicles, and parts; ships and boats; and search and navigation equipment.

⁵ Estimates and percent changes exclude semiconductor industry data.

⁶ Based on year-to-date for shipments and new orders, but on same month prior year for unfilled orders and inventories.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 6. Value of Manufacturers' Inventories, by Stage of Fabrication, by Industry Group¹

[Estimates are shown in millions of dollars and are based on data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Seasonally Adjusted						Not Seasonally Adjusted				
	Monthly			Percent Change			Monthly				% Change
	July 2019 ^p	June 2019 ^f	May 2019	June - July	May - June	Apr. - May	July 2019 ^p	June 2019 ^f	May 2019	July 2018	
MATERIALS AND SUPPLIES											
All manufacturing industries.....	237,864	238,340	238,157	-0.2	0.1	-0.1	239,212	236,740	238,324	234,055	2.2
Durable goods industries.....	145,835	145,701	145,691	0.1	0.0	-0.2	146,778	144,618	145,251	141,964	3.4
Wood products.....	5,163	5,190	5,194	-0.5	-0.1	0.4	5,061	4,966	4,918	4,996	1.3
Nonmetallic mineral products.....	6,202	6,184	6,235	0.3	-0.8	0.6	6,221	6,215	6,271	5,955	4.5
Primary metals.....	12,870	13,044	13,105	-1.3	-0.5	-1.1	12,985	12,908	12,771	12,897	0.7
Fabricated metal products.....	20,413	20,491	20,546	-0.4	-0.3	-0.2	20,654	20,435	20,433	20,632	0.1
Machinery.....	29,504	29,184	29,213	1.1	-0.1	-0.1	29,590	29,034	29,350	27,176	8.9
Computers and electronic products.....	19,295	19,172	19,113	0.6	0.3	0.3	19,477	19,141	19,362	18,880	3.2
Electrical equipment, appliances, and components.....	8,582	8,535	8,519	0.6	0.2	0.4	8,678	8,530	8,596	8,058	7.7
Transportation equipment.....	31,932	31,992	31,904	-0.2	0.3	-0.6	32,111	31,476	31,672	31,522	1.9
Furniture and related products.....	3,850	3,883	3,912	-0.8	-0.7	-0.3	3,912	3,923	3,897	3,939	-0.7
Miscellaneous products.....	8,024	8,026	7,950	0.0	1.0	-0.4	8,089	7,990	7,981	7,909	2.3
Nondurable goods industries.....	92,029	92,639	92,466	-0.7	0.2	0.0	92,434	92,122	93,073	92,091	0.4
Food products.....	17,984	18,132	18,007	-0.8	0.7	0.8	18,007	17,981	17,873	17,773	1.3
Beverage and tobacco products.....	6,020	6,014	5,973	0.1	0.7	0.1	5,691	5,785	5,931	5,546	2.6
Textiles.....	1,142	1,146	1,152	-0.3	-0.5	-0.8	1,149	1,147	1,159	1,163	-1.2
Textile products.....	1,362	1,364	1,363	-0.1	0.1	0.0	1,359	1,365	1,369	1,320	3.0
Apparel.....	471	473	505	-0.4	-6.3	-0.6	477	466	497	511	-6.7
Leather and allied products.....	275	276	277	-0.4	-0.4	1.5	281	279	278	274	2.6
Paper products.....	8,026	8,146	8,193	-1.5	-0.6	-0.4	8,059	8,070	8,108	8,238	-2.2
Printing.....	2,792	2,818	2,810	-0.9	0.3	0.8	2,801	2,800	2,796	2,815	-0.5
Petroleum and coal products.....	10,780	11,174	11,361	-3.5	-1.6	-1.4	11,026	11,354	11,983	12,402	-11.1
Chemical products.....	31,752	31,676	31,420	0.2	0.8	0.3	32,111	31,558	31,675	30,767	4.4
Plastics and rubber products.....	11,425	11,420	11,405	0.0	0.1	-0.4	11,473	11,317	11,404	11,282	1.7
WORK IN PROCESS											
All manufacturing industries.....	214,950	213,939	214,083	0.5	-0.1	0.5	216,549	212,901	215,854	210,116	3.1
Durable goods industries.....	160,540	159,650	159,043	0.6	0.4	1.1	162,286	159,351	161,119	154,671	4.9
Wood products.....	2,234	2,223	2,209	0.5	0.6	0.6	2,205	2,214	2,226	2,242	-1.7
Nonmetallic mineral products.....	1,580	1,573	1,561	0.4	0.8	-1.1	1,591	1,595	1,599	1,551	2.6
Primary metals.....	10,365	10,334	10,435	0.3	-1.0	-1.2	10,549	10,423	10,548	10,907	-3.3
Fabricated metal products.....	14,061	14,052	13,941	0.1	0.8	-1.0	14,206	14,042	14,050	13,903	2.2
Machinery.....	18,365	18,664	18,509	-1.6	0.8	-0.3	18,578	18,514	18,675	19,094	-2.7
