



**S E N T I E R**  
R E S E A R C H

**Household Income Trends  
June 2018**

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## Household Income Trends June 2018

### Source

This report on median household income for June 2018 is based on data from the monthly Current Population Survey (CPS), the source of the nation's official statistics on employment and unemployment. This nationally representative sample included 50,757 interviewed households and 98,766 persons age 16 years old and over.

### Summary of Findings

New data from the monthly Current Population Survey (CPS), indicate that median annual household income in June 2018 was \$62,175. Median household income for June of this year was higher than for any other month since January 2000, but only 2.8 percent above the median for that month of \$60,460.

Following the “great recession” defined as lasting from December 2007 to June 2009, median household income fell to its low point in June 2011 (\$54,643). The June 2018 median of \$62,175 is 13.8 percent higher than the June 2011 median.

The June 2018 median is 2.6 percent higher than that for June 2017.

(Income amounts in this report reflect before-tax money income. Values have been

adjusted for inflation and are expressed in

June 2018 dollars. Seasonal adjustments have been applied unless otherwise noted.)

Median annual household income has displayed a somewhat erratic pattern over the past several years. More broadly, there has been a general upward trend in median household income since the post-recession low point reached in June 2011. This upward trend was initially marked by monthly movements, both up and down. Many monthly changes were not statistically significant. By the summer of 2014 however, that uneven trend became dominated by a series of significant monthly increases. (See Figure 1 at the back of this report.)

The general upward trend in median annual household income since June 2011 reflects,

in part, the low level of inflation as measured by the CPI for all items used in this series, as opposed to the CPI less food and energy. Energy prices have recently been fluctuating, which has had an effect on the CPI for all items. The CPI for all items increased by 0.1 percent between May 2018 and June 2018, and also by 0.2 percent between April 2018 and May 2018.

The June reading on the labor market from the U.S. Bureau of Labor Statistics shows a mixed situation compared to May. The official unemployment rate in June 2018 was 4.0 percent compared to 3.8 percent in May. The median duration of unemployment was 8.9 weeks in June 2018, lower than May 2018 (9.2 weeks). The broader measure of employment hardship, which includes the unemployed, marginally attached workers (of which discouraged workers are a subset), and persons working part-time for economic reasons, was 7.8 percent in June 2018, slightly higher than the May 2018 reading (7.6 percent).

The Sentier Household Income Index (HII) shows the value of real median annual household income in any given month as a percent of the base value at the beginning of the last decade (January 2000 = 100.0 percent). The Sentier HII stood at 102.8 in June 2018, higher than December 2007 (98.8) when the “great recession” began, and higher than June 2009 (97.0), when the “economic recovery” subsequently began. The Sentier HII was 90.4 in June 2011, the low point in our household income series. The trend in the Sentier HII, plotted against the various labor market variables discussed above, is shown in Figures 1, 2, and 3 at the back of this report.

Other economic factors, such as average weekly earnings, have also had an effect on household income levels. (Average weekly earnings are affected by changes in average hourly earnings and average hours worked per week.) Average weekly earnings in June 2011, the low point in our household income series, were \$880.70 (in June 2018 dollars). By June 2018, average weekly earnings had increased to \$930.81. (All figures are seasonally adjusted from the U.S. Bureau of Labor Statistics based on the Current Employment Statistics survey).

The Nation’s official estimates of household income and poverty are released once a year by the U.S. Census Bureau. Official data derived from the 2017 Current Population Survey Annual Social and Economic Supplement (CPS ASEC) that relate to annual income received during calendar year 2016 were released by the U.S. Census Bureau on September 12, 2017. These are the most recent statistics on annual income that are currently available from the U.S. Census Bureau. While the U.S. Census Bureau provides the most accurate measures of both the level and change in household income, the new series presented in this report provides an interim measure that tracks income changes on a monthly basis, an attribute that is especially important during periods of economic instability, such as those we have experienced. As demonstrated in this and our previous reports, the new monthly series has the ability to track household income changes during the specific months of important economic events, such as the recession and the economic recovery, that do not coincide neatly with calendar year boundaries.

