

Debt in the U.S.:

Time Bomb or Dud?

Does the accumulation of debt in the U.S. mean little to our economic future or does it portend the doom that some see? Though the debt accumulation is unwelcome, this paper will show that it is not as bad as some would suggest. However, 2 or 3 more years of debt accumulation could tip the balance. Importantly, the current debt burden is sufficient to cause difficult times for consumption even without further debt accumulation.

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This paper will investigate the current accumulation of debt in the U.S. The two primary current concerns identified in this analysis are the concentration of debt risks on the consumer and the prospective increase in Federal debt because of the current budget deficit. U.S. households are quickly approaching distress debt levels, but current debt levels are manageable for businesses and governments.

Household debt in America has reached the point where there is not enough net cash flow on an annual basis to pay required debt service. In aggregate, household discretionary cash flow requires net annual liquidation of about \$200 billion of financial or real assets or additional borrowings of the same amount.

Until the last few years, households normally generated enough discretionary cash flow to finance their debt service and their aggregate investment in new housing. Now, households must borrow money or liquidate prior financial savings to add to their stock of real assets.

The Federal government debt burden is also increasing to high levels. The burden is manageable because average interest rates are much lower than normal on the existing publicly held debt. However, debt outstanding is higher than normal.

The accumulation of debt is the primary concern for the Federal government. The Federal government is currently adding over \$400 billion of publicly held debt every twelve months.

The business community appears to have benefited dramatically from the current debt environment. Though debt levels are high, interest costs are historically low, leverage opportunities to increase earnings on interest spread are plentiful and cash flow levels offer substantial coverage of existing interest costs.

Finally, state and local governments appear to have slightly higher than normal debt burdens and very normal interest costs. State and local governments appear to be in reasonably good financial condition.

The primary concern about the current level of debt is the high debt burden on the consumer. The consumer is effectively maxed out on new debt. Households will eventually have to reduce consumption to accept additional debt service or sell off previously accumulated savings.

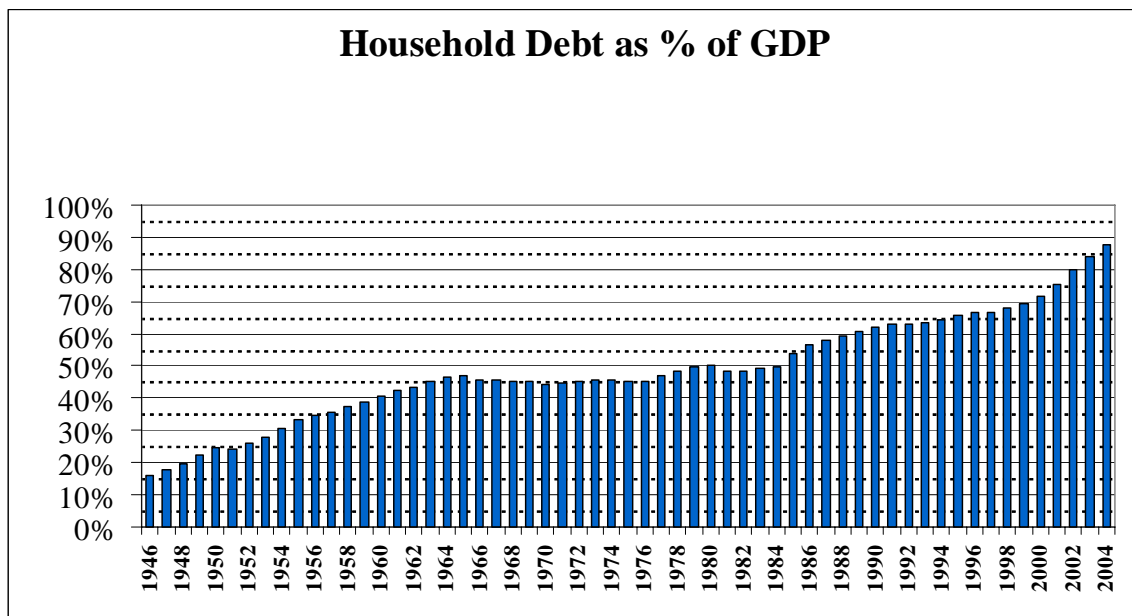
The secondary concern about current debt levels is the accumulation of debt by the Federal government. Though current Federal debt levels are manageable, the Federal government is accumulating new debt at a pace that could cause budget difficulties within 3 to 5 years.

Household Debt

U.S. households have accumulated \$10.3 trillion of debt at the end of 2004 according to the Federal Reserve's Flow of Funds report. Since current GDP is nearly \$11.7 trillion, this number may not seem like much. At 88% of GDP, households have probably never carried a larger debt load.

By comparison, households only had debt equal to 71% of GDP at the end of 2000; debt equal to 62% of GDP in 1990 and debt equal to 50% of GDP in 1980. From 2000 to 2004, households accumulated an incredible amount of debt equal to almost 20% of GDP. In four years, consumers effectively accumulated as much debt as they had in the previous 20 years!

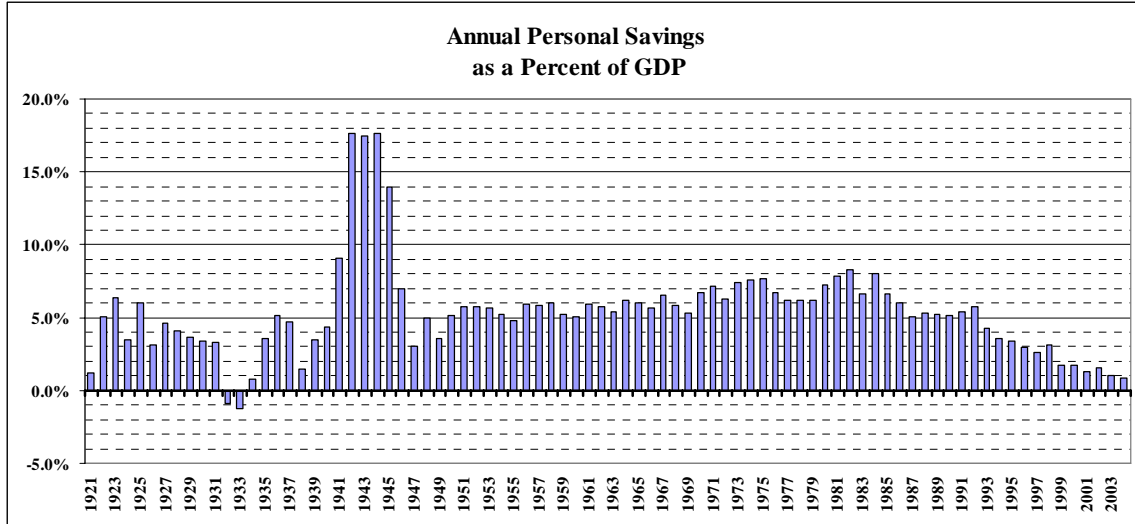
The chart below shows household debt levels since 1946 as a percent of GDP. The chart shows the extraordinary accumulation since the tech bubble began in 1998. We have literally added nearly \$5 trillion of personal debt since 1997.



