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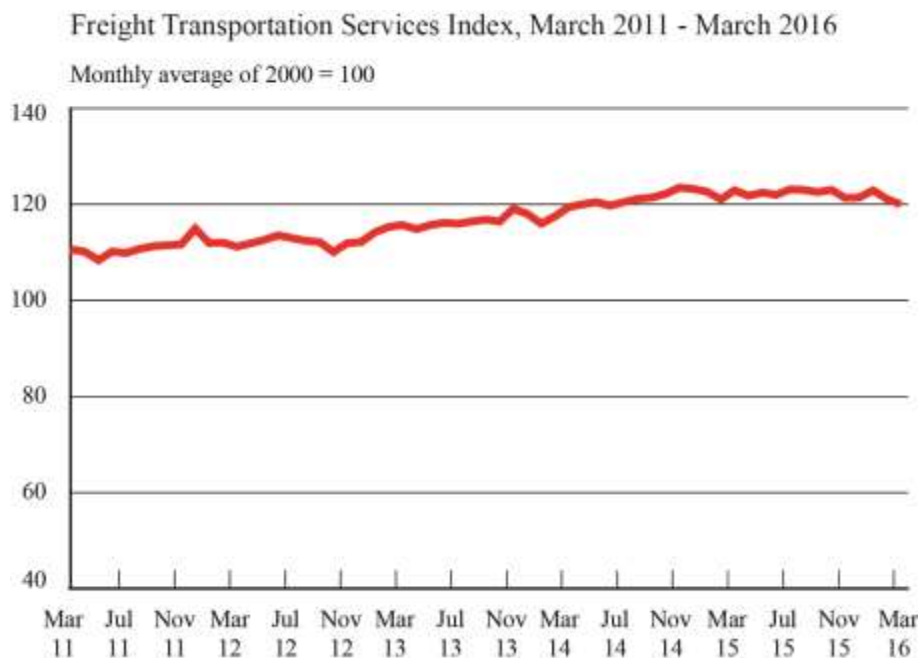
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BTS Releases March 2016 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, fell 0.9 percent in March from February, falling for the second consecutive month, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The March 2016 index level (120.0) was 26.7 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).



The level of freight shipments in March measured by the Freight TSI (120.0) was 2.8 percent below the all-time high level of 123.5 in November 2014 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The February index was revised down to 121.1 from 122.2 in last month's release, and the January index was revised down to 122.9 from 123.1.

The Freight TSI measures the month-to-month changes in freight shipments by mode of transportation in tons and ton-miles, which are combined into one index. The index measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight.

Analysis: The March Freight TSI decrease of 0.9 percent from February was broad in terms of mode – all freight modes decreased except for air freight, which rebounded after a significant decrease in February. The decrease was driven by continued weakness in the mining (including oil and gas well drilling and servicing), utility and manufacturing sectors of the economy. The [Federal Reserve Board Industrial Production index](#) declined 0.6 percent in March, its second consecutive monthly decline. Housing starts were 8.8 percent below the February level.

The first-quarter TSI decline of 1.2 percent from the second quarter matched trends in the larger economy. [Gross Domestic Product](#) (GDP) growth decreased to the relatively slow annual rate of 0.5 percent. The Industrial Production index also declined during the first quarter.

Trend: Following declines of 1.5 percent from January to February and 0.9 percent from February to March, the Freight TSI was 2.4 percent below its level of December 2015. The index fell to the lowest point since March 2014, 2.8 percent below the high point of November 2014. The two-month decline was the largest since January 2014. The first-quarter decline of 1.2 percent was the largest quarterly decline since the third quarter of 2012. It was the first time that Freight TSI has declined for two consecutive quarters since the first quarter of 2009, when the economy was in recession. The Freight TSI has now declined in four of the last five quarters. The index remains high compared to earlier years and has increased by 26.7 percent since its low of 94.7 in April 2009. For additional historical data, go to [TSI data](#).

Index highs and lows: Freight shipments in March 2016 (120.0) were 26.7 percent higher than the recent low in April 2009 during the recession (94.7). The March 2016 level was 2.8 percent below the historic peak reached in November 2014 (123.5).