## Data Sources and Estimation Methods

This study is based on data collected in the Current Population Survey (CPS), the same household survey used to derive the official monthly unemployment rate. Data have been compiled from each monthly survey taken since January 2000 (as of June 2018, 222 surveys in total). Each of these surveys collected data for a nationally representative sample of more than 50,000 interviewed households and their respective members (approximately 135,000 per month). The survey collects the detailed information needed to determine the employment characteristics of all civilians age 16 years old and over and to compute the official unemployment rate. It also collects key demographic and social characteristics for all household members, including children. Some of these are as follows:

- Age
- Gender
- Relationship to householder (i.e. spouse, own child, grandchild, nonrelative, etc.)
- Race and ethnicity
- Educational attainment
- Veteran's status (era of past membership in the armed forces)
- Presence of disabilities
- Citizenship
- Country of birth

Estimates of household income from the survey are based on a single question that asks respondents to report the total money income received by the household during the previous 12-month period. The definition of income used in the survey includes the following:

- Wages and salary
- Nonfarm self-employment income

- Farm self-employment income
- Social Security and Supplemental Security Income
- Interest, dividends, net rental income, and royalties
- Cash public assistance (federal and state)
- Unemployment compensation and workers' compensation
- Retirement income from pensions, annuities, other retirement plans
- Veterans' pensions and compensation
- Child support and alimony
- Other cash income **excluding** capital gains or lump sum, one-time amounts

The total amount of household income before taxes is recorded in one of 16 categories as shown below:

- Under \$5,000
- \$5,000 to \$7,499
- \$7,500 to \$9,999
- \$10,000 to \$12,499
- \$12,500 to \$14,999
- \$15,000 to \$19,999
- \$20,000 to \$24,999
- \$25,000 to \$29,999
- \$30,000 to \$34,999
- \$35,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 and over

The total household income estimates in this report are based on a composite moving average. Each month 25 percent of the sample households are new while 75 percent

were also interviewed in the previous month. As the household income question is asked only for the “new” households each month, statistics derived from the full sample represent a moving average covering the 4-month period prior to the interview month. The household income estimates in this report reflect all sample households. We have determined that estimates based solely on the 25-percent sample entering in a single month exhibit an unacceptable level of sampling variability.

The raw data collected for each household member in the survey must be aggregated and summarized at the household level in order to generate the household statistics underlying this analysis. Householders are identified in order to compute statistics that relate to characteristics of the householder. Counts of the number of household members, number of children, and number of earners are computed by examining each household member’s detailed information. Missing responses to the question on household income are imputed using statistical matching techniques in order to adjust for any nonresponse bias. Procedures for imputing missing responses are based on the same methodology used by the U.S. Census Bureau for the Annual Social and Economic Supplement (CPS ASEC), the source for official estimates of annual income, poverty, and health insurance coverage. There are some reporting differences when asking for total household income as compared to using the CPS ASEC supplemental questionnaire, which asks a detailed series of questions on the receipt of income during the previous calendar year. We have made adjustments to correct for bias caused by these differences. The U.S. Census Bureau’s income estimates for calendar year 2016 were released on September 12, 2017. That release does not include monthly trend data, and therefore

does not report on any income developments during 2017 and 2018.

All statistics shown in this analysis are based on weighted sample data. The survey for each month includes a sample weight for each household. The sum of these weights across all sample households provides a national estimate of the total number of households existing for that month. When summed these weights also provide estimates of the number of households by characteristics such as race, age, gender, presence of unemployed, etc.

