

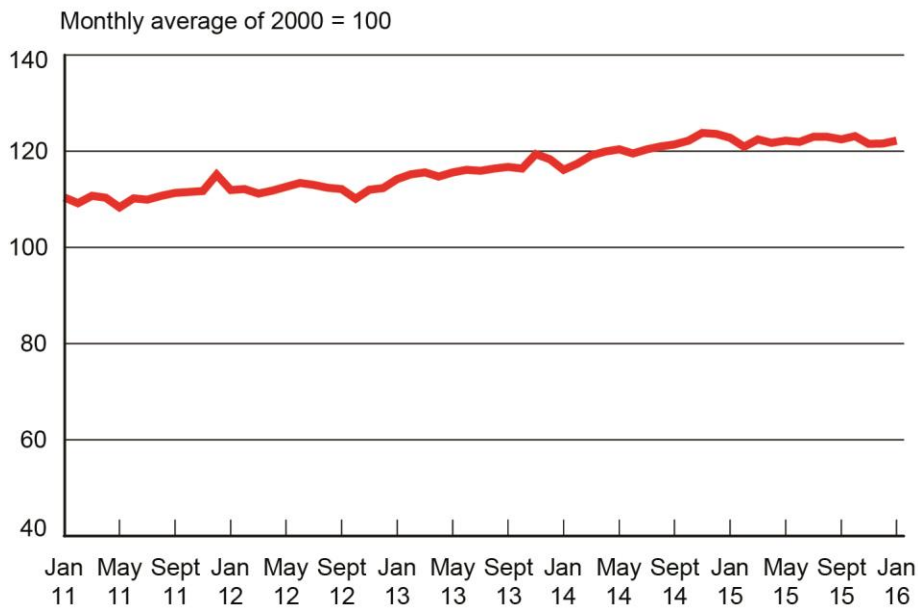
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BTS 14-16  
Wednesday, March 9, 2016  
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## January 2016 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, rose 0.5 percent in January from December, rising for the second consecutive month, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The January 2016 index level (122.2) was 29.0 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).

Freight Transportation Services Index, January 2011 - January 2016



The level of freight shipments in January measured by the Freight TSI (122.2) was 1.3 percent below the all-time high level of 123.8 in November 2014 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The December 2015 index was revised to 121.6 from 121.0 in last month's release.

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 January Freight TSI increase of 0.5 percent from December was due to substantial growth in rail intermodal and pipeline and a smaller increase in the largest mode, trucking. Air freight, water, and rail carloads all decreased. The TSI increase paralleled growth in the [Federal Reserve Board Industrial Production index](#) which rose 0.9 percent in December (reversing two months of declines), in personal income, up 0.5 percent, and in employment, which continued steady growth. The [ISM Manufacturing Index](#) was again below 50, indicating declining manufacturing activity and a continuing decrease in high inventories. The TSI growth took place despite severe winter weather.

**Trend:** The January Freight TSI increase was the second consecutive monthly increase, the first time the index increased for two months in a row since November 2014. The two increases still left the index 0.7 percent below its October 2015 level and below the level of all months from July 2015 to October 2015. The index remains high compared to earlier years with an increase of 29.0 percent since the low of 94.7 in April 2009. For additional historical data, go to [TSI data](#).

**Index highs and lows:** Freight shipments in January 2016 (122.2) were 29.0 percent higher than the recent low in April 2009 during the recession (94.7). The January 2016 level was 1.3 percent below the historic peak reached in November 2014 (123.8).

**Year to date:** Freight shipments measured by the index were up 0.5 percent in January compared to the end of 2015 (Table 3).

**Long-term trend:** Freight shipments are up 10.7 percent in the five years from the post-recession level of January 2011 and are up 8.6 percent in the 10 years from January 2006 (Table 5).

**Same month of previous year:** January 2016 freight shipments were down 0.5 percent from January 2015 (Tables 4, 5).

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 February 2016 index is scheduled for April 13.

**Passenger Index:** The TSI for passengers rose 0.2 percent in January from its December level (Table 6). The Passenger TSI January 2016 level of 124.6 was 4.3 percent above the January 2015 level (Table 7). The index is up 10.1 percent in five years and up 13.1 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 rose 0.4 percent in January from its December level (Table 8). The combined TSI January 2016 level of 123.0 was 0.9 percent above the January 2015 level (Table 9). The combined index is up 10.5 percent in five years and up 9.7 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 July 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
July	123.0	<b>0.9</b>	124.8	<b>1.9</b>	123.6	<b>1.1</b>
August	123.0	<b>0.0</b>	122.5	<b>-1.8</b>	122.9	<b>-0.6</b>
September	122.5	<b>-0.4</b>	123.2	<b>0.6</b>	122.8	<b>-0.1</b>
October	123.1	<b>0.5</b>	124.6	<b>1.1</b>	123.7	<b>0.7</b>
November	121.5	<b>-1.3</b>	123.3	<b>-1.0</b>	122.1	<b>-1.3</b>
December	121.6	<b>0.1</b>	124.3	<b>0.8</b>	122.5	<b>0.3</b>
<b>January</b>	122.2	<b>0.5</b>	124.6	<b>0.2</b>	123.0	<b>0.4</b>

