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DO RETIRED AMERICANS ANNUITIZE TOO LITTLE? TRENDS IN THE SHARE OF ANNUITIZED INCOME

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CRR WP 2015-9
Submitted: October 2014
Released: June 2015

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Abstract

This paper examines the importance of annuity-like income as a share of total money income received by aged families. The analysis considers the aged (62+) population as a whole as well as different parts of the aged families' income distribution during the period from the early 1980s through 2009. We use survey data from 1983 through 2009 from the *March Current Population Survey* (March CPS) and the *Survey of Consumer Finances* (SCF). The total income amounts reported in the files are compared with data in the *National Income and Product Accounts* (NIPA). We calculate the family income consisting of annuitized income flows (primarily Social Security and pensions) and measure it as a share of families' total money income. We also expand the definition of both annuitized and non-annuitized income to include income flows not captured in the surveys, namely, health insurance subsidies and the housing services received by homeowners. Finally, we consider the potential impact on aged families if they were to convert their wealth into private annuities.

The paper finds that:

- Despite the shift from defined benefit (DB) to defined contribution (DC) retirement plans, there is little evidence that the annuity-like income share of total income has fallen for aged families – and, in particular, for low-income aged families – over the past three decades.
- This basic result remains unchanged when we consider more comprehensive income definitions and when we focus on aged families with retired heads of family.
- Nonetheless, many middle- and high-income aged families would experience a sizeable increase in monthly income if they annuitized their wealth.

The policy implications of the findings are:

- Concerns that reduced rates of annuitization will lead retirees to spend down their assets at a too-rapid rate seem overblown or at least premature; there is little evidence that the share of income derived from annuity-like income sources has declined.
- Contrary to a widespread fear, the shift from DB to DC workplace pensions has not reduced the share of retirement income that consists of relatively secure, annuity-like income flows that will last as long as aged breadwinners and their spouses survive.

Introduction

Pension annuities offer retirees a simple vehicle for insuring themselves against the risk of outliving their retirement savings. As the U.S. workplace retirement system shifts to defined contribution (DC) pensions with lump-sum payouts, it seems logical to think retirees will shift their retirement savings portfolios towards annuity products in order to replace the guaranteed life income payouts that were once provided by old fashioned, defined benefit (DB) pensions.

Such a shift has yet to occur, however. Only a very small percentage of older workers and recent retirees with DC-type pensions has purchased or intends to purchase an annuity with their retirement savings. Economists and experts on insurance agree that annuities can play a key role in providing stable retirement income that lasts for the lifetime of retired workers and their spouses (Yaari 1965; Davidoff, Brown and Diamond 2005). When retirees are uncertain about how long they will live, the purchase of a life annuity can assure them of receiving a specified monthly income up through the age of death. After savings are converted into an annuity, workers and their survivors are no longer required to make decisions about how their retirement savings are invested and the annual drawdown rate from their savings. Many economists think savers with average or above-average life expectancy should convert much of their retirement savings into an annuity within a few years of retirement

In spite of the advantages of annuity payouts, the percentage of retirees who purchase annuities is small. Based on her analysis of the 2006 *Health and Retirement Survey* (HRS) data files, Pashchenko (2010) estimates that less than 8 percent of Americans 70 and older report receiving income from a private annuity. Many explanations have been offered for the very small share of retirees who buy annuities. One partial explanation is that most retirees already receive a large fraction of their retirement income in annuity-like payments. Another is that many Americans near retirement have not accumulated enough financial assets to make it worthwhile to purchase an annuity.

This paper uses income and asset data from the *Current Population Survey* (CPS) and the *Survey of Consumer Finances* (SCF) as well as aggregate data from historical data bases to examine the trend in retirement income that is paid out as annuities. Our analysis tracks annuitization rates in different parts of the income distribution to determine whether too little annuitization has caused an important welfare loss for retirees. Our basic result is easy to summarize. We find surprisingly little evidence that regular pension or annuity income has

shrunk in relation to other sources of old-age income. According to the reports of people interviewed in both the CPS and SCF surveys, the share of old-age income derived from pensions and annuities has *increased* since the early 1980s, the heyday of DB pension plan enrollment in the U.S. workplace. We confirm this result using broader measures of income than the standard money income measure used by the Census Bureau and Federal Reserve Board in their analyses of the same surveys. Two of the most important income items missing in the money income definition are health insurance coverage and the flow of housing services obtained by homeowners by virtue of occupying a dwelling that they own. Inclusion of these income items in household income strengthens our conclusion that more secure kinds of retirement income have increased rather than declined since DB pension enrollment began its long decline.

The remainder of the paper is organized as follows. The next section presents evidence on the declining role of DB pensions in workplace retirement savings. Section 2 describes the household survey data we use and evaluates its quality relative to alternative sources of information on household income. Section 3 describes our analytical procedures and lays out our main results using standard money income measures. This section also presents results using alternative income measures that count the value of health insurance and returns on homeowner equity to aged families. We also show the impact of excluding aged households containing a full-time working breadwinner from the analysis. Section IV presents simulation estimates of the impact of annuitizing the financial wealth holdings of the aged population. If households annuitized all their financial wealth, the current money incomes of many families would rise, often by a substantial amount. However, this would have a very limited effect on the low-income aged, who only rarely have meaningful amounts of financial wealth. The paper concludes with a brief summary and a discussion of possible explanations for our basic findings.

Decline in pension coverage under defined benefit plans

Over the past three decades, the proportion of American workers covered by a traditional DB pension plan shrank noticeably. The drop occurred for three main reasons. Workers are now less likely to be offered a pension plan at work than was the case at the end of the 1970s (Figure 1). Among government employers the erosion in the pension offer rate has been slight. The decline has been larger in the private sector. In addition, workers employed in private industry are now less likely to work for an employer who offers a plan. Workers are also somewhat less

likely to be enrolled in a plan even if pension coverage is offered at their place of work. One reason is that enrollment in many DC plans, including 401(k) and 403(b) plans, is voluntary. Workers who do not elect to make voluntary tax-preferred contributions to many plans are excluded from participation.

A second reason for the falloff in DB coverage is that employment in private industry has increased faster than it has in the public sector. DB pension plans have always been more common (and generous) in federal, state, and local government agencies than among private employers. Finally, for a variety of reasons private employers that offer pension coverage have shifted out of DB plans and into DC plans, most notably 401(k) plans. Clark and Monk (2006) and Butrica et al. (2009) summarize some reasons for the shift. Among private sector workers with a pension plan, the fraction who are enrolled solely in a DB plan fell from 62 percent in 1979 to just 7 percent in 2011 (Figure 2). Many employees, especially in the private sector, are eligible to enroll in both a DB and DC employer-sponsored plan. If we count the workers enrolled in both types of plan plus those enrolled solely in a DB plan, 84 percent of pension-enrolled private employees were in a DB plan in 1979 compared to only 31 percent in 2011. Thus, about 7 out of every 10 private-sector workers covered by a workplace pension now receive coverage solely under a DC plan.

The shift in private employer pensions away from DB and toward DC plans can also be seen in the asset holdings of the two kinds of plans. Figure 3 shows the division of total private pension fund assets between DB and DC plans over the period from 1975 through 2011. At the end of the 1970s, over 70 percent of private employer pension fund assets backed the benefit claims of DB plans. By 2011, this fraction had dipped below 30 percent of total fund assets.

An overwhelming majority of DC plans provide retirement savings payouts in the form of lump-sum distributions. Comparatively few offer the option of payouts as life annuity payments (Mitchell 2000). As a result, only a small percentage of workers who retire under a DC pension plan convert their pension accumulation into an annuity. Using data from the *Health and Retirement Survey* (HRS), for example, Hurd and Panis (2006) found that just 7 percent of respondents who retired under a DC plan converted their pension savings into an annuity. In contrast, nearly all DB pensions offer payouts in the form of life annuities. The shift of the private-sector pension system towards DC pensions has meant that a growing portion of

workplace retirement savings is accumulated in a form in which the savings will not be automatically distributed to beneficiaries as annuities.

The decline of DB pensions and the associated drop in the fraction of workers who will automatically receive guaranteed income payments at retirement is viewed with alarm by many critics of U.S. workplace benefits programs. Jacob Hacker (2006) sees the drop in DB coverage as part of a great "risk shift" that has transferred the burden of dealing with economic insecurity from employers to workers and their families. Teresa Ghilarducci (2006) is one among many progressive critics of the U.S. pension system who charge that the shift to DC plans, especially voluntary 401(k) plans, has drastically reduced the retirement income security of American workers. One way in which risk has been shifted to workers and their income security reduced is by eliminating the option of converting workplace savings into a life annuity at retirement.

Components of income received by the aged

It seems reasonable to expect that the 35-year decline in enrollment in DB pension plans should have reduced the portion of retirement income received as annuities or annuity-like income flows, especially among recent retirees. In the remainder of this paper we examine data on the components of old-age income from two household survey files that should shed light on this question. The first is the Census Bureau's CPS, or Annual Social and Economic Supplement, which collects annual work experience and income data from a representative sample of U.S. households. The second is the Federal Reserve Board's SCF, whose main aim is to gather information on family wealth and its components and family borrowing and its components. The SCF interview also asks questions about family income in the past year. These are similar to but less detailed than the income questions posed in the CPS. Unlike the CPS income survey, which is conducted every year, the SCF is conducted once every three years. Our analysis is limited to the calendar years for which complete and representative income data were available in the SCF (1982, 1988, 1991, 1994, 1997, 2000, 2003, 2006, and 2009). The surveys were conducted in the calendar year following the year for which income was ascertained. Since respondents were asked about their families' current wealth holdings and credit accounts, the net worth information in the SCF covers a somewhat later period than the income information.

For two reasons we should expect the CPS income data to be somewhat more precise than the income reports obtained in the SCF. As already noted, the CPS income questionnaire is

more detailed than the one in the SCF. It asks respondents to report about more individual income items. Second, the CPS sample is considerably larger. In 2007, for example, the CPS sample was nearly nine times larger than the one interviewed in the SCF (57,000 versus about 6,500 respondents). On the other hand, the sampling strategy used in the SCF confers an important advantage for analyzing the incomes and balance sheets of high-income families. Part of the SCF sample is drawn using Internal Revenue Service tax return data, and this high-income sub-sample increases the fraction of the final sample consisting of high-net-worth families.

Neither survey provides flawless information about the amount and composition of income flowing into U.S. households. Except in households that receive only one kind of income, it may be difficult for respondents to recall all the types and amounts of income received by household members in the previous calendar year. As an aid to respondents' memories, the annual CPS income survey is conducted around the time that families file their annual income tax returns. Not every family is obliged to fill out these returns, however, and some kinds of money income, including means-tested government benefits, are not reported on tax returns. Some regular sources of income, such as wages and Social Security, are much better reported in household surveys than income items that are more irregular or variable, such as dividends, self-employment earnings, and unemployment compensation.

We have attempted to determine the quality of the income reported in the two surveys by comparing the aggregate totals reported with the totals shown in the U.S. national income and product accounts (NIPAs) or, in some cases, the IRS tax files. To make the comparisons we had to make adjustments to the NIPA estimates of personal income to align them more closely with the income concepts used in the CPS and SCF. The adjustments and some details of the comparison are described more fully in an appendix. Table 1 shows the main results of our comparison. Income is divided into four broad components — labor earnings, capital income, government transfers (excluding Social Security), and retirement benefits. For each income component we show the percentage of the recorded income item in the NIPAs that is reported in the household survey. Results for the CPS survey are shown in the top panel of the table, and results for the SCF in the bottom panel.

