

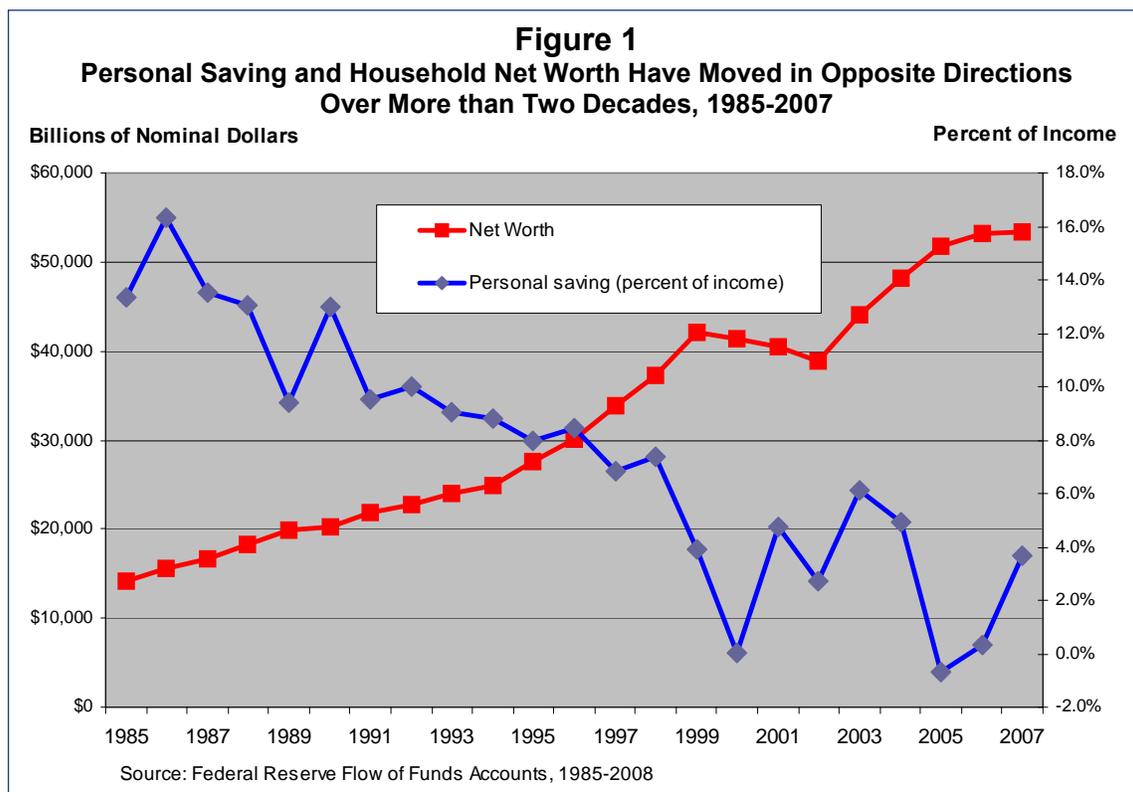
A New Perspective on “Saving” for Retirement

The personal saving rate alone tells us little about the adequacy of workers’ preparation for retirement. Changes in household net worth better reflect the adequacy of retirement saving. The saving rate and changes in household net worth have generally moved in opposite directions over the past two decades. The biggest single reason for the difference in these trends is that our official measures of saving exclude capital gains, which in most years far exceed in magnitude the measured annual saving that occurs. From a policy relevance standpoint, a measure such as changes in net worth is more useful.

Introduction

It is a commonplace observation that personal saving is essential to building retirement wealth. Yet, in the second half of the 1990s, while personal saving dropped closer and closer to zero, household wealth reached all-time highs

(Reinsdorf, 2002). From 2007q1 through 2008q3, net worth plummeted by more than \$6 trillion but the saving rate turned upward. In fact, personal saving and household wealth have moved in opposite directions over more than two decades (see Figure 1). This *Insight on the Issues* discusses and differentiates



the concepts of “saving” and “wealth,” explains how our standard measure of saving provides little insight into household retirement wealth accumulation, and draws implications for our understanding of retirement planning.

Defining Terms

In common parlance, the terms “wealth” and “savings” are sometimes used interchangeably to mean the quantity of assets that people have accumulated over time, whether in the form of cash, investments, housing, or other property. However, “savings” and “saving” (with no “s” at the end) are not synonymous (Reinsdorf, 2004; Poole, 2007). Economists draw an important distinction between “savings” (hereafter, wealth), a noun referring to a quantity of assets, and “saving,” a verb that refers to the act of deferring consumption today in order to be able to consume at a later date.

