

May 9, 2005

PAGE ONE

New and Improved

An Inflation Debate Brews Over Intangibles at the Mall

**Critics Say U.S. Plays Down
CPI Through Adjustments
For Quality, Not Just Price**

Value of a TV's Flat Screen

By **TIMOTHY AEPPEL**

Staff Reporter of THE WALL STREET JOURNAL


May 9, 2005; Page A1

WASHINGTON -- To most people, when the price of a 27-inch television set remains \$329.99 from one month to the next, the price hasn't changed.

But not to Tim LaFleur. He's a commodity specialist for televisions at the Bureau of Labor Statistics, the government agency that assembles the Consumer Price Index. In this case, which landed on his desk last December, he decided the newer set had important improvements, including a better screen. After running the changes through a complex government computer model, he determined that the improvement in the screen was valued at more than \$135. Factoring that in, he concluded the price of the TV had actually fallen 29%.

Mr. LaFleur was applying the principles of hedonics, an arcane statistical technique that's become a flashpoint in a debate over how the U.S. government measures inflation. Hedonics is essentially a way of accounting for the changing quality of products when calculating price movements. That's vital in the dynamic U.S. economy, marked by rapid technological advances. Without hedonics, the effect of consumers getting more for their money wouldn't get fully reflected in inflation numbers.

DOW JONES REPRINTS

 This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers, use the Order Reprints tool at the bottom of any article or visit:

www.djreprints.com.

- [See a sample reprint in PDF format.](#)
- [Order a reprint of this article now.](#)



Tim LaFleur

But even as the Federal Reserve raises interest rates amid a recent uptick in inflation, many critics complain the hedonic method is distorting the picture of what's going on in the economy. They say hedonics is too subjective and fear it helps keep inflation figures artificially low -- meaning the Fed may already be lagging in its inflation-fighting mission.

It's critically important for consumers, business, the government and the economy as a whole that the CPI is as accurate as possible. The CPI is used to benchmark how much is paid to Social Security recipients, who last year received outlays of \$487 billion. It also plays a role in adjusting lease payments, wages in union contracts, food-stamp benefits, alimony and tax brackets.

Getting the CPI right is immensely complex and can seem counterintuitive.

Consumers sometimes have the impression that the government must be missing something -- since inflation has remained remarkably low in recent years, even as housing prices, medical bills and other daily costs have soared. Hedonics helps explain part of the difference. There are also differences in the mix of things people buy. For instance, healthy people spend far less on health care, an area that has seen particularly strong inflation. And not everyone pays college tuition, another area where prices have been marching rapidly higher.

The issue is likely to gain more attention now as signs of inflationary pressures grow. Consumer prices jumped 0.6% last month, the biggest increase in five months, as the prices of energy, clothing and airline fares all rose sharply. On an annual basis, consumer prices rose at a 4.3% rate in the first three months of this year, compared with 3.3% for all of last year.

CHANGING NUMBERS

- See the Bureau of Labor Statistics [complete Consumer Price Index](#)¹ for March 2005. (Acrobat² required.)

Bill Gross, head of the world's largest bond fund, Pimco, caused a stir last fall by proclaiming that the way the CPI is calculated amounts to a "con job" by the government aimed at concealing the true rate of inflation. A key culprit, he said, was the CPI's growing reliance on hedonics. Mr. Gross, who has other complaints about how inflation is tracked, estimates the

CPI really is one percentage point higher than official figures suggest.

That's important for bond investors, who view inflation as their biggest enemy. Bond holders receive a fixed interest payment on their bonds that is eaten away by inflation. If there is hidden inflation in the economy, bonds are less valuable.

Likewise, Andrew Harless, vice president of econometric analysis at Atlantic Asset Management in Stamford, Conn., takes issue with hedonics. "Price decline and quality improvement are not the same thing," he says. As a result, any index that treats it as such is likely to be misleading.

Inflation watchers at the statistics bureau say critics exaggerate the significance of hedonics, noting that it's used in only seven out of 211 product categories in the CPI. In most of those, officials say, hedonics actually magnifies price increases rather than suppressing them.