At first glance total money income appears to be better reported in the SCF than in the CPS. On average in the nine survey years, SCF respondents reported about 98 percent of the total benchmark income shown in the NIPAs and the IRS tax files. CPS respondents reported an

average of only 89 percent of the benchmark totals. The enrollment of a high-income subsample in the SCF undoubtedly helped investigators obtain better information about sources of income that are highly concentrated at the top end.[1] Capital income in particular appears to be better reported in the SCF than the CPS. In contrast, government transfers are more accurately reported in the CPS. Social Security is well reported in both surveys, although it is more consistently reported in the CPS. Wage income is also reported reasonably accurately in both surveys. Self-employment income, on the other hand, is poorly reported. Obtaining accurate statements of the net income of unincorporated businesses has long been difficult for tax authorities, so it should not be surprising if responses in a voluntary census survey are subject to error. Oddly, however, SCF respondents occasionally reported substantially more self-employment income than recorded in the NIPAs. The variability of self-employment income reports in the SCF is in part traceable to a change in the way self-employment income was ascertained in the interviews after 2001 when the SCF began to direct respondents to specific lines of their tax returns (see Appendix).

The reports of pension and annuity income appear to have deteriorated over time in both the CPS and SCF. In this case, however, it is difficult to know whether the problem is in the survey responses or the benchmark to which they are compared. Both surveys try to elicit information about regular payments from a pension plan or insurance policy. Ideally, the responses should reflect annual totals of regular monthly or quarterly pension and annuity payments. These totals should exclude lump-sum distributions and occasional withdrawals from a pension or retirement account. We have tried to exclude lump-sum distributions from our benchmark total based on income tax records, but it is possible some such distributions are included in that estimate. If (taxed) lump-sum distributions and occasional withdrawals have become more important over time, the calculations reported in Table 1 may overstate the falloff in pension reporting between 1982 and 2009.

[1] Unlike the SCF, the CPS does not enroll a special high-income subsample. Consequently, it probably obtains worse estimates of average incomes in the top portion of the distribution. The public use version of the CPS file compounds the problem by using an inconsistent method for top-coding high income amounts. In effect, the top-coding procedure truncates reported incomes much more severely in the 1980s and early 1990s compared with later years. To circumvent this problem we have replaced the original Census Bureau top codes with alternative codes proposed by analysts with access to the uncensored data. See Larrimore et al. (2008).

Trends in income shares since 1982

Our analysis focuses on the income received by "family units" headed by a person who is 62 or older. A family unit may consist of only a single person, in which case the person is at least 62 years old. It may also consist of a married couple, one of whose members must be at least 62. The family unit also consists of the dependents of this aged person or couple who live at the same address. (Relatives at the same address who have their own children or spouse are not considered part of the aged person's family unit.) We selected this unit of analysis to correspond as closely as possible to the basic unit of analysis in the SCF ("primary economic unit"). It corresponds to a combination of three demographic categories in the CPS, "families," single person households, and unrelated individuals living inside larger households.

Table 2 shows our estimates of the trends in the main income components received by aged family units between 1982 and 2009. Results in the top panel refer to estimates obtained using the CPS, while estimates based on the SCF survey are shown in the bottom panel. Each entry in the table shows the percent of aged families' aggregate income that is derived from the indicated income source. Thus, labor earnings reported in the CPS have increased over time, rising from about 31 percent of aggregate income in the 1980s to 41 percent of total income in 2009. The same upward trend in labor income is also evident in the SCF, though it appears more erratic. (As mentioned above, some of the discrepancy between the two sets of estimates may be traceable to the reclassification of some self-employment income in the SCF after the 2001 survey.) The crucial results displayed in Table 2 refer to the share of old-age income received as retirement benefits, that is, Social Security payments plus non-Social-Security pensions and annuities. In both surveys, these forms of income comprise a larger share of old-age income in recent years compared with the early 1980s. Some of the increase in the SCF is due to a rise in the relative importance of Social Security benefits. However, survey responses in the CPS show the opposite trend — Social Security benefits fell modestly in comparison with other kinds of income. In both the CPS and SCF, pensions and annuities increased relative to other forms of old-age income, the reverse of what we would expect given the decline in DB pension coverage.

To be sure, both surveys show a decline in the percentage of aggregate income received from Social Security, pensions, and annuities since the share attained between 1994 and 2003. In the CPS this peak was attained in 1994, when Social Security benefits accounted for one-third of the total income and pension and annuity payments accounted for 18 percent of the total income

of the aged. The peak role of guaranteed income sources was attained almost a decade later in the SCF, in 2003, when the income shares of both Social Security benefits and pension and annuity payments hit startling peaks. Thus, compared with the peak shares of Social Security, pension, and annuity benefits, the most recent period has seen something of a decline.

For a number reasons the overall share of annuity income in the total income of the aged may give a misleading picture of the importance of annuitized income flows to most aged families. As in younger age groups the income distribution of the aged is unequal, with a far bigger share of income going to top income recipients than to poor and middle-income elderly families. If aged families with high incomes receive a disproportionate share of non-annuitized income, as seems likely, the low- and middle-income elderly may receive a large share of their retirement income in the form of guaranteed annuities or pensions. Another reason the income share analysis in Table 2 offers an incomplete picture of the shifting importance of annuities is that U.S. workers have been delaying their retirements and increasing their labor incomes over time (Bosworth and Burke 2012). Considerable evidence suggests that retirement delays have been especially common among well-educated, highly compensated workers (Burtless 2013). Workers who still earn substantial labor incomes presumably do not need to supplement their earnings with annuity income. By delaying pension claiming they can increase the monthly payout rate of the pension they will ultimately receive.

In Table 3 we examine the distributional pattern of annuity income flows as a percentage of aged families' incomes. To perform this calculation we first ranked aged families according to their family-size-adjusted incomes and then divided the people who were members of the families into five equal groups according to their families' rank in the size-adjusted income distribution.[2] For each family we calculated the percentage of total family income consisting of annuitized income flows (Social Security, pensions, and annuities). We then calculated the mean percentage of annuitized income across families within a quintile. Note that this calculation assigns an equal weight to each family. Families with higher incomes are not assigned higher

[2] Our family size adjustment is intended to determine families' income rank by their "equivalent" incomes, that is, their family income adjusted to reflect the effects of family size. The adjustment we use is to divide each family's unadjusted income by the square root of the number of family members. This adjustment implies that a family consisting of four members requires twice as much income to have the same "equivalent" income as a household containing just one member. Note that each of the income quintiles contains an equal number of *persons* rather than an equal number of *families.*

weights by virtue of their higher incomes, as is typically the case when analysts calculate income shares.

The results in Table 3 are based on estimates from the CPS files, in the top panel, and from the SCF files, in the bottom panel. If the results are averaged across all nine survey years, the estimates from the two surveys are remarkably consistent:

Average percent of income derived from Social Security, pensions, and annuities, 1982-2009

Data source	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
CPS files	81	81	69	54	35	66
SCF files	88	80	70	56	32	66

For the average family headed by a person 62 or older, two-thirds of total income consists of some form of annuitized income — Social Security, public or private employee pensions, or annuities. Aged families in the bottom two-fifths of the income distribution report a higher percentage of annuity income compared with families in the top three-fifths of the distribution. In the higher ranks of the income distribution, annuitized income flows account for a progressively smaller percentage of total family income. Labor earnings and non-annuitized capital income flows are more important for high-income families. In both the CPS and SCF, the proportionate share of annuitized income in 2009 is almost identical to its average share in the previous eight survey years, and in every quintile the share is higher in 2009 than it was in the first survey year. The notable difference between the two surveys is the estimated importance of annuity income in the bottom quintile. In the CPS, annuitized income flows account for an average of 81 percent of family income; in the SCF, annuities account for 88 percent of total income. This difference is probably the result of SCF respondents' poor reporting of means-tested government benefits (which we do not count as annuitized income). The results in Table 3 thus offer little evidence the decline in private sector DB plans has led to a drop in the percentage of old-age income that is derived from annuitized income flows.

We believe these results are likely to understate the importance of annuitized income flows for most aged families. The calculations omit two forms of income that are increasingly

important to Americans as they age. One is health insurance subsidies provided through employer- and government sponsored plans. The second is the flow of housing services that homeowners receive as occupants of a dwelling they own.

Health insurance subsidies. Health insurance subsidies probably have the bigger impact on aged families, because average health care expenditures in this population are very high. In 2009 the Medicare program, which insures most of the disabled population and nearly all the resident U.S. population past age 65, spent almost $10,400 per person enrolled. Not all this spending represented subsidies to the insured population, since a small percentage of government costs for the program were offset by premium contributions from the insured. The implicit income flow from Medicare subsidies represents a sizeable share of the personal incomes of low- and middle-income Americans 65 and older. The value of the subsidy to a person within a given risk class can be estimated by calculating the difference between Medicare's expected outlays on people in the risk class and the person's premium contributions for insurance. The Census Bureau has taken this approach to estimating the implicit income received by Americans enrolled in Medicare, Medicaid, and other public health insurance programs. It also estimates the net subsidy value of employer-provided health insurance, and adds that implicit income to the wage earnings of employees who report they are covered by an employer-sponsored health plan. In one of the Census Bureau's experimental income measures, these income amounts are added to money income to arrive at a more comprehensive measure of income for middle- and high-income families. In the case of lower income families, the Census Bureau adds the full value of employer-provided subsidies in workplace health plans to family income but only the "fungible value" of the government subsidies provided to enrollees in government health plans.[3] Under this measurement approach, the value of publicly subsidized health insurance is treated as zero for families with extremely low incomes and is treated as equivalent to the net government cost

[3] The Census Bureau describes this approach as follows: "The fungible approach for valuing medical coverage assigns income to the extent that having the insurance would free up resources that would [otherwise] have been spent on medical care. The estimated fungible value depends on family income, the cost of food and housing needs, and the market value of the medical benefits. If family income is not sufficient to cover the family's basic food and housing requirements, the fungible value methodology treats Medicare and Medicaid as having no income value. If family income exceeds the cost of food and housing requirements, the fungible value of Medicare and Medicaid is equal to the amount which exceeds the value assigned for food and housing requirements (up to the amount of the market value of an equivalent insurance policy (total cost divided by the number of participants in each risk class)." [URL = http://www.census.gov/hhes/www/ income/data/historical/measures/redefs.html]

of provision for families with middle and high incomes. Families with moderately low incomes have only part of the cost of their public insurance subsidies included in their income.

Most working-age Americans and their dependents obtain health insurance through an employer. The overwhelming share of this insurance is contingent on a worker's continued employment with the firm or government agency. When employment ceases, so does the employer's subsidy for health insurance. In contrast, Medicare is provided to nearly all Americans when they attain age 65, and it lasts until the insured person dies. Medicare insurance is thus equivalent to annuity income, while the subsidy in an employer-sponsored health plan is equivalent to wage income and is not an annuity. As U.S. health costs have soared and public and employer subsidies for health care have risen, these insurance subsidies have grown to represent a larger percentage of Americans' personal incomes (Burtless and Svaton 2010).

In Table 4, we show the implications of including the fungible value of health insurance subsidies in the incomes of CPS respondents. As in our earlier calculations, we first ranked aged families according to their family-size-adjusted incomes using the new and more comprehensive income measure, and we then divided the people who were members of aged families into five equal groups according to their families' rank in the size-adjusted income distribution. For each family we calculated the percentage of total family income consisting of annuitized income flows (in this case, implicit Medicare and Medicaid insurance subsidies plus Social Security, pensions, and annuities). We then calculated the mean percentage of annuitized income across families within a quintile. The top panel of the table shows the results of these calculations for the nine years we analyze. To make a comparison with our previous results earlier, the bottom panel shows the difference between the results in the top panel of the table and those in the top panel of Table 3. The differences reveal as expected that the inclusion of health benefits in the income definition boosts the percentage of retirement income that is annuitized. The proportional increase is largest for families in the middle and fourth income quintiles, though even in the highest quintile there is a sizeable increase in the estimated percentage of income that is annuitized. In contrast, in the bottom two income quintiles there is little change in the percentage of old-age income that is annuitized. The main reason is that the Census Bureau's estimate of the fungible value of public health insurance places a zero or very low value on such insurance for families with cash incomes that are small relative to the cost of a basic budget for

food and shelter. Note that the estimates imply that health insurance "annuities" have added somewhat more to the annuitized share of income in recent years compared with the early 1980s.