Perhaps the simplest way to think about the difference between saving and wealth is that the former is an annual increment to the latter. Wealth is a stock of assets, while the act of saving generates a flow of assets. Assets cumulate over time, sometimes in episodic or “lumpy” form such as gifts, bonuses, or even inheritances, but often through the much more mundane and gradual process of setting portions of income “aside” for future needs. Saving, as an annual increment to wealth, comes from deferring consumption out of earnings or out of other sources of income such as pensions, gifts, inheritances, awards, insurance claims, lottery winnings, etc.

In a strict accounting sense, there is much more to wealth accumulation than saving—in fact, most of the retirement wealth that is amassed every year is not officially recorded as saving. Saving is one of two components of accumulated

wealth. The other consists of changes in the value of existing capital assets, which are entirely excluded from our saving measures. This is important for understanding the relationship between saving and wealth. A focus on saving provides a very narrow view of wealth accumulation and might easily lead to an unnecessarily pessimistic view of retirement wealth adequacy.

Two important sources of personal wealth are traditional defined benefit pension plans and Social Security benefits. Workers may not think of these as personal wealth because they are not marketable and not accessible until retirement. But both are important sources of consumption possibilities in retirement, especially Social Security, which constitutes the single largest source of retirement wealth for most households.

Measuring Saving

Personal saving, or the amount that households defer consuming each year out of income, has been a source of public policy concern because it has declined from about 10 percent to nearly zero over the past two decades. Most of the public discussion and concern about the adequacy of personal saving in the U.S. is based on data collected either by the U.S. Bureau of Economic Analysis in the Department of Commerce, which constructs the national income and product accounts (NIPA), or data reported by the Federal Reserve in its quarterly Flow of Funds Accounts (FFA). The two data sources are conceptually and arithmetically different. The NIPA calculates personal saving as a residual—it is what remains after we subtract taxes and personal outlays (consumption) from personal income. Personal income is about 95 percent of national income (see definitions below, which explain the

relationships among income, saving, and the saving rate):

Personal income = *compensation + transfers from government and business*¹

Disposable personal income (DPI) = *personal income – taxes*

Personal saving = *disposable personal income – personal outlays (consumption)*

Personal saving rate = *personal saving/disposable personal income*

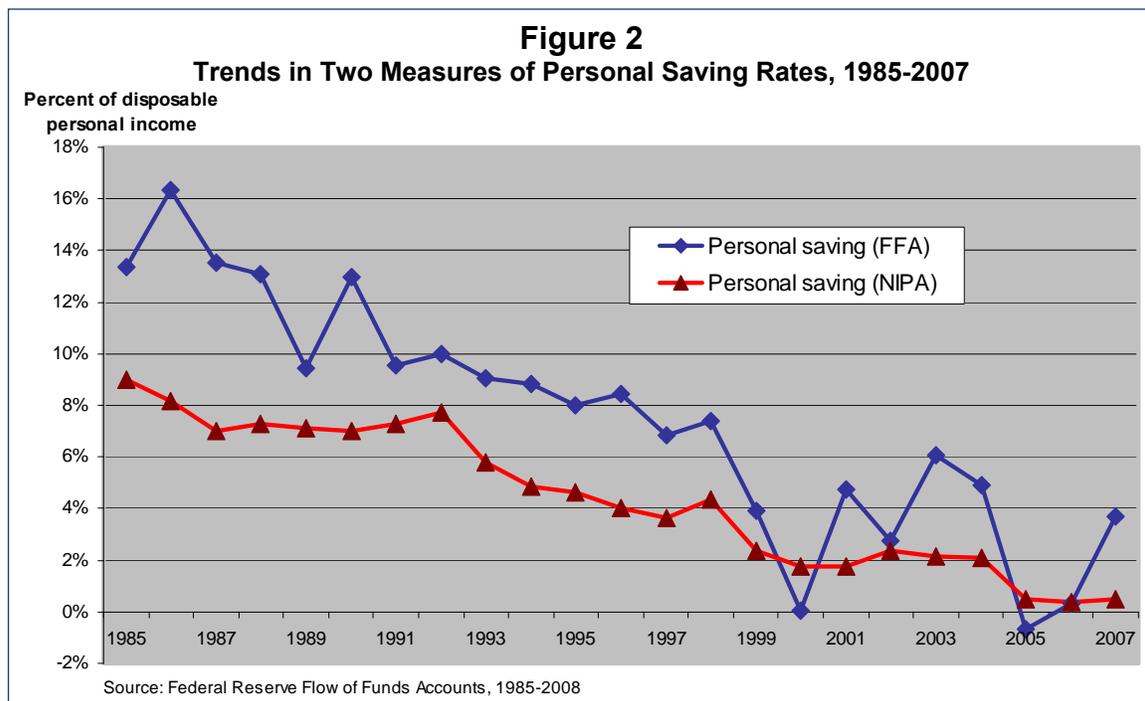
The FFA employs a somewhat different approach, calculating the net increase in financial and tangible assets minus the net increase in liabilities and capital transfers as the measure of personal saving. Neither NIPA nor FFA includes capital gains. Figure 2 shows the secular decline in both NIPA and FFA measures since the 1980s that has caused great concern among many economists. It also shows that the FFA measure has

typically registered slightly higher rates of saving, but has also been more volatile recently than the NIPA estimate.