Year to date: Freight shipments measured by the index were down 1.2 percent in March compared to the end of 2015 (Table 3).

Long-term trend: Freight shipments are up 8.5 percent in the five years from the post-recession level of March 2011 and are up 7.2 percent in the 10 years from March 2006 (Table 5).

Same month of previous year: March 2016 freight shipments were down 2.4 percent from March 2015 (Tables 4, 5).

1st quarter changes: The Freight TSI fell 1.2 percent in the 1st quarter (Table 10).

The TSI has three seasonally adjusted indexes that measure changes from the monthly average of the base year of 2000. The three indexes are freight shipments, passenger travel and a combined measure that merges the freight and passenger indexes. See [Seasonally-Adjusted Transportation Data](#) for numbers for individual modes. TSI includes data from 2000 to the present. Release of the April index is scheduled for June 8.

Passenger Index: The TSI for passengers rose 0.4 percent in March from its February level (Table 6). The Passenger TSI March 2016 level of 124.0 was 2.6 percent above the March 2015 level (Table 7). The index is up 9.3 percent in five years and up 11.7 percent in 10 years (Table 5). The passenger TSI measures the month-to-month changes in travel that involves the services of the for-hire passenger transportation sector. The seasonally adjusted index consists of data from air, local transit and intercity rail.

Combined Index: The combined freight and passenger TSI fell 0.5 percent in March from its February level (Table 8). The combined TSI March 2016 level of 121.3 was 0.9 percent below the March 2015 level (Table 9). The combined index is up 8.7 percent in five years and up 8.4 percent in 10 years (Table 5). The combined TSI merges the freight and passenger indexes into a single index.

Revisions: Monthly data has changed from previous releases due to the use of concurrent seasonal analysis, which results in seasonal analysis factors changing as each month's data are added.

BTS research has shown a clear relationship between economic cycles and the Freight and Passenger Transportation Services Indexes. See a [study of this relationship](#) using smoothed and detrended TSI data. Researchers who wish to compare TSI over time with other economic indicators, can use the [FRED database](#), which includes freight, passenger and combined TSI, and which makes it possible to easily graph TSI alongside the other series in that database. See [TSI data on FRED](#).

For a webinar on the TSI, see [Past Webinars](#). For a video explanation of the TSI, see [Overview of the Transportation Services Index](#). A BTS report explaining the TSI, [Transportation Services Index and the Economy](#), is available for download.

Table 1: Freight, Passenger and Combined Transportation Services Indexes since September 2015
Percent Change from Previous Month
(Seasonally Adjusted, Monthly Average of 2000 = 100)

	Freight		Passenger		Combined	
	Index	Pct. Change	Index	Pct. Change	Index	Pct. Change
September	122.5	-0.4	122.9	0.4	122.7	-0.2
October	123.0	0.4	124.4	1.2	123.5	0.7
November	121.3	-1.4	123.1	-1.0	121.9	-1.3
December	121.4	0.1	124.3	1.0	122.3	0.3
January	122.9	1.2	122.9	-1.1	123.0	0.6
February	121.1	-1.5	123.5	0.5	121.9	-0.9
March	120.0	-0.9	124.0	0.4	121.3	-0.5

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

Table 2: Freight Transportation Services Index Monthly Changes, 2013-2016
Percent change from previous month

	2013	2014	2015	2016
	% Change	% Change	% Change	% Change
January	1.9	-1.7	-0.5	1.2
February	1.0	1.3	-1.3	-1.5
March	0.3	1.6	1.6	-0.9
April	-0.8	0.5	-0.9	
May	0.8	0.4	0.5	
June	0.4	-0.7	-0.3	
July	-0.2	0.7	0.9	
August	0.3	0.5	-0.1	
September	0.3	0.2	-0.4	
October	-0.3	0.7	0.4	
November	2.3	1.1	-1.4	
December	-0.9	-0.2	0.1	