We will analyze this debt load in the context of the cash flow available to service the debt and the potential impacts on economic activity. The analysis will utilize the Personal Income information from the National Income and Product Accounts(NIPA) maintained by the Bureau of Economic Analysis(BEA).

Currently, the Personal Income statement shows approximately \$100 billion of savings available to individuals. This lack of savings is unusual in itself and has only previously occurred during 1932 and 1933.

The savings level shown in the Personal Income statement has a number of serious flaws if used as the basis of analyzing the ability to carry debt. The primary flaw is that the statement includes a number of non-cash items in income and expenditure. The next chart shows savings as a percent of GDP since 1921.



The non-cash items are substantial and need to be identified and removed from the income and the expenses to effectively evaluate households' debt carrying ability. In Appendix I, we show the detailed adjustments that we have made to the personal income statement for 2003. The table below summarizes the transition from savings to cash flow and then to pre-debt service cash flow for the last 10 years.

Calculation of Personal Cash Generation(\$ billions)

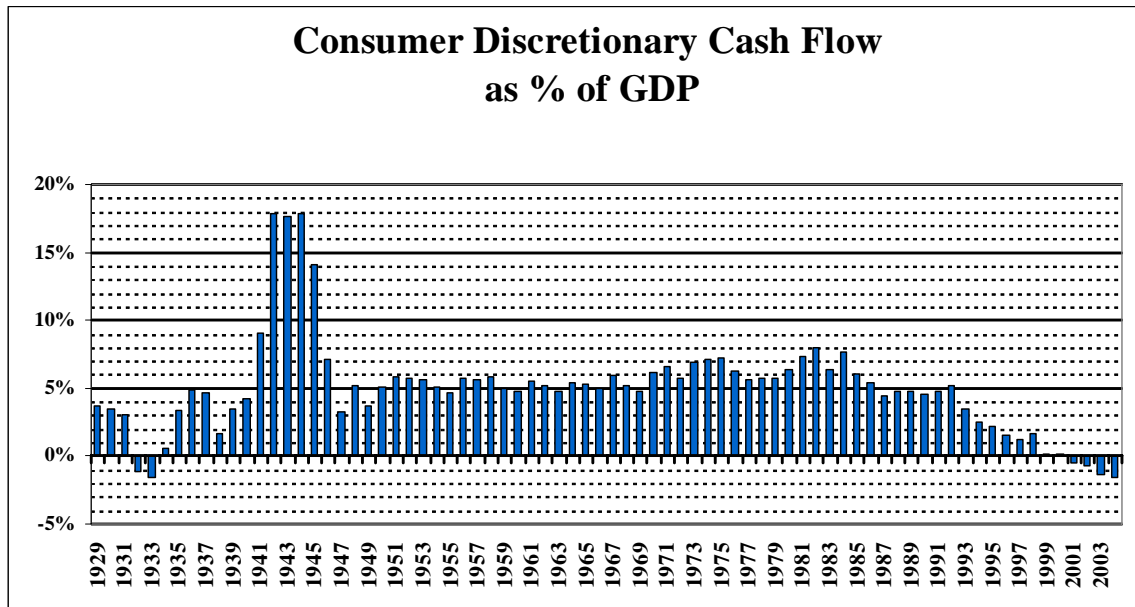
<u>Calendar Year</u>	<u>Personal Savings</u>	<u>Non-Cash Adjustment</u>	<u>Net Cash Savings</u>	<u>Interest Payments</u>	<u>Pre-Debt Cash Savings</u>
1994	\$249.5	\$101.7	\$351.2	\$393.0	\$744.2
1995	250.9	108.5	359.4	436.3	795.7
1996	228.4	113.6	342.0	463.0	805.0
1997	218.3	119.4	337.7	493.8	831.5
1998	276.8	126.0	402.8	517.6	920.4
1999	158.6	136.2	294.8	544.2	839.0
2000	168.5	144.2	312.7	605.5	918.2
2001	132.3	162.0	294.3	631.3	925.6
2002	159.2	169.5	328.7	631.9	960.6
2003	110.6	178.0	288.6	636.5	925.1

Though Appendix I might be of interest by itself, it is sufficient to say that income-based cash flow was approximately \$975 billion before required debt service during 2004. Since \$1 trillion of available cash is a large amount, households should be able to service large amounts of debt.

Debt service during 2004 includes nearly \$650 billion of interest and nearly \$500 billion of required principal repayment. Out of \$1.0 trillion of net cash generated by households,

the entire \$1.0 trillion was used up on debt service and households still needed almost \$200 billion more to cover debt service!

The next chart shows that households have always maintained a substantial safety cushion against economic challenges in the form of discretionary cash flow, i.e. money unspent after normal consumption and annual debt service. Until 1992, that cushion equaled about 5% of GDP.



*Note: This chart is based on average historical Federal Reserve debt service ratios as a % of disposable income for periods prior to 1980. It also uses estimates of outstanding mortgage debt prior to 1945. The information after 1979 is taken from original sources at the BEA and the Federal Reserve.

Beginning in 1993, we began to give up that safety cushion. Finally, in 2001, U.S. households no longer had any financial flexibility. We produce no net savings and are not even able to meet the required annual pay-down of our outstanding debt.

Other than 1932 and 1933, households have always generated cash in excess of debt service until 2001. In 1932 and 1933, the economy had fallen 45% from its peak in 1929. Effectively, households have hit the financing threshold where there is no remaining margin for error.

Any economic downturn could immediately cause debt financing problems. Any increase in interest rates will probably squeeze consumer cash flow. Any excess in consumption growth will only make debt financing more difficult.

In spite of this debt threshold, households took out \$1.5 trillion of new debt during 2004. The net increase in debt was \$1 trillion after required principal payments. Based on early economic information in 2005, it appears that households are well on their way to meeting or beating 2004's debt accumulation during 2005.