Issues in the NIPA and FFA Measures of Saving

The NIPA and FFA saving rates tend to underestimate the annual personal saving actually occurring in the economy because of certain measurement conventions. Three of those conventions—the treatment of consumer durable goods, the treatment of private and public pensions, and the treatment of capital gains and the taxes on those gains—illustrate why and how annual saving may be underestimated. Although changes in these conventions would affect the overall saving rate, they would probably not change its downward trajectory of the past several years. Far more important is the omission of capital gains—changes in the value of capital assets—from either saving measure.

Capital gains, one of the two main components of accumulated wealth,



dwarf the amount of annual personal saving in the economy. Not only are capital gains quantitatively much larger (and more volatile) than annual saving, but large capital gains also influence behavior by substituting for personal saving out of earnings and encouraging consumption via the “wealth effect,” possibly contributing to a lower personal saving rate. Evidence of this pattern has persuaded some analysts that capital gains alone can account for the decline in the personal saving rate since the mid-1980s (Juster et al., 2004). These factors are discussed below.

1. Treatment of Private and Public Pensions

The purpose of the NIPA is to measure current production, income derived from that production, and the allocation of that income across personal, business, and government sectors (Gale and Sabelhaus, 1999). NIPA personal saving, which is the more frequently cited saving indicator, consists of three components—personal saving, business saving, and government saving. Personal and business saving together compose private sector saving.

The NIPA measure of personal saving counts contributions to and interest on both defined benefit (DB) and defined contribution (DC) plans as part of personal saving. The treatment of both private and public sector DB plans as personal rather than business saving is somewhat controversial. Unlike 401(k) plans, which are clearly individually owned personal accounts, the ownership of defined benefit plan assets is ambiguous. Employers bear the investment risk in DB plans and control how plan assets are invested. In addition, no necessary connection exists between the amount that a worker has earned in pension benefits in a given period and the amount that an employer contributes to the pension fund.

Under old pension accounting rules, periods of large capital gains which caused DB plan assets to grow would allow employers to reduce new contributions to their pensions plans. That reduction would cause saving in the personal sector to decline, despite increases in the actuarial value of promised benefits. This response to DB asset growth is only one of the important ways in which capital gains affect the measured saving rate.

At the same time, growth in distributions from DB and IRA plans further reduced saving in pension plans. One study has estimated that, from 1988 through 2001, 1.7 percentage points of the total 5.6 percentage point drop in the NIPA saving rate (about 30 percent) could be attributed to the inflows and outflows of pension plans. (Lusardi et al., 2001).

If private and public DB plans were counted as business saving rather than personal saving, historically it would generally have increased the business saving rate and lowered the personal saving rate. The size of that impact would depend largely on swings in capital gains. In times of large increases in capital gains, growth in plan assets might cause measured saving to decline. In that case, moving DB plans to the business sector would actually improve the personal saving rate.

2. Consumer Durables

Since NIPA saving equals disposable (after-tax) income minus consumption, the estimate of personal saving in NIPA depends on what is counted as investment and consumption.

An expenditure generally counts as an investment if it generates a future flow of income or services that increases future income potential. In NIPA, owner-occupied housing is treated as an investment good, but other consumer durables, such as automobiles, refrigerators, etc., are treated as

consumption. They arguably provide a future flow of services or income-equivalents that increase potential income.

For owner-occupied housing, an amount of saving is determined by imputing a rental income equivalent (how much the homeowner would have to pay for rent in an equivalent residence) less imputed expenses (e.g., mortgage interest, taxes, depreciation), which are counted as personal consumption. Homeowners are essentially treated as landlords in the business sector renting housing services to themselves, which they consume as tenants (Perozek and Reinsdorf, 2002). According to estimates through 1998, the amount spent on consumer durables was fairly stable at about two percent of disposable personal income (Gale and Sabelhaus, 1999).

