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Authors: Annamaria Lusardi, Jonathan Skinner, Steven Venti

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PENSION ACCOUNTING & PERSONAL SAVING

BY ANNAMARIA LUSARDI, JONATHAN SKINNER, AND STEVEN VENTI*

Introduction

In the past two decades, the personal saving rate in the United States has declined dramatically, from 10.6 percent of disposable personal income in 1984 to a low of 2.3 percent in 2001, before bouncing back to 3.9 percent in 2002 (U.S. Department of Commerce, 2003). There is considerable debate over the reasons for this decline in the personal saving rate, as calculated by the National Income and Product Accounts (NIPA), as well as its usefulness as an indicator of saving. Many observers have questioned the influence of stock market wealth on conventionally measured personal saving rates and have noted three major ways in which the stock market and saving may be linked.

First, NIPA saving measures fail to account for capital gains. So, when households spend newly-gained housing or stock market wealth, their NIPA consumption increases but their income does not. Since saving is the difference between income and consumption, saving automatically declines as consumption rises. Recent studies have attempted to quantify the behavioral link between household consumption changes and stock market gains, with estimates ranging from two cents per dollar of wealth to ten cents or more.

The second linkage between the stock market and saving involves taxation of capital gains. When individuals sell appreciated stock, they must pay capital gains taxes. The realized gains do not affect NIPA income, but the taxes paid reduce disposable income. Even under the extreme assumption that individuals do not increase their consumption when they realize capital gains, NIPA saving would still decline because the increased taxes reduce disposable income. Capital gains taxes as a fraction of disposable income are estimated to have doubled between 1988 and 2000, rising from 0.8 percent to 1.7 percent in 2000 (Perozek and Reinsdorf, 2002).

The final way in which the stock market can affect personal saving, which is the focus of this brief, has to do with the treatment of pension plans in the NIPA. We show that dramatic swings in asset markets have perverse effects on the personal saving rate. Indeed, according to the official NIPA accounting rules, the entire retirement saving sector contributed *nothing* to measured personal saving between 1996 and 2000.

The analysis discussed in this piece covers the years 1988-2000, a time when the stock market was booming and personal saving rates were dropping. While these conditions have reversed with the onset of the bear market in 2000, understanding the experience of the 1990s offers key insights into what is happening today.

Trends in Pension Contributions

The principal sources of private retirement saving in the United States are defined contribution and defined benefit pension plans sponsored by employers — both private and public — and personal saving arrangements such as Individual Retirement Accounts (IRAs). Assets in pension plans and IRAs have grown considerably over

* Annamaria Lusardi is Associate Professor of Economics at Dartmouth College. Jonathan Skinner and Steven Venti are Professors of Economics at Dartmouth College and Research Associates at the National Bureau of Economic Research. The original research on which this brief is based was supported by the National Institute on Aging.

the past two decades. Between 1975 and 2000, the ratio of retirement assets to disposable income increased over four-fold. Although assets in both defined contribution and defined benefit plans have grown enormously, annual contributions to each plan type have taken different paths.

Over the past two decades, contributions to defined contribution plans have risen dramatically. Most of this growth has been in 401(k) plans, which expanded rapidly after 1982. These plans have grown for a number of reasons. Employees appreciate their greater flexibility and portability. Employers usually find 401(k)s less costly to administer than defined benefit plans, and they can shift the investment risk to the employee (Munnell, Sundén, and Lidstone, 2002). Similar to defined contribution plans, IRAs also grew quickly following a legislative change in 1981, but were curtailed significantly by the Tax Reform Act of 1986.

In contrast to the trend in defined contribution plans, contributions to defined benefit plans have leveled off since the mid-1980s. Contributions have been flat not only because the share of workers covered by these plans has dropped but also because federal policies have effectively linked defined benefit contributions to asset market performance. In 1974, the Employee Retirement Income Security Act (ERISA) set minimum and maximum funding requirements for defined benefit pensions. When stock and bond prices increase, many firms respond by cutting back on pension contributions. In 1987, the Omnibus Budget Reconciliation Act redefined "full funding" and limited pension assets to no more than 150 percent of the legal liability (the balance firms must hold to pay future benefits). Funds up against this ceiling could no longer make tax-deductible contributions to their pension plans. In addition, increases in "reversion taxes" — i.e., taxes on any assets that remain after a plan is terminated — further discouraged contributions (Bernheim and Shoven, 1988 and Ippolito, 2001).

