

Qualified Retirement Plans: Analysis of Distribution and Rollover Activity

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Abstract

One potential downside when employees have the freedom to manage their own retirement accumulations is “leakage” prior to the end of their working careers, which is proxied here using age 60. Leakage occurs when employees take withdrawals prior to retirement, when they cash out distributions at job separation, or when they fail to pay back loans taken out against their accounts. Although leakage has the potential to undermine a participant-driven retirement system, trend analysis shows that aggregate pre-retirement leakage is modest and trending down relative to assets, and stable as a share of gross contributions. The probability of receiving a distribution and the fraction of gross distributions cashed out are roughly equal across income groups, but the portion cashed out represents a higher percentage of income for the lower-income groups.

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1. Introduction

One potential downside of a participant-driven employer-sponsored retirement system is the possibility that significant “leakage” takes place before employees reach retirement. Leakage occurs when employees take withdrawals prior to retirement, when they cash out lump-sum distributions at job separation, or when they fail to pay back loans taken out against their accounts. Although it is possible that leakage could be undermining the account-based pension system that now dominates in the private sector, the analysis here based on a combination of tax return, administrative, and survey data suggests those concerns are probably somewhat exaggerated. That is, leakage from retirement accounts seems relatively modest from both aggregate time-series and cross-sectional distributional perspectives.

The possible negative effect of leakage on retirement preparedness is receiving increasing attention, but it is important to remember that policymakers and retirement plan sponsors walk a fine line when it comes to preventing leakage.¹ Participation in a DC pension plan generally is voluntary, and employees choose how much they contribute when they do participate. Studies show that when employees know they can get access to their funds before retirement they are more likely to participate in the first place, and they contribute more when they do participate.² Lawmakers have acknowledged this and made it clear that they understand employees will sometimes desire access to their savings before retirement for legitimate reasons. Thus, although pre-retirement withdrawals are discouraged by a 10 percent penalty on top of the income tax

¹ See, for example, recent studies by the U.S. Government Accountability Office (2009), U.S. Congressional Research Service (2009), Butrica, et al. (2010), and Davis, et al. (2010).

² For example, Munnell, Sundén, and Taylor (2000) use data from the Survey of Consumer Finances to show that participation is higher if participants can get access to their funds before retirement. That study also contains an extensive list of references to other papers that make the same basic point about how access to funds before retirement increases participation and/or contributions conditional on participating. Holden and VanDerhei (2001) analyze recordkeeper data and find that the presence of a loan provision increases 401(k) participants’ contributions. Holden, Brady, and Hadley (2005) contains additional references to loan research literature. It is also worth noting that recent advances in pension plans, such as the more widespread use of auto enrollment, may affect the extent to which loan and withdrawal availability affects participation going forward.

owed, withdrawals from retirement plans and IRAs are not prohibited. Congress has even expanded the reasons for non-penalized withdrawals in recent years to include, for example, first-time home purchase, educational expenses, and certain emergencies, reducing the tax consequences of accessing retirement assets at younger ages.³

Given the trade-off between participation and potential pre-retirement leakage, the public policy question to address is whether the provisions that allow leakage might be undermining the U.S. pension system, both generally and for specific subsets of the population. One approach to answer the question is to analyze aggregate net inflows. In any given year, new contributions are flowing into the system. At the same time, money is leaving the system as benefit payments, loans, or withdrawals. Leakage is the subset of the outflows that occurs prior to retirement. Current contributions to DC pensions by employers and employees are quite high; as a share of employee compensation, total pension contributions in the private sector have been higher in the past few years than they ever have been (Clark and Sabelhaus, 2009). However, the only way to know whether or not a given level of contributions will generate adequate retirement incomes is to take leakage seriously, and to acknowledge that some of the money flowing into retirement accounts will leak out (Poterba, Venti, and Wise, 2007).⁴