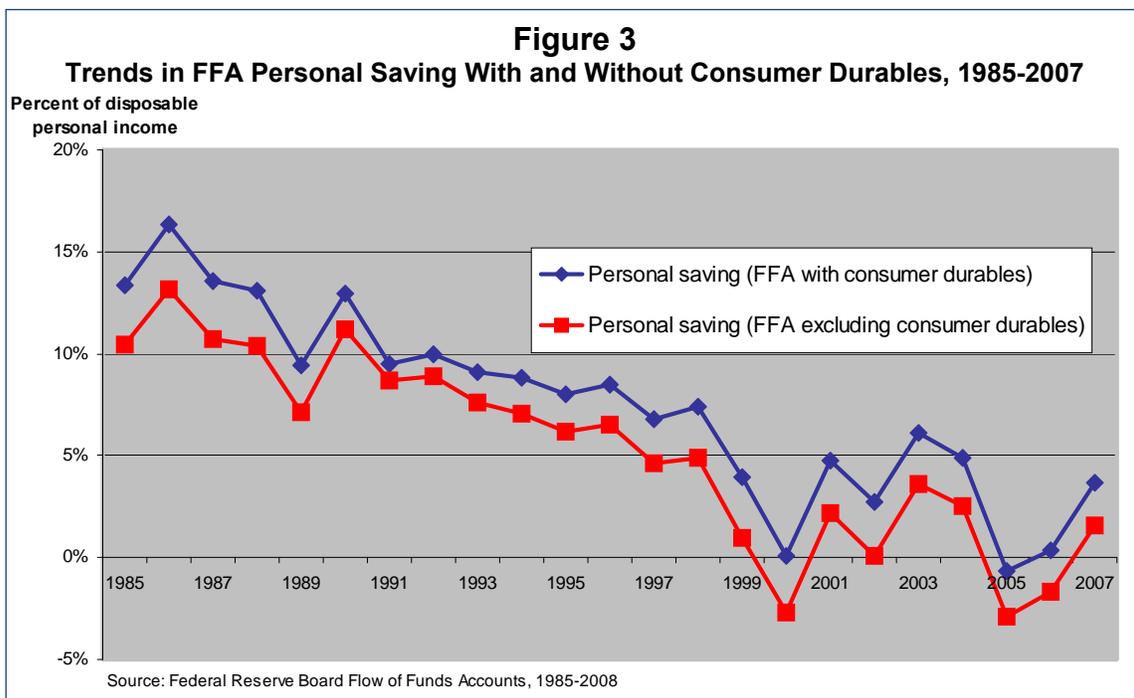
A more recent study has estimated the net increase in personal saving that would result from treating consumer durables as investment rather than consumption as about two percent from

1990 to 2004, but closer to 2.5 percent since 2000 (Garner, 2006).

Figure 3 reports the FFA personal saving rate including and excluding consumer durables. The saving rate including consumer durables was 2.2 percentage points higher for the entire 1985-2007 period.

3. Taxes on Realized Capital Gains

The purpose of the NIPA is to measure current production and income derived from it, and NIPA saving represents new capital available for investment. Capital gains do not represent income from current production, but rather increases in wealth from changes in the prices of assets that already exist. For this reason, they are excluded from both the NIPA and the FFA measures of saving. Despite their exclusion from NIPA income and saving, realized capital gains are subject to personal income taxes, and those taxes *are* counted in the calculation of NIPA disposable personal income to arrive at personal saving. This seemingly anomalous treatment of realized capital



gains and their taxes results in a decrease of roughly one percentage point in the measure of personal saving (Reinsdorf, 2007).

These three technical measurement issues discussed above—counting public pensions as public rather than private saving, counting consumer durables as consumption rather than investment, and subtracting taxes on realized capital gains from income but excluding all capital gains themselves—could make the personal saving rate appear several percentage points lower than it would otherwise. These changes would not alter the overall downward trajectory of the U.S. personal saving rate over the past 20 years. However, the exclusion of the other key component of overall wealth—realized and unrealized capital gains—would alter both the level and the trajectory of personal saving.

Macro Effects of Capital Gains

The relationship between personal wealth increases due either to individuals’ saving or to capital gains may be seen more clearly if we examine the equation below (Reinsdorf, 2007). It describes household wealth (W) at any given point in time (t) as consisting of pre-existing household wealth (W_{t-1}), plus interest derived from that pre-existing wealth (I_t), plus any net new additions to wealth derived from saving out of current income (S_t), and the change in the value of the pre-existing wealth (dW_t).

$$W_t = W_{t-1} + I_t + S_t + dW_{t-1}$$

Each of these components consists of additional components— W_{t-1} consists of various assets a household owns (home, retirement accounts, stocks, etc.), I_t consists of interest and dividends from those existing assets, S_t consists of new income less consumption and taxes paid, and dW_{t-1} consists of existing wealth

