

## Negative Savings?

*Does a negative personal savings rate mean that we, as a nation, are “eating the seed corn?” Probably not. The aggregate measures of personal savings are among the least reliable of economic data, and personal savings are not a major determinant of new capital formation. In any event, the quality of capital formation is as important for the future trend of economic growth as its quantity.*

Recent reports from the Department of Commerce have indicated that personal outlays now exceed personal income: personal saving has decreased to less than zero. Needless to say, this news has been greeted in the editorial pages with harrumphs about the profligacy of the American consumer and similar concerns related to a presumed inadequacy of investments for the future. The estimate of personal savings, derived from the National Income and Product Accounts (NIPAs), has been at a low level for many years and has been decreasing throughout the current business-cycle expansion, but it has not been negative since the depths of the Great Depression.

Taken at face value, this news seems ominous. In the long term, not setting aside anything for the future would appear to be a prescription for decay and decline. In the short term, if consumers decide to retrench, the current 8-year-long economic expansion could come to an abrupt end.

But how can it be that consumers have come to spend more than they are earning? The baby boomers are in their prime earning years, when most savings for retirement are accumulated and vast sums are being set aside in IRAs, 401k plans, and similar tax-deferred retirement accounts.

A possible reason cited by some analysts is evident in Chart 1, which shows taxes and savings as a percent of personal income for the years 1993 through the third quarter of 1998. In this chart, we have added “contributions for social insurance” (mainly social security taxes levied on payrolls) to both the numerator and the denominator of the ratios—this item is not included in estimated personal income, but the taxes would not have been due if the income had not been earned.

As shown in this chart, the total of sav-

ings and taxes has fluctuated in a relatively narrow range (between 24 and 25 percent of the total) during the past 8 years, but while taxes have crept upward, savings have decreased. In other words, by this reckoning, savings have decreased to zero not because consumers have been spending a larger share of their incomes on consumption but rather because consumers have maintained their spending as a percent of income as their taxes have increased.

### *What’s Wrong with this Picture?*

This view resonates with those who believe that rising taxes are inimical to capital formation and the long-term health of the economy. It also would seem to confirm the “hydraulic” (as in the depiction of the economic flows within a network of pipes found in many introductory economic textbooks) view implicit in the Keynesian-inspired NIPAs. In the NIPA accounts, the overall government surplus or deficit is a component of savings and, by an accounting identity, savings on the income side of the ledger must equal investment on the product side. Thus, the decreasing government deficit of recent years has meant that less savings have been needed from other sectors to maintain the level of investment.

The foregoing views are based, however, on undue reliance upon or misunderstanding of the significance of the data, especially how they are compiled and what they do and do not include.

### *The Scope and Limitations of the NIPAs*

Table 1 shows the relationship of aggregates in the NIPAs for the year 1997, beginning with the components of Gross Domestic Product (GDP). The first item, Gross Private Domestic Investment, in-

cludes plant and equipment purchased by businesses, the change in business inventories, and all private residential construction activity.

Personal Consumption Expenditures (PCE) is an estimate of all goods and services purchased by households. This is less straightforward than it might appear, inasmuch as spending on owner-occupied housing is included in Private Domestic Investment and an “imputation” (an estimate of the value of something for which there is no transaction) of the rental value of owner-occupied homes is included in PCE. There are several other imputations in PCE, the largest of which is for the services of financial intermediaries (such as the cost of clearing checks) that are not consciously purchased by consumers.

Government purchases of goods and services is relatively straightforward. We will note in passing, however, that because it only includes the purchases and payrolls of governments, it is not (as used in some analyses) a very good measure of the burden or impact of government on the economy, which also includes taxes, transfer payments or the even less readily quantifiable impact of regulation.

Exports are added to these three components and imports are deducted to derive the estimate of Gross Domestic Product (GDP): an estimate of the total value of all goods and services produced in the nation.