³ There are several dimensions to the tax code rules affecting retirement plan leakage, varying across pension types (DB or DC) and IRAs, and the basis for the withdrawal. DB plans do not permit pre-retirement withdrawals, but DC plans are allowed to permit hardship and in-service withdrawals, and of course money can be taken out of an IRA at any time. Withdrawals at job change are allowed under both DB and DC, assuming the plan offers lump-sum distributions. DC plans also have another possible source of leakage, which is failure to repay loans, assuming the plan offered a loan option in the first place. In general, a 10 percent penalty is assessed on the taxable portion of pension and IRA withdrawals for most taxpayers younger than 59½. There is one job change exception: if the taxpayer leaves a DC plan and is 55 or older they can take the money out of that plan without penalty. There are also a handful of exceptions to the 10 percent penalty, including first-time home purchase (IRA), educational expenses (IRA), medical expenses (DC plan or IRA), health insurance expenses (IRA), or other specified emergencies.

⁴ The estimates of retirement plan leakage currently used by Poterba, Venti, and Wise (2007) for their retirement account simulations are taken from a paper by Hurd and Panis (1996) that is similar in spirit to this paper but based on the Health and Retirement Study.

The empirical strategy in most of the previous research on retirement plan leakage involves using household survey data to study the disposition of retirement accounts for separating employees (Chang, 1996; Burman, Coe, and Gale, 1999; Engelhardt, 2002, 2003; Hurd and Panis, 2006; Congressional Research Service, 2009; Copeland, 2009a, 2009b).⁵ This approach has the potential advantage of evaluating retirement dispositions in the context of the overall demographic, labor supply, and financial situation of the household. A number of common themes emerge from the studies based on household surveys, but there are empirical issues that suggest one should exercise caution when drawing inferences about overall leakage or even differences by type of household.

The first general conclusion of the survey-based leakage studies is that the size of the distribution is a key determinant of the ultimate disposition. That is, very small distributions tend to be cashed out, while larger distributions are generally rolled over into another qualified account.⁶ Because of this pattern, it is not surprising to find the conclusion in this literature that “most people cash out, but most dollars are rolled over.” A second finding, highly correlated with the first, is that lower-income participants are more likely to cash out a distribution, which gives rise to concerns about distributional outcomes. Lower-income participants are likely to have contributed less to their plans to begin with, and if they are more likely to cash out when they separate from their employer, leakage is much more of a potential problem.

However, household surveys fail to capture up to 70 percent of retirement account distributions in any given year, so using these estimates to draw inferences about overall leakage

⁵ There is a closely related line of research on IRA drawdown behavior, which could in principle be studied in the general framework of “leakage.” See, for example, Bryant (2008), Holden and Reid (2008), Sabelhaus (2000), Sabelhaus and Schrass (2009).

⁶ Measuring leakage using survey data is problematic for conceptual reasons as well, because some cash-outs go into other types of saving or repayment of loans. If those types of dispositions are counted as saving instead of leakage the estimates of non-leaked distributions roughly doubles (Engelhardt, 2003).

or differences across types of families may be somewhat premature.⁷ Some of the failure to measure distributions occurs because household surveys that ask about retirement plan distributions when the employee separates from a job are missing leakage associated with in-plan hardship withdrawals. Also, the surveys are generally missing withdrawals from IRAs.⁸ It is also very likely that some participants separating from their employers and choosing direct rollovers to IRAs or other qualified accounts are simply failing to report those amounts as a distribution, because the rollover has no tax consequences.⁹

The fundamental shortcomings of household survey data are not a problem when using tax returns or other administrative data to study retirement plan leakage. Flows out of retirement plans and other qualified accounts can be comprehensively tracked using a combination of the primary personal income tax return (Form 1040), the information return for retirement account distributions (Form 1099-R), and the information return for IRAs (Form 5498). Thus, by using tax data one is able to observe all retirement account distributions, not just lump-sum payouts that occur at job change. Even data consistency can be effectively analyzed using the tax data, because, for example, a retirement account distribution generates a Form 1099-R along with (in principle) the appropriate entries on Form 1040.

⁷ Burman, Coe, and Gale (1999) arrive at the 70 percent figure by comparing their survey-based distributions with the tax-based estimates from Sabelhaus and Weiner (1999). Some of the difference is definitional, insofar as the survey is not designed to capture some of the flows tracked in the tax data, but that speaks to the point of why tax data are preferable for studying leakage.

⁸ See Sabelhaus and Schrass (2009).