Take housing, which makes up about 30% of the CPI. Critics often blast the CPI for using a measure based

on what it costs to rent homes rather than what it costs to buy them -- thereby avoiding the recent run-up in housing prices. The bureau says it is more concerned with monthly costs of housing than the long-term value of houses, so it thinks rents are a better gauge.

The bureau says hedonics actually helps boost the housing component of CPI. In order to take into account the aging of housing, and presumably falling quality that goes with it, the CPI applies a form of hedonics that links the age of a housing unit to rents. If someone is paying the equivalent of \$500 a month in rent for several years, the rent has actually gone up as the unit ages and becomes less desirable, according to the government.

Monthly Grind

How the Consumer Price Index is put together:

- 1 400 data collectors visit stores and gather 80,000 retail price quotes and 5,000 housing rent quotes, transmitting data daily to Washington.
- 2 40 commodity analysts at the Bureau of Labor Statistics review about a quarter of this avalanche of price data.
- 3 About nine days before the release of the CPI, the office is locked down—with bright red “restricted area” signs posted on all the doors.
- 4 90 people—a mix of commodity analysts and other economists who specialize in assembling the CPI—compute basic indexes for 211 item categories, which are divided into 38 index areas.
- 5 Final results are released at 8:30 a.m., Eastern time, about two weeks after the end of the month in question.

Hedonics, which literally means the "doctrine of pleasure," was a term first adopted by a General Motors economist, Andrew Court, who studied auto prices in the 1930s. He had created a method of linking car prices over time to features such as weight and horsepower, and wanted a name for the statistical method that emphasized the link between features and consumer utility.

The technique stirred few passions until the technology boom of the 1990s. By then, government agencies had realized they needed a better way to track quality changes in computers and other fast-changing high-tech goods.

Federal Reserve Chairman Alan Greenspan, testifying before the Senate Finance Committee in 1995, said that he thought the CPI was biased upward by as much as 1.5 percentage points. The political response was immediate: If inflation was lower than supposed, it would be possible to rein in deficits without cutting spending or raising taxes. That's because the lower inflation rate would translate into smaller payments to Social Security recipients and other big-ticket items for the government.

Shortly thereafter Congress established the Advisory Commission to Study the Consumer Price Index, better known as the Boskin Commission. The panel confirmed Mr. Greenspan's view and said about half the bias was due to product innovations, such as those seen in computers, which were being overlooked in the CPI. Thus began a push to apply hedonic techniques more broadly.

Today, the hub of this effort is a warren of beige-walled cubicles at the Bureau of Labor Statistics a few blocks from the Capitol. Here 40 commodity specialists hunch over reports with 85,000 price quotes that flow in from around the country every month. The numbers are gathered by 400 part-time data collectors. They visit stores and note prices on the items that make up the basket of goods in the CPI, ranging from ladies' shoes to skim milk to microwave ovens.

One of the biggest challenges in this process is finding substitutes for products that disappear from store shelves or change so much that they are hard to recognize from one month to the next. With TVs, for instance, data collectors find the models they priced the previous month missing about 19% of the time over the course of a year.

When that happens, the data gatherer goes through a four-page checklist of features such as screen size and the type of remote control to find the nearest comparable model. Once this process identifies a product that appears to be the closest match, the data gatherer notes its price. The commodity specialists back in Washington check over these choices and decide whether to accept them.

Mr. Harless at Atlantic Asset Management says all these judgment calls add up to a process that is far too subjective. The CPI "takes something you can't really measure and applies a metric to it in ways that are arbitrary," he says. "There ought to be some kind of warning label on inflation numbers that are derived from hedonic pricing."

David Johnson, the economist who heads the CPI program at the bureau, says, "There's no doubt the analyst has to make decisions about what's comparable and what's not, and where adjustments should be made, but we try to use the data from all the markets to make that decision."



David Johnson

Many price adjustments in the CPI are straightforward: When candy bars get smaller, but are sold for the same price, the CPI reflects that as a price increase.