GDP is perhaps the most widely used

Chart 1  
**Personal Taxes and Savings as a Percent of Personal Income**

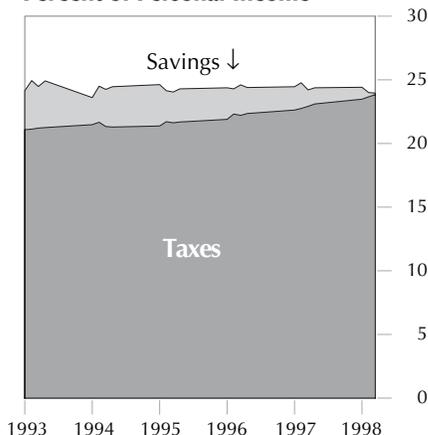


Table 1  
**Relationship of the Major Aggregates in the National Income  
and Product Accounts, 1997**

(Billions of dollars)

Gross Private Domestic Investment	\$1,256.0
Personal Consumption Expenditures	5,493.7
Government Purchases of Goods and Services	1,454.6
Plus: Exports	965.4
Less: Imports	<u>(1,058.8)</u>
<b>Equals: Gross Domestic Product</b>	<b>\$8,110.9</b>
Plus: Factor income from the rest of the world	265.5
Less: Factor income paid to the rest of the world	<u>(273.5)</u>
<b>Equals: Gross National Product</b>	<b>\$8,102.9</b>
Less: Capital Consumption Allowances	<u>(871.8)</u>
<b>Equals: Net National Product</b>	<b>\$7,231.1</b>
Less: Indirect business tax and nontax liability*	(640.4)
Plus: Statistical Discrepancy	<u>55.8</u>
<b>Equals: National Income</b>	<b>\$6,646.5</b>
Less: Corporate Profits	(821.6)
Contribution for Social Insurance	(727.0)
Net Interest	(432.0)
Plus: Transfer Payments to Persons	1,110.5
Personal Interest Income	747.3
Personal Dividend Income	<u>260.3</u>
<b>Equals: Personal Income</b>	<b>\$6,784.0</b>
Less: Personal Income Taxes	<u>(989.0)</u>
<b>Equals: Disposable Personal Income</b>	<b>\$5,795.0</b>
Less: Personal Outlays	<u>(5,674.1)</u>
<b>Equals: Personal Savings</b>	<b>\$121.0</b>
Plus: Corporate Retained Earnings	300.4
Government Surplus (Deficit), NIPA basis	29.4
Foreign Investment in U.S. (Net)	140.9
Less: Statistical Discrepancy	<u>(55.8)</u>
<b>Equals: Net Private Domestic Investment</b>	<b>\$535.9</b>
Plus: Private Capital Consumption Allowances	<u>720.1</u>
<b>Equals: Gross Private Domestic Investment</b>	<b>\$1,256.0</b>
Plus: Gross Government Investment	<u>235.4</u>
<b>Equals: Gross Domestic Investment</b>	<b>\$1,491.4</b>

\* Includes business transfer payments and subsidies less current surplus of government enterprise.

and misused aggregate in the NIPAs. It involves many arbitrary imputations and allocations between investment and consumption, and presumably does not include significant amounts of illegal or “off the books” activity. Nevertheless, because it is compiled using the same methodology (*i.e.*, the arbitrary allocations and omissions are consistent) from year to year or quarter to quarter does mean that it can serve as a useful indicator of the short-run trend of economic activity. This is why GDP is perhaps the most important coincident indicator of business-cycle changes.

However, nearly every observer can find reasons to object the use of GDP as a measure of economic well-being. Clearly, GDP needs to be adjusted for price inflation for comparisons over time to have much significance, but such adjustment requires a myriad of arbitrary choices to account for changes in technology (as reflected in the quality as well as the range of items produced) and tastes. Also, many

argue that GDP measures only the level of economic activity and may ignore some costs of that utility (pollution, for example) or the utility of that activity. Are meals away from home and convenience foods which comprised an increasing share of PCE (at the prices paid for them) really better than home cooking (which counts only the cost of groceries)? Do the costs of rebuilding in the wake of a natural disaster (which add to GDP) really make us better off than we would have been in the absence of disaster? And so on and so forth.

In short, estimates of well-being based on GDP should be treated with great suspicion, especially when they extend over long time periods (or between countries). That said, economists and others make such comparisons all the time, largely because the alternatives (based on life expectancy, infant mortality, the numbers of automobiles, telephones, TVs, miles of paved roads, etc.) seem quite one-dimensional in comparison. But the problems of

interpreting the significance of GDP pale in comparison to those associated with other commonly cited NIPA aggregates.

#### *From GDP to National Income*

Some of the income from U.S. production is due to foreign capital invested in the United States, and payments for the use of this capital are deducted from GDP. The earnings on U.S. investments abroad are then added to get Gross National Product, which is the estimate of total payments to U.S. factors of production. An additional, and much larger, adjustment is made for Capital Consumption to get Net National Product.