⁹ Industry data reinforce the idea that employee perceptions or perhaps even awareness are a key to understanding why household surveys fail to properly measure distributions. Retirement account assets are often either left in the employer's plan when the employee separates or directly rolled over to another qualified account without the money ever passing through the employee's hands (Vanguard, 2010).

One downside of using tax data is the relatively limited information about the taxpayers being studied.¹⁰ However, as in previous work using linked information and primary tax returns, there are significant insights to be gained about the extent of both aggregate leakage and the distribution of leakage across some basic demographic characteristics (Sabelhaus and Weiner, 1999). The tax and information returns themselves contain a significant amount of financial information about households, and marital status can be inferred based on filing status. In addition, the data file used here has age for both primary and secondary taxpayers, which makes it possible to evaluate retirement account distributions in a lifecycle context. It is true that the tax data do not permit one to study why a taxpayer behaves a certain way, but simply documenting how they behaved with respect to retirement plan distributions is a crucial first step.

2. Trends in Aggregate Retirement Plan Leakage

Employer-sponsored pension coverage in the private sector has been steadily changing composition from defined benefit (DB) to defined contribution (DC) plans since the passage of ERISA in 1974 (Clark and Sabelhaus, 2009). Assets in DC plans are generally more susceptible to leakage, because employees often have access to their accumulated balances through loans and in-service withdrawals in addition to distributions at job separation.¹¹ Because DC plans have grown in prominence, leakage has potentially become a much larger problem. However, administrative and survey data from a variety of sources for the past two decades show no such upward trend in aggregate leakage, when measured relative to underlying DC balances or gross contributions to DC plans.

¹⁰ Some of that missing information, for example the events associated with the pension withdrawal, are discernible in the panel data. Future research will involve using the panel to identify events like job change, marital dissolution, or changes in income that are likely associated with specific types of withdrawals.

¹¹ In DB plans, pre-retirement access is generally limited to cash-outs of lump-sum distributions at job separation. Loans may be allowed in the DB setting, but Form 5500 data indicate that loan activity in DB plans is rare.

The concept of leakage used in this section is meant to reflect taxable withdrawals prior to retirement, but data limitations make it necessary to use proxies to distinguish leakage from other taxable withdrawals. Those proxies are based on splitting the sample by characteristics such as the age of the taxpayer, the observation of a penalty on the distribution, and failure to repay loans in order to properly characterize the distribution as leakage or not.¹² The primary threshold used for characterizing pre-retirement withdrawals as leakage is age 55, but results are also shown for all taxpayers up to age 60. Although most retirement plan participants continue working and contributing to their employer-sponsored retirement plans after age 55, that cutoff is important because the tax code permits non-penalized withdrawals from employer-sponsored plans after job separation for workers aged 55 or older. Above age 59½ workers can generally make penalty-free withdrawals from IRAs and DC retirement accounts whether they separate from their employer or not.¹³ Again, most participants are still working and contributing at age 60, but the age-based thresholds are a useful way to draw the line as to where a distribution goes from generally being considered leakage to generally being considered retirement income.

In addition to age, the other attributes of IRA and pension withdrawals that can be tracked over time are whether or not a penalty is paid on the withdrawal, and whether or not the distribution reflected a failure to repay a loan (a so-called “deemed” distribution). In general, the penalty amount is 10 percent of the taxable portion of the distribution, so the inferred penalized distribution is set to ten times the reported penalty.¹⁴ The extent of deemed distributions can be measured comprehensively in the cross-sectional tax return data set used in the next section, but

¹² The cross-sectional information from data used in the next section make it possible to characterize distributions from qualified plans regardless of age, insofar as those distributions are directly or indirectly rolled over into other qualified accounts. However, in those data it is not possible to say for sure that a particular distribution is leakage, because (for example) distributions that are not rolled over are not necessarily spent. In any event, the time-series analysis here relies on data from Form 1040 where direct and indirect rollovers are not distinguishable.

¹³ The tax code permits in-service withdrawals, but some plan sponsors do not.