Todd Reese, the commodity specialist for autos, says he doesn't need hedonics to extrapolate the value of quality changes, because auto makers present him with a list of changes to the car and the corresponding prices. Still, Mr. Reese must make some tough calls as he does his job. For instance, he recently considered a 2005 model in which the sticker price went from \$17,890 to \$18,490. The manufacturer cited an extra cost of \$230 to make antilock brakes standard, while it said it saved \$5 by dropping the cassette portion of the CD player.

The bureau accepted both those items, so the ostensible price increase shrank by \$225. But the car maker also told Mr. Reese it wanted to subtract \$30 from the price increase for the cost of putting audio controls on the steering wheel, allowing drivers to change channels without reaching for the radio dial. "We didn't allow that claim," says Mr. Reese. "We didn't judge that to be a functional change."

The most visible and controversial application of hedonics in the CPI has been in computers, where hedonics sharply accelerated price declines starting in the late 1990s. Recently, the bureau has quietly stopped using hedonics in computers.

Mr. Johnson, the CPI economist, says the change, which took effect in September 2003, was mainly driven by "timeliness" issues. With computers changing so rapidly, the agency found it difficult to keep its hedonic models up-to-date. At the same time, he says, the components of home computers have increasingly become commodities, making it far easier to price the various parts separately, such as memory or screen size, by going straight to manufacturer sources that list those prices.

The decision to stop using hedonics on computers in the CPI, which hasn't been publicized, came in the wake of a 2002 report by the National Science Foundation's Committee on National Statistics. The report concluded that hedonics may be one of the most promising ways of dealing with quality changes, but the agency should be more cautious in adopting it.

"The controversy is really about a small category of electronic goods," says the CPI's Mr. Johnson. Rapid quality advances in everything from DVD players to microwave ovens means that hedonics does, in fact, have the effect of pushing down that part of the index, he says. However, electronics accounts for less than 1% of the overall index.

Meanwhile, the statistics bureau is continuing to look for new ways to apply hedonics. As part of its research, the agency recently selected 10 random items, including laundry detergent, to study as potential new areas to apply hedonics.

Ron Blackwell, chief economist for the AFL-CIO, says he is concerned about how hedonics is used. For one thing, the method seems overly focused on capturing quality improvements, he says.

"It's very careful on the adjustments of quality upwards, but not as careful on judging the deterioration of quality, so it's biased," says Mr. Blackwell. Because of this inconsistency, he says, when the CPI is used to calculate Social Security payments or set wages in labor contracts, "it really understates the increase in prices that's taken place and that's experienced by workers and retirees."

Jack Triplett, a visiting fellow at the Brookings Institution who has written extensively on hedonics, says he often encounters resistance from people who insist official inflation figures can't be capturing the real picture, because the government data contrast with their own experience. Some have suggested the CPI should be broken into subcategories, such as one for the elderly, which would put greater weight on items they buy in relatively greater amounts, such as health care.

In February, Mr. LaFleur received a report about a 57-inch television in which the price dropped from \$2,238.99 to \$1,909.97. Going over the checklist, the data gatherer in the field discovered the old version had a built-in high-definition tuner. The new one did not.

Running this through the hedonic model, Mr. LaFleur found that the tuner was valued at \$513.69. This turned what appeared to be a 14.7% price decrease into a 10.7% increase. In hedonic calculations, the price difference is always added or subtracted from the previous month's figure in order to calculate the ultimate change.

Similarly, in the case of the 27-inch television where the price appeared to stay the same, Mr. LaFleur says it was obvious to him that the price had declined. The latest model had a flat screen, he says, something which consumers value more than the curved screen in the old model. The newer TV also had a 10-watt stereo, compared with the weaker six-watt stereo in the older model.

Write to Timothy Aepfel at timothy.aepfel@wsj.com³

URL for this article:

<http://online.wsj.com/article/0,,SB111560037984127816,00.html>

Hyperlinks in this Article:

(1) <http://online.wsj.com/documents/bbcpi.pdf>

(2)

JAVASCRIPT:OpenWin('http://www.acrobat.com/',",",",',na+me+lo+sc+re+',true,0,0,true);void("")

(3) <mailto:timothy.aepfel@wsj.com>