Home ownership. Older Americans typically own the homes they live in. According to the 2010 SCF, 83 percent of household heads 62 and older owned the dwellings they lived in, compared to 76 percent for household heads between 52 and 61, and 56 percent for those with a household head below age 52. These ownership rates are considerably higher than those seen among younger householders (U.S. Census Bureau 2014). Older home owners also have far less debt on their homes than younger ones. In 2010, 55 percent of the homeowner families with a head over age 62 did not have a mortgage balance on their home; and while the percentage has been falling over time (from 80 percent in 1983), it is substantially higher than the 27 percent reported for households with a head aged 52 to 61. In assessing the income security of older Americans compared with younger ones, it is thus important to account for the impact of home ownership.

Home owners receive a flow of housing services as a result of home ownership that is not counted in the Census Bureau's money income statistics. In our view, this flow of services offers owners something more akin to a guaranteed income flow than to a variable flow of uncertain income. Ideally, we should measure the income flow by treating the home owner as a small business that receives a gross flow of income (linked to the monthly rent the business could obtain if the dwelling were leased) and that incurs operating expenses (tied to maintenance expenses, depreciation, property taxes, and borrowing costs if there is a mortgage on the home). Neither the CPS nor the SCF obtains enough information about home owners' potential rent or expenses to estimate their net flow of housing services. The SCF, however, provides us with information about the value of occupants' homes and their remaining mortgage balance on the home. With this information we can obtain an alternative estimate of the flow of housing services. In particular, we can calculate the net asset value of the dwelling (its gross value less the remaining mortgage balance) and then multiply the net home equity by an appropriate interest rate. This is the procedure used by the Census Bureau when it imputes returns on net home equity to construct a comprehensive income measure. However, the CPS contains information on neither home values nor remaining mortgage balances, so these values must be imputed based on evidence from a different survey. The SCF, on the other hand, contains

enough information to calculate the net return on home equity with tolerable accuracy. We use Moody's Corporate Bond Rate on securities rated AAA as the appropriate interest rate for calculation of returns on net home equity.

We show the implications of including returns on net home equity as a form of secure (or annuity-like) income in Table 5. The additional income to homeowners adds to both total income and "secure income" by an identical amount. The top panel of Table 5 shows the average share of secure income in total old-age income for each income quintile and for the entire sample of aged families. The bottom panel shows the difference between the results in the top panel of the table and those in the bottom panel of Table 3, which displays the same ratios for the SCF sample using the standard definition of money income.

The differences shown in the bottom panel suggest the proportional increase in secure income is largest for aged families at the top of the income distribution. These families are more likely to own costly homes. The increases in our estimates of secure income appear highly variable across years, which may seem ironical for an income flow we classify as "secure." The variability is due to our formula for calculating returns on net home equity. Both the price of American homes and the AAA bond rate have varied over time, almost certainly more than the flow of housing services from a fully-paid-for, owner-occupied home. As interest rates decline, our measure of returns on net home equity will fall, usually much faster than the rents on leased houses and apartments. Furthermore, the United States saw a boom followed by a bust in home values between 1994 and 2009. In many areas of the country home prices rose and then fell much faster than market rents on the same kinds of dwellings. From the perspective of a home owner who saw his dwelling first double in value and then fall in price by half, the rise and decline in home prices may have been associated with absolutely no change in the value of housing services enjoyed by the owner-occupant.

Despite the shortcomings of our measure of the flow of benefits from home ownership, the numbers displayed in the bottom panel of Table 5 imply that aged families in the bottom 80 percent of the income distribution receive income flows derived mainly from quite secure income sources — Social Security, pensions, annuities, and flows of services from a real asset that they own, their own homes. Moreover, the share of income derived from secure income sources has increased over time. In three of the five quintiles — all but the second and middle quintiles—the increases were sizeable.

The retired versus working aged. The results discussed so far average the experiences of all aged families, whether or not the head of family or the spouse of the head is still at work. Some aged families contain an active worker who is not yet fully retired. In some cases, these workers bring home modest earnings. After working a long career in a full-time and possibly demanding job, the breadwinner may take a part-time, less arduous, and less well paid job as a segue into full retirement. The increase in old-age employment seen in the United States since the early 1990s has not been mainly in part-time or undemanding jobs, however. Evidence on weekly hours, labor income, and workers' job tenure suggests that much of the increase has been due to delays in retirement from full-time, career jobs (Burtless 2013). And the increase in labor income is most notable among those at the top of the distribution, the most educated, and those who report that they enjoy working.

To determine how much the trend toward later retirement has affected our estimates, we divided aged families between those with and without a full-time working head. We classified all families in which a head was 75 or older as "retired." (Employment rates past age 75 are extremely low.) The remaining aged families were classified as "working" if the family head or the spouse of the head worked more than half the year in a full-time position. Families were classified as "retired" if neither the head nor the spouse worked at least 27 weeks a year in a full-time job. In 1982, about 18 percent of the people in aged families were members of "working" families under our definition. This percentage fell to 16 percent between 1989 and 2001 and then increased to 22 percent by 2009. The change in the proportion of people in working and retired families was partly the result of demographic change. The percentage of all aged Americans between 62 and 65 rose sharply starting in 2006 as the oldest members of the Baby Boom generation attained age 62. The proportion of older Americans in working families also increased because of rising full-time employment rates among people between 62 and 74, a trend that began more than a decade before 2006.

In Table 6, we show results of our calculations when the sample of people in aged families is restricted to members of "retired" families. The estimates use the Census Bureau's definition of money income and are based on responses to the March CPS interviews. In the top panel we show trends in the share of money income received as Social Security, pensions, and annuities for these families. As with the calculations in Tables 3 through 5, the results are broken down for families by their position in the income distribution. Even though the sample

differs from the one used to estimate the percentages in the top panel of Table 3, we do not change the quintile classification of the "retired" families who are retained for the analysis in Table 6. The top panel of Table 6 shows trends in the percentage of total income that is derived from Social Security, pensions, and annuities in the retired families, and the lower panel shows the difference between these percentages and the comparable ones for the full sample of retired plus working aged families. The results suggest that among retired families the percent of income received from more secure or annuity-like income sources generally increased over the analysis period, especially among retired families in the top two quintiles. For the average retired family in the top quintile, the percentage of income consisting of annuity-like income flows increased from 40 percent to 52 percent between 1982 and 2009. The increase was almost as great among retired families in the fourth quintile.

The lower panel of Table 6 shows, not surprisingly, that when working aged families are excluded from the sample, the estimated percentage of income derived from secure, annuity-like income sources increases, although by a small proportional amount for the families in the bottom two fifths of the old-age income distribution. The latter result is also unsurprising, since less than 5 percent of aged families in the bottom two quintiles have a head who works in a full-time job for at least half the year. In contrast, by 2009 slightly more than half the people in aged families in the top one-fifth of the old-age income distribution were members of a family with a full-time working breadwinner. When families with full-time breadwinners are excluded from the calculations, the remaining high-income families are seen to derive a high and rising percentage of their total money incomes from more secure, annuity-like income sources.

Even though our tabulations suggest that the mean share of income that consists of annuity-like income flows has remained high over the past three decades, especially among aged families in the middle and at the bottom of the income distribution and among those without a full-time worker, many observers worry that a minority of aged families face increased insecurity because their workplace savings was accumulated in a DC rather than a DB pension. Figure 4 sheds light on this potential problem. Instead of showing the percent of income that is annuitized for the mean family in the income group, it shows trends in the percent annuitized for the family at the 25^{th} percentile of the distribution of annuitized income shares. In other words, 25 percent of families have an annuity share that is below the estimate shown in the figure and 75 percent have a higher annuity share. The top panel of Figure 4 shows trends among all aged families in

the March CPS files, with results displayed separately for families in each money income quintile. The results show that even at the 25th percentile, the share of income consisting of Social Security, pensions, and annuities increased slightly between 1982 and 2009 in the middle and bottom two income quintiles. In the top two quintiles, the share of income annuitized in the bottom two quintiles has fallen, however.

Much of the decline can be explained by delayed retirement and the rising importance of earned income for families in the top two quintiles. In the bottom panel we exclude the "working" families from the analysis and focus solely on the aged families where neither the head nor the spouse held a full-time job for more than half the indicated calendar year. When the working families are excluded, the share of income annuitized at the 25th percentile of the annuitization distribution increases over time or remains roughly unchanged, even in the top two income quintiles. Thus, Figure 4, like Tables 3 through 6, contains little evidence that suggests the era of declining DB pensions has produced a drop in the portion of retirees' income that is relatively secure throughout their retirement.

Potential impact of greater annuitization

Even though we find little evidence aged families, especially fully retired families, have seen a noticeable drop in secure income flows such as pensions and annuities, it is reasonable to ask how much they could boost their secure incomes through annuitization of their financial wealth. To investigate the issue we used data in the SCF, which provides the most accurate available information on the distribution and components of financial wealth in the United States. Since we are interested in the amount of additional annuitized income the family could obtain if it converted its net financial holdings into a stable annuity stream, the first analytical step is to subtract the family's current capital income flows from its available income. If all of its financial wealth is converted into an annuity, it will no longer receive interest, dividend, or rent payments. The second step is to calculate the total net wealth available for conversion into an annuity. We assume all stocks, bonds, mutual fund holdings, and bank deposits are available for conversion. In addition, we assume the family will convert its non-actively managed businesses and real estate holdings, except its primary residence, into an annuity. From those asset values we must subtract the family's current debt. The only debt a family retains is its

mortgage and other loans on its principal residence and vehicles. We exclude the value of actively-managed businesses from the conversion.[4]

To calculate the annuity flow that would be generated by the sale of these assets, we use a simplified formula to calculate the annual annuity payment. The formula depends on whether the family purchases a single life annuity or a joint annuity. We assume aged families with a single head buy single life annuities while married couples buy joint annuities. After the first spouse dies we assume the surviving spouse receives an annual payment equal to two-thirds of the annual payment when both spouses are alive. The insurer's charge for the annuity then depends on the expected age-specific mortality rates of the annuitant and the spouse of the annuitant, the interest rate assumed by the insurer when it sells the annuity, and any fees charged by the insurer at the time of sale. We assume the insurer charges a fee equal to 15 percent of the purchaser's up-front capital payment. The remaining 85 percent of the capital payment buys a fair annuity. Age specific survivorship rates are derived from mortality tables prepared by the Social Security Actuary between 2002 and 2005. When an insurer sells an annuity we assume it expects to earn a real rate of return equal to the U.S. Treasury 10-year bond rate minus the expected inflation rate reported in the Blue Chip or Livingston inflation surveys. The simplifying assumptions needed to derive our pension cost estimates could undoubtedly be improved with a more elaborate model and better data. In particular, it is doubtful that insurers charge an identical fee — 15 percent of the annuitant's up-front payment —t o customers, regardless of the amount of the annuity purchased. We believe, however, that our simulated annuity payouts provide a reasonable approximation to the income flows wealth owners could expect if they converted their holdings into an annuity.

Table 7 presents the results of our annuity simulation. All of the calculations are based on respondents' reports of wealth and income in the Federal Reserve Board's SCF. The entries in the table show the percentage change in total income that aged families could obtain if they converted their net financial wealth, except their principal residence, into a single life or joint annuity. Results in the top panel reflect the estimated percent change in average money income within each income quintile holding constant each family's original position in the income distribution. Thus, a family with an initial position in the second income quintile retains that

[4] The income of an actively managed business might be reported as self-employment income, or after 2001 it might be recorded as S-corporation capital income.

position after conversion of its wealth into an annuity, even if the additional income would move the family into a higher or lower quintile after the income changes are accounted for. In contrast, results in the lower panel of Table 7 show the impact on the average income within a quintile if families' positions in the income distribution are modified to reflect income changes caused by the annuitization of wealth. The two panels show different results (except in the right-hand column) because the families within each income quintile differ depending on whether their income rank is determined before or after income is annuitized.