¹⁴ In practice this is a slight underestimate, because 10 percent is technically the largest penalty a taxpayer can face.

in order to construct aggregate trends, the analysis in this section is restricted to private-sector DC plans. The data on deemed distributions from private-sector DC plans is available from the year 2000 and forward from the Department of Labor's Form 5500 data series.¹⁵

In order to benchmark withdrawals over time one needs corresponding data on total DC and IRA assets by age. The denominators against which to benchmark trends in pre-retirement withdrawals are constructed using the triennial Survey of Consumer Finances (SCF) for 1992 through 2007. The SCF is a household survey, and thus balances can be aggregated across several possible dimensions. For most of the leakage measures here that means tracking total retirement account balances by age over time. The total DC and IRA balances in the SCF track published aggregates over time (from the Federal Reserve Board's Flow of Funds accounts and data from the Investment Company Institute) quite well, and thus the account balances by age are also assumed to be representative across age groups.

Several measures of aggregate pre-retirement withdrawals relative to underlying assets suggest that leakage is very modest in all years, and if anything leakage has been trending down over time (Figure 1). The specific measures of leakage shown here are (1) penalized withdrawals relative to total DC and IRA assets for all ages, (2) penalized withdrawals for taxpayers younger than 55 relative to DC and IRA assets for that age group, (3) total taxable withdrawals for taxpayers younger than 55 relative to DC and IRA assets for that age group, and (4) total taxable withdrawals for taxpayers younger than 60 relative to DC and IRA assets for that age group.¹⁶

The various measures provide a fairly wide range for the leakage estimates, but the differences

¹⁵ The *Private Pension Plan Bulletin* is published annually by the U.S. Department of Labor, and is available at <http://www.dol.gov/ebsa/publications/form5500dataresearch.html>.

¹⁶ Throughout, the "age" for a joint tax return is set to the older of the primary and secondary taxpayers.

are intuitive, and all support the assertion that aggregate leakage is modest and declining despite being biased towards overestimating leakage.¹⁷

Penalized withdrawals are the narrowest concept of leakage considered in Figure 1. Overall, penalized withdrawals in 2007 were just over 0.5 percent of account balances, and that ratio has fallen over time. This statistic is arguably biased by the phasing in of the DC- and IRA-based retirement system over the past few decades, though, because the aging of the system has been associated with the aging of the typical participant in the system. To control for this, the second measure restricts the comparison to penalized withdrawals over account balances for taxpayers younger than age 55. Most of the penalty occurs for taxpayers younger than age 55, but they own less than half of the DC and IRA assets, so the penalized withdrawal to asset measure for this group is double that for the entire population. Still, at 1.2 percent of assets in 2007, penalized withdrawals for the younger than 55 age group are relatively modest.

The other measures shown in Figure 1 are based on total taxable withdrawals, which include penalized withdrawals, but also the non-penalized amounts taken out because of exceptions in the tax code (first-time home buying, hardship, and education) or the initiation of retirement income payouts (for those 55 to 59 years old). Adding non-penalized withdrawals raises the estimated leakage to asset ratio significantly, but again, the overall withdrawal rates are modest at just over 2.0 percent for taxpayers younger than 55, and about 2.5 percent for taxpayers younger than 60. As with the penalized withdrawal percentages, overall taxable withdrawals relative to account balances have been declining over time.

¹⁷ In 1989 the ratio of total IRA and DC plan (or “thrift plans” in SCF terminology) assets in the SCF to Investment Company Institute published totals was 83 percent, and the ratio was 89 percent in 2007. Because the SCF totals are 10 to 15 percent below the published aggregates, the estimates here of leakage relative to assets are biased upwards. The SCF totals are used as the denominator for total penalized withdrawals in addition to the age-specific measures to maintain a consistency across the measures in Figure 1. In addition, the denominator in these calculations is DC plan and IRA assets, and because some of the outflows are from DB plans, the leakage estimates are biased up even more.

The gap between penalized and total withdrawals underscores the fact that the Form 1040 tax data alone are not sufficient to characterize retirement account outflows as leakage—it is an upper bound for several reasons. Taxpayers could be shifting the money into other accounts (including Roth IRAs) or paying down debt, not necessarily spending it. Engelhardt (2002) refers to this distinction as “tax-qualified” versus “wealth-preserving” use of the distribution—he finds that the latter may be twice the former. Also, it is useful to keep in mind that although taking a withdrawal in order to pay for education is a form of leakage, it does not mean that it is an undesirable outcome.