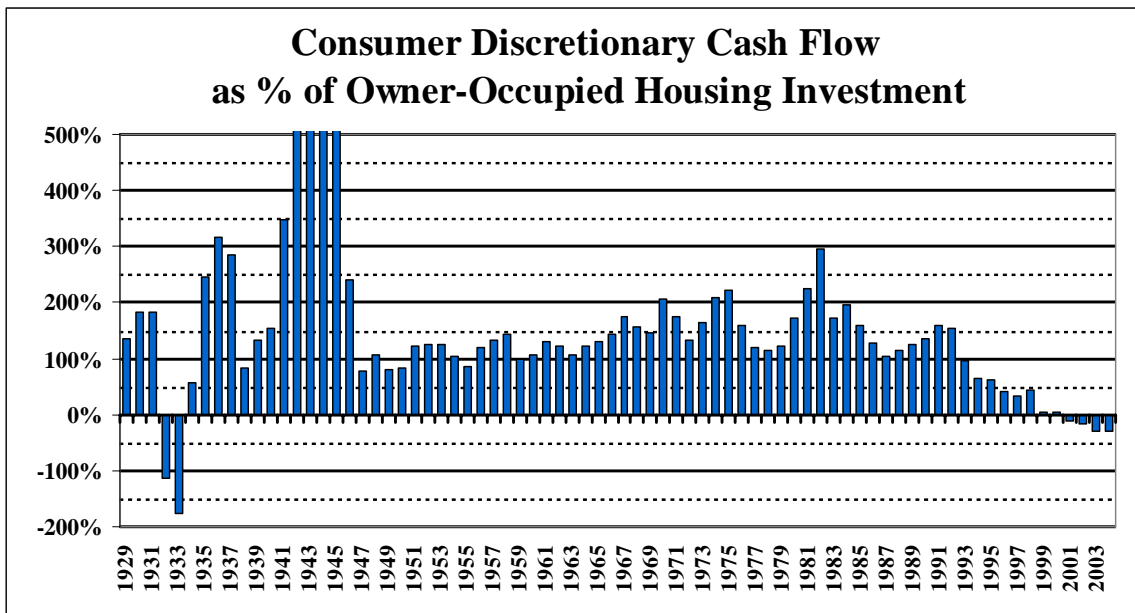
The next table shows how household debt has accumulated during the last 10 years. The astonishing part of this table is the size of new household debt as a percent of GDP. Just the act of slowing debt accumulation is likely to cause a dramatic slowing of the economy.

Sources of Debt Change(\$ billions)

Calendar Year	Beginning Personal Debt	Principal Payments	New Personal Debt	Ending Personal Debt	New Debt as % of GDP
1994	\$4,226.6	\$175.8	\$498.1	\$4,548.9	7.0%
1995	4,548.9	194.4	519.6	4,874.1	7.0%
1996	4,874.1	219.8	551.9	5,206.2	7.1%
1997	5,206.2	232.6	544.0	5,517.6	6.6%
1998	5,517.6	254.4	691.6	5,954.8	7.9%
1999	5,954.8	281.6	775.2	6,448.4	8.4%
2000	6,448.4	299.3	868.9	7,018.0	8.9%
2001	7,018.0	346.7	967.4	7,638.7	9.6%
2002	7,638.7	405.5	1,135.7	8,368.9	10.8%
2003	8,368.9	441.8	1,304.4	9,231.5	11.9%
2004	9,231.5	472.6	1,505.3	10,264.2	12.8%

Another \$1 trillion of net debt accumulation during 2005 will add nearly \$100 billion to required annual debt service when including interest. The Federal Reserve’s current interest rate increases could easily add another \$50 billion in interest on the pre-existing debt. Total debt service could increase by \$150 billion in one year.

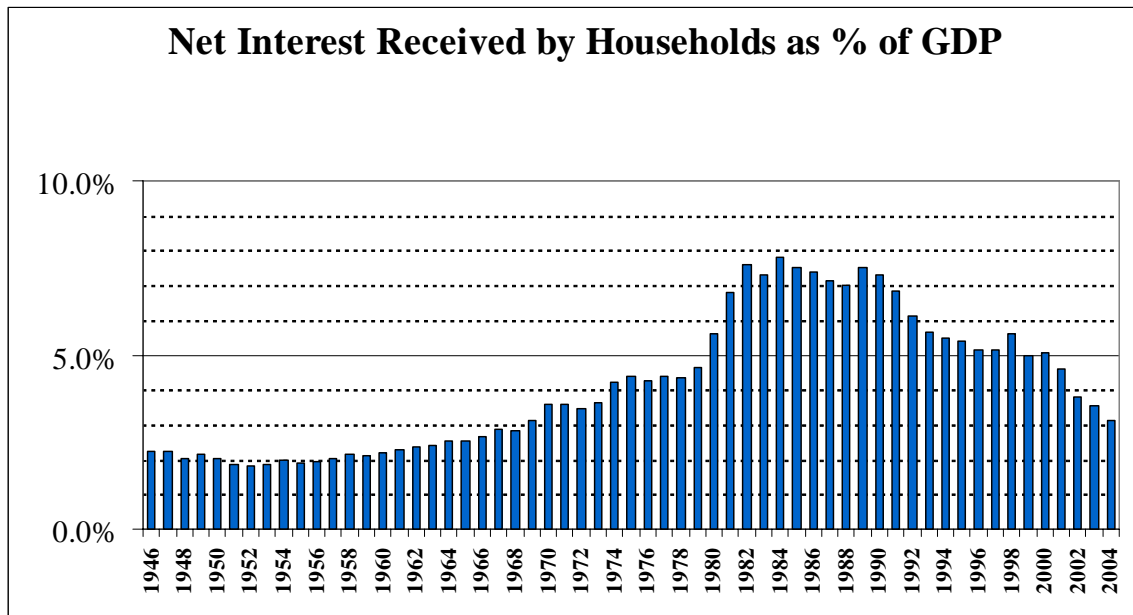
The primary challenging aspect of household debt is the lack of flexibility caused by high debt burdens. The next chart shows the historical relationship between investment in residential housing and cash flow after debt service. Until 1993, households generated enough discretionary cash to cover 100% of the cost of new houses.



This chart shows something incredible. The U.S. is in the midst of the single biggest housing boom since the 1920s. Yet, we generate no cash for the purchase of these assets. The new housing investments are 100% financed even as consumers do not generate enough cash flow to cover current debt service!

As of the end of 2004, debt service levels have reached the point that consumers either need to stop buying houses or to reduce increases in consumption. Any economic slowdown could quickly lead to declines in consumption and housing investment and rapidly increasing levels of debt default.