Computers and electronic products.....	12,135	12,232	12,441	-0.8	-1.7	-0.6	12,295	12,383	12,879	12,994	-5.4
Electrical equipment, appliances, and components.....	4,308	4,322	4,320	-0.3	0.0	0.0	4,399	4,380	4,411	4,081	7.8
Transportation equipment.....	92,263	91,030	90,369	1.4	0.7	2.5	93,209	90,572	91,440	84,729	10.0
Furniture and related products.....	1,318	1,304	1,333	1.1	-2.2	-1.0	1,325	1,330	1,365	1,401	-5.4
Miscellaneous products.....	3,911	3,916	3,925	-0.1	-0.2	0.5	3,929	3,898	3,926	3,769	4.2
Nondurable goods industries.....	54,410	54,289	55,040	0.2	-1.4	-1.2	54,263	53,550	54,735	55,445	-2.1
Food products.....	5,762	5,745	5,946	0.3	-3.4	0.0	5,175	5,151	5,366	5,642	-8.3
Beverage and tobacco products.....	9,835	9,793	9,735	0.4	0.6	0.3	9,253	9,338	9,579	8,838	4.7
Textiles.....	728	724	728	0.6	-0.5	-0.4	733	722	733	714	2.7
Textile products.....	422	422	426	0.0	-0.9	-0.2	420	415	423	409	2.7
Apparel.....	334	332	344	0.6	-3.5	1.2	352	340	343	360	-2.2
Leather and allied products.....	81	80	77	1.3	3.9	1.3	80	77	78	78	2.6
Paper products.....	1,382	1,373	1,370	0.7	0.2	1.0	1,404	1,391	1,380	1,320	6.4
Printing.....	1,214	1,210	1,214	0.3	-0.3	-3.7	1,203	1,148	1,150	1,111	8.3
Petroleum and coal products.....	12,275	12,183	12,700	0.8	-4.1	-2.2	12,897	12,351	13,110	13,840	-6.8
Chemical products.....	19,217	19,310	19,352	-0.5	-0.2	-1.8	19,591	19,506	19,403	19,988	-2.0
Plastics and rubber products.....	3,160	3,117	3,148	1.4	-1.0	-0.2	3,155	3,111	3,170	3,145	0.3
FINISHED GOODS											
All manufacturing industries.....	243,670	243,002	242,007	0.3	0.4	0.3	245,097	242,256	243,938	236,190	3.8
Durable goods industries.....	120,693	120,292	119,826	0.3	0.4	0.4	121,557	119,503	120,846	115,608	5.1
Wood products.....	4,724	4,756	4,839	-0.7	-1.7	-0.9	4,663	4,739	4,918	4,849	-3.8
Nonmetallic mineral products.....	7,241	7,198	7,168	0.6	0.4	-0.3	7,275	7,307	7,345	7,069	2.9
Primary metals.....	12,410	12,397	12,638	-0.1	-1.9	0.3	12,435	12,380	12,762	12,183	2.1
Fabricated metal products.....	20,049	20,096	20,088	0.2	0.0	0.6	20,245	20,149	20,295	19,530	3.7
Machinery.....	24,516	24,281	24,140	1.0	0.6	0.8	24,454	24,005	24,340	22,465	8.9
Computers and electronic products.....	11,887	12,011	11,854	-1.0	1.3	-0.4	11,992	11,819	11,823	11,896	0.8
Electrical equipment, appliances, and components.....	7,490	7,450	7,444	0.5	0.1	-0.6	7,668	7,501	7,569	7,075	8.4
Transportation equipment.....	16,891	16,674	16,225	1.3	2.8	1.3	17,305	16,246	16,317	16,070	7.7
Furniture and related products.....	2,847	2,817	2,797	1.1	0.7	0.3	2,961	2,943	2,871	2,736	8.2
Miscellaneous products.....	12,638	12,612	12,633	0.2	-0.2	1.0	12,559	12,414	12,606	11,735	7.0
Nondurable goods industries.....	122,977	122,710	122,181	0.2	0.4	0.1	123,540	122,753	123,092	120,582	2.5
Food products.....	30,726	30,498	30,105	0.7	1.3	-0.5	30,977	30,040	29,613	30,067	3.0
Beverage and tobacco products.....	9,445	9,420	9,364	0.3	0.6	0.7	9,466	9,515	9,534	9,267	2.1
Textiles.....	1,505	1,469	1,461	2.5	0.5	-1.1	1,505	1,467	1,468	1,387	8.5
Textile products.....	1,784	1,762	1,757	1.2	0.3	-0.2	1,775	1,743	1,755	1,734	2.4
Apparel.....	1,121	1,150	1,135	-2.5	1.3	1.2	1,183	1,146	1,093	1,153	2.6
Leather and allied products.....	412	415	420	-0.7	-1.2	-0.5	418	424	428	452	-7.5
Paper products.....	6,846	6,836	6,884	0.1	-0.7	1.0	6,902	6,864	6,897	6,644	3.9
Printing.....	1,536	1,519	1,530	1.1	-0.7	-1.8	1,520	1,544	1,567	1,521	-0.1
Petroleum and coal products.....	17,197	16,924	16,950	1.6	-0.2	-2.7	17,421	16,927	17,248	16,801	3.7
Chemical products.....	39,773	39,995	39,935	-0.6	0.2	1.8	39,786	40,254	40,632	39,408	1.0
Plastics and rubber products.....	12,632	12,722	12,640	-0.7	0.6	0.3	12,587	12,829	12,857	12,148	3.6