Estimates shown in this report may differ from actual values because of both sampling variability and nonsampling error. Sampling variability occurs because responses are obtained from a sample of the population (50,000 interviewed households) rather than from a full census. Nonsampling error can occur from a variety of factors. Households may report incorrect information when answering questions about the total amount of household income received during the past 12 months prior to the interview. When a respondent forgets the exact dates for a sequence of events this can result in a known survey bias called “telescoping,” in which the reporting of the events is telescoped either forward or backward.

The telescoping phenomenon may be especially relevant in situations where household members become unemployed or find a job after a significant period of unemployment. For example, a respondent who recently found a job following a long period of unemployment may erroneously include the annual salary from the new job when responding to the household income question in the CPS that should be restricted only to income received during the 12-month period prior to the survey month. Similarly, respondents with Social Security income may use their current monthly Social

Security benefit to compute annual household income during the previous 12-month period even though the current monthly amount reflects the first month following a cost-of-living adjustment.

The Consumer Price Index (CPI-U) for all urban consumers has been used to make adjustment for changes in prices where noted in the tables and text of the report. We have used the seasonally adjusted CPI to make these adjustments.

The Sentier Household Income Index (HII) has been seasonally adjusted to reduce seasonal differences in the reporting of household income. Various factors may contribute to seasonal difference in the way households report their incomes in the CPS. Earlier studies by the U.S. Census Bureau have shown that reports of household income tend to rise as the survey month approaches the April tax-filing period. This trend, while apparent in surveys of the 1980's and early 1990's, is less pronounced in more recent years. Seasonal adjustments are made using the X-12-ARIMA software. This software was developed by the U.S. Census Bureau and is the same software used to create adjustment factors for monthly employment and unemployment series released by the U.S. Bureau of Labor Statistics.

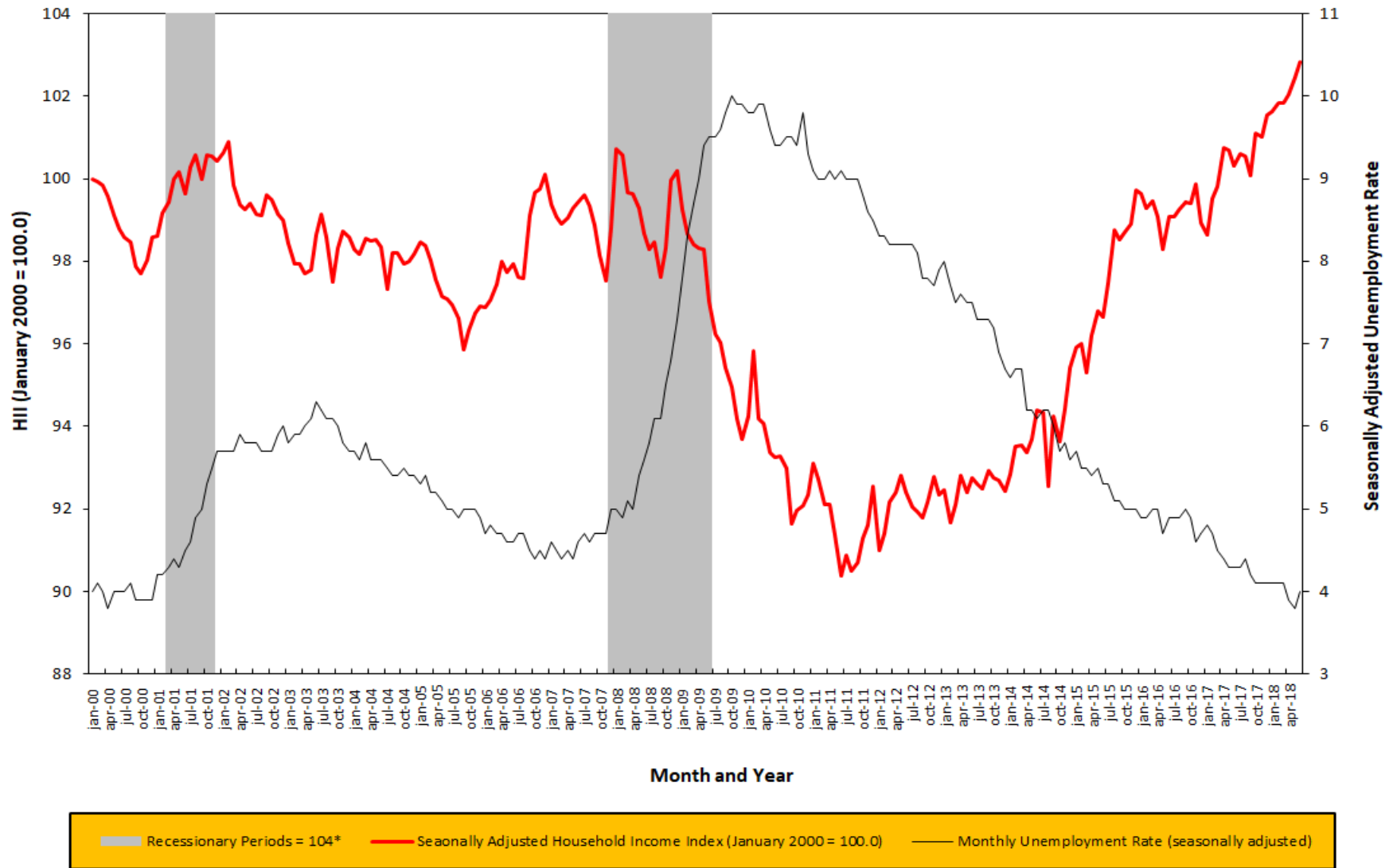
The household income estimates in this report reflect modifications made as part of annual benchmarking adjustments that were implemented in January 2018, which improve the methods used for estimating the level of household income and update the factors used for making seasonal adjustments to the time series data. In addition, beginning with January 2013 we have been using the seasonally adjusted

