

# Revision Policy for TSI for All Statistical Releases Prior to April 2013

## Policy Summary

TSI is updated monthly. The index numbers for the latest four months are considered preliminary. BTS releases the preliminary number for the latest month and replaces the number for the oldest preliminary month with a revised number. Subsequent revisions are held until a bi-annual comprehensive revision of the TSI. The bi-annual comprehensive revisions will be released as part of the July TSI release.

## Objectives of the Policy

This revision policy is designed to provide a balance between accuracy and consistency in measuring the month-to-month changes in transportation services. BTS intends the following:

- To maintain consistency by minimizing the changes to recent months caused by frequent changes to input data when TSI is updated.
- To maintain accuracy by utilizing a four-month period to update preliminary data, and by a bi-annual revision that also incorporates methodological changes.

This policy was put into effect with the November 2004 release. Because TSI is an experimental index, BTS had been revising TSI based on methodological changes and provisional data in prior releases.

## Approaches

### *Freeze Prior Months*

To reconcile these contending objectives, BTS will:

1. Freeze TSI numbers after a four-month preliminary period;
2. Update the four-month-old preliminary index number with the most recent data available at the time. After this update, the index number for that month will be considered revised and will remain unchanged until the yearly revision.

### *Use of Preliminary Status*

The four-month preliminary period is designed to balance between timeliness and accuracy for publishing TSI. It allows BTS to publish TSI in a timely manner when preliminary input data become available. At the same time, it provides a window for revising TSI numbers with more finalized input data before TSI numbers are frozen from further month-to-month changes. Experience has shown that input data are particularly subject to change during this four-month period.

The TSI numbers are classified as preliminary, revised, or final.

**Preliminary:** The most recently released month and the three previous months for which no revisions have been made since their public release.

**Revised:** The months of the current calendar year preceding the most recent four months. The indexes for these months have been revised with monthly updated data, but have not been finalized through the bi-annual comprehensive revision.

**Final:** Any month for which the bi-annual comprehensive revision has been completed.

#### *Bi-annual Comprehensive Revisions*

Every two calendar years, BTS will conduct a comprehensive revision to TSI to incorporate all changes in data and methodology. In this comprehensive revision, all month-to-month changes for the period covered by TSI will be recalculated based on the most up-to-date data and improved methods. All index numbers, including those for prior years, will be revised to reflect the revised month-to-month changes.

The bi-annual comprehensive revisions will take place at least six months after the end of the calendar year to allow for the one-month lag between the reference month and the date of release, and the additional four-month period when data are considered preliminary. Revisions due to methodology changes will always be made as part of the bi-annual comprehensive revision unless unusual circumstances require them to be implemented sooner.

## **Policy Implementation**

The policy is implemented as follows: With each month's release of TSI, the previous three months will remain preliminary and unrevised. The number of the old fourth month (the oldest preliminary number) will be revised and moved into the revised category. The most recent four months (the previous three plus the new release), will change one month at a time with every new release and will, at all times, be

preliminary, while the fifth and earlier months values will remain as revised and will not be changed until the year-end comprehensive revision.

For example, in September when the July TSI number is released, the previously released June, May, and April numbers, as preliminary, will remain unchanged. The previously released March number, which had been preliminary, will be revised using the latest information available, and become revised. April, May, and June will not be revised, even if new data are available, and will still be considered preliminary. April will be revised based on the most up-to-date data and made revised with the release, in October, of the August preliminary number.

Every two years, the entire TSI data series will undergo a final revision six months after the end of the calendar year.

## Reasons for Revision

Revisions to TSI are necessary because of updates and revisions to the input data used to calculate TSI and changes in the methodology. Specifically, TSI estimates may change in response to the following:

**Revisions to recent months input data:** To improve the timeliness of the TSI, BTS calculates and releases preliminary TSI estimates for a new month based on the data available at that time. Some input data are preliminary and subject to revisions in the later months, which result in changes in TSI estimates.

**Revisions to historical input data:** Occasionally, the sources for TSI input data revise their historical data to reflect newly available information or changes in their data compilation methods. Such changes in source data also result in changes to the TSI estimates.

**Changes in estimated seasonality pattern caused by adding new data to the input data series:** TSI is a seasonally adjusted index, which means seasonality patterns must be removed from the data. Adding a new data point to the data series for the most recent month changes the seasonality estimation.

**Changes in TSI estimation methodology:** TSI estimation methodology may be changed to incorporate new knowledge about transportation industries and their output data and improvements in statistical methods. Changes may include new methods for seasonality adjustments, new methods for indexing, or the addition of new components of transportation services to TSI.