GDP plus Change in Debt—US Flow of Funds

My recent post "What Bernanke doesn't understand about deflation" has hit a chord, with a number of sites around the world reproducing it—including John Mauldin's Outside the Box column. But it has raised a couple of queries in people's minds too:

1. Does my definition that "aggregate demand equals GDP plus the change in debt" involve double-counting?
2. My figures for the USA are difficult to reconcile with the published US Flow of Funds data.

On the second point first, I produce an aggregate level of private sector debt in the USA from Table L1 of the Flow of Funds (on page 60 of the June 2010 PDF, and in ltab1d.prn in the ltabs.zip data archive) by adding together debt data for the following sectors:

- Household
- Non-financial corporations
- Nonfarm non-corporate
- Farm
- Financial Corporations

This omits some of the debt included in the aggregate debt level in the same table—notably government debt and debt owed by the "rest of the world". In the interests of making it easier to reconcile my table with the data in the Flow of Funds, here's the same exercise applied simply to the very first row in Table L1 (and the first column in ltab1d), "Total credit market debt owed by:"

US Flow of Funds Table L1, row 1 (column 1 in the file ltabs1d.prn)

200504	41267079
200601	42343298
200602	43337326
200603	44258861
200604	45329493
200701	46504304
200702	47528151
200703	48860628
200704	50044489
200801	50812625
200802	51272735
200803	52082473
200804	52524931
200901	52882693
200902	52686684

200903	52549072
200904	52416676
201001	52126900

I also transform the data to monthly by interpolation, and the way my data is stored the figure I give for 2006 corresponds to the figure stored for the end of the quarter 200504 by the Fed. I've highlighted these numbers in the two tables here to make that more obvious.

Change in debt and aggregate demand

Variable\Year	2006	2007	2008	2009	2010
GDP	12,915,600	13,611,500	14,291,300	14,191,200	14,277,300
Change in Nominal GDP %	6.3%	5.4%	5.0%	-0.7%	0.6%
Change in Real GDP %	2.7%	2.4%	2.3%	-2.8%	0.2%
Inflation Rate %	4.0%	2.1%	4.3%	0.0%	2.6%
Total Debt	**41,267,079**	45,329,493	50,044,489	52,524,931	52,416,676
Debt Growth Rate %	9.2%	9.8%	10.4%	5.0%	-0.2%
Change in Debt	3,468,111	4,062,414	4,714,996	2,480,442	-108,255
GDP + Change in Debt	16,383,711	17,673,914	19,006,296	16,671,642	14,169,045
Change in Aggregate Demand %	0.0%	7.9%	7.5%	-12.3%	-15.0%

On the first point, since I consider that aggregate demand is spent on both goods & services (which are counted in GDP) and the net sum expended purchasing existing assets (which is not counted in GDP), then there is no double counting. A standard textbook aggregate demand figure is the sum spent buying goods and services (for the expenditure definition), which omits of course the sum spent buying existing assets as well. That would be all well and good if we lived in a world without asset sale—which of course we don't.

Another reason people see a potential error here is that they think that a loan simply represents the transfer of spending power from a saver to a borrower, so that overall there's no change in spending power because of a loan: money is simply transferred from one group that will therefore spend less (creditors), to another that will therefore spend more (debtors). This is clearly the thinking that Bernanke applied when he, in common with ~~most~~ all neoclassical economists, dismissed Fisher's "debt deflation" explanation for the Great Depression:

> "Absent implausibly large differences in marginal spending propensities among the groups, it was suggested, pure redistributions should have no significant macroeconomic effects. " (Bernanke 2000, p. 24)

This is not the case in the real world, for two reasons:

1. Credit Money is created by banks "out of nothing" by the act of giving a borrower purchasing power (a loan of money) in return for recording a liability by that borrower to the bank (a bank debt). This creates new spending power "ab initio" without removing it from other agents. For

the mechanics of this process, see my "[Roving Cavaliers of Credit](#)" blog entry ([click here for the PDF](#)).

2. As Schumpeter argues cogently, the endogenous creation of money by the banking sector lending to entrepreneurs is an essential reason that capitalism can grow, and it creates spending power that does not originate in the existing "circular flow of commodities":

> "From this it follows, therefore, that in real life total credit must be greater than it could be if there were only fully covered credit. The credit structure projects not only beyond the existing gold basis, but also beyond the existing commodity basis."

> "[T]he entrepreneur needs credit … [T]his purchasing power does not flow towards him automatically, as to the producer in the circular flow, by the sale of what he produced in preceding periods. If he does not happen to possess it … he must borrow it… He can only become an entrepreneur by previously becoming a debtor… his becoming a debtor arises from the necessity of the case and is not something abnormal, an accidental event to be explained by particular circumstances. What he first wants is credit. Before he requires any goods whatever, he requires purchasing power. He is the typical debtor in capitalist society." (Schumpeter 1934, pp. 101-102)

So there is no double-counting in "aggregate demand equals GDP plus the change in debt": the rise in debt adds new demand to that generated by the sale of commodities alone (and is a good thing here because it finances a large part of investment); and the increase in debt is spent financing part of investment and consumption (an overlap that could give rise to double-counting) and also on purchases of existing assets (where no overlap is possible).

Bernanke, B. S. (2000). Essays on the Great Depression. Princeton, Princeton University Press.

Schumpeter, J. A. (1934). The theory of economic development : an inquiry into profits, capital, credit, interest and the business cycle. Cambridge, Massachusetts, Harvard University Press.