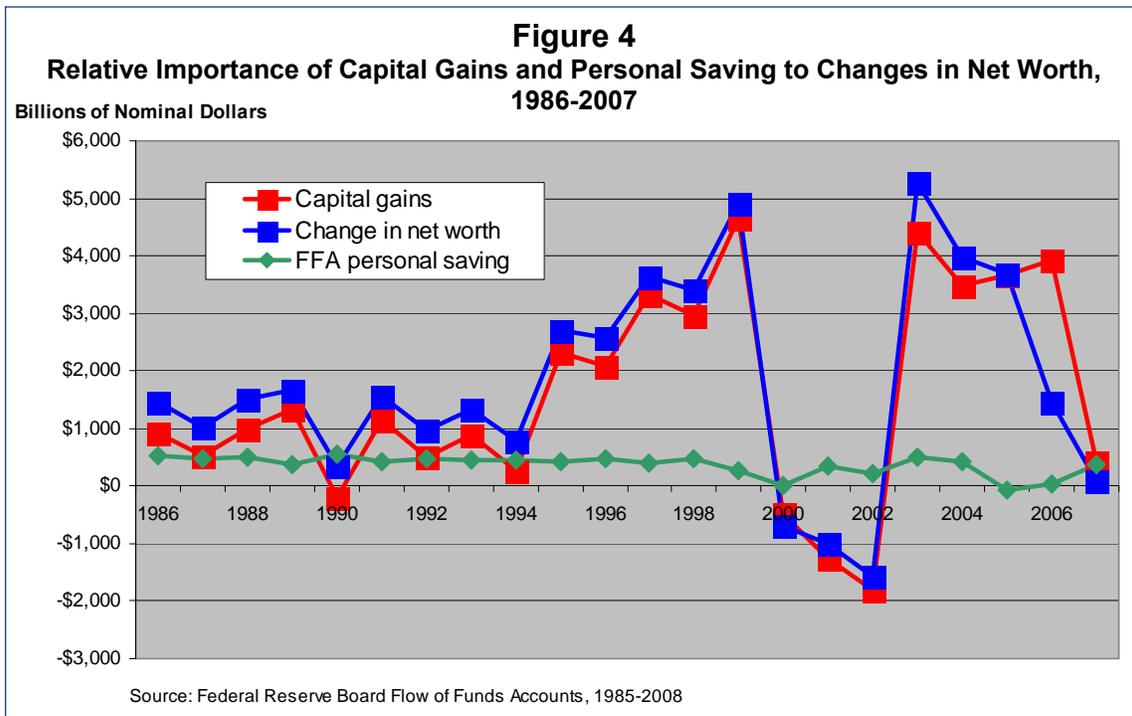
multiplied by the ratio of prices in the current period to prices in the previous period—in other words, changes in the value of existing wealth.

The impact of excluding capital gains from both the NIPA and FFA measures of national saving is substantial. One study estimated that, “since 1995, capital gains have accounted for over 80 percent of the gains in household sector net worth. In 1997 and 1998, capital gains were approximately ten times measured saving” (Gale and Sabelhaus, 1999). In 1999, capital gains were 30 times as great as measured saving.

Capital markets are also quite volatile—large gains in the late 1990s turned sharply negative in 2000-2002, then sharply positive again in 2003. In the current financial market meltdown, capital gains plunged from \$4.2 trillion in 2006 to about \$800 billion in 2007, then turned to losses of -\$2.8 trillion in the third quarter of 2008. But even in the mid-1980s to mid-1990s, before the stock market boom, they were two to three times as large as personal saving on average.

The dominance of capital gains in wealth changes is seen in Figure 4, which compares the annual change in net worth with annual saving and the annual change in capital gains (Figure 4). The trend in net worth is virtually indistinguishable from the trend in capital gains. As one source puts it, “most of the observed negative trend in the NIPA saving rate seems to be attributable to the omission of capital gains and losses from measured personal disposable income (Poole, 2007).

This relationship suggests that, year to year, measured personal saving has only a small impact on the growth in household net worth. “The weak connection between saving and wealth formation in recent years has not been