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**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
	<b>% Change</b>	<b>% Change</b>	<b>% Change</b>	<b>% Change</b>
January	1.7	-1.9	-0.6	0.5
February	0.9	1.1	-1.5	
March	0.3	1.4	1.3	
April	-0.8	0.7	-0.7	
May	0.8	0.4	0.4	
June	0.4	-0.7	-0.2	
July	-0.2	0.8	0.9	
August	0.4	0.5	0.0	
September	0.3	0.3	-0.4	
October	-0.3	0.7	0.5	
November	2.6	1.3	-1.3	
December	-0.9	-0.2	0.1	

SOURCE: Bureau of Transportation Statistics

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

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
January	114.2	116.1	122.8	122.2
February	115.2	117.4	120.9	
March	115.6	119.1	122.5	
April	114.7	119.9	121.7	
May	115.6	120.4	122.2	
June	116.1	119.5	121.9	
July	115.9	120.4	123.0	
August	116.4	121.0	123.0	
September	116.7	121.4	122.5	
October	116.4	122.2	123.1	
November	119.4	123.8	121.5	
December	118.3	123.6	121.6	

SOURCE: Bureau of Transportation Statistics

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

<b>Year</b>	<b>Freight</b>	<b>Passenger</b>	<b>Combined</b>
2007	-0.7	0.3	-0.4
2008	2.3	0.3	1.8
2009	-1.5	-0.6	-1.2
2010	1.8	0.1	1.2
2011	1.5	0.0	1.0
2012	-2.8	-0.5	-2.1
2013	1.7	0.8	1.4
2014	-1.9	-0.3	-1.4
2015	-0.6	-1.2	-0.8
<b>2016</b>	<b>0.5</b>	<b>0.2</b>	<b>0.4</b>

SOURCE: Bureau of Transportation Statistics

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

	<b>January Freight TSI</b>	<b>Percent change from same month previous year</b>
2007	109.8	-2.4
2008	113.3	3.2
2009	98.8	-12.8
2010	103.3	4.6
2011	110.4	6.9
2012	111.9	1.4
2013	114.2	2.1
2014	116.1	1.7
2015	122.8	5.8
<b>2016</b>	<b>122.2</b>	<b>-0.5</b>

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 (January to January)**

Since January ...	Duration in years	Freight TSI Percent change to January 2016	Passenger TSI Percent change to January 2016	Combined TSI Percent change to January 2016
2015	1	-0.5	4.3	0.9
2014	2	5.3	6.0	5.5
2013	3	7.0	6.6	6.9
2012	4	9.2	8.3	8.9
2011	5	10.7	10.1	10.5
2010	6	18.3	12.8	16.6
2009	7	23.7	13.6	20.5
2008	8	7.9	6.9	7.3
2007	9	11.3	9.4	10.6
2006	10	8.6	13.1	9.7

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	0.8	-0.3	-1.2	0.2
February	0.0	0.1	-0.8	
March	-0.8	1.8	1.9	
April	0.9	0.0	0.5	
May	-0.2	0.6	0.2	
June	0.8	-0.6	0.6	
July	-0.9	0.3	1.9	
August	0.7	0.3	-1.8	
September	-0.1	-0.2	0.6	
October	0.2	0.3	1.1	
November	0.9	-0.7	-1.0	
December	-0.6	1.1	0.8	

SOURCE: Bureau of Transportation Statistics

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

	January Passenger TSI	Percent change from same month previous year
2007	113.9	3.4
2008	116.6	2.4
2009	109.7	-5.9
2010	110.5	0.7
2011	113.2	2.4
2012	115.1	1.7
2013	116.9	1.6
2014	117.5	0.5
2015	119.5	1.7
<b>2016</b>	<b>124.6</b>	<b>4.3</b>

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	1.4	-1.4	-0.8	0.4
February	0.6	0.8	-1.3	
March	0.0	1.5	1.5	
April	-0.3	0.5	-0.3	
May	0.5	0.5	0.4	
June	0.5	-0.7	0.0	
July	-0.4	0.5	1.1	
August	0.5	0.5	-0.6	
September	0.2	0.2	-0.1	
October	-0.2	0.6	0.7	
November	2.1	0.7	-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 January Combined TSI  
 (Monthly average of 2000 = 100)**

	January Combined TSI	Percent change from same month previous year
2007	111.2	-0.8
2008	114.6	3.1
2009	102.1	-10.9
2010	105.5	3.3
2011	111.3	5.5
2012	112.9	1.4
2013	115.1	1.9
2014	116.6	1.3
2015	121.9	4.5
<b>2016</b>	<b>123.0</b>	<b>0.9</b>

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.



## **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.