In both the top and bottom panels, it is plain that annuitizing wealth boosts money income in all income quintiles. The percentage increase in money income caused by annuitization is typically larger in the higher income quintiles, especially if family income ranks are recalculated after wealth holdings have been converted into annuities. The sizeable income gains at the top of the distribution are due in part to the fact that high income recipients also tend to have large wealth holdings.

In Figure 5, we present estimates from the SCF showing the distribution of annuity income shares over time with and without our hypothetical annuitization of household wealth. The top panel shows trends in the median share and in the 25^{th} and 75^{th} percentile shares of money income that consists of annuity-like income flows. It includes capital income and excludes our measure of the annuitized value of household wealth. For the 75^{th} percentile aged family, almost all money income is derived from a source providing an annuity-like income stream: Social Security, regular pensions, and annuities. The median share of annuitized income has increased about 12 percentage points, rising from 70 percent to 82 percent of money income. The 25^{th} percentile family has also seen an increase in the share of annuity-like income, but in 2009 only about 40 percent of income consisted of Social Security, pensions, and annuities.

The lower panel of Figure 5 shows our estimates of the effect of annuitizing families' net worth (except their net home equity) on the share of income that is annuitized. At the 75^{th} percentile of the distribution of annuity-like income shares there is essentially no impact of annuitizing net worth. All or nearly all income takes the form of an annuity, regardless of whether wealth is annuitized. Obviously, annuitization of a family's wealth will have little or no impact on the components of their income if they do not have much financial wealth. However, based on the SCF income and wealth reports for 2009, the median family would see a 12-percentage-point increase in the share of income derived from annuities. The share of annuitized

income would rise from 82 percent to 94 percent. At the 25th percentile of the annuitization distribution, the increase in annuity share would be even greater — 18 percentage points. When we restrict our analysis to aged families in the bottom two income quintiles, however, the effects of annuitizing families' financial wealth are quite small. Only a very small percentage of these families have any financial wealth to annuitize.[5]

The overall gains in potential income from annuitization are substantial. There are a number of possible explanations for this finding. The most obvious one is that annual payouts from annuitized wealth would provide higher income flows than the actual payouts wealth owners typically receive on their holdings. This explanation is clearly true in some cases.[6] However, many forms of wealth offer higher expected returns than an annuity contract, but they do not generate high annual income flows. Returns are produced in part by appreciation of the asset value rather than by interest, dividend, or rent payments. Since realized and unrealized appreciation of assets is not reported by wealth holders in the SCF or CPS interviews, this income flow is invisible in respondents' reports of their annual capital incomes. Thus, the tabulations displayed in Table 7 almost certainly overstate the income gains that wealth holders could obtain if they converted their financial wealth into an annuity. However, they may accurately indicate how much *reported* income flows would increase.

The results in Table 7 suggest that the percentage increase in income that could be obtained from annuitization has increased over time, especially in the middle of the income distribution. This finding may lend support to the idea that by accumulating savings outside DB pension programs and then failing to buy an annuity, workers are passing up the opportunity to obtain substantially higher and more secure incomes in old age. Nonetheless, there is little evidence in the bottom panel of Table 3 or in the top panel of Table 5 that aged SCF respondents

[5] One reason retired workers in these low-income families have little wealth may be that they were enrolled in a DC plan and used all the funds in their retirement account before or soon after reaching retirement. It is ordinarily harder for workers vested in a DB plan to disburse their pension rights before leaving their pension-covered job. DB plans that offer lump-sum distributions at job exit may of course also permit workers to use up their retirement savings before reaching retirement. Thus, our finding that low-income families cannot derive a noticeable benefit from annuitizing their financial wealth sheds no direct light on the virtues or risks of DC versus DB plans.

[6] Suppose we compare the annual payout rate from an annuity with that of the Treasury security that is held by the insurer selling the annuity. The Treasury security offers a payout rate that is determined by the yield on the bond at the time it was purchased by the insurer. The insurer can offer to make a higher annual payment than the yield on the bond because it is only making benefit payments to the annuitants who have survived to that year. Deceased annuitants do not receive any annuity payments, so their former shares of the interest payments and bond principal can be distributed to remaining survivors.

have experienced any drop in the share of their retirement incomes that is derived from secure, annuity-like income sources.

Explanations and conclusions

For a variety of reasons, private U.S. employers and a few public employers have shifted their workplace retirement programs away from DB pension plans and toward DC plans. Nearly all DB plans permit or even require workers retiring under the plan to obtain annuities that provide regular income as long as the retiree and a survivor spouse remain alive. This retirement income option is far less common in DC plans, and few DC plan participants who take lump-sum distributions from their plans appear to purchase life annuities available in the private market. The ascendancy of DC plans and decline in pension coverage under DB plans should therefore have led to a falloff in the percentage of aged families' incomes that consists of traditional pensions or annuities.

Our analysis of the March CPS and SCF public use files has failed to produce much evidence of any falloff in the annuity-like income share. This is true when our income definition relies on the standard money income concepts, which are used by the Census Bureau to analyze median income trends and the distribution of income. It is also true when we use more comprehensive income definitions that include the insurance value of employer and government health insurance or the flow of householder returns on net homeowner equity. In fact, when we focus not on all aged households but only those which do not have a full-time worker, our results show that the share of older families' income that is derived from annuity-like income sources has increased over time – exactly the opposite of what we would expect in view of the decline in DB pension coverage. Critics of DC plans are correct in arguing that many older families would see an increase in their monthly incomes if they annuitized more of their financial holdings at retirement or shortly thereafter. Given the current distribution of financial wealth among the aged, this would have relatively little effect on the incomes of aged families in the bottom half of the income distribution. Few of them have much wealth.

It is nonetheless something of a puzzle that DB pensions are disappearing from the private sector — which employs more than 5 out 6 Americans — without much detectable effect on the share of old-age income that is derived from a pension or annuity. In the remainder of the paper we will offer some possible explanations of the puzzle.

Impact of declining DB coverage is not yet visible in retirees' incomes. According to this argument, even though DB pension coverage began to shrink in the early 1980s, the trend has not continued long enough to have a material effect on the components of income received by today's aged population. Nearly all workers enrolled in DB plans in the early 1980s who were vested in their plans would still retain pension rights under the plans if they remain alive. Even if their plans became insolvent and were eventually abandoned by the sponsoring employer, the Pension Benefit Guaranty Corporation would have assumed the employer's obligation to make pension payments under the plan.

This line of reasoning can explain why a relatively high percentage of retired workers with DB pension credits could be collecting pensions, but it cannot easily account for the relatively large size of the pensions currently being received. Many employers with DB plans in 1980 shrank in size, entered bankruptcy, or froze their DB plans. Even though their workers would retain their previously acquired pension credits, in many cases they would be prevented from acquiring additional pension credits. This certainly was the outcome if workers were dismissed from their jobs or were enrolled in a frozen DB plan. The statistics on pension coverage displayed in Figure 2 imply that a dismissed worker was far less likely to obtain a new DB-covered job if separation occurred in 1990 or 2000 as opposed to 1980. Thus, even if a large percentage of retired private-sector workers is collecting a pension under a traditional DB plan, it is hard to believe their pension credits would entitle them to such generous pensions as those received by DB-covered workers who retired in the 1980s.

Impact of inflation on DB pensions. The value of a DB pension to a pensioner depends crucially on the rate of price inflation and the pension plan's rule for adjusting benefit payments to reflect inflation. Since 1975, Social Security benefits have been adjusted annually to reflect fully the change in the consumer price level. Many public employee DB plans also have rules which index benefits, at least partially, to price inflation. Inflation adjustments are much less common, though not unknown, in private-sector DB plans. If a retired worker receives an unindexed annuity, the purchasing power of the annuity will depend on the cumulative inflation since the annuity commenced. Since the 1970s, price inflation has fallen considerably in the United States. Annual inflation in the 1970s averaged 7.8 percent; between 2000 and 2010 it averaged just 2.4 percent. Though the difference may seem modest, it has a big impact on the

value of an unindexed pension. A $100-per-month unindexed pension commencing in 1970 was only worth $47 in 1980 (measured in 1970 prices). A $100-per-month unindexed pension commencing in 2000 was worth $79 in 2010 (measured in 2000 prices).

The implications for pension levels in the early 1980s and the late 2000s should be obvious. Retired workers collecting DB pensions in 1982 were typically receiving pensions issued a number of years earlier when the consumer price level was considerably lower than it was in 1982. Even though the pension may have seemed generous at the time it began, by 1982 many other sources of income, including Social Security benefits and current interest payments on savings deposits or money market funds, had increased. By 2009 many of the pensioners who were receiving DB pensions were no longer around. They were replaced by retirees whose DB pensions began in the 1990s and 2000s, when inflation was considerably lower. Even though nominal Social Security benefits increased at the rate of consumer prices, because price inflation was relatively low the value of unindexed DB pensions did not decline as fast relative to Social Security as was the case in the 1970s and early 1980s.

The decline in nominal interest rates. Retirees who have accumulated retirement savings outside of a DB plan or annuity and who want to hold very safe assets may hold their savings in insured savings accounts, money market funds, or short-term U.S. Treasury securities. The yield on these kinds of assets fell dramatically over our analysis period. The average yield on 6-month certificates of deposits was 12.6 percent in 1982, for example. By 2009, the average yield on the same asset was just 0.9 percent. Obviously, retirement savers who held their savings in this kind of safe asset saw a huge decline in their annual capital income. In part, the decline is easily explained. The high nominal interest rates of the early 1980s compensated savers for the loss of real capital associated with high inflation. In the 10 years through 1982, consumer price inflation averaged 8.7 percent. If savers expected that inflation rate to persist, their expected real yield on the 6-month certificate of deposit was just 3.9 percent. Thus, much of the gap between nominal yields in the early 1980s and late 2000s can be explained by declining inflation.

Whatever the explanation for falling nominal yields, they influenced the measured income flows of retirees who invested their savings in very safe assets. Some of the decline in measured capital income flows recorded in Table 2 is undoubtedly traceable to this economic trend. Note that part of the decline in measured capital income flows is illusory. To the extent

that part of the nominal yield compensates savers for their loss of real capital associated with inflation, we may not want to count it in estimating family income.

Income mismeasurement. We have documented in Table 1 and an appendix the relationship between aggregate income reports in the CPS and SCF files and the benchmark totals of the same components of income in the national accounts and IRS tax records. Survey respondents are fallible, and they may have become more or less fallible over time. Our consistent finding that old families have not seen a drop in the share of their income that is annuitized might be the result of respondent reporting errors. Unfortunately, the most serious error may be traceable to the reporting of pensions and retirement account withdrawals. It should be clear to most retirees whether they receive regular benefit checks from a pension fund or annuity plan. In both the March CPS and SCF, respondents are only supposed to report those income items when they report pensions and annuities. However, retirees who receive regular withdrawals from a 401(k), IRA, or DC plan account may not see any difference between those withdrawals and a regular pension payment. The distinction is important to economists and financial planners. By definition, a life annuity lasts as long as the annuitant lives. In contrast, regular withdrawals from a DC-plan investment account could deplete the retiree's savings long before he or she dies.

Even though respondents are not supposed to report lump-sum withdrawals from their DC accounts as regular pensions, our ignorance about the distribution of such withdrawals and the allocation of withdrawals to savings and current consumption represents another kind of measurement problem. Under U.S. law, workers who have DC plan balances when they retire are usually required to start making taxable withdrawals from the plans in the calendar year when they turn 70½. This kind of withdrawal is not reported in either the March CPS or the SCF. Yet the withdrawals certainly help pay for the retirement consumption of retired participants in a DC plan. The fact that these withdrawals are unreported or misreported in the household surveys means that we do not have a clear picture of the role such withdrawals play in financing the retirement consumption of participants.