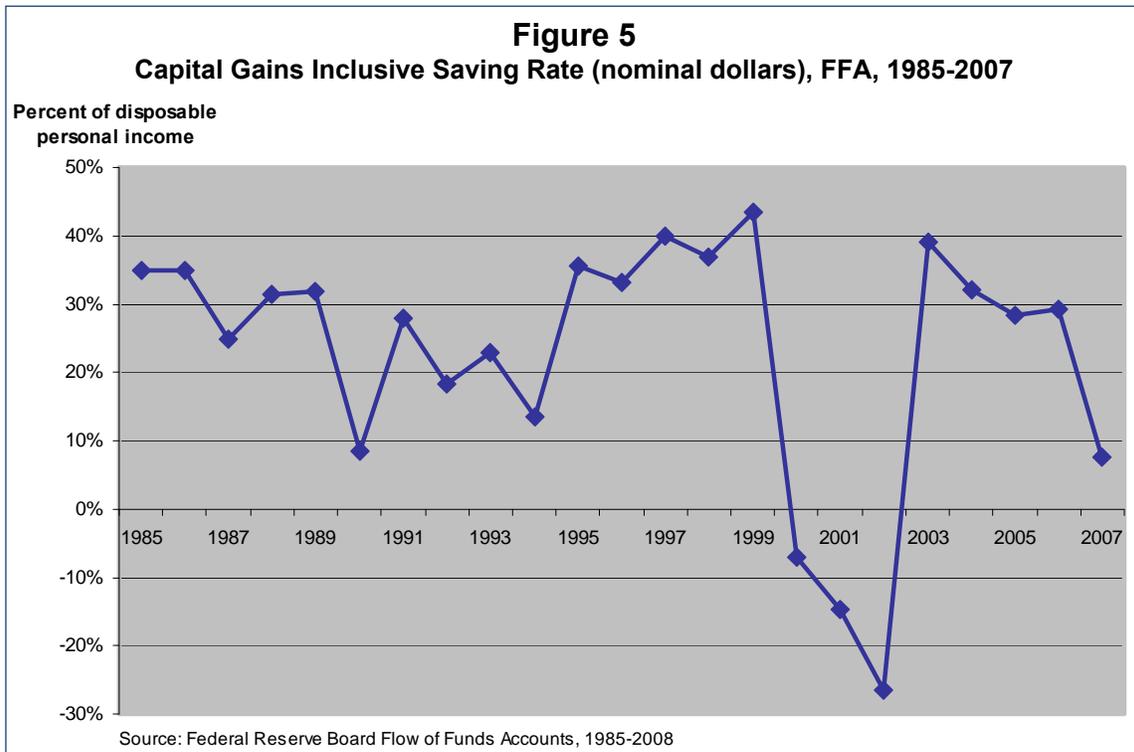
unusual. In general, changes in aggregate household wealth, even over periods of a decade or more, have little to do with saving flows. Swings in household wealth tend to be driven by movements in the prices of assets such as stock and real estate” (Steindel, 2007).

Many have suggested, with substantial supporting evidence, that the “wealth effect” created by the rise in value of financial and non-financial assets has in fact been a direct cause of increased consumption and a resulting decline in personal saving (Maki and Palumbo, 2001; Lusardi et al, 2001; Reinsdorf, 2007). One study has estimated that, from 1988 through 2001, capital asset appreciation through its direct effects on individual saving and through its effects on defined benefit, defined contribution, and Individual Retirement Account contributions accounted for anywhere from 66 percent to 80 percent of the 8.8 percentage point decline in the saving rate during that period (Lusardi, et al., 2001).

Although the stock market gains in the 1990s were atypical, “capital gains have dominated measured saving as a source of wealth change in the last 40 years, except during the 1960s and 1990-94. Even in those periods, however, capital gains were as large as measured saving” (Gale and Sabelhaus, 1999, 200). Of course, in 2000-02 there were large capital losses, and even larger losses in 2008.

Adding capital gains to measured annual saving would result in substantially higher saving rates, which are also highly volatile, as seen in Figure 5. Saving rates including capital gains averaged about 26 percent between 1985 and 1995, and even including the three years of net capital losses in 2000-2002, the capital gains inclusive rate was 23 percent.

An obvious question raised by this analysis is, if capital gains have so dominated annual saving as a source of wealth change, shouldn’t they be included in measures of personal saving? The answer, as is so often the case, is



“it depends.” If the goal is to understand what is happening to retirement preparedness at the individual household level, capital gains should certainly be included, since capital gains increase a household’s consumption possibilities in retirement.

At an aggregate level, however, as Gale and Sabelhaus (1999) and the Congressional Budget Office (1993) discuss, increases in capital gains for one individual or cohort may entail costs for others, with no increase in aggregate wealth. Because it is appropriate to include capital gains in household wealth does not imply it is necessarily appropriate to include it in aggregate saving.

Micro Effects of Capital Gains

The significance for individuals of the difference between saving and asset price changes as sources of wealth becomes more apparent as people age and accumulate more resources. Nowhere is this better illustrated than by

the financial meltdown of the past year, which has depleted 401(k) accounts and left older workers in a quandary about their retirement decisions. Between September 30 and December 2, 2008, the stock market lost 47 percent of its value, or about \$11 trillion. Of a total of \$8.7 trillion in assets in retirement accounts, 70 percent was invested in stocks, and account holders lost 36 percent of that total as of December 2, 2008 (Soto, 2008).

For a worker past age 50 with an accumulation of \$200,000 in her account—all in equities—and who has contributed the maximum (\$20,500) before taxes into the account in 2007, her maximum pre-tax contribution could increase the account by just about 10 percent (not counting any employer match), but the 36 percent decline in the S&P 500 index between 11/1/07 and 11/1/08 would more than offset that worker’s contribution to 401(k) saving in that year.