SOURCE: Bureau of Transportation Statistics

Table 2A: Freight Transportation Services Index by Month, 2013-2016

	2013	2014	2015	2016
January	114.2	116.0	122.6	122.9
February	115.3	117.5	121.0	121.1
March	115.7	119.4	122.9	120.0
April	114.8	120.0	121.8	
May	115.7	120.5	122.4	
June	116.2	119.7	122.0	
July	116.0	120.5	123.1	
August	116.4	121.1	123.0	
September	116.8	121.4	122.5	
October	116.4	122.2	123.0	
November	119.1	123.5	121.3	
December	118.0	123.2	121.4	

SOURCE: Bureau of Transportation Statistics

Table 3: Freight, Passenger and Combined Transportation Services Indexes Year-to-Date Change, 2007-2016
Percent change to March from December of the previous year

Year	Freight	Passenger	Combined
2007	1.1	2.6	1.5
2008	-0.7	0.3	-0.4
2009	-4.4	-1.6	-3.5
2010	4.0	0.3	2.8
2011	1.7	0.3	1.4
2012	-3.2	0.3	-2.2
2013	3.2	0.1	2.3
2014	1.2	1.7	1.4
2015	-0.2	0.2	-0.2
2016	-1.2	-0.2	-0.8

SOURCE: Bureau of Transportation Statistics

Table 4: Freight Transportation Services Index from Year-to-Year Percent Change in the March Freight TSI (Monthly average of 2000 = 100)

	March Freight TSI	Percent change from same month previous year
2007	111.8	-0.1
2008	109.9	-1.7
2009	95.9	-12.7
2010	105.5	10.0
2011	110.6	4.8
2012	111.2	0.5
2013	115.7	4.0
2014	119.4	3.2
2015	122.9	2.9
2016	120.0	-2.4

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 5: Transportation Services Indexes from Previous Years
Percent Change to 2016 (March to March)**

Since March ...	Duration in years	Freight TSI Percent change to March 2016	Passenger TSI Percent change to March 2016	Combined TSI Percent change to March 2016
2015	1	-2.4	2.6	-0.9
2014	2	0.5	3.5	1.4
2013	3	3.7	6.9	4.7
2012	4	7.9	6.9	7.6
2011	5	8.5	9.3	8.7
2010	6	13.7	12.0	13.3
2009	7	25.1	14.2	21.7
2008	8	9.2	6.3	8.2
2007	9	7.3	6.3	7.0
2006	10	7.2	11.7	8.4

SOURCE: Bureau of Transportation Statistics

**Table 6: Passenger Transportation Services Index Monthly Changes, 2013-2016
Percent change from previous month**

	2013 % Change	2014 % Change	2015 % Change	2016 % Change
January	1.0	0.0	-0.6	-1.1
February	-0.2	-0.2	-1.2	0.5
March	-0.8	1.9	1.9	0.4
April	0.9	-0.1	0.4	
May	-0.2	0.6	0.2	
June	0.7	-0.6	0.6	
July	-0.8	0.2	1.9	
August	0.7	0.3	-1.8	
September	-0.1	-0.2	0.4	
October	0.2	0.2	1.2	
November	0.8	-0.7	-1.0	
December	-0.6	1.0	1.0	

SOURCE: Bureau of Transportation Statistics

**Table 7: Passenger Transportation Services Index from Year-to-Year
Percent change in the March Passenger TSI
(Monthly average of 2000 = 100)**

	March Passenger TSI	Percent change from same month previous year
2007	116.6	5.0
2008	116.6	0.0
2009	108.6	-6.9
2010	110.7	1.9
2011	113.5	2.5
2012	116.0	2.2
2013	116.0	0.0
2014	119.8	3.3
2015	120.9	0.9
2016	124.0	2.6

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 8: Combined Transportation Services Index Monthly Changes, 2013-2016
Percent change from previous month**

	2013 % Change	2014 % Change	2015 % Change	2016 % Change
January	1.7	-1.1	-0.6	0.6
February	0.5	0.8	-1.2	-0.9
March	0.1	1.7	1.7	-0.5
April	-0.3	0.3	-0.5	
May	0.6	0.4	0.4	
June	0.4	-0.7	-0.1	
July	-0.3	0.6	1.1	
August	0.4	0.4	-0.6	
September	0.2	0.2	-0.2	
October	-0.2	0.5	0.7	
November	1.9	0.6	-1.3	
December	-0.8	0.2	0.3	