Appendix:
Survey Measures of Income[7]

The purpose of this appendix is to explain the methods that we used to benchmark the survey estimates of household income to corresponding measures in the national income accounts, and to report our evaluation of their correspondence over the period of 1982-2009.[8] There are several alternative sources of data that could be used as benchmarks of the survey estimates of particular types of income, such as income tax records, Social Security benefit payments, or employment records. We have chosen to rely on the national accounts because they provide consistent measures over time, and the Bureau of Economic Analysis has utilized all of the other available administrative data sources in trying to produce the most complete measures of income from current production.[9] However, it is also important to recognize that the survey definitions of income do not always equate with the concepts used in the national income and product accounts (NIPAs). Our approach is to adjust the data of the national accounts to match the concepts of the March CPS, now often referred to as the Annual Social and Economic Supplement, or ASEC. The CPS income concepts in turn closely correspond to those used in the SCF. The income data are grouped into four categories: (1) earnings, (2) capital income, (3) transfers, and (4) retirement benefits.

Our benchmark estimates of these income items, as well as their major components, based on the NIPAs and IRS tax files are displayed in the top panel of Appendix Table A1. The second panel shows our estimates of the same income components based on interview responses in the March CPS, and the bottom panel shows comparable estimates based on data in the SCF files.

Earnings. The match between the NIPA and the CPS is straightforward, except for the treatment of the self-employment income from incorporated businesses. The CPS obtains two

[7] This appendix updates earlier discussion of the same data issues in Bosworth, Burtless, and Anders (2007).
[8] The dates refer to the years in which the income was earned. Thus, the CPS data for 2009 were drawn from the March 2010 CPS, and the SCF estimates are from the 2010 Survey of Consumer Finances.
[9] We benefited greatly from the material in Roemer (2000) and Ruser and others (2004). Additional details are provided in the appendix to Bosworth, Burtless, and Anders (2007).

measures of earned income – main job and all other work.[10] In addition, the income for the main job can be identified for employees and the self-employed, with self-employed businesses being further divided into incorporated and unincorporated (sole proprietors, partnerships, and professional practice). The earnings of employees in their main job and income from other employers is classified as wage and salary income. In addition, it is important to note the main-job income of the self-employed in incorporated businesses is also included in wage and salary income. Self-employment income is limited to workers who report income from an unincorporated business. In the case of other earnings from self-employment, no distinction is made between incorporated and unincorporated, and it is all allocated to self-employment income.

The measure of wage and salary income in the CPS began to depart from the concept of the national accounts with the growth in popularity of sub-chapter S corporations. The S corporation has the limited liability advantages of general corporations, but the earnings are passed directly through to the owners' individual income tax returns without payment of the corporate income tax. Thus, the net income of such corporations is taxed only once, as income reported on individual income tax returns. The NIPAs include this net income as corporate profit and record the payments to individuals as dividend income. While S-corporation income is not published separately in the national accounts, IRS tax returns suggest that it has grown dramatically–from about $40 billion in 1991 to $430 billion in 2009. A problem arises in comparing CPS income and the NIPAs because the S-corporation income is grouped in the CPS along with the earnings from other incorporated self-employed businesses as part of wage and salary income.

It is not clear, however, how S-corporation income is actually reported by respondents in the CPS. On income tax returns, S-corporation income is reported on schedule E along with income from partnerships and other forms of property income. It is distinct from schedule C, which is generally used for business income and loss. Census interviewers for the CPS are instructed not to ask for data from income tax forms, but if such data are offered by respondents, interviewers are instructed to classify schedule E income as business income rather than wage

[10] The questionnaire does not ever refer to wage and salary income. Instead, respondents are asked about income from jobs, and the classification as wages and salary is inferred from the answer to a question about type of job (employed or self-employed, unincorporated).

and salary income. In sum, it is not obvious how to derive an appropriate benchmark for income that is actually reported as "wage and salary income" in the CPS.

The classification of wage and salary income is straightforward for the SCF since there is a single question asking for this kind of income. Thus, the way wage and salary income is reported in the SCF seems fully consistent with the way it is treated in the NIPAs. The 2004 survey made specific reference to line 7 of IRS form 1040 in providing guidance to respondents about what they were expected to report as wages and salaries. Prior surveys made no specific reference to income tax forms.

Families are also asked about income from a professional practice, business, or farm. In the 2004 survey, an important change was introduced when respondents were specifically directed to their form 1040 tax return -- in particular line 12, which refers to income reported on Schedule C, and line 18, farm income. A later question on net rent, trusts, or royalties directs the respondents to line 17 of the form 1040, which reports the net income recorded on Schedule E. Unfortunately, Schedule E is used to report income from a wide range of sources -- including real estate, royalties, partnerships, S corporations, and trusts. Thus, large amounts of income that would be traditionally viewed as business income (i.e., self-employment income) are included within Schedule E. It is also apparent that the 2004 change in the questionnaire had a large effect on respondents. Business income declined from $647 billion in the 2001 survey to $409 billion in 2004. In contrast, the response to the question on rent, trusts and royalties jumped from $187 to $444 billion.

Differences in the wording of the questions about income by category also create problems for the comparison of the SCF and the CPS. Given concerns about the distinction between incorporated and unincorporated businesses in the CPS, it might seem reasonable to combine business income with wages in an overall earned-income measure. However, the structure of the questions in the SCF – specifically, the reference to Schedule E – creates ambiguity in the distinction between business and capital income, suggesting a grouping of those two components.

Finally, we adjust the NIPA data for difference in the universe of persons covered by the two statistical sources. The CPS and the SCF exclude the income of individuals who live in institutions, on military bases, overseas, or who die before the interview date. We use the

population adjustment developed by Roemer (2000) and apply it as a ratio to the NIPA for years not covered by his study.

Capital income. For purposes of adjusting the NIPA to the concepts of the CPS, we distinguish among interest, dividends, and rental income. However, it is clear that the components should not be evaluated separately. When income passes through a financial intermediary, such as a mutual fund, it can easily be transformed from interest to dividend income.

The most significant issues for aligning capital income in the national accounts and the surveys arise from the role of fiduciary accounts where funds are managed for households by third parties. Payments to these accounts are included as part of personal income in the national accounts, yet individual households often have no specific knowledge of the income earned within the fiduciary accounts. Major examples of fiduciary accounts include pension and life insurance funds. The CPS and SCF focus on cash income received by households, ignoring the buildup of assets within fiduciary accounts. In addition, the national accounts include nonprofits as part of the household sector, and impute to households an income receipt for services furnished without charge by financial institutions. After excluding payments to fiduciary accounts and to nonprofits, only about a fourth of the NIPA measure of interest income and one-third of dividend income is included within the concept employed by the CPS.[11]

Transfers. Most government transfers of the CPS have their equivalents in the national accounts, and the detailed government accounts of the NIPAs makes the translation quite simple. Important exceptions are the exclusion of Medicare, Medicaid, and food stamps from the basic money income measure of the CPS. These payments count as transfer income in the NIPAs, but they are excluded from the CPS concept of money income because they are in-kind payments. On the other hand, the NIPAs have no counterparts to intra-household payments, such as child support, alimony, and inheritances. These items, which are included in the Census Bureau's concept of money income, are therefore excluded from the comparisons. The CPS asks far more

[11] In addition, the comparisons in recent years is greatly limited by the decision to eliminate a prior NIPA table (7-19) that provided information on imputed income After 2003, we rely on IRS data to extrapolate the estimates of capital income.

detailed questions than the SCF about transfers. Since the SCF only asks about three broad categories, it is reasonable to expect a higher level of reported income on the CPS.

Retirement income. The values reported for Social Security (that is, Old-Age, Survivors, and Disability insurance, or OASDI) and railroad retirement reported in the NIPAs should align well with both surveys because the definitions are very similar. The only significant classification issue is to exclude Supplementary Security Insurance (SSI) from the retirement programs and include it as part of transfers. Prior to the 2001 survey, the SCF question on OASDI was ambiguous, and it appears that some respondents included SSI with OASDI.

We encountered more difficult problems in aligning the measures of pension income. Both the CPS and the SCF focus on benefit payments as the relevant income measure, and both define these as "regular payments," as opposed to lump-sum withdrawals. In the NIPAs, pension funds are largely included within the household sector.[12] Thus, employer contributions to pension and life insurance accounts and the capital income of the accounts were part of personal income, whereas payments out of the funds are regarded as an intra-household transaction and excluded. The BEA does publish estimates of pension payments, but they *include* lump-sum distributions that may or may not be rolled over into other retirement accounts.[13] Ideally, the rollovers would be classified as a capital transfer and excluded from the measure of current personal income.

The Statistics of Income (SOI), prepared by the Internal Revenue Service using data reported on income tax returns, is an alternative source for pension data, and it distinguishes between total and taxable receipts, with the difference being attributed to rollovers and nontaxable (Sabelhaus and Weiner, 1999). We opted to use the SOI measure of taxable pension income plus railroad retirement from the NIPA as our benchmark measure.

There is also considerable ambiguity as to what is being recorded in the CPS and the SCF surveys. For the CPS, we relied on Unicon data files. These report pension income as the sum of three components: survivor, disability, and retirement benefits. However, we adjusted those aggregates to move some payments under workers' compensation and black lung payments to transfers. For the SCF, we used the responses to a question about pension and disability

[12] The national accounts were changed in 2013 to separate defined benefit plans into an accrual-based estimate of the income promised to workers and change in the value of the residual asset or liability of the pension administrator
[13] The BEA data also specifically exclude IRAs, Keogh plans (employer) and Simplified Employee Plans (SEPs).

payments, which explicitly excludes IRA and Keogh plans. We make no distinction in our tabulations between retirement and disability.

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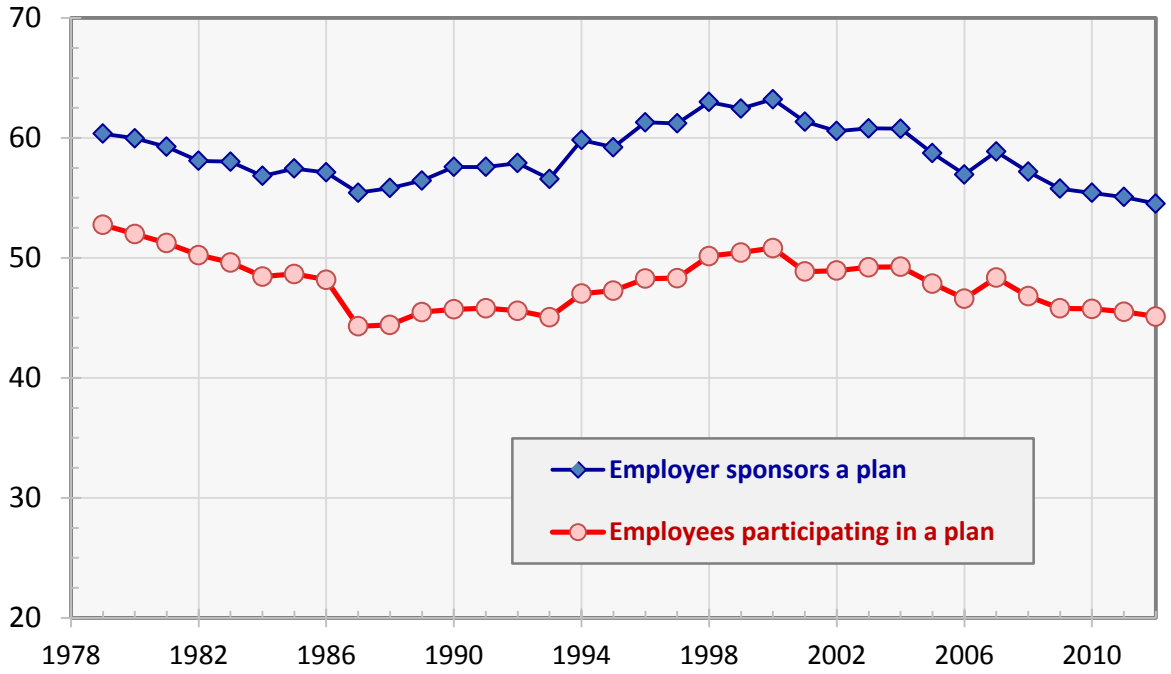
Figure 1. Employer Offer of Workplace Pension and Employee Participation in a Pension Plan, 1979-2012