The Capital Consumption Allowance is based on the entirely valid notion that some portion of gross investment simply replaces items in the capital stock that have worn out or become obsolete. As with depreciation charges on business income statements, the capital consumption allowance is arbitrary. In some respects the Capital Consumption Allowance is even more of a “stab in the dark” than a business’s depreciation estimate, because the national income accountants have less specific information about the actual assets involved. On the other hand, the NIPA Capital Consumption Allowance is based on the estimated replacement cost of the assets involved and, especially in periods of high price inflation, they therefore may be more realistic than the historical cost depreciation required for businesses.

A less obvious deduction is made for indirect taxes (such as property or sales taxes), which, because these are not levied according to income or earnings, are not deemed to be anyone’s income in the NIPAs. Net product less indirect taxes should equal National Income. However, the published National Income figure is not based on the foregoing adjustments to the product side of the NIPAs but rather on data from payrolls and business tax returns. For 1997, as it happened, the estimate of National Income was larger than the product-side calculation—there was a “Statistical Discrepancy” of \$55.8 billion.

#### *From National Income to Personal Income and Saving*

Not all of National Income accrues to persons. Pre-tax Corporate Profits, “Contributions for Social Insurance” and, less obviously, Net Interest (the net total paid and imputed as factor payments to capital), are deducted from the estimate of National Income. Then, income paid to persons other than wages and salaries (transfer payments, interest, and dividends) is added to derive the estimate of Personal Income.

Personal Savings is then derived by

deducting Personal Income Taxes, consumption (PCE above), interest paid by consumers, and a small amount of private remittances abroad. In 1997, this estimate of personal savings was \$121 billion. \*

What specific savings or investment vehicles do the NIPA accountants consider in their estimate of personal savings? The surprising answer: *none*. The estimate is simply a residual—what is left over after personal outlays (for consumption, taxes, interest, etc.) have been deducted from the estimate of Personal Income. In other words, the estimates of Personal Income and Savings probably differ greatly from how their situation is viewed by consumers.

### *Don't Try This at Home*

The NIPA accountants regard sales and purchases of assets as simply changes of ownership that not add to production or income. The NIPA estimate of personal income does not include capital gains. Needless to say, the Internal Revenue Service takes a different view. That the taxes on such gains are included in personal income tax payments, while the gains are excluded from personal income, probably accounts for most of the decreasing trend of Personal Savings since 1993.

The imputations mentioned above added to both income and outlays and presumably do not affect the estimate of savings, except to the extent that that owner-occupiers' spending on their houses differs from the imputed rental expenses. On the other hand, a large portion of the proceeds of illegal or "off the books" activities that are not counted in the estimate of Personal Income are likely to be spent on items of consumption that *are* in the purview of the "bean counters." To the extent that this is the situation, personal savings will be underestimated. It is tempting to ascribe the Statistical Discrepancy to this sort of omission; however the discrepancy fluctuates greatly and it is not always a positive number (as it was in 1997), *i.e.*, in some periods, the product estimates side adds up to more than the income estimates.

The Federal Reserve Board, in its Flow of Funds Accounts, provides estimates of changes in the Household Sector's net worth (or savings). These estimates, based on deposits in banks and asset holdings (such as common stocks, bonds, mutual funds, real estate, consumer durables, etc.),

\* The decrease of personal savings to a negative number has occurred in the most recent monthly estimates of personal income and its disposition—even the full NIPA estimate for the third quarter of 1998 showed personal savings at a (positive) annual rate of about \$10 billion.

do reflect net purchases and sales *and* changes in market valuations as well as net borrowings. Most of the Flow of Funds data for households are calculated as the residuals of other sectors and thus incorporate all the errors in the estimates for those sectors. Nevertheless, increases in household net worth in the Flow of Funds have been substantially and consistently larger than the NIPA estimate of Personal Saving. The increase for 1997 was an amazing \$3.5 trillion, of which \$1.75 trillion was an increase in the value of equity holdings (stocks and mutual funds), \$790 billion in real estate and durable goods, and \$930 billion in deposits and credit market instruments net of borrowing. This latter figure alone suggests that the NIPA estimate of personal savings is not a very realistic picture of consumers' financial situation.