Consumer Price Index for all urban consumers (CPI-U) to make adjustments for changes in prices throughout the entire household income data series back to January 2000. (All estimates prior to January 2013 were based on the not seasonally adjusted CPI-U.) These various adjustments result in a trend line in real median annual household income, and the corresponding Sentier Household Income Index (HII), that closely resembles the previously published trend line. Similar benchmarking adjustments will be made in January of each year as part of an effort to introduce continuous improvements into the household income data series.

The estimates in this report reflect population controls based on the 2010 Decennial Census results. These controls are used to "weight" the survey observations so that they reflect the population by detailed demographic subgroups. Introduction of the new survey weights to reflect the latest Census results is standard operating procedure for the CPS. Traditionally their introduction has had only very minor effects on comparisons of median incomes but may have some small effects on estimated numbers of households. The new population controls were introduced in January 2012 for the CPS.

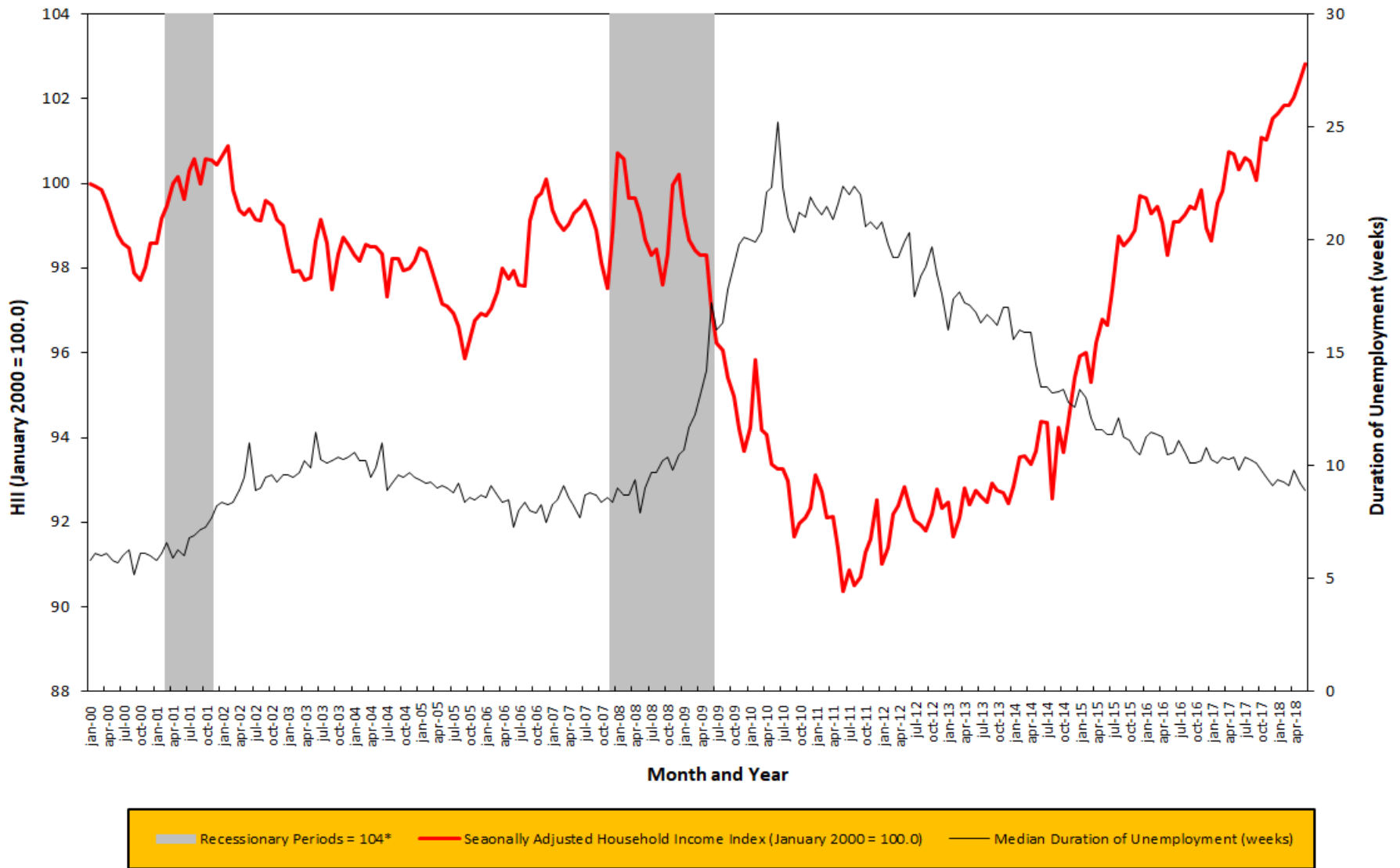
Each January the U.S. Census Bureau makes additional adjustments to the population controls in the Current Population Survey. This means the sample weights are revised so that estimates from the CPS agree with pre-specified national population totals by age, sex, race, and Hispanic origin and with state level totals by age, sex, and race. The estimates in this report reflect those adjustments.

**Figure 1.**  
**Median Household Income Index (HII) and Unemployment Rate by Month: January 2000 to June 2018**



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the unemployment rate and the CPI-U: the U.S. Bureau of Labor Statistics.