Conversely, the late 1990s stock market boom enriched people’s 401(k) portfolios faster than they could contribute to their own accounts. Thus, the immediate importance of active saving to one’s overall net worth generally declines relative to the importance of capital gains as total wealth increases.

Analytical and Policy Implications

1. Measures of Retirement Preparedness

While the personal saving rate has declined steadily for the past 20 years, aggregate household net worth, including pension, 401(k), IRA, and housing wealth have increased dramatically. As an indicator of the adequacy of retirement assets, the personal saving rate, despite being cited regularly in the media, is not very useful because it excludes capital gains, which are far more important to changes in net worth than annual personal saving. The change in household net worth, and not the saving rate, should be used to indicate changes in retirement preparation.

2. Why Saving Is Still Important

This does not mean that personal saving is unimportant for building personal wealth. Even if changes in asset prices account for most of the change in household net worth, the opportunity to amass household wealth via asset appreciation depends critically on acquiring those assets in the first place. Personal saving remains the foundation of the acquisition of personal wealth, on which asset appreciation can build. Younger workers in particular can better take advantage of the compounding over time that investment affords.

Saving is also important from the perspective of overall economic growth, because it is the amount of national saving that determines how much

domestic capital is available to fund our investment needs, and how much we need to borrow from abroad. But here it is the total saving rate, including not just personal but business and government saving (net surpluses or deficits in public budgets), that best defines the domestic resources available for that investment.

3. Better Incentives

Despite numerous incentives to save in the Internal Revenue Code—deferral of taxes on employer-provided defined benefit and defined contribution pension plans, deductibility of contributions to traditional and Roth Individual Retirement Arrangements, Medical and Health Savings Accounts, Section 529 and Coverdell savings accounts for education, and the Saver’s Credit (a tax credit for low- and moderate-income earners)—the saving rate has steadily declined for two decades. In fact, at least one estimate suggests the revenue loss (public dissaving) from these tax incentives has recently exceeded the amount of the private saving (Bell et al., 2004), implying a net negative effect of these savings incentives.

Personal saving has proved especially difficult for people in the lower half of the income distribution, most of whom do not have access to a pension plan at work. Also, the old-style DB pensions with guaranteed lifetime income have been eclipsed by 401(k) plans with riskier returns and lump-sum payouts that individuals must manage themselves. And, with the exception of the Saver’s Credit, saving provisions are structured in ways that provide the largest benefits to more affluent households, who have less need of incentives to save. Notable experts have questioned the wisdom of retaining the tax exemption for qualified pension plans (Munnell, 1992; Ghilarducci, 2007).

To get people to save more, our political culture is more accepting of government incentives to change people’s behavior voluntarily (“carrots”) rather than mandating it (“sticks”). With the exception of Social Security, most saving incentives have been “carrots.” It is time to consider both “carrots” and “sticks.”

Two policy “carrots” hold the promise of increasing saving among those who need it most. A new “auto-IRA” program would provide all workers in firms with a minimum number of workers the opportunity (workers could opt out if they chose to) to save automatically through employer withholding (Iwry and John, 2007). Judging by the success of this “automatic” approach with 401(k) plans (Madrian and Shea, 2001; Gale, Iwry, and Orszag, 2005), the auto-IRA could significantly increase the number of savers and the amount of saving.

Second, the Saver’s Credit could be made both more efficient, with slower phaseouts of the credit as income increases, and more generous, with higher income thresholds for eligibility and refundability (providing a cash refund if the credit exceeds a worker’s tax liability) (Southworth and Gist, 2008).

In addition to these “carrots,” it is time to consider a “stick” as well—some form of consumption tax that would both provide more revenue and encourage more personal saving. The declining saving rate has been mirrored by (1) a rising rate of personal consumption, which increased from about 60 percent to about 70 percent of GDP in the past two decades (Parker, 2001); and (2) a sharp increase in personal debt. The ratio of household sector debt to personal income has increased from 60 percent of annual personal income to nearly 120 percent of income (Dynan and Kohn, 2007).

The housing boom and bust have accounted for much of this debt. Discretionary extraction of home equity accounted for about 80 percent of the rise in home mortgage debt since 1990 (Greenspan and Kennedy, 2007).

Increased housing debt has escalated financial risks for all age groups, but especially those nearing retirement. One manifestation of that risk is the increased percentage of older households carrying mortgage debt into retirement. Households headed by a person aged 65 to 74 with housing debt increased from 28 percent to 40 percent between 1989 and 2004, and those aged 75+ with housing debt increased from 9 percent to 22 percent during the same period.

Additional taxes are no prescription for the current recession, but in the long run, the need to finance existing and future federal domestic and international commitments will require increased tax revenue. It is time to consider some type of consumption tax, such as a value-added tax (which every OECD country other than the U.S. has) or a progressive consumption tax, not as a substitute for but in addition to the income tax, which would both provide more revenue to the federal government and encourage more personal saving.