In any event, as indicated in the rest of Table 1, estimated personal savings on the income side of the ledger are by no means the most significant source of financing of Gross Private Domestic Investment in the NIPAs. Sources of capital formation on the income side also include Corporate Retained Earnings, the Government Surplus, and Net Foreign Investment. Adding back the Capital Consumption Allowance used to calculate Net National Product from GDP and deducting the statistical discrepancy that was added to make the product side of the ledger equal the

estimate of National Income, brings the total to the Gross Private Domestic Investment figure of \$1.26 trillion that we began with.

### *The Other Sources*

Corporate profits are taxed to corporations and dividends may be taxed to stockholders. Thus, it should not be a surprise that retained earnings are a major vehicle for savings. That the government may be considered a source of savings may be somewhat more surprising. However, consider what a government surplus really means: governments are paying off previous borrowings. This adds to the amount that investors have to finance something useful. By the same token, when the government was running deficits it was, in effect, draining funds from the capital markets.

In the NIPAs, net foreign investment is simply the trade balance (exports less imports) with its sign reversed. The actual investment flows to and from the rest of the world are quite a bit larger and more complicated than that (with large variations in specific flows such as bank loans, direct and portfolio investment, etc.), and the trade balance is not a particularly revealing indicator of our investment relationships with the rest of the world.

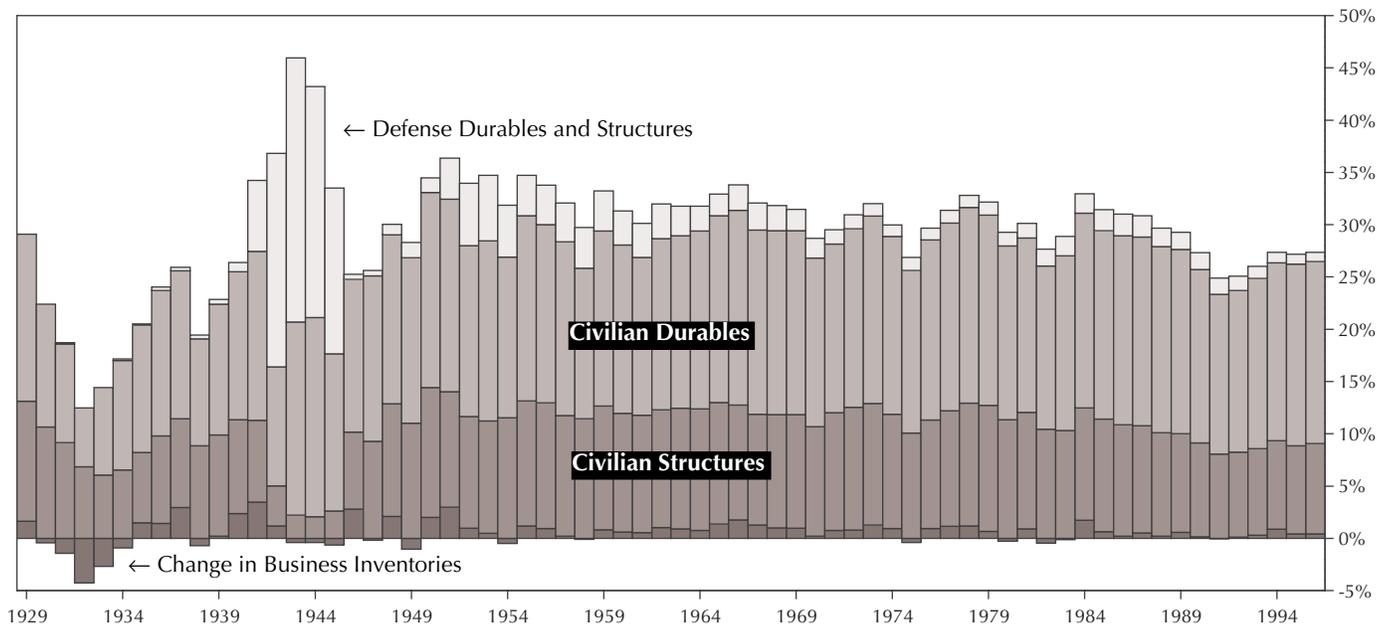
The hand-wringing often associated with these flows would seem to be mainly based on xenophobia. Suffice it to note

Table 2  
Items of Deferred Consumption, 1997  
(Billions of dollars)