The next chart uses a final approach to document the accumulating household debt load. The chart shows the net interest received by households as a percent of GDP.



The net interest received on all household investments and debts has fallen from 5% of GDP to about 3% of GDP in just 4 years. Though rising interest rates will increase interest received, rising interest rates and rising debt loads could cause interest paid to rise as fast or faster. Households are unlikely to benefit much from rising interest rates.

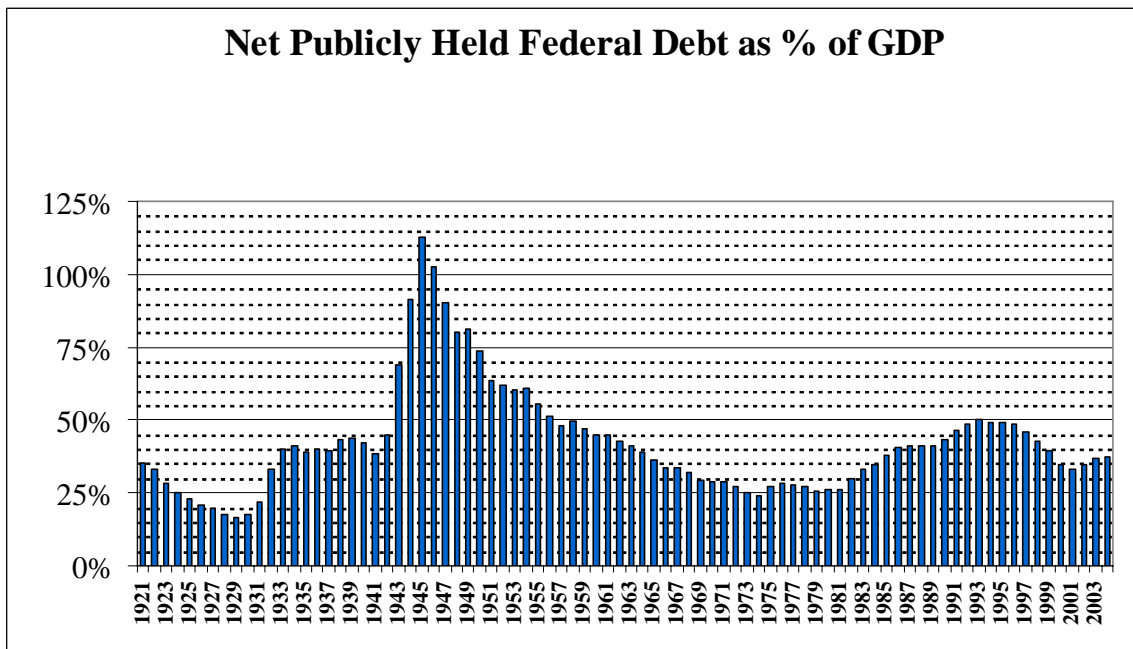
In total, the household sector appears to be approaching the limit of its ability to increase debt loads. The size of household debt is likely to play a pivotal role in governmental policy choices and in the future development of our economy.

The primary conclusion is that households are probably already under debt pressure in aggregate. It is likely that it will be difficult for governments to raise taxes or for the Federal Reserve to raise interest rates without causing measurable consumption slowdowns.

Federal Government Debt

The Federal debt has accumulated to about \$4.4 trillion of publicly held debt or about \$7.6 trillion of total debt as of the end of 2004. The current level of publicly held debt at 38% of GDP should be very manageable. The current level of total debt at 65% of GDP is a level that resulted in bi-partisan budget discipline in the 1990s.

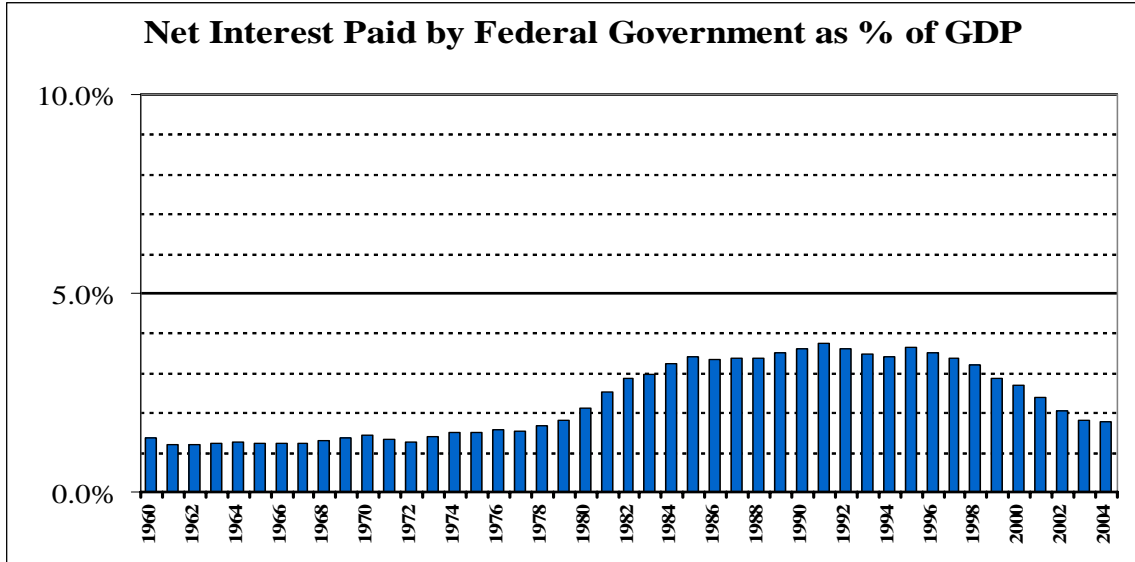
The chart below shows the publicly held debt as a percent of GDP. Though the current level of publicly held debt is somewhat elevated compared to better times, it is dramatically lower than it was during the 1990-1992 recession.