The perspective one gains from considering overall penalized and non-penalized withdrawals for pre-retirees gives a sense that leakage is modest and trending down, and that impression is reinforced by looking at aggregate leakage relative to aggregate contributions (Figure 2). Although there is no single data source that tracks aggregate DC and IRA contributions, it is possible to piece together new contributions from a variety of sources.¹⁸ The numerator used to compare leakage with new contributions is the narrow total penalized withdrawals measure repeated from Figure 1, in order to avoid any contagion from using total taxable withdrawals that may be associated with retirement or portfolio shifts. In that sense, Figure 2 presents a direct answer to the question: for every dollar that goes into the DC and IRA system, how many cents leak out through penalized withdrawals in the same year? The answer for the past twenty years has been a remarkably steady 14 percent or 15 percent of gross inflows leaking out. Although the data series is somewhat limited from a time perspective, the two

¹⁸ The denominator in Figure 2 includes new contributions to DC plans from the Department of Labor’s Form 5500 data series (see footnote 15), unpublished data on contributions to the federal employee Thrift Saving Plan, and tax-deductible IRA contributions from the IRS Statistics of Income. The key missing contribution flows are contributions to state and local government 457 retirement plans and non-profit 403(b) plans.

business cycle troughs (1991 and 2000) are associated with a higher penalized withdrawal to contribution ratios.

The final component of the aggregate trend analysis in this section focuses on one source of possible leakage, loans from retirement plans. It is important to note that loans themselves are not a form of leakage, though they can lead to leakage directly if the participant separates and fails to repay the loan (or lowers subsequent contributions, but that effect cannot be measured directly). In any event, loans relative to private-sector DC plan assets are relatively small and stable over time, and the amount of “deemed” distributions from failure to repay loans is also small and stable (Figure 3).¹⁹ The actual leakage relative to balances is thus the product of two small and stable ratios, which is a tiny and stable fraction of plan assets. In 2007, only 0.02 percent of private-sector DC plan assets leaked out because of a failure to repay loans.

3. The Distribution of Retirement Plan Leakage

Even though aggregate retirement plan leakage seems modest and declining over time, leakage may still be an issue of possible concern from a distributional perspective. That is, in any given year, the leakage that does occur may be concentrated among lower-income workers, which would suggest that financial mistakes could be undermining retirement security for the most vulnerable part of the population. In fact, a careful inspection of the distribution of retirement plan leakage using a combination of tax returns and information returns (Forms 1099-R and 5498) shows that leakage is actually distributed across income groups, and, after controlling for income, even surprisingly balanced across pre-retirement age groups.

¹⁹ The Form 5500 data report negligible amounts of participant loans and deemed distributions of participant loans in private-sector DB plans (see U.S. Department of Labor 2010). Those are not analyzed here.

The analysis of the distribution of leakage presented here is based on a sequential analysis of withdrawal activity, and the specific steps are driven somewhat by data limitations. In a world of perfect data, researchers would have access to panel data that tracks retirement plan coverage along with contributions to and withdrawals from retirement accounts. The perfect data set would also have the key socioeconomic information needed to study how behavior varies across population subgroups. The SOI tax return data used here is cross-sectional, and basic demographics (age and filing status) along with reported income on tax returns are the only controls available.

A key missing piece of the puzzle is micro data on retirement plan contributions. Using information returns along with Form 1040 makes it possible to measure employee contributions to retirement plans, because those contributions show up as deferred compensation on the W-2. However, the W-2 does not track employer contributions, which the aggregate data suggest are significant—about 40 percent of total private-sector DC plan contributions, based on Form 5500 data.²⁰ Thus, it is not possible to directly construct the same sort of “net contributions” estimate across age and income groups using the micro data that was presented above for the aggregate trend analysis.²¹

Instead, the approach to distributional analysis here relies on identifying whether the taxpayer might be exposed to retirement plan leakage by virtue of having retirement coverage or retirement accounts, then calculating the percent of those exposed to leakage who actually experienced gross or taxable distributions, and then calculating the average fraction of the gross distribution that can be considered possible leakage. The key to the distributional insights is that even after controlling for coverage and/or retirement account ownership, the propensity to have a

²⁰ See footnote 15 for a description of the Form 5500 data.