^p Preliminary

^f Revised data due to late receipts and concurrent seasonal adjustment.

¹ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>. Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 7. Ratios of Manufacturers' Inventories to Shipments and Unfilled Orders to Shipments, by Industry Group ¹

[Based on Seasonally Adjusted data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Inventory/Shipments ratio				Unfilled Orders/Shipments ratio ²			
	Jul 2019 ^a	Jun 2019 ^a	May 2019	Apr 2019	Jul 2019 ^b	Jun 2019 ^b	May 2019	Apr 2019
	All manufacturing industries ²	1.38	1.38	1.38	1.37	(X)	(X)	(X)
Durable goods industries ²	1.68	1.66	1.67	1.67	6.67	6.55	6.62	6.69
Wood products.....	1.34	1.33	1.34	1.34	(X)	(X)	(X)	(X)
Nonmetallic mineral products.....	1.32	1.31	1.33	1.34	(X)	(X)	(X)	(X)
Primary metals.....	1.77	1.75	1.76	1.75	1.55	1.53	1.52	1.51
Fabricated metal products.....	1.63	1.62	1.62	1.63	2.66	2.62	2.62	2.64
Machinery.....	2.21	2.16	2.16	2.17	3.48	3.42	3.44	3.48
Computers and electronic products ³	1.55	1.55	1.53	1.54	5.43	5.46	5.39	5.35
Electrical equipment, appliances, and components.....	1.73	1.72	1.73	1.74	1.84	1.82	1.82	1.82
Transportation equipment.....	1.63	1.58	1.61	1.59	15.23	14.65	14.99	15.22
Furniture and related products.....	1.15	1.16	1.18	1.19	1.36	1.39	1.40	1.40
Miscellaneous products.....	1.79	1.78	1.79	1.79	(X)	(X)	(X)	(X)
Nondurable goods industries.....	1.08	1.09	1.08	1.08	(X)	(X)	(X)	(X)
Food products.....	0.80	0.81	0.80	0.80	(X)	(X)	(X)	(X)
Beverage and tobacco products.....	1.94	2.01	1.97	2.01	(X)	(X)	(X)	(X)
Textiles.....	1.37	1.35	1.35	1.37	(X)	(X)	(X)	(X)
Textile products.....	1.56	1.57	1.57	1.57	(X)	(X)	(X)	(X)
Apparel.....	2.02	2.00	2.04	2.07	(X)	(X)	(X)	(X)
Leather and allied products.....	1.78	1.84	1.90	1.86	(X)	(X)	(X)	(X)
Paper products.....	1.00	1.01	1.02	1.02	(X)	(X)	(X)	(X)
Printing.....	0.80	0.81	0.83	0.84	(X)	(X)	(X)	(X)
Petroleum and coal products.....	0.75	0.77	0.75	0.75	(X)	(X)	(X)	(X)
Chemical products.....	1.36	1.35	1.36	1.37	(X)	(X)	(X)	(X)
Plastics and rubber products.....	1.38	1.38	1.38	1.38	(X)	(X)	(X)	(X)

^a Not Applicable

^b Preliminary

² Revised data due to late receipts and concurrent seasonal adjustment.

³ Excludes the following industries with no unfilled orders: Wood products; nonmetallic mineral products; medical equipment and supplies; office supplies; other miscellaneous manufacturing; cutlery and handtools; farm and garden machinery; computer storage and peripheral devices; audio and video equipment; manufacturing and reproducing magnetic and optical media; batteries; automobiles; light trucks and utility vehicles; heavy duty trucks; and miscellaneous furniture.