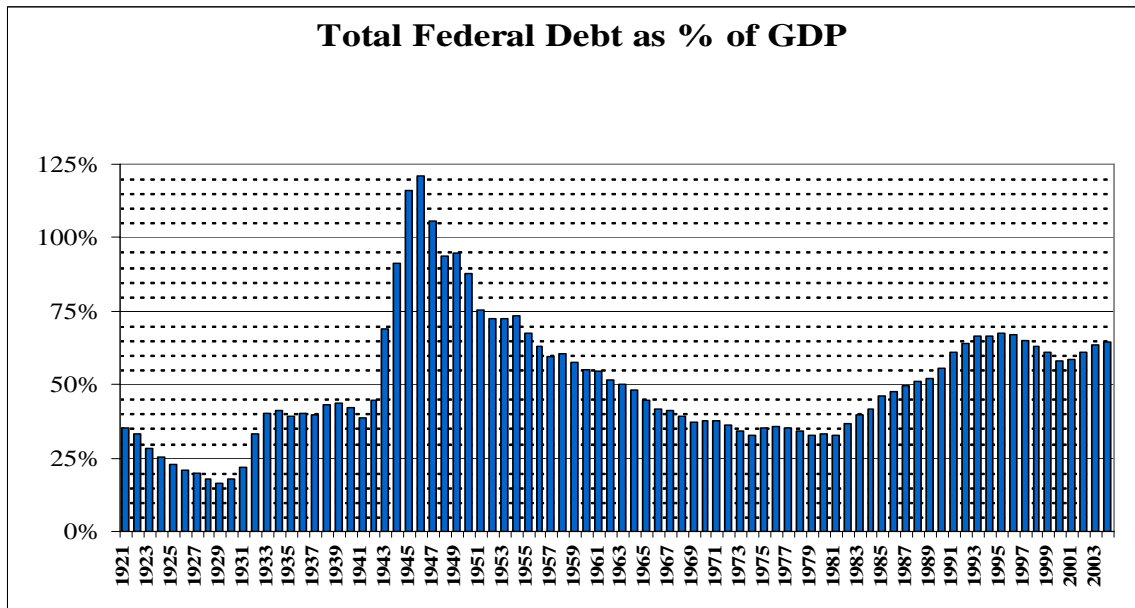
For the moment, the U.S. government has funding flexibility. However, the size of the current budget deficit should start to cause difficulties within the 2008 timeframe suggested by Federal Reserve Chairman Alan Greenspan.

The current budget deficit is running at about 3.5% of GDP. With three more years at that level, the debt would have increased to about 45% of GDP. By 2010, the Federal debt could reach a 50 year high as a percent of GDP.

The interest cost on the debt is another way to evaluate the level of Federal debt. The current level of net interest paid by the Federal government as a percent of GDP is very manageable. The current level is less than 2% of GDP. It is likely that even higher interest rates caused by the Federal Reserve will not cause substantial hardship in the near future.



The only current consideration for the Federal debt is the size of the total debt. The total debt includes accounting entries of non-marketable debt held by Federal Retirement Systems including the Social Security System. The next chart shows the size of the total debt as a percent of GDP.



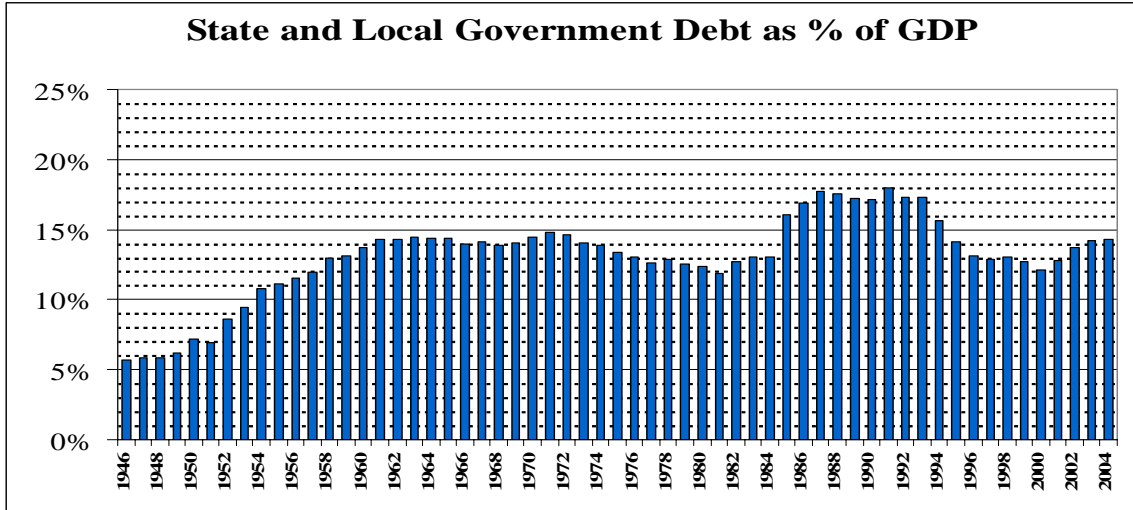
Total Federal debt is reaching difficult levels. More importantly, it is also accumulating at a rate of more than 5% of GDP per year. Total Federal debt levels could cause difficult choices in the not-to-distant future.

Overall, the Federal debt situation is currently manageable. However, current debt accumulations will need to be brought under control.

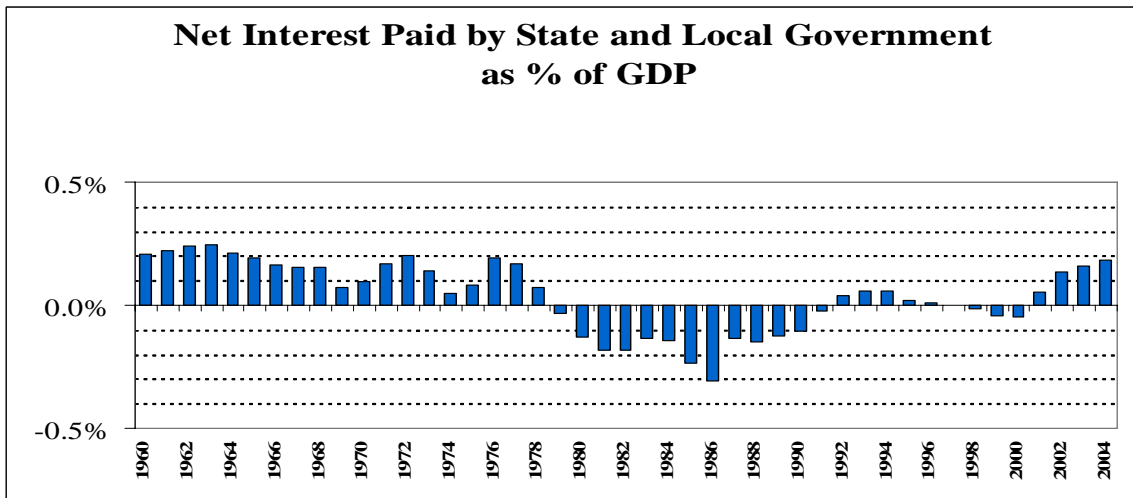
State and Local Government Debt

State and Local government debt has accumulated to about \$1.7 trillion of debt as of the end of 2004. The current level of debt at 14% of GDP should be very manageable.