SOURCE: Bureau of Transportation Statistics

**Table 9: Combined Transportation Services Index from Year-to-Year
Percent change in the March Combined TSI
(Monthly average of 2000 = 100)**

	March Combined TSI	Percent change from same month previous year
2007	113.4	1.3
2008	112.1	-1.1
2009	99.7	-11.1
2010	107.1	7.4
2011	111.6	4.2
2012	112.7	1.0
2013	115.9	2.8
2014	119.6	3.2
2015	122.4	2.3
2016	121.3	-0.9

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 10: Freight Transportation Services Index Change by Quarter, 2007-2016
Percent change from the last month of the previous quarter**

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	1.1	-1.9	-0.3	1.2
2008	-0.7	0.0	-2.5	-6.4
2009	-4.4	0.2	3.3	2.1
2010	4.0	0.9	0.7	1.5
2011	1.7	-0.4	1.0	3.2
2012	-3.2	2.1	-1.2	0.0
2013	3.2	0.4	0.5	1.0
2014	1.2	0.3	1.4	1.5
2015	-0.2	-0.7	0.4	-0.9
2016	-1.2			

SOURCE: Bureau of Transportation Statistics

Table 11: Passenger Transportation Services Index Change by Quarter, 2007-2016
Percent change from the last month of the previous quarter

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	2.6	0.1	0.7	-1.0
2008	0.3	-0.2	-3.7	-1.5
2009	-1.6	0.0	0.9	0.7
2010	0.3	1.1	1.2	0.0
2011	0.3	0.6	0.8	0.4
2012	0.3	-0.7	0.4	0.2
2013	0.1	1.5	-0.3	0.3
2014	1.7	-0.1	0.3	0.5
2015	0.2	1.2	0.4	1.1
2016	-0.2			

SOURCE: Bureau of Transportation Statistics

Table 12: Combined Transportation Services Index Change by Quarter, 2007-2016
Percent change from the last month of the previous quarter

Year	1st Quarter (Jan-Mar) % Growth	2nd Quarter (Apr-Jun) % Growth	3rd Quarter (Jul-Sep) % Growth	4th Quarter (Oct-Dec) % Growth
2007	1.5	-1.2	0.0	0.5
2008	-0.4	-0.1	-2.8	-5.1
2009	-3.5	0.1	2.6	1.8
2010	2.8	0.9	0.8	1.0
2011	1.4	-0.1	0.9	2.4
2012	-2.2	1.2	-0.7	0.0
2013	2.3	0.7	0.3	0.9
2014	1.4	0.1	1.2	1.2
2015	-0.2	-0.2	0.4	-0.3
2016	-0.8			

SOURCE: Bureau of Transportation Statistics

Brief Explanation of the TSI

The Transportation Services Index (TSI) is a measure of the month-to-month changes in the output of services provided by the for-hire transportation industries. The freight index measure changes in freight shipments while the passenger index measures changes in passenger travel.

The TSI tells us how the output of transportation services has increased or decreased from month to month. The index can be examined together with other economic indicators to produce a better understanding of the current and future course of the economy. The movement of the index over time can be compared with other economic measures to understand the relationship of changes in transportation output to changes in Gross Domestic Product (GDP).

The freight transportation index consists of:

For-hire trucking,

Railroad freight services (including rail based intermodal shipments such as containers on flat cars),

Inland waterways transportation,

Pipeline transportation (including principally petroleum and petroleum products and natural gas), and

Air freight.

The index does not include international or coastal waterborne movements, private trucking, courier services, or the US Postal Service.

The passenger transportation index consists of:

Local transit,

Intercity passenger rail, and

Passenger air transportation.

The index does not include intercity bus, sightseeing services, ferry services, taxi service, private automobile usage, or bicycling and other non-motorized transportation.