## US – United States

The Federal Housing Finance Agency (FHFA) publishes a nationwide house price index for existing, single-family dwellings (formerly called OFHEO house price index). Prices are measured with mortgage data provided by the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac)—based on conforming, conventional mortgages that are purchased or securitized. "Conforming" refers to mortgages that meet the underwriting guidelines of Fannie Mae and Freddie Mac and do not exceed the conforming loan limit set by the Federal Housing Financial Board. "Conventional" refers to mortgages that are neither insured nor guaranteed by a government entity. The index is constructed using the repeat sales method, which documents changes in market prices using dwellings sold more than once—meaning that the FHFA price index measures average price changes in repeat sales or refinancing on the same properties.

Dwellings sold within a sample period are pooled together, and a univariate dummy regression model is postulated to explain the price changes between the sales transactions. The FHFA weighted repeat sales method attempts to control for price changes that occur with renovation and depreciation, and also attempts to lessen the price variance associated with infrequent transactions. The FHFA series is reported quarterly going back to 1975. The house price series is not seasonally-adjusted by the source. We seasonally-adjust the series using the BSTS model and re-base it to 2005=100. We deflate this house price series using the Personal Consumption Expenditure (PCE) deflator obtained from the OECD Economic Outlook database.

We complete the data for the United States by including a Personal disposable income (PDI) series, reported in *per capita* terms. The PDI and working age population series came from the OECD Economic Outlook database. The source of the PDI and working age population has changed. This affects the PDI series for the 2012 first quarter update and all subsequent updates. We use personal disposable income for the household sector (including NPISHs) published by the Bureau of Economic Analysis (BEA). This series is reported at a quarterly frequency starting in 1947 and seasonally adjusted by the source. Current working age population data is now obtained from the Bureau of Labor statistics (BLS). This series is reported at a monthly frequency beginning in 1948. Working age is defined as 16 years and older in the U.S., while the series used for most other countries includes 15-64 years old. We take the monthly averages to express the working-age population series at a quarterly frequency. To create the PDI *per capita* series we divide the PDI by the working-age population. We use the PCE deflator to report the PDI in real terms. Both nominal and real measures are indexed to 2005=100.

## Information Resources:

Federal Housing Finance Agency (FHFA) House Price Data <u>http://www.fhfa.gov/default.aspx?page=84</u>

Bureau of Economic Analysis (BEA) PDI Data http://www.bea.gov/iTable/index\_nipa.cfm