	<i>Consumers</i>	<i>Businesses</i>	<i>Governments</i>	<i>Total</i>
<i>Durable goods</i>				
Motor Vehicles	\$269.5	\$125.6	—	\$395.1
Furniture & Household Equip.	271.4	8.0	—	279.4
Other Household Items	132.1	—	—	132.1
Producers Durable Equipment	—	494.9	—	494.9
Government Non-Defense	—	—	60.4	60.4
National Defense	—	—	54.7	54.7
Total Durable Goods	\$673.0	\$628.5	\$115.1	\$1,416.6
<i>Structures</i>				
Residential Construction	*	\$319.9	\$3.7	\$323.6
Non-Residential Buildings	—	173.3	55.4	228.7
Highways & Streets	—	—	48.5	48.5
Utilities	—	33.5	17.8	51.3
Mining, Petroleum & Gas	—	22.7	—	22.7
Farm	—	4.0	—	4.0
Other	—	6.7	27.0	33.7
National Defense	—	—	5.7	5.7
Total Structures	—	\$560.1	\$158.1	\$718.2
<i>Change in Business Inventories</i>				
Items of Deferred Consumption	—	67.3	—	67.3
Less: Uncapitalized Durables	(673.0)	—	(37.9)	(710.9)
Equals: Gross Domestic Investment	-0-	\$1,256.0	\$235.4	\$1,491.2
Less: Capital Consumption Allowances	—	(720.1)	(151.7)	(871.8)
Equals: Net Investment	-0-	\$535.9	\$83.6	\$619.4

\* Owner-occupiers are deemed to be in the business of renting to themselves.

Chart 2  
**Items of Deferred Consumption as a Percent of GDP**



that there is very little evidence that foreigners are managing their U.S. assets in ways that are inimical to the nation's interests, or that U.S. investment abroad retards the U.S. economy. The fact that foreigners currently want to invest more in the United States than we want to invest abroad reflects their problems, not ours. Ending our trade deficit and capital inflow by making the U.S. a less desirable place to invest is a most unattractive option.

**Deferred Consumption**

Saving is the postponement of consumption. What most people regard as saving, the acquisition of financial assets, may or may not involve a postponement of consumption for the economy as a whole. If you put money in the bank, and the bank then lends it out to someone to buy a car, whether or not you have added to the nation's stock of wealth depends, not on your bank balance, but on whether the car is new or used and whether it is deemed to be a part of the Nation's wealth at all. In short, savings equal investments in the sense that it is only that portion of current production remaining available for future use that represents deferred consumption.

Some might argue that much of current expenditures on education and training, or even health care, represent "investments in the future." The hope, if not all actual experience, is that education makes people more productive. Healthy workers are demonstrably more productive. However, it is more usual to count as available for future consumption only

durable goods (defined as items with a useful life of 3 years or more), structures, and business inventories. Table 2 shows the 1997 purchases of various types of these items by sector and which parts of those purchases are included in the investment totals of Table 1 that, to repeat, provide the basis for savings estimates in the NIPAs.

**Yes, But Are we Saving More or Less Now?**

Chart 2 shows what we have called items of deferred consumption as a percent of GDP for the year 1929 through 1997. During the post-war period, the total of these items fluctuated cyclically in a relatively narrow range around an average of about 30 percent; but, after recovering from the 1981-82 recession, it decreased during the latter half of the 1980s and reached a low of 25 percent in 1991.

The percentage has increased somewhat during the current expansion, and that increase also discredits the notion that savings have decreased during the past 8 years. Nevertheless, the 1997 level was below that for, say, 1955, '65, '75 or even 1985. Civilian purchases of durable goods in 1997 were about equal to their levels

during earlier decades, while military purchases and civilian structures were a lower proportion of GDP.

That a smaller proportion of output is of deferred consumption items would thus appear to reflect the end of the Cold War, as well as the housing of the baby boom generation and the completion of the interstate highway system.

However, just as the question of how much we are saving depends greatly on the essentially arbitrary Capital Consumption Allowance (the estimate of how much of our prior years' investments has become unavailable or useless), whether or not we are saving enough depends on the extent to which our current purchases will be useful in the future. The variety of items of deferred consumption purchased in 1997 shown in Table 2 were not all equally useful in 1998, nor will they be in future years. Such purchases are not like a deposit in a savings account paying a fixed return. Some things will prove to be much more useful than others.

In other words, the *quality* of our deferred consumption (savings and investment) is as, or perhaps even more important, to our future well-being than its *quantity*, however measured. □

**PRICE OF GOLD**

	1997 Jan. 9	1998 Jan. 8	— 1998/1999 — Dec. 30    Jan. 7	
Final fixing in London	\$356.55	\$281.65	\$287.80	\$289.95

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