In addition to remedies for inadequate saving, the greater exposure to risk in the management of retirement assets highlights the need for better options for reducing risk in pension distributions. Few 401(k) plans offer annuitization even as an option at retirement, and virtually none offers automatic annuitization as a default option that employees could waive. Moreover, DB plans increasingly offer lump sums as a distribution option, increasing the numbers of retirees facing the risk of longevity and managing their assets over a longer life span. At a minimum, firms should be required to offer full or at least

partial annuitization as one distribution option, and firms could make annuitization rather than a lump sum distribution the default option for 401(k) payouts.

References

Bell, E., Carasso, A., and Steuerle, E. (2004). "Retirement Saving Incentives and Personal Saving," *Tax Notes*, December 20, p. 1689.

Bureau of Economic Analysis (2008). "Concepts and Methods of the U.S. National Income and Product Accounts," Chapters 1-4, July.

Congressional Budget Office (1993). *Assessing the Decline in the National Saving Rate*, April.

Dynan, K. and Kohn, D. (2007) "The Rise in U.S. Household Indebtedness: Causes and Consequences," Federal Reserve Board, Finance and Economics Discussion Series 2007-37.

Gale, W., Iwry, M., and Orszag, P. (2005). "The Automatic 401(k): The Simple Way to Strengthen Retirement Savings," Retirement Security Project, The Brookings Institution.

Gale, W. and Sabelhaus, J. (1999). "Perspectives on the Household Saving Rate," *Brookings Papers on Economic Activity*, 1999, pp. 181-224.

Garner, C. A. (2006). "Should the Decline in the Personal Saving Rate Be a Cause for Concern?" *Federal Reserve Bank of Kansas City Economic Review*, 2nd Quarter, 2006, 5-27.

Ghilarducci, T. (2007). "Guaranteed Retirement Accounts." EPI Briefing Paper, November 20, 2007.

Greenspan, A. and Kennedy, J. (2007). "Sources and Use of Equity Extracted from Homes," Federal Reserve Board,

Finance and Economics Discussion Series, 2007-20, March.

Guidolin, M. and La Jeunesse, E., (2007) "The Decline in the U.S. Personal Saving Rate: Is it Real and Is It a Puzzle?" *Federal Reserve Bank of St. Louis Review*, 89 (6), November/ December.

Iwry, M., and John, D. (2007) "Pursuing Retirement Security Through Automatic IRAs," Retirement Security Project, The Brookings Institution.

Juster, F. T., Lupton, J., Smith, J., and Stafford, F. (2006). "The Decline in Household Saving and the Wealth Effect," *Review of Economics and Statistics*, February.

Lusardi, A., Skinner, J., and Venti, S. (2001). "Saving Puzzles and Saving Policies in the United States," *The Oxford Review of Economic Policy*, 17 (1), 95-115.

Madrian, B. and Shea, D. (2001) "The Power of Suggestion: Inertia in 40(k) Participation and Savings Behavior," *Quarterly Journal of Economics* 116 (4), November, 1149-87.

Maki, D. and Palumbo, M. (2001). "Disentangling the Wealth Effect: A Cohort Analysis of Household Saving in the 1990s," Finance and Economics Discussion Series 2001-21, Federal Reserve Board, April.

Munnell, A. (1992). "Current Taxation of Qualified Pensions: Has the Time Come?" *New England Economic Review*, March/April,

Parker, J. (1999). "Spendthrift in America? On Two Decades of Decline in the U.S. Personal Saving Rate," in B. Bernanke and J. Rotemberg (eds.) *NBER Macroeconomics Annual 1999*, Cambridge: MIT Press.

Soto, M. (2008). "How is the Financial Crisis Affecting Retirement Saving?"

Fact Sheet on Retirement Policy, The Urban Institute, December 3 Update.

Southworth, L. and Gist, J. (2008). “The Saver’s Credit: What Does It Do for Saving?” *Insight on the Issues 1*, AARP Public Policy Institute, February.

Steindel, C. (2007). “How Worrisome is a Negative Saving Rate?” *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, 13 (4), May.

¹ More technically, personal income is defined as national income, less corporate profits, taxes on production and imports less subsidies, contributions for government social insurance, net interest and miscellaneous payments on assets, and business current transfer payments, plus personal income receipts on assets and personal current transfer receipts (Bureau of Economic Analysis, July 2008).

Insight on the Issues 22, February, 2009

Written by John Gist
AARP Public Policy Institute,
601 E Street, NW, Washington, DC 20049
www.aarp.org/ppi
202-434-3872, ppi@aarp.org
© 2008, AARP.
Reprinting with permission only.