The chart below shows State and Local debt as a percent of GDP. The current level of debt is right near the long-term level of State and Local debt and is dramatically lower than it was during the 1990-1992 recession.



State and Local governments appear to have maintained appropriate debt policies in the aggregate. The interest cost on the debt is another way to evaluate the level of State and Local debt. The current level of net interest paid by these governments as a percent of GDP is also very manageable. The current level is about 0.2% of GDP.

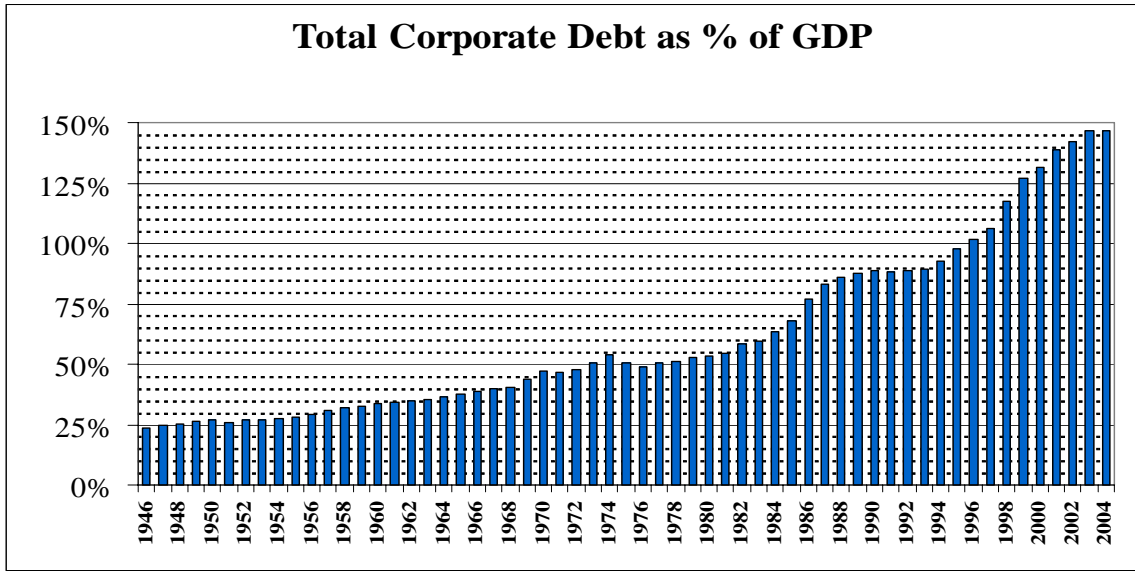


Overall, the debt levels of State and Local governments appear to be in good shape.

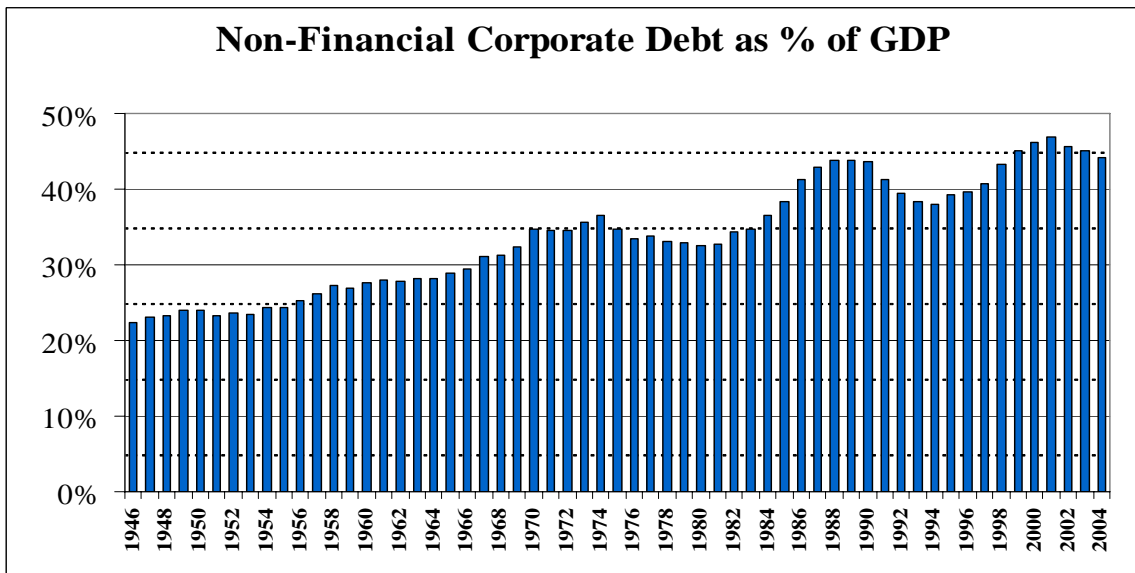
Corporate Debt

Corporate credit market debt has accumulated to about \$17 trillion of debt as of the end of 2004. The current level of debt at 147% of GDP has never been attained before but should be manageable because of its composition.

The chart below shows total Corporate credit market debt as a percent of GDP. The current level of total debt is astonishingly high. However, it reflects the change in the position of the financial industry in the economy.

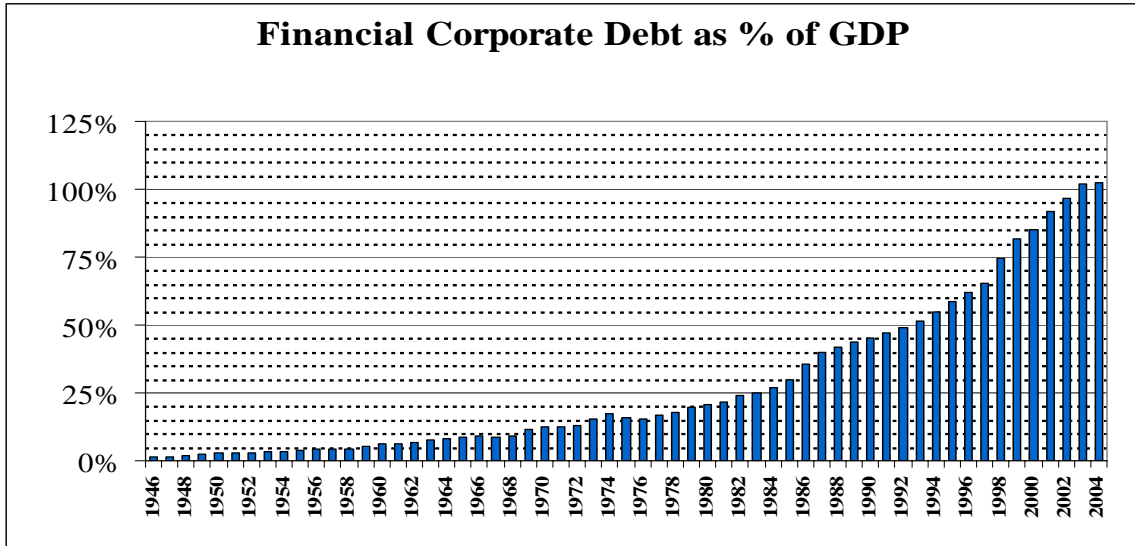


The next chart shows the level of non-financial company Corporate debt as a percent of GDP.