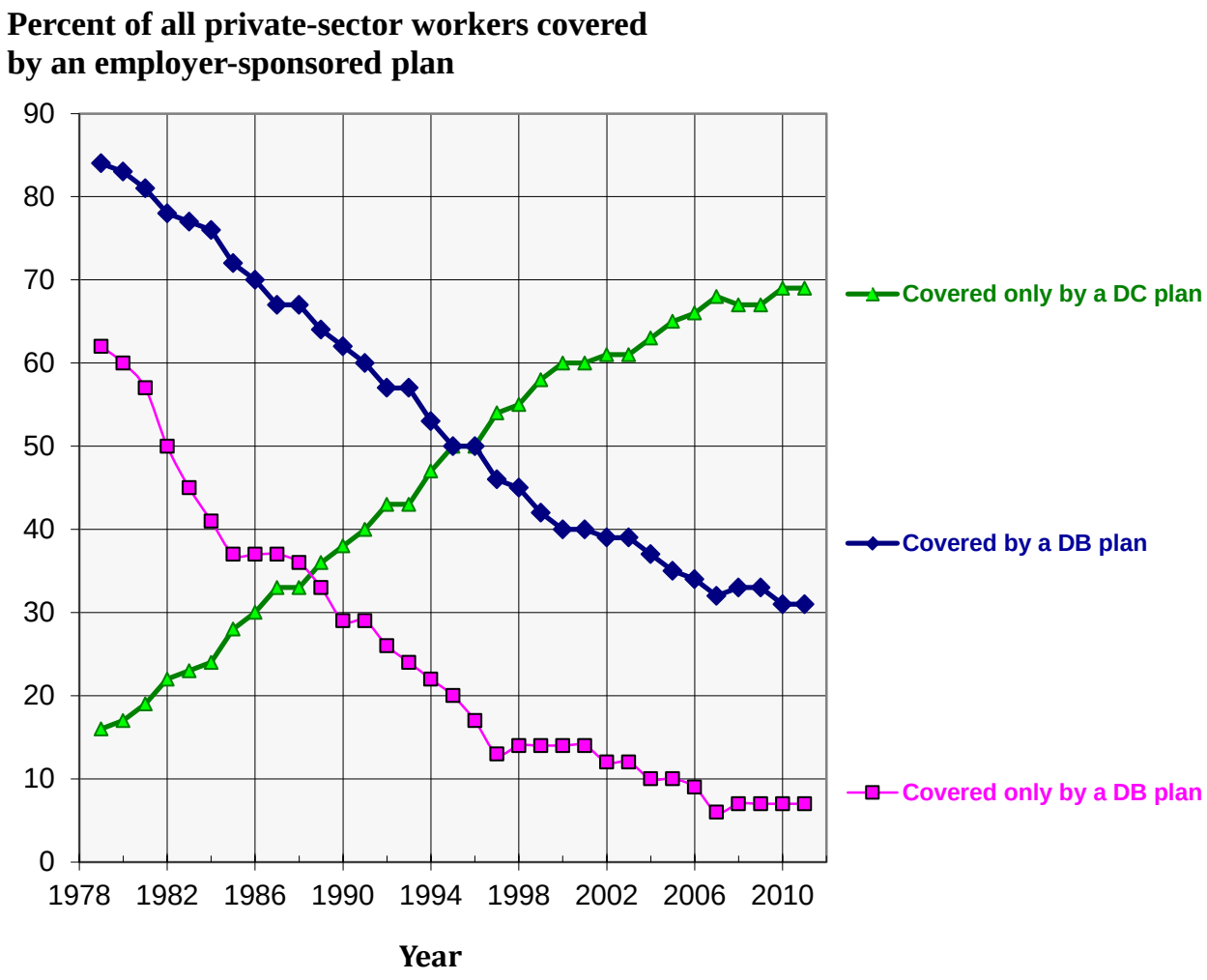
Percent of all 21-64 year-old public and private employees



Note: Employers offering a pension plan do not necessarily offer enrollment in the plan to the employee responding to the survey.

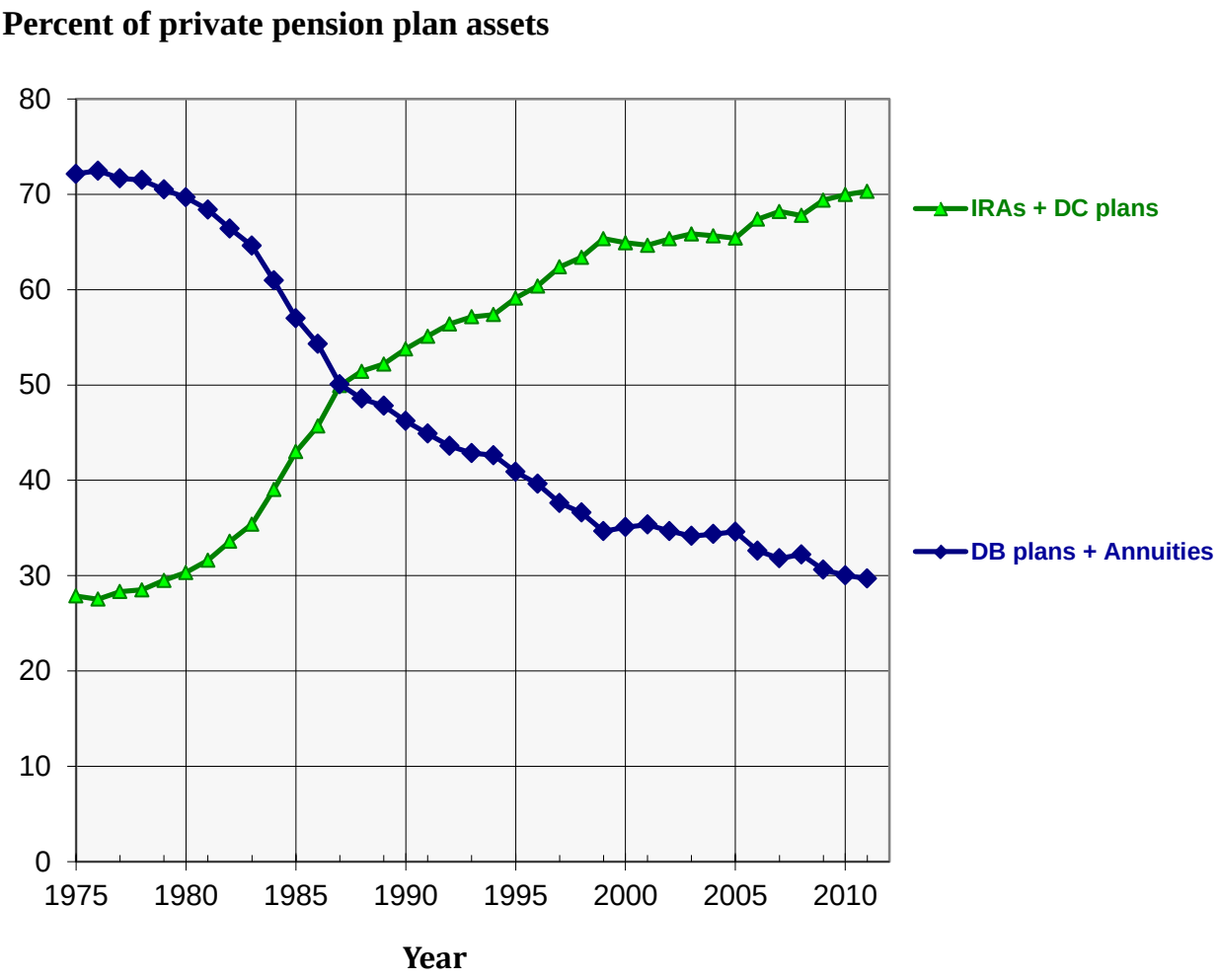
Source: Investment Company Institute tabulations of 1980-2012 Current Population Survey files. www.ici.org/info/per19-08_data.xls <downloaded Sept. 10, 2014>.

Figure 2. Defined Benefit and Defined Contribution Pension Coverage among Private Sector Workers Covered by an Employer-Sponsored Pension Plan, 1979-2011



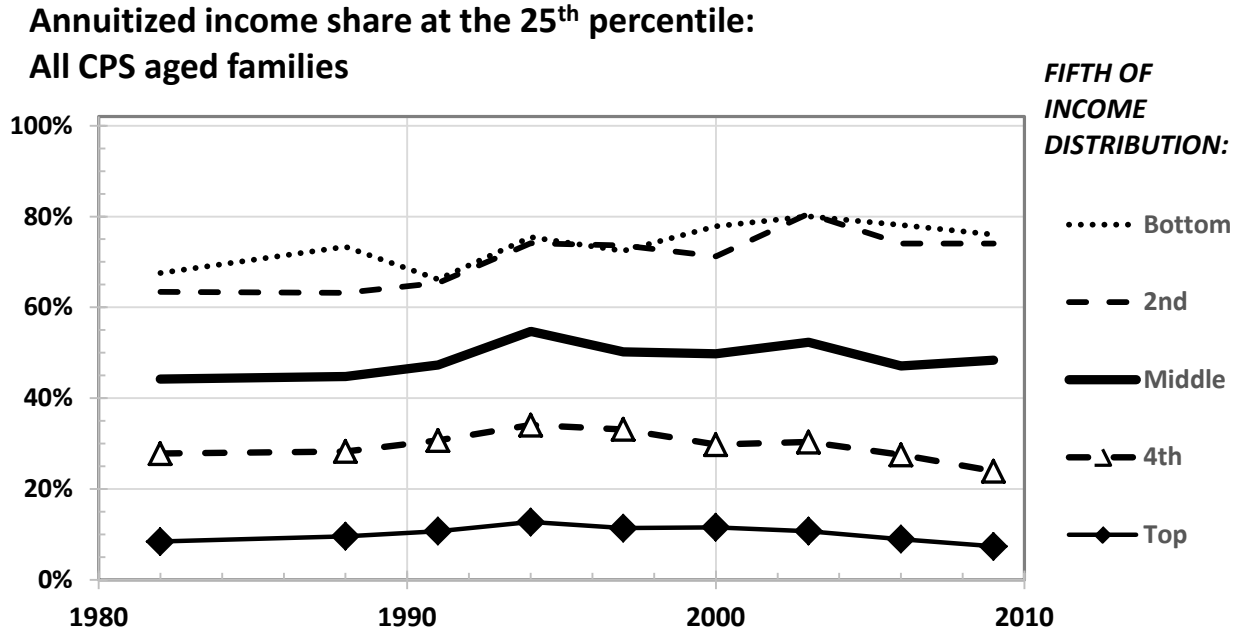
Source: EBRI (2014), http://www.ebri.org/publications/benfaq/index.cfm?fa=retfaqt14fig2 <accessed Sept. 10, 2014>, based on U.S. Department of Labor Form 5500 Summary Reports, Pension Benefit Guaranty Corporation, and Current Population Survey tabulations.

