

Consumer Metrics Institute Members News

October 24, 2010: The U.S. Census Bureau's Retail Sales Report

We are asked from time to time to "reconcile" various retail sales reports to our own measurements of consumer demand. The "official" U.S. Government report on retail sales is compiled by the U.S. Census Bureau, a part of the U.S. Department of Commerce. The headline number from the September report was a reported 6.3% improvement year-over-year from the same period in 2009. This is nearly an exact reverse from what our data was showing. To understand why their numbers could be so radically different, we need to examine their methodologies:

-- The aggregate retail sales numbers from the survey work out to be about 40% of the consumer portion of the GDP. They literally sample the stuff you buy in stores on a weekly/daily basis -- and not all those other big checks you write.

-- They don't cover the other 60% of the consumer economy: mortgage payments, car payments, insurance payments, finance charges, power/gas/water bills, cable & phone bills, medical care from health care providers/facilities, and sales taxes -- among other things.

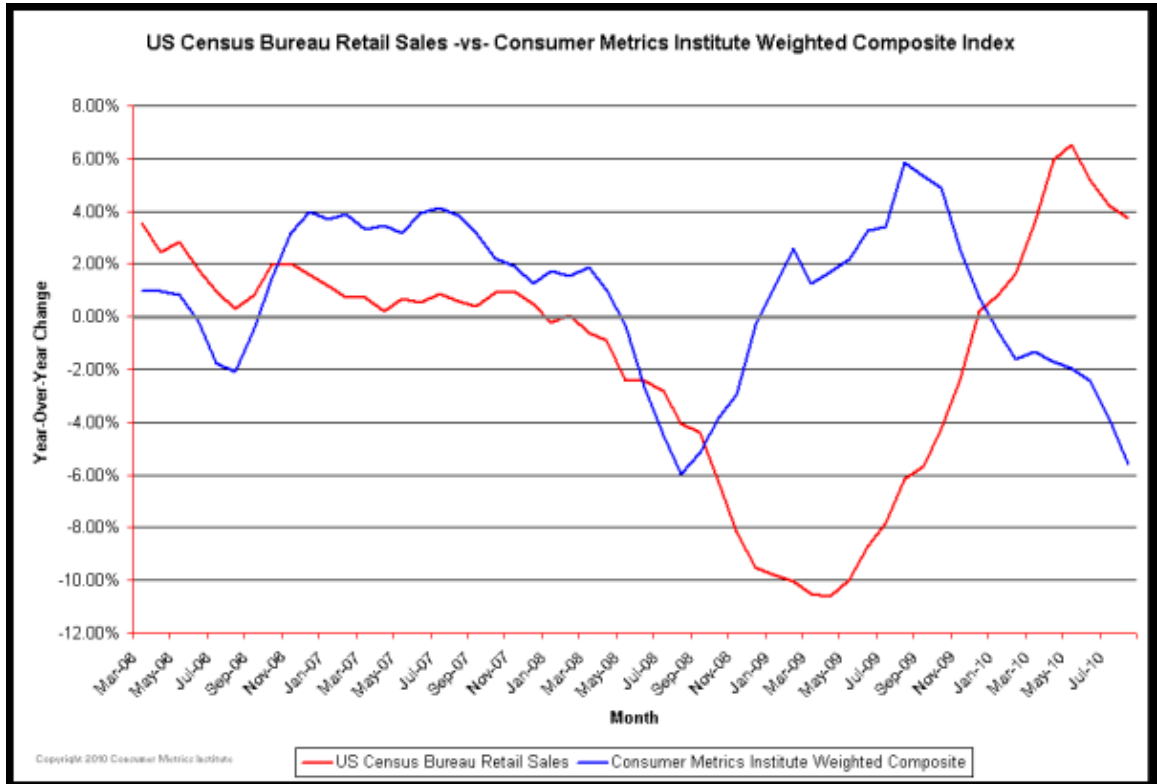
-- Although they try to sample from retail firms of all sizes, they sample with "certainty" from only the largest. This results in "large firm bias" to at least some extent. In fact, the smaller the retail firm, the less likely it is to be sampled and the more likely it is to be "guess-timated" from other data. In other words: they know the Walmart results and they guess the sales at the "mom-and-pop" stores. In that sense their data more closely resembles our "Department Store Chains" sub-index within our Retail Sector -- which also, not coincidentally, more closely matches their numbers.

-- Each month somewhere between 25% and 30% of questionnaires are not returned. For those missing questionnaires they "impute" the results based on past responses from the same firms. If and when they "are notified" that a formerly reporting firm has ceased business, that firm is dropped from the sample. The imputations result in "survivor bias" within their data to at least some extent.

-- Their data is not adjusted for inflation/deflation. But they do cover retail gasoline sales, which has had significant price movements over the periods covered.

-- Although both unadjusted and seasonally adjusted data is available, the most widely reported numbers are the seasonally adjusted ones. The impact of seasonal adjustments can be difficult for third-party analysts to sort out, and the adjustments themselves can dwarf the real changes in the data.

We have always tried to correct for some of these issues when looking at their data. The chart below summarizes our frustration with the last two years of Census Bureau Retail Sales data. In it we have taken the unadjusted Census Bureau Retail Sales numbers, corrected them for inflation/deflation, compared them year-over-year, and smoothed the results over three months. We then compared them to our Weighted Composite Index similarly smoothed:



In theory, the U.S. Census Bureau's data tracks only "discretionary" goods -- in the sense that the items not captured (mortgage payments, finance charges, taxes, utilities, medical provider costs, insurance, etc.) are the core non-discretionary items that consumers can't easily adjust month-to-month. We generally classify consumer expenditures into discretionary and non-discretionary. But in a sense there are three categories: truly non-discretionary (e.g., auto insurance, power bills, and taxes), semi-discretionary (e.g., dining, liquor and premium groceries) and the hyper-discretionary (e.g., iPads and cruises). Items in the hyper-discretionary category can be eliminated from budgets without much pain at all. Things in the semi-discretionary category can be down-scaled without significant lifestyle changes. People still need to eat, but grocery bills can certainly be reduced when necessary without subjecting the kids to starvation.

The retail sales measured by the Census Bureau fall into the latter two categories, the semi-discretionary and the hyper-discretionary. As a consequence the results should be volatile -- and they certainly are. But we really puzzle over the extent, duration and timing of the downturn; for example, in the above chart where are the signs of "Cash for Clunkers"?

We know that our data includes the housing sector in ways that "retail sales" cannot even begin to capture. That certainly explains some of the differences. But the timing doesn't even begin to jive with the BEA's conclusion that the GDP bottomed in Q4-2008, or the NBER's conclusion that the recession was over in June 2009. Look at the above chart again -- the timing just seems wrong; the BEA's GDP bottom, the NBER's "Great Recession" timing and the Census Bureau's retail sales reports can't all be correct. We sense that something has gone seriously awry during the past two years with the Census Bureau's sampling methodologies.

That said, we encourage our members to review the latest [Gallup Consumer Spending poll](#)

(brought to our attention by "Ilargi" at [The Automatic Earth](#)). That poll is clearly seeing some of the same softness that pervades our data, something of a confirmation that we're not completely delusional. If Gallup's self-reporting methodology has an accuracy problem it's probably due to "best intentions" biasing the numbers -- which in this case means that consumers at least know that they should be more frugal this year than last year. And that's not exactly a ringing endorsement for an imminent consumer led recovery.

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