

## **Errata: Nonmanufacturing Business Outlook Survey (NBOS) (Last updated: February 16, 2023)**

The pages below show the changes made to correct errors in the NBOS historical data file, with the most recent changes listed first.

### **February 16, 2023**

#### **Corrections to January 2023 Data**

The previously reported nonseasonally adjusted (NSA) historical data for January 2023 were incorrect and repeated the NSA values from November 2022. The historical data file has been updated to reflect the actual NSA values for January 2023 as of February 16, 2023.

### **January 26, 2016**

#### **Corrections to July 2012 Data**

The previously reported nonseasonally adjusted (NSA) historical data for July 2012 were based on a panel of survey participants that included duplicate responses. Corrections were made to the original NSA data, were incorporated into the newly released seasonally adjusted data, and are available in the NBOS historical data file as of January 26, 2016.

### **December 22, 2015**

#### **Error with Part-Time Employment Index for November and December 2015**

In December 2015, the Regional Section of the Philadelphia Fed's Research Department discovered a programming error that overwrote the responses for the part-time employment question in the November 2015 and December 2015 surveys with responses for a different question. The part-time employment index data are unavailable for those two months and are recorded as missing values.

As of December 22, 2015, the two affected data releases and the data in the NBOS historical data file reflect these missing values as #N/A.

**November 6, 2015**

**Philadelphia Fed's *Nonmanufacturing Business Outlook Survey*: Note on Data Correction Differences**

The Regional Section of the Philadelphia Fed's Research Department has been conducting the *Nonmanufacturing Business Outlook Survey (NBOS)* since March 2011 and publishing results since September 2014. These survey results are intended to convey local firms' assessments of regional business conditions through a series of questions on current and future business activity.

We recently discovered a programming error that affected how responses to the two questions on future general activity (in the region and at the respondents' firms) were recorded from April 2011 through October 2015. As a result, the calculation of the diffusion indexes for both future activity variables during this period was inaccurate. See the "Explanation of Error" section for more information.

The error resulted in overcounting responses for "increases" and undercounting responses for "decreases"; as a result, the diffusion indexes were reported at higher readings than they should have been. This note describes the differences between the *NBOS* future activity indexes as they were published for the October 2015 release (the "as published" indexes) and the corrected *NBOS* future activity indexes ("corrected"). The new data are available on the website in the corrected *NBOS* Historical Data Excel file as of November 6, 2015.

Overall, we found that the future activity indexes for both the region and at the individual firm level were reported at higher levels than they should have been; however, both indexes remained positive and suggest overall optimism among respondents for future activity (see Charts 1 and 2). The average differences for the regional future activity and firm-level future activity indexes were -33.0 and -24.6, respectively. The difference between the "corrected" future indexes and the "as published" future indexes is negative for every month for both categories (see the charts below), with the exception of two months for the firm-level index, for which the difference was zero. Furthermore, in recent months, the "as published" data have shown the regional future activity index hovering around 80; however, the "corrected" data show a downward trend since earlier in the year, with the index falling 19 points since April, to 42.5.