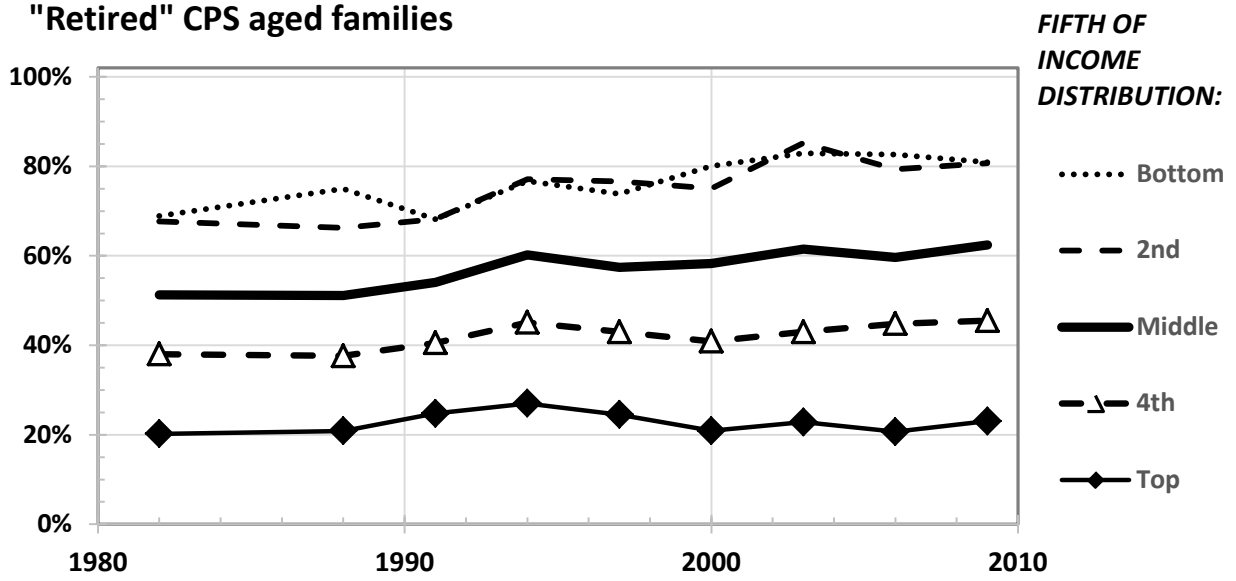
Figure 3. Percent of Private Pension Assets Held in DC and IRA Plans versus DB Plans and Annuities, 1975-2011



Source: Authors' calculations based on Investment Company Institute (2012), "The U.S. Retirement Market, Second Quarter 2012" (September).

Figure 4. Effects of Including and Excluding "Working" Aged Families on Estimated Trend in Annuitized Income Share, 1982-2009

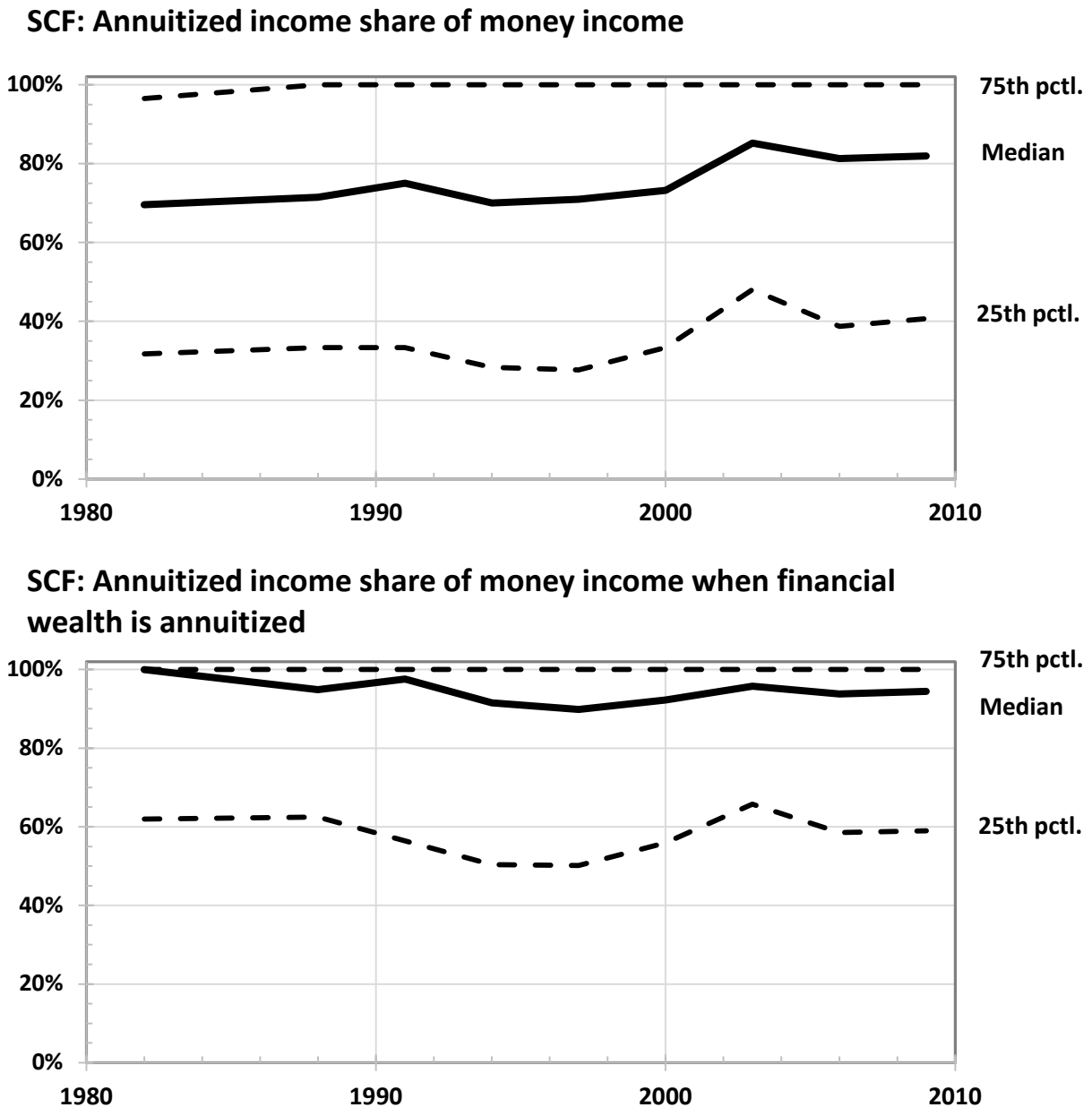




Note: The calculations show the share of total income that is annuitized by the 25th percentile family in the indicated income group of the aged population: 25% of families in the group have an annuity income share that is below the indicated amount, and 75% of families have an annuitized share that is above the indicated amount.

Source: Authors' calculations based tabulations of the March CPS files as explained in text.

Figure 5. Impact of Annuitizing Aged Families' Wealth Holdings on the Share of Money Income that Consists of Annuity-like Income Flows, 1982-2009



Source: Authors' calculations based tabulations of the Federal Reserve Board's SCF files as explained in text.

Table 1. Money Income Reported in Household Surveys as a Percent of NIPA Benchmark, 1982-2009

Percent of NIPA-reported income

Income Category	1982	1988	1991	1994	1997	2000	2003	2006	2009
				Current Population Survey					
Earnings	**92**	**92**	**91**	**91**	**90**	**91**	**89**	**87**	**87**
Wages	95	95	94	97	96	97	96	93	93
Self-employment Income	66	66	65	51	53	53	46	46	44
Capital Income (Interest, Dividends, and Rent)	**43**	**62**	**62**	**73**	**108**	**99**	**78**	**66**	**58**
Transfers	**81**	**79**	**82**	**82**	**82**	**79**	**77**	**71**	**72**
Unemployment and workers compensation	97	56	63	64	59	55	59	52	68
Welfare, TANF, SSI, other	62	93	97	94	94	92	91	80	75
Retirement benefits	**99**	**96**	**93**	**94**	**90**	**88**	**87**	**85**	**84**
OASDI (Social Security)	93	91	88	93	93	95	93	92	92
Pensions and annuities	111	99	95	91	82	77	79	76	73
Total Income	**86**	**90**	**89**	**91**	**92**	**92**	**89**	**85**	**85**
				Survey of Consumer Finances					
Earnings	**97**	**100**	**102**	**98**	**98**	**99**	**95**	**89**	**87**
Wages	89	100	99	99	97	101	101	95	92
Self-employment Income	169	98	132	90	103	92	51	50	51
Capital Income (Interest, Dividends, and Rent)	**67**	**105**	**98**	**125**	**124**	**134**	**189**	**173**	**179**
Transfers	**68**	**52**	**49**	**40**	**29**	**25**	**34**	**39**	**46**
Unemployment and workers compensation	59	41	49	34	31	32	39	40	57
Welfare, TANF, SSI, other	79	59	50	44	29	22	30	39	37
Retirement benefits	**93**	**89**	**80**	**80**	**77**	**79**	**103**	**94**	**93**
OASDI (Social Security)	90	79	69	67	69	85	109	105	103
Pensions and annuities	100	104	95	99	87	72	96	81	81
Total Income	**93**	**101**	**107**	**98**	**97**	**99**	**100**	**96**	**94**

Source: National accounts data are converted to CPS concepts of money income by the authors. The national accounts data are adjusted to exclude imputed income of pension funds and nonprofits serving households. S-Corporation income is included in capital income in the national accounts and in the SCF after 2001; it is largely reported as self-employment income in the CPS.

Table 2. Components of Income Received by Families Headed by Person 62 or Older in CPS and SCF, 1982-2009

Percent of total income received by aged families

Income category	1982	1988	1991	1994	1997	2000	2003	2006	2009
				Current Population Survey					
Earnings	**31.3**	**30.9**	**29.8**	**31.3**	**31.6**	**34.6**	**37.0**	**38.5**	**40.8**
Wages	27.5	27.3	26.5	27.6	27.7	30.2	32.2	33.4	36.7
Self employment income	3.8	3.6	3.3	3.7	4.0	4.3	4.8	5.1	4.1
Capital Income (Interest, Dividends, and Rent)	**21.5**	**20.3**	**19.2**	**14.6**	**17.3**	**15.4**	**11.8**	**13.6**	**9.9**
Transfers	**2.8**	**2.2**	**2.7**	**2.7**	**2.3**	**2.4**	**2.3**	**2.2**	**2.8**
Workers and unemployment comp	1.4	0.2	0.5	0.5	0.4	0.3	0.4	0.3	0.8
Child support, alimony, inheritance	0.5	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2
Welfare, TANF, SSI, other	1.0	1.9	2.1	2.0	1.8	1.9	1.7	1.7	1.8
Retirement benefits	**44.3**	**46.2**	**47.9**	**51.0**	**48.4**	**47.5**	**48.7**	**45.6**	**46.3**
OASDI (Social Security)	32.1	29.7	30.1	33.2	31.4	30.7	31.1	29.0	29.8
Pensions and annuities	12.2	16.6	17.8	17.8	17.0	16.8	17.5	16.6	16.5
Other income	**0.0**	**0.4**	**0.4**	**0.4**	**0.4**	**0.2**	**0.3**	**0.1**	**0.1**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
				Survey of Consumer Finances					
Earnings	**32.2**	**31.9**	**28.1**	**38.6**	**36.0**	**38.0**	**30.2**	**32.4**	**36.4**
Wages	22.6	21.4	20.5	29.6	27.4	28.2	26.3	27.4	32.6
Self employment income	9.6	10.5	7.6	9.0	8.6	9.7	3.9	5.0	3.9
Capital Income (Interest, Dividends, and Rent)	**29.9**	**28.2**	**21.8**	**22.3**	**19.4**	**18.3**	**17.3**	**25.9**	**18.5**
Transfers	**1.4**	**0.8**	**3.3**	**0.6**	**1.1**	**0.7**	**0.5**	**0.5**	**0.9**
Workers and unemployment comp	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.4
Child support, alimony, inheritance	0.4	0.1	2.9	0.1	0.8	0.4	0.1	0.2	0.2
Welfare, TANF, SSI, other	0.9	0.6	0.3	0.4	0.2	0.2	0.3	0.3	0.4
Retirement benefits	**36.3**	**35.7**	**37.7**	**37.2**	**41.6**	**41.4**	**51.7**	**40.6**	**43.4**
OASDI (Social Security)	26.3	19.9	21.3	22.0	23.5	26.3	32.6	26.3	28.2
Pensions and annuities	10.0	15.8	16.5	15.2	18.2	15.1	19.0	14.3	15.3
Other income	**0.2**	**3.4**	**9.2**	**1.3**	**1.9**	**1.6**	**0.3**	**0.6**	**0.8**
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Note: "Families" include single-member households. Families included in the sample must have a head or spouse of head who is 62 or older.

