Chained CPI: What Is It & How Does It Work?

Plus A Look at the Advantages & Disadvantages

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You've likely heard or read about the debate surrounding measurement of the Consumer Price Index (CPI). There have been calls to change the way it is measured in the United States by moving from the current method to an alternative method known as the *Chained Consumer Price Index.* The debate whether to change the method or not has become highly politicized and emotionally charged. Politicians and interest groups have chosen sides and the rhetoric has become confusing. Most confused are probably the consumers likely to be affected. With that in mind, allow me to try to explain the difference and frame the debate in a way that is rational, not too technical and not politically nor emotionally charged.

The Consumer Price Index is one of at least six economic indicators that purport to measure changes in prices. Nevertheless the CPI is, perhaps arguably, the most popular. It is estimated by the Bureau of Labor Statistics and consists of a current market basket of 211 categories of assorted goods and services from about 26,000 retail outlets and 4,000 households in 87 urban locations. It does not include rural, military or institutionalized population such as those in prison or in nursing homes. Prices are collected on about 80,000 items. The survey results are then reduced to eight broad categories which are assigned a weight that represents the relative importance of that item. Housing, for example, is currently weighted the highest at 44%. Other current weights are shown at the left. Weights are determined by surveys of thousands of consumers (families and individuals) about what they actually bought in the survey time period. They are adjusted at two year intervals in even numbered years based on changing consumer preferences.

The result is two key indices. The "CPI-W," which is the "*CPI for Urban Wage Earners and Clerical Workers*" accounts for about 32% of the population. The "CPI-U" is a broader index which covers about 87% of the population and is therefore more indicative of how prices are moving. These measures are the ones currently in use. Since the same items and geographies are surveyed each month, BLS can track changes in consumer behavior and price performance on a monthly basis. The fact that they are based on the *same items and geographies* each month is perhaps the most important point. A sharp increase over a short period of time indicates a period of inflation while a sharp decrease indicates deflation which is a period when prices decline or the value of money increases.

Measuring the same items and geographies each month is also a key weakness as it doesn't capture substitution. In the real world, if the price of a consumer good or service rises significantly during a period, a consumer forego that and substitute a lower priced but similarly useful good or service. The **chained CPI** will capture that substitution. A chained system allows a consumer to shift the weight of his or her spending from one area of spending to another. Because consumers may substitute for lower priced goods or services, the chained CPI will usually be lower. That fact is apparent in the table to the left in which we compare chained and traditional CPI for the last 13 years.

Chained & Unchained CPI As Measured In December of Years 2000-2012

CPI	Chained	Not Chained
2000	2.6	3.4
2001	1.3	1.6
2002	2.0	2.4
2003	1.7	1.9
2004	3.2	3.3
2005	2.9	3.4
2006	2.3	2.5
2007	3.7	4.1
2008	0.2	0.1
2009	2.5	2.7
2010	1.3	1.5
2011	2.9	3.0
2012	1.6	1.7

SOURCE: Bureau of Labor Statistics

All of the gathered data are compiled into indices which are issued by the Bureau of Labor Statistics, Department of Labor during the second or third week of each month. Each monthly release covers retail price performance for the prior month. The BLS reports both chained and traditional CPI measures on both a seasonally adjusted and not seasonally adjusted basis. It also reports total CPI as well as a measure without the highly volatile food and energy components.

The CPI has widespread importance as it touches nearly everyone. Changes in the CPI can alter the benefits of millions of Social Security recipients (currently 57.2 million) as well as welfare recipients (currently approaching 47 million) and others whose benefits or entitlements are tied to the consumer price index. For example, if the federal government switched to a chained CPI, the average Social Security recipient would receive roughly $100 per month less. Alternatively, the federal government would save roughly $340 billion over 10 years in current dollars. This obviously does not take into account the exploding growth of those retiring and receiving benefits over that 10 year period.

The chained CPI system is probably the most realistic indicator of price movement. As politics always trumps economics, it may or may not be the method used going forward.

Price Indices

Price indices at nearly every level of the economy and every step along the manufacturing supply and production chains are extraordinarily important and have a great deal of market sensitivity. Indeed, inflation is often referred to by economists as public enemy number one for financial markets and consumers. The two most important inflation measures are prices at the producer level and at the consumer level.

The Producer Price Index is watched carefully because any hint of inflation in what manufacturers and wholesalers pay for goods at any stage of production can quickly translate to inflation at the retail level. If manufacturers pay more for materials, it stands to reason that the prices will be passed along to consumers although we admit that the relationship is rarely that simple or direct.

At the producer level, the Bureau of Labor Statistics tracks the price of food and non-food crude goods, including but not limited to non-food crude items such as petroleum, sand, timber and coal.

They also track intermediate goods which have undergone some manufacturing such as paper and auto parts, etc. The final measure at the producer level is finished goods such as apparel, automobiles and much more.

Then comes the retail level, or the Consumer Price Index, which is the subject of this piece.

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CPI Currently Assigned Weights

Housing 44%
Food & Beveridge 16%
Transportation 15%
Medical 6%
Recreation 6%
Education 6%
Apparel 4%
Other 3%

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