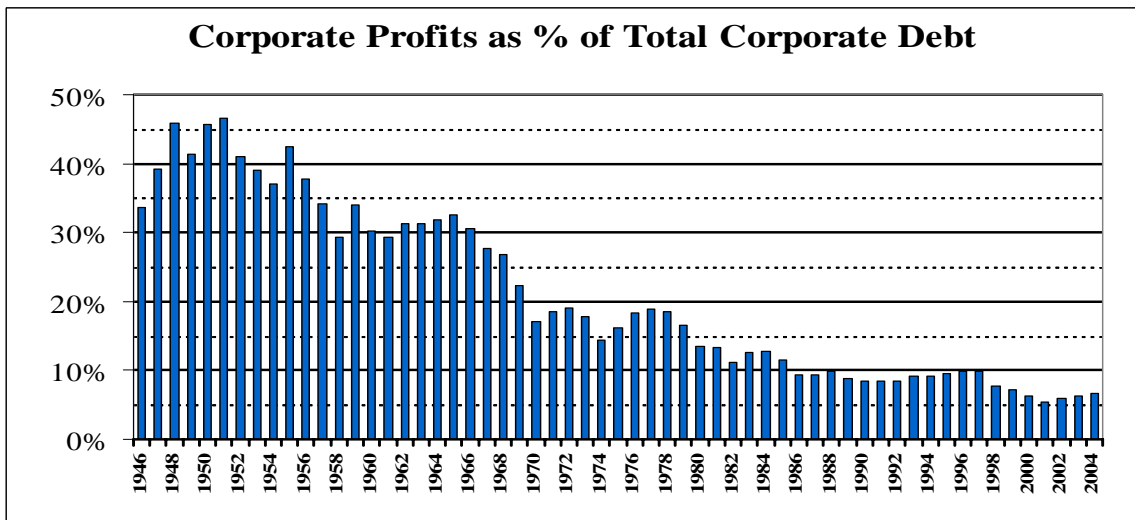
The second chart shows an improving trend for the debt levels of non-financial companies. Though corporate debt from this perspective is more consistent with historical levels, the levels still remain elevated.

The two charts in tandem raise questions about the change in the nature of the corporate sector and whether historical relationships are still reliable. The primary observation is that the financial industry has increased dramatically over the years.



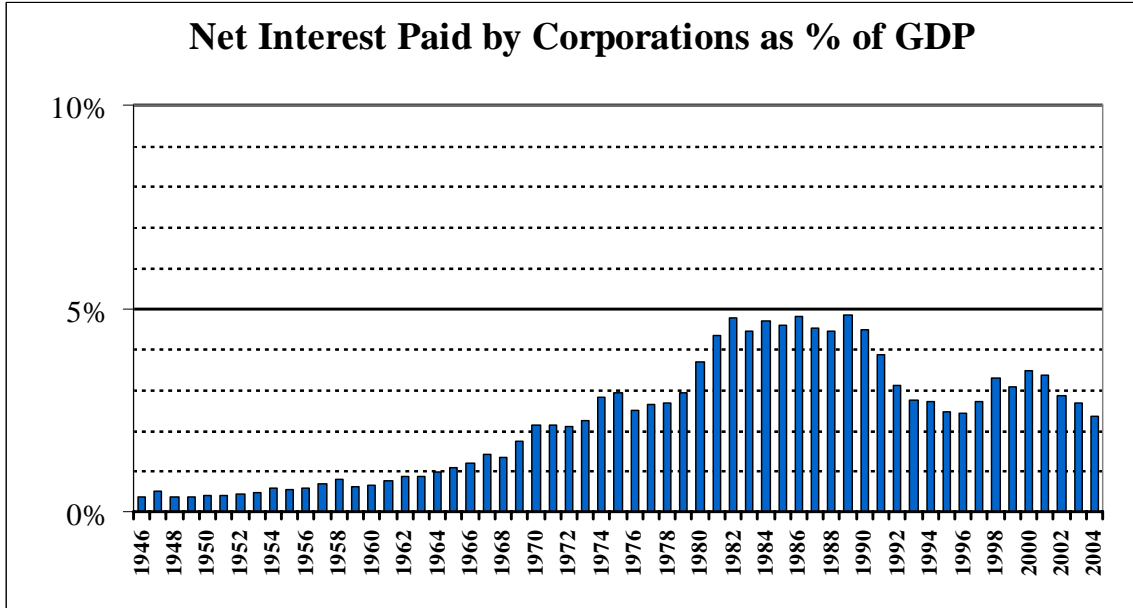
This chart shows the incredible increase in financial company debt during the last 20 years. It also shows that this debt has nearly doubled since 1993. This debt only includes the credit market debt of these companies.

The next chart shows corporate profits as a percent of total corporate debt. This chart gives some idea of the ability of corporations to withstand changes in the financing environment.



Even as financial debt soared during the 1980s and 1990s, corporations maintained a consistent relationship between total debt and profits. Since 1998, debt levels have grown faster than profits even as profits have climbed to the highest levels of GDP in decades.

The next chart shows that corporations have benefited from this debt expansion. It would appear that corporations in aggregate now pay less net interest with substantially higher debt levels.