Chart 1. Future Activity in the Region, April 2011 to October 2015

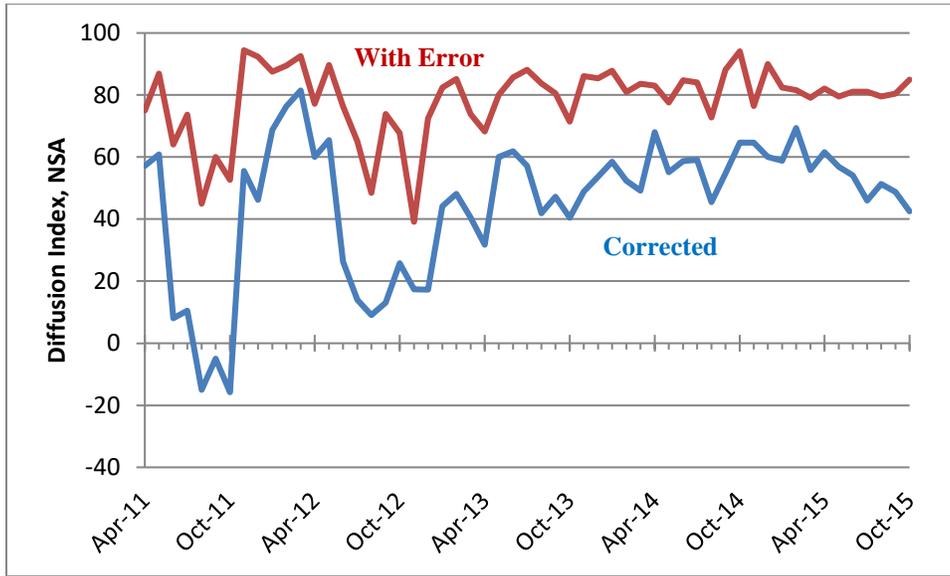
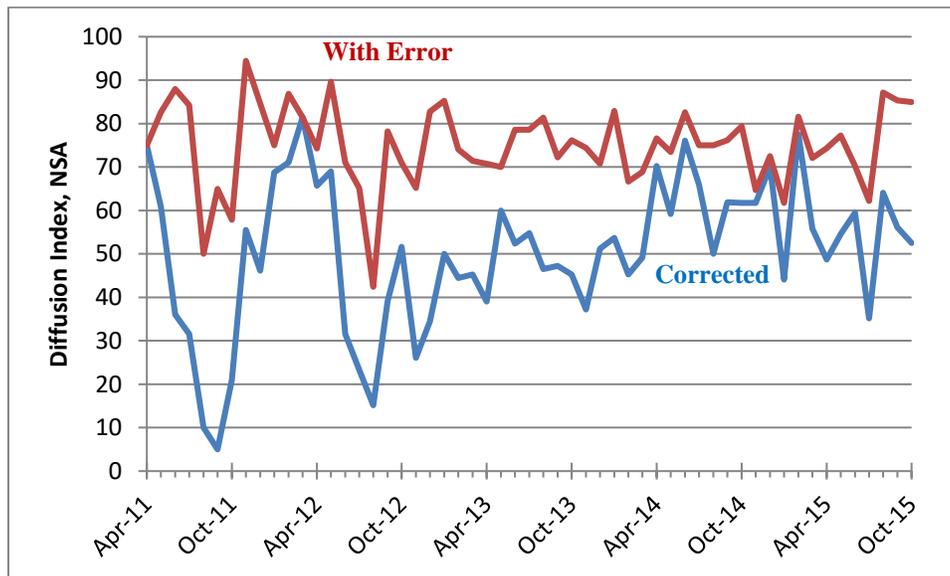


Chart 2. Future Activity at the Firm Level, April 2011 to October 2015



### Explanation of Error

In the survey each month, respondents are asked for their assessment of business conditions and can select from the following choices: “Significantly Lower,” “Slightly Lower,” “Same,” “Slightly Higher,” and “Significantly Higher.” We calculate diffusion indexes for each variable based on the percentage of responses for each choice. The diffusion indexes represent the difference between the percentage of respondents reporting increases (“Slightly Higher” and “Significantly Higher” responses) minus the percentage reporting decreases (“Slightly Lower” and “Significantly Lower” responses).

This calculation method is consistent for all variables. Because of a coding issue, the responses for the future activity variables were shifted; as a result, the diffusion indexes for the future variables had been representing the percentage of respondents who had reported “Same” or “Slightly Higher” minus the percentage of respondents who had reported “Not Applicable” or “Significantly Lower.” Furthermore, the responses for “Slightly Lower” activity were recorded as “Same” and, by definition of the diffusion index, were omitted from the calculation. The example below, using results for the Future Activity – Region variable from the October 2015 *NBOS*, demonstrates the shift in how responses were coded with the error and what they were after the correction and the effect of the shift on the diffusion index calculation.

Table. Future Activity in the Region Response Distribution, October 2015 <i>NBOS</i>									
%	N/A	Significantly Lower	Slightly Lower	Same	Slightly Higher	Significantly Higher	Sum of Increases	Sum of Decreases	Diffusion Index
<b>With Error</b>	5.0	0.0	0.0	7.5	40.0	45.0	85.0	0.0	85.0
<b>Corrected</b>	0.0	0.0	7.5	40.0	45.0	5.0	50.0	7.5	42.5