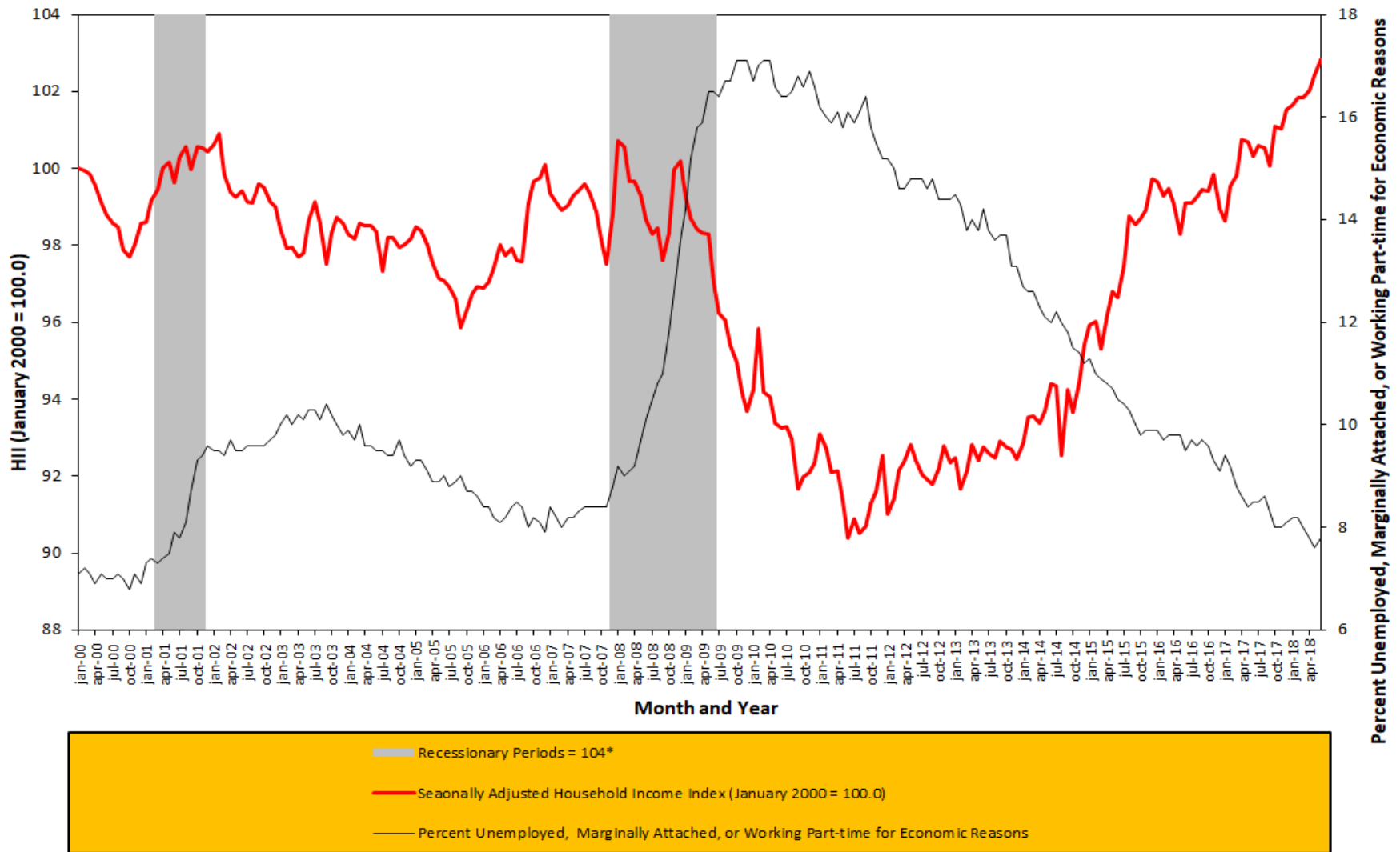
**Figure 2.**  
**Median Household Income Index (HII) and Median Duration Unemployment by Month: January 2000 to June 2018**



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the median duration of unemployment and the CPI-U: the U.S. Bureau of Labor Statistics.



**Figure 3.**  
**Median Household Income Index (HII) and Percent Unemployed, Marginally Attached, or Working Part-time for Economic Reasons by Month, January 2000 to June 2018**



Sources: For income data: Sentier Research, LLC estimates of annual household income derived from the monthly Current Population Survey (CPS) conducted by the U.S. Census Bureau; for the percent unemployed, marginally attached, or working part-time for economic reasons and the CPI-U: the U.S. Bureau of Labor Statistics.