Source: Authors' tabulations of U.S. Census Bureau March CPS files and Federal Reserve Board's SCF files as described in text.

Table 3. Mean Percent of Income Derived from Secure Retirement Income Sources by Position in Old-Age Income Distribution, 1982-2009

Percent

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	Current Population Survey					
1982	79	78	64	49	30	62
1988	83	77	65	50	33	63
1991	77	79	66	54	36	64
1994	86	82	72	58	38	69
1997	81	82	70	57	37	67
2000	83	82	70	56	35	67
2003	82	85	73	57	37	69
2006	81	83	69	54	33	65
2009	79	82	70	55	35	65
Change, 1982 to 2009	*0.5*	*4.4*	*6.1*	*6.0*	*4.7*	*3.6*

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	Survey of Consumer Finances					
1982	81	77	73	48	25	62
1988	93	83	67	55	26	66
1991	90	80	69	55	33	66
1994	89	77	66	55	30	64
1997	88	76	64	56	31	63
2000	92	78	70	53	27	66
2003	91	82	77	60	49	73
2006	87	82	72	58	32	68
2009	85	82	74	62	37	69
Change, 1982 to 2009	*3.5*	*4.6*	*1.4*	*14.0*	*11.5*	*6.8*

Note: The numbers displayed reflect the mean percentage of income derived from Social Security, pension, and annuity income among families in the group.

Source: Authors' tabulations of March CPS and SCF files as explained in text.

Table 4. Mean Percent of Income Derived from Secure Retirement Income Sources When Income Definition Includes Value of Health Insurance, by Position in Old-Age Income Distribution

Percent

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	CPS: Income definition includes value of health insurance protection					
1982	80	80	68	52	33	65
1988	83	80	70	55	36	67
1991	78	81	71	59	39	67
1994	87	84	77	63	42	72
1997	82	84	76	63	41	71
2000	83	83	75	62	39	70
2003	83	86	77	64	40	72
2006	82	83	75	61	38	69
2009	80	83	75	60	38	69
Change, 1982 to 2009	*-0.3*	*3.4*	*7.0*	*7.9*	*5.3*	*3.9*

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	Difference compared with CPS money income calculations					
1982	1	2	4	4	3	3
1988	0	3	5	5	3	3
1991	1	2	5	6	3	3
1994	1	2	5	5	4	3
1997	1	2	6	6	4	4
2000	0	1	5	6	4	3
2003	1	1	4	7	4	3
2006	1	0	6	8	5	4
2009	0	1	5	6	4	3

Source: Authors' tabulations of March CPS files as explained in text.

Table 5. Mean Percent of Income Derived from Secure Retirement Income Sources When Income Definition Includes Return on Net Home Equity, by Position in Old-Age Income Distribution

Percent

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	SCF: Income definition includes homeowner return on net home equity					
1982	82	81	79	62	41	69
1988	90	86	76	63	42	72
1991	87	84	72	66	46	71
1994	101	80	75	63	39	73
1997	91	81	68	64	40	69
2000	92	83	73	63	38	71
2003	92	84	79	68	57	77
2006	89	84	76	66	43	72
2009	88	83	78	69	44	73
Change, 1982 to 2009	*5.8*	*1.5*	*-0.8*	*7.2*	*2.9*	*3.4*

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	Difference compared with SCF money income					
1982	1	4	6	13	16	7
1988	-3	3	9	9	17	6
1991	-3	4	3	11	12	5
1994	12	2	8	8	9	9
1997	3	5	4	8	9	6
2000	-1	5	3	10	11	5
2003	1	2	2	8	8	4
2006	2	1	4	8	11	5
2009	3	1	4	6	7	4

Source: Authors' tabulations of SCF files as explained in text.

Table 6. Mean Percent of Income Derived from Secure Retirement Income Sources When Sample Excludes Families with a Working Head, by Position in Old-Age Income Distribution *

Percent

	Fifths of the income distribution					All
	Bottom	2nd	Middle	4th	Top	families
	CPS sample excludes aged families with a working head **					
1982	80	80	69	58	40	69
1988	82	80	70	57	43	70
1991	79	81	71	61	48	71
1994	87	85	76	66	51	76
1997	81	85	75	65	48	74
2000	83	84	75	64	47	74
2003	84	88	79	67	51	77
2006	83	86	76	66	46	75
2009	81	86	78	69	52	76
Change, 1982 to 2009	*1.6*	*5.6*	*8.8*	*11.5*	*11.6*	*7.1*

	Fifths of the income distribution					All
Year	Bottom	2nd	Middle	4th	Top	families
	Difference compared with sample that includes working heads					
1982	1	3	5	9	11	7
1988	0	2	5	7	10	6
1991	2	2	5	7	12	7
1994	1	3	4	8	13	7
1997	0	2	4	8	12	7
2000	1	2	5	8	11	7
2003	2	3	5	10	14	8
2006	2	3	7	13	14	10
2009	2	4	8	15	17	11

* We define a "working head" to be a head of family or the spouse of a head, under 75 years old, who worked more than half the calendar year in a full-time job.

** The quintile ranks of families are their original ranks, that is, their ranks when the sample included both working and retired heads.

Source: Authors' tabulations of March CPS files as explained in text.

Table 7. Percent Change in Money Income if Financial Wealth is Replaced by Annuity, by Position in Old-Age Income Distribution, 1982-2009

Percent

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	SCF: Income from capital is replaced with hypothetical annuity / Families left with original income rank					
1982	13	12	15	15	35	26
1988	16	19	17	19	21	20
1991	9	17	13	20	30	24
1994	26	19	25	24	35	30
1997	33	34	32	33	39	37
2000	20	28	43	47	52	47
2003	37	27	42	37	48	43
2006	25	40	49	45	28	33
2009	29	32	30	43	34	35
Change, 1982 to 2009	*15.9*	*20.3*	*14.3*	*27.4*	*-0.6*	*8.2*

Year	Fifths of the income distribution					All families
	Bottom	2nd	Middle	4th	Top	
	SCF: Income from capital is replaced with hypothetical annuity / Families assigned a new income rank					
1982	3	9	9	12	38	26
1988	-21	4	10	13	22	20
1991	-8	5	7	14	39	24
1994	-33	8	18	20	44	30
1997	7	19	25	25	45	37
2000	3	14	28	37	63	47
2003	3	15	28	30	54	43
2006	4	19	27	31	37	33
2009	4	12	22	26	40	35
Change, 1982 to 2009	*0.8*	*2.9*	*12.4*	*14.2*	*1.3*	*8.2*

Source: Authors' tabulations of SCF files as explained in text.

Table A1. Comparable Measures of Income: National Accounts, Current Population Survey, and the Survey of Consumer Finances, 1982-2009

National Income and Product Accounts

Adjusted to CPS definitions, Billions of current dollars

	1982	1988	1991	1994	1997	2000	2003	2006	2009
Earnings	**$1,747**	**$2,757**	**$3,166**	**$3,741**	**$4,546**	**$5,675**	**$6,100**	**$7,359**	**$7,446**
Wages	1,574	2,457	2,823	3,293	3,987	4,971	5,296	6,378	6,615
Self Employment Income	173	300	343	448	559	704	804	981	831
Capital Income	**343**	**344**	**377**	**305**	**314**	**367**	**377**	**675**	**601**
Interest income	248	239	249	164	149	197	171	266	217
Dividends	66	73	91	87	103	105	147	330	281
Rents, royalties, and trusts	28	33	37	54	62	65	59	79	102
Transfers	65	84	116	130	126	136	188	187	333
Unemployment and workers comp	35	31	51	51	45	47	82	59	160
Child support, alimony, inheritances, and gifts		-	-	-	-	-	-	-	-
Welfare, TANF, SSI, other	30	52	65	79	81	89	106	128	174
Retirement benefits	209	343	428	502	597	704	809	961	1,147
Social Security, survivor's and disability benefits	145	202	249	294	336	378	437	513	626
Pensions	64	142	179	208	261	326	372	448	520
Other income	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Total Income	**2,364**	**3,529**	**4,088**	**4,678**	**5,583**	**6,883**	**7,474**	**9,182**	**9,526**

Current Population Survey, March Supplement

Billions of current dollars

	1982	1988	1991	1994	1997	2000	2003	2006	2009
Earnings	**$1,615**	**$2,534**	**$2,881**	**$3,413**	**$4,112**	**$5,185**	**$5,440**	**$6,386**	**$6,505**
Wages	1,500	2,336	2,658	3,187	3,816	4,814	5,073	5,937	6,136
Self Employment Income	115	198	223	226	296	370	367	449	369
Capital Income	**146**	**212**	**235**	**222**	**339**	**365**	**295**	**449**	**346**
Interest income	97	143	156	127	190	195	148	251	174
Dividends	49	37	43	54	94	110	89	125	99
Rents, royalties, and trusts	N/A	32	36	41	54	60	59	72	73
Transfers	**76**	**86**	**119**	**136**	**135**	**148**	**189**	**180**	**287**
Unemployment and workers comp	34	18	32	32	27	26	49	31	108
Child support, alimony, inheritances, and gifts	23	20	24	30	32	40	44	46	48
Welfare, TANF, SSI, other	18	49	63	74	77	82	97	103	130
Retirement benefits	**207**	**329**	**397**	**473**	**538**	**617**	**705**	**819**	**960**
Social Security, survivor's and disability benefits	135	183	220	273	312	359	405	470	573
Pensions	71	141	171	190	215	251	293	341	380
Other income	**0**	**5**	**6**	**10**	**11**	**7**	**8**	**7**	**7**
Total Income	**2,044**	**3,166**	**3,639**	**4,255**	**5,135**	**6,320**	**6,637**	**7,840**	**8,105**

Table A1 (continued). Comparable Measures of Income: National Accounts, Current Population Survey, and the Survey of Consumer Finances, 1982-2009

Survey of Consumer Finances

Billions of current dollars

	1982	1988	1991	1994	1997	2000	2003	2006	2009
Earnings	**$1,691**	**$2,758**	**$3,243**	**$3,667**	**$4,444**	**$5,644**	**$5,772**	**$6,562**	**$6,514**
Wages	1,398	2,463	2,792	3,265	3,870	4,997	5,363	6,072	6,093
Self Employment Income	293	296	451	402	574	647	409	490	421
Capital Income	**229**	**362**	**368**	**382**	**388**	**490**	**711**	**1,169**	**1,074**
Interest income	123	175	162	152	139	195	161	197	185
Dividends	48	66	69	100	98	108	107	148	136
Rents, royalties, and trusts	59	120	136	130	151	187	444	824	754
Transfers	**80**	**76**	**123**	**83**	**72**	**71**	**112**	**139**	**229**
Unemployment and workers comp	21	13	25	17	14	15	32	24	91
Child support, alimony, inheritances, and gifts	36	33	66	31	35	36	49	65	74
Welfare, TANF, SSI, other	23	31	32	35	23	19	32	50	64
Retirement benefits	**195**	**307**	**343**	**402**	**458**	**556**	**836**	**901**	**1,069**
Social Security, survivor's and disability benefits	131	159	173	196	232	322	478	538	646
Pensions	64	148	170	206	226	235	358	363	423
Other income	**7**	**59**	**278**	**31**	**33**	**43**	**25**	**45**	**64**
Total Income	**2,201**	**3,562**	**4,354**	**4,565**	**5,395**	**6,805**	**7,458**	**8,816**	**8,950**

Source: Authors' tabulations as explained in text. S-corporation income is combined with wages from the NIPAs for comparisons to the CPS and with self-employment income for comparisons with the SCF.

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