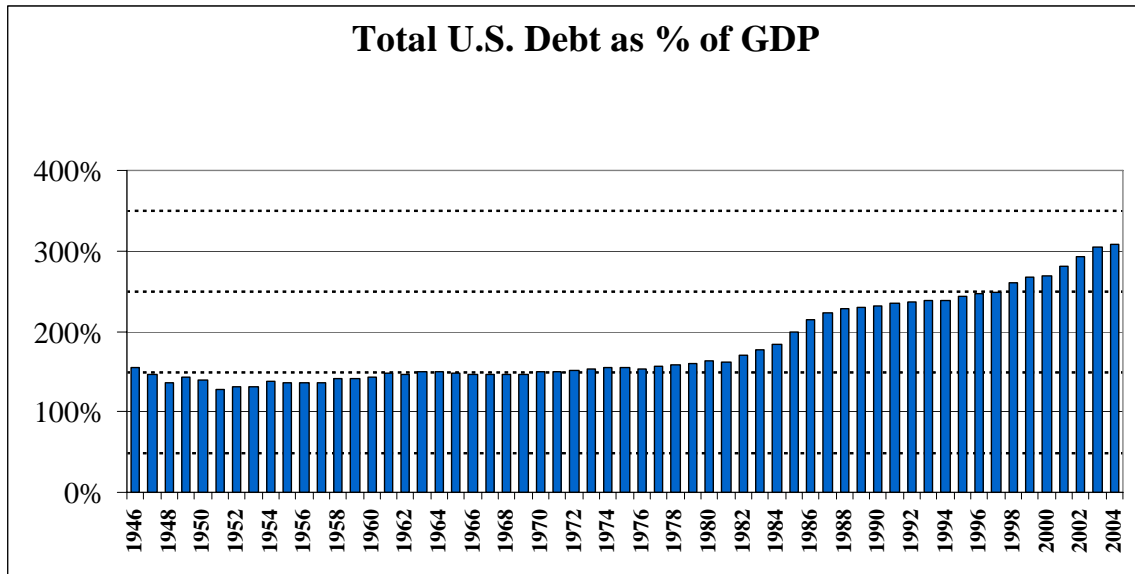


The corporate debt situation appears to be relatively stable in spite of the large increase in debt levels. The net interest paid by corporations as a percent of GDP has been relatively stable over the last 35 years. Financing costs burdened corporations more during the 1980s than they do now.

Overall, the corporate debt levels appear manageable. The positives of general levels debt loads for non-financial corporations and falling net interest payments by corporations tend to offset questions associated with the expansion of financial sector debt.

Debt Summary

U.S. debt levels for all sectors combined have expanded dramatically during recent decades. The largest surge in the total debt level as a percent of GDP came from 1980 to 1986. The recent increase in total debt has also been substantial and has reached new levels as a percent of GDP.



This paper also has reviewed debt for each economic sector. The analysis shows that the household sector is the only sector with current problems. The Federal government is also on a debt accumulation path that might lead to problems by 2010, but the current debt level is not unmanageable by itself.

The other sectors, primarily the corporate sector, appear to have manageable debt levels. State and local governments are in the best shape of all four sectors.

Appendix I Documentation of Household Cash Flow Adjustments

Personal Savings as adjusted for Non-Cash Items				
	Reported 2003	2003 Imputations*	Non-Cash Imputations	Adjusted 2003
Personal income	\$ 9,162	\$ 1,001	\$ 930	8231.5
Compensation of employees, received	6289	458.7	0	6289
Food furnished to employees, including military and domestic service		12		
Standard clothing issued to military personnel		0.5		
Employees' lodging		0.5		
Employer contributions for health and life insurance		441.5		
Contributions for government social insurance for Federal Government employees for certain programs		4.1		
Proprietors' income with inventory valuation and capital consumption adjustments	834.1	3.1	2.9	831.2
Farm products consumed on farms		0.2		
Margins on owner-built housing		2.9	2.9	
Rental income of persons with capital consumption adjustment	153.8	95.3	747	-593.2
Owner-occupied housing: Space rent		866.7	866.7	
Owner-occupied housing: Intermediate inputs		-163.7		
Owner-occupied housing: Taxes on production and imports		-121.8		
Owner-occupied housing: Subsidies		0.5	0.5	
Owner-occupied housing: Net interest, domestic-Owner-occupied housing		-364.4		
Services furnished without payment by financial intermediaries except life insurance carriers-Owner-occupied housing		23.8	23.8	
Premium supplements for property and casualty insurance-Owner-occupied housing		1.3		
Owner-occupied housing: Current transfer payments		-3.1		
Owner-occupied housing: Consumption of fixed capital		-144	-144	
Personal interest income	929.9	193	180.9	749
Depositor services-Persons		180.9	180.9	
Premium supplements for property and casualty insurance-Persons and nonprofit institutions serving households		13.4		
Premium supplements for property and casualty insurance-Owner-occupied housing		-1.3		
Personal dividend income	392.8	0	0	392.8
Personal current transfer receipts	1335.4	-0.5	-0.5	1335.9
Owner-occupied housing: Subsidies		-0.5	-0.5	
Less: Contributions for government social insurance	773.2	4.1	0	773.2
Contributions for government social insurance for Federal Government employees for certain programs		4.1		
Personal current taxes	1001.9	-127.7	0	1001.9
Taxes on production and imports		-121.8		
Rental value of nonresidential fixed assets owned and used by nonprofit institutions serving households				
Taxes on production and imports		5.9		
Disposable personal income	8159.9	873.2	930.3	7229.6
Less: Personal outlays				
Personal consumption expenditures	7760.9	838.5	1108.3	6652.6
Owner-occupied housing: Space rent		866.7	866.7	
Owner-occupied housing: Intermediate inputs		-163.7		
Rental value of nonresidential fixed assets owned and used by nonprofit institutions serving households				
Taxes on production and imports		5.9		
Interest paid by nonprofit institutions serving households		15.7		
Imputed interest paid by persons-Nonprofit institutions serving households		-1.9		
Consumption of fixed capital		46.4	46.4	
Depositor services-Persons		180.9	180.9	
Borrower services-Persons		14.3	14.3	
Premium supplements for property and casualty insurance-Persons and nonprofit institutions serving households		13.4		
Farm products consumed on farms		0.2		
Food furnished to employees, including military and domestic service		12		
Standard clothing issued to military personnel		0.5		
Employees' lodging		0.5		
Employer contributions for health and life insurance		441.5		
Private investment-related imputations-Owner-occupied residential structures		-517.8		
Private investment-related imputations-Nonresidential fixed investment by nonprofit institutions serving households		-76.1		
Personal interest payments	185.3	0	0	185.3
Personal current transfer payments	103.1	0	0	103.1
Personal saving	\$ 111	\$ 35	\$ (178)	\$ 289

*2003 Imputations are identified. Non-cash imputations either add or subtract from income or expenditure. The total non-cash imputation is subtracted from Personal Saving to get cash savings.