Overall, the size of the retirement saving sector doubled between 1994 and 2000, to a large extent because of massive increases in stock prices inside these accounts. By 2000, private and public pension plans held $9.1 trillion of assets, while IRAs held another $2.6 trillion.

The Pension Sector and NIPA Saving

A booming asset market means that, by NIPA conventions, resources flowing into the retirement sector will lag resources flowing out of the sector. To see this, it is important to understand exactly how pension funding and distributions are treated in the NIPA personal saving measure.

First, employer-sponsored pension funds are classified as the property of the individual employees. Therefore, both employee and employer contributions to defined contribution and defined benefit plans are counted as personal income during the employees' worklives when the contributions are made. Interest and dividend earnings on these contributions are also included in employees' NIPA income in the year in which they occur. As noted above, capital gains on the investments are not included in NIPA income.

Second, when employees retire and begin receiving distributions from a defined benefit or defined contribution plan or an IRA, the distributions do not show up as personal income because they were already counted as income during the employees' worklives (again, with the notable exception of capital gains, which are never counted as NIPA income). Of course, the consumption that the pension-related distributions allow does show up as NIPA consumption. This treatment makes sense from the perspective of an individual: over the first part of the life-cycle a worker diverts some income to saving and, in later years, a worker receives and consumes retiree benefits.[1]

However, funny things happen when this NIPA convention is applied to the group of post-war workers who were most likely to hold defined benefit pension plans. In a fully funded system, the rate of growth of contributions will be less than the rate of growth of benefits because a large share of benefits will be paid out of the

[1] The NIPA accounting for defined contribution plans and IRAs seems to be an appropriate fit for this life-cycle perspective, but, according to Perozek and Reinsdorf (2002), it is less clear that defined benefit plans should be treated the same way. For example, individual employees do not "own" or exercise control over contributions to defined benefit plans the way they do with defined contribution plans. For this reason, Perozek and Reinsdorf suggest an alternative under which defined benefit plan funding would be treated as part of business saving rather than personal saving with distributions from defined benefit plans counted as income for individual retirees.

fund's capital gains. This fact alone will drag down the NIPA saving rate. If asset prices are booming, pension plans can, in principle, pay benefits entirely from sales of appreciated assets and remain fully funded. This situation is exacerbated by the host of legal and regulatory restrictions (discussed above) that further depress contributions.

Moreover, not only do the benefits paid by the pension sector raise consumption without increasing income, they also trigger a tax liability that lowers NIPA income.[2] This liability occurs because at least a portion of pension benefits are included in an individual's taxable income. Note that the tax liability and the associated income are separated in time as the original pension contribution counted as NIPA income but was not subject to tax at the time it was made.[3]

How Large Is the Impact?

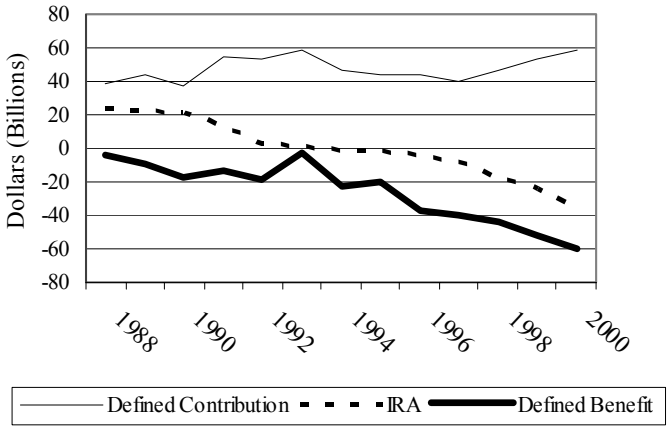
How serious of a drag on NIPA saving might the treatment of pension plans be? Assume for the moment that all benefits paid are consumed. Then in each year the contribution of the pension sector to NIPA saving is:

{Saving} = {Contributions} + {Interest and dividend earnings} - {Benefits paid}

Since the mid-1980s, benefit payments from defined benefit plans have exceeded contributions. In 1998, the most recent year for which data are available, employers contributed about $35 billion to defined benefit plans, but disbursed about $111 billion of benefits. Moreover, interest and dividend earnings in this year amounted to only $26 billion. More generally, defined benefit plans (and, to a lesser extent, IRAs) have had distributions well in excess of income components throughout the 1990s.[4] Despite this outflow, the value of defined benefit plan assets rose rapidly during this period due to the booming stock market. Among defined contribution plans, many of which are recently established 401(k) programs, contributions have always outpaced distributions. Thus, unlike defined benefit plans, defined contribution plans have contributed positively to NIPA saving.