⁴ Unfilled orders to shipments ratio excludes semiconductor manufacturing.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.

Table 8. Revisions to Previously Published Monthly Percent Changes ¹

[Based on Seasonally Adjusted data from the Manufacturers' Shipments, Inventories, and Orders Survey.]

Industry	Shipments		New Orders		Unfilled Orders		Inventories	
	Jul ² 2019	Jul ¹ 2018- Jun 2019	Jul ² 2019	Jul ¹ 2018- Jun 2019	Jul ² 2019	Jul ¹ 2018- Jun 2019	Jul ² 2019	Jul ¹ 2018- Jun 2019
	All manufacturing industries.....	(X)	0.1	(X)	0.3	(X)	0.1	(X)
Durable goods industries.....	0.0	0.2	-0.1	0.5	-0.1	0.1	-0.1	0.0
Wood products.....	(X)	0.4	(X)	(NA)	(X)	(NA)	(X)	0.2
Nonmetallic mineral products.....	(X)	0.3	(X)	(NA)	(X)	(NA)	(X)	0.2
Primary metals.....	-0.1	0.4	-0.1	0.7	-0.1	0.3	-0.2	0.3
Fabricated metal products.....	0.0	0.3	0.1	0.7	0.1	0.2	-0.2	0.1
Machinery.....	0.0	0.4	-0.2	0.7	0.0	0.1	0.1	0.1
Computers and electronic products.....	0.2	0.3	0.2	0.5	0.0	0.1	0.0	0.1
Electrical equipment, appliances, and components.....	-0.7	0.2	-0.6	0.5	0.0	0.2	0.1	0.3
Transportation equipment.....	0.1	0.4	0.0	1.0	0.0	0.1	0.0	0.1
Furniture and related products.....	(X)	0.5	(X)	0.6	(X)	0.7	(X)	0.3
Miscellaneous products.....	(X)	0.2	(X)	0.2	(X)	0.1	(X)	0.1
Nondurable goods industries.....	(X)	0.2	(X)	(NA)	(X)	(NA)	(X)	0.1
Food products.....	(X)	0.1	(X)	(NA)	(X)	(NA)	(X)	0.1
Beverage and tobacco products.....	(X)	0.3	(X)	(NA)	(X)	(NA)	(X)	0.1
Textiles.....	(X)	0.4	(X)	(NA)	(X)	(NA)	(X)	0.2
Textile products.....	(X)	0.4	(X)	(NA)	(X)	(NA)	(X)	0.2
Apparel.....	(X)	0.5	(X)	(NA)	(X)	(NA)	(X)	0.5
Leather and allied products.....	(X)	0.8	(X)	(NA)	(X)	(NA)	(X)	0.4
Paper products.....	(X)	0.1	(X)	(NA)	(X)	(NA)	(X)	0.2
Printing.....	(X)	0.4	(X)	(NA)	(X)	(NA)	(X)	0.3
Petroleum and coal products.....	(X)	0.5	(X)	(NA)	(X)	(NA)	(X)	0.4
Chemical products.....	(X)	0.2	(X)	(NA)	(X)	(NA)	(X)	0.2
Plastics and rubber products.....	(X)	0.2	(X)	(NA)	(X)	(NA)	(X)	0.1

X Not Applicable

NA Not Available

¹ Estimates of shipments and new orders are for the duration of the period, while estimates of unfilled orders and total inventories are for the end of the period. Not seasonally adjusted estimates of shipments and new orders include adjusted data for non-calendar reporters. Seasonally adjusted estimates include concurrent adjustments for holiday and trading-day differences, where appropriate, as well as seasonal variation, based on the results of the latest annual review of the model parameters. Estimates are not adjusted for price changes.

² The current month revisions are the difference between the advance percent change and the percent change as shown in this publication.

³ The twelve month revisions are the differences between the month-to-month percent changes of the preliminary and final estimates. The monthly averages are the simple averages of the absolute values of the differences for the months specified. The advance to final percent change revisions for the durable goods industries are shown in the advance report for the month.

Note: Estimates of manufacturers' shipments, inventories and orders are subject to survey error and revision. One major component of survey error is nonsampling error, which includes errors of coverage, response, and nonreporting. Since the survey panel is not a probability sample, estimates of sampling error cannot be calculated. For further details on survey design, methodology, and data limitations see <<http://www.census.gov/manufacturing/m3/>>.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders (M3) Survey, July Full Report, September 5, 2019. Information on data sources and methodology can be found on our website at <www.census.gov/manufacturing/m3/how_the_data_are_collected/index.html>.