To see how these trends affect the measured saving rate, Figure 1 shows the net contribution to NIPA saving for defined benefit plans, defined contribution plans, and IRAs during the years 1988-2000.[5] This net contribution is simply the difference between NIPA income components (contributions plus investment earnings) and NIPA consumption (equal to benefits assuming they are fully consumed). Defined benefit plans reduce NIPA saving in all years since 1988, and the amounts are increasingly large through 2000. Thus, for example, NIPA saving was lower by $60.7 billion in 2000 due to defined benefit plans. In contrast, the impact of defined contribution plans on NIPA saving is large and positive in all years. In 2000, they generated positive savings of $58.4 billion. The net contribution of IRAs has been negative since 1994. By 2000, outflows from IRAs exceeded inflows by $35.7 billion.

FIGURE 1: NET CONTRIBUTION TO NIPA SAVINGS



Source: U.S. Department of Labor (2002), U.S. Department of Treasury (2002), and authors' projections.

[2] Note that this effect tends to drag down personal saving, but at the same time boost business saving as corporations need no longer contribute to their defined benefit plans.

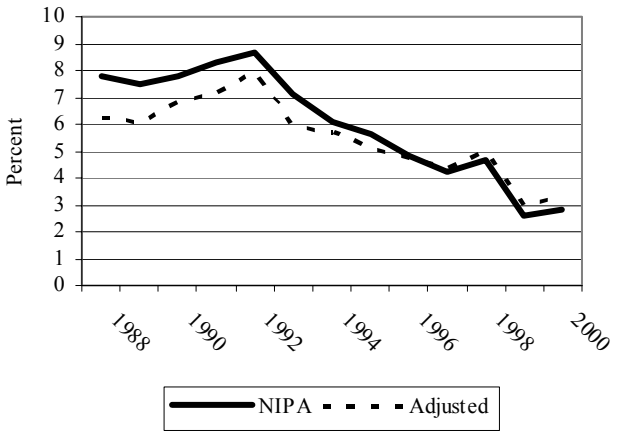
[3] The tax treatment of traditional IRAs is consistent with this statement. However, Roth IRAs differ — they are taxed when the contributions are made, not when distributions occur.

[4] IRA contributions in this analysis include only tax-deductible contributions and ignore contributions from rollovers. Rollovers are not counted as new saving in the NIPA framework because they reflect previous saving through employer-sponsored pension plans.

[5] Data for 1999 and 2000 are projections. See Lusardi, Skinner, and Venti (2001) for additional details on how each series in the figure was derived.

Figure 2 shows what the NIPA saving rate would have been without transactions involving defined benefit plans, defined contribution plans, and IRAs. Of the 5-percentage-point drop in the NIPA saving rate between 1988 and 2000 (from 7.8 percent to 2.8 percent), fully 2.1 percentage points — or 42 percent — is explained by the accounting of pension plan inflows and outflows. Put another way, between about 1996 — when the two lines in Figure 2 cross — and 2000, retirement saving accounts contributed *nothing* to NIPA saving.

FIGURE 2: NIPA SAVING RATE WITH AND WITHOUT DEFINED BENEFIT, DEFINED CONTRIBUTION, AND IRA PLANS



Source: U.S. Department of Labor (2002), U.S. Department of Treasury (2002), U.S. Department of Commerce (2003), and authors' projections.

Conclusion

Stock market wealth has had a direct effect on consumption. However, it is not just stock market wealth that has dragged saving rates down to low levels. The treatment of pension plan contributions and benefits has also played a large role, accounting for over 40 percent of the total decline in the personal saving rate from 1988 through the turn of the century. But the recent economic downturn and stock market implosion suggest a reversal of the pattern of the 1990s may now occur, meaning that personal saving will begin rising. While it's too early to tell for sure, the recent evidence is certainly consistent: personal saving has rebounded somewhat in the past year to 3.9 percent of disposable income (up from 2.8 percent in 2000). In short, secular changes in personal saving rates may tell us less about the thriftiness of American families and more about the rules of national income accounts.

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CENTER FOR RETIREMENT RESEARCH AT BOSTON COLLEGE

Fulton Hall 550, 140 Commonwealth Avenue, Chestnut Hill, MA 02467-3808

phone 617.552.1762 fax 617.552.1750 crr@bc.edu www.bc.edu/crr