²¹ One possible strategy is to use micro data on employee and employer contributions to retirement plans from the Survey of Consumer Finances. Those data will be an important component of the next steps in this research agenda.

distribution and the fraction of any gross distribution that is taxable are fairly stable across income groups.

The starting point for the distributional analysis is acknowledging that retirement plan coverage varies across tax filers, by age, income, and married versus single filing status (Figures 4a and 4b). The criteria for being exposed to possible leakage is that the tax filing unit (the tax return) have one or more of the following: evidence of employer-sponsored retirement plan coverage on Form W-2, evidence of an IRA with a positive balance on Form 5498, or evidence of an actual distribution from a qualified retirement plan on Form 1099-R. This inclusive approach to identifying taxpayers exposed to retirement plan leakage means, for example, that a particular taxpayer need not have current coverage—they are included even if all they have is a withdrawal from a plan in which they (or a spouse) was previously covered. Indeed, this selection decision has a big impact on the withdrawal-to-income estimates presented later, because many of those who are filing in the current year have only the retirement account distribution, and thus show up in the lower-income groups and are characterized as having leakage that represents 100 percent of their income.

Retirement plan participation rises with both income and age in the younger than 60 population (Figure 4a). Overall, 60 percent of tax returns filed by this group include some indication of coverage, but that ranges from just under 20 percent for the lowest income deciles up to nearly 100 percent for the highest income deciles. The coverage estimates also show a consistent positive age effect, especially for the lower-income groups. These patterns reflect a typical lifecycle story of retirement plan participation, insofar as participation rises with both income and age, with income being the more dominant factor.

Although the pattern of retirement plan participation seems to rise linearly across income deciles when joint and single returns are viewed together, that pattern masks an important subtlety when the two are separated (Figure 4b).²² Joint filers are considered to have coverage if either the primary or secondary filer meets one of the three criteria laid out above. The data show that single filers are always less likely to have retirement plan participation than joint filers—overall the percentages with coverage are 78 percent and 49 percent. The joint returns also exhibit a very different pattern of coverage across income groups, with participation rising much more steeply as income increases from the lowest decile, with well over half of tax filers in the middle income deciles participating in (or having had participated in) some sort of qualified account.

Having narrowed down the tax-filing population to include only those filers who are possibly exposed to leakage, the next step is to determine what percentage of each age, income, and filing status group actually received a qualified distribution during the year (Figures 5a, 5b). Overall, 24 percent of tax filers with evidence of participation received a distribution. The overall patterns of gross distribution events by income has a slight u-shape within any given age group (and for all age groups younger than 60 combined) but the range is within a few percentage points of the overall average for the group. The slightly higher rate of gross distributions for lower-income tax returns may reflect a sampling effect, meaning those tax units would not have filed a return had it not been for the gross distribution.

Although the differences in the incidence of distributions by income group are modest, there is a significant increase in the probability of having a gross distribution (conditional on

²² The income deciles for joint and single returns are determined separately, and as expected, the distribution cutoffs for joint filers are much higher. Thus, tabulating using one set of decile breaks would push a disproportionate share of single filers into the lower income decile groups, and a disproportionate share of the joint filers into the upper-income groups.

participating in a retirement plan) as age increases. Differences in receipt of gross distributions by age and filing status do not add much in the way of insights about the likelihood of distributions, though there is some evidence that the very high rate of gross distributions among the lower-income part of the oldest age group (55 to 59) is driven by single filers.

Not every tax payer receiving a gross distribution has a taxable distribution, because many roll the entire distribution over to another qualified account. Overall, about two-thirds of the taxpayers younger than 60 with gross distributions indicate that at least part of the distribution is taxable (Figures 6a, 6b). The variation in incidence of taxable distributions by income is a muted version of the gross distribution pattern, which is another way of saying that the ratio of taxable to gross distribution incidence does not exhibit a lot of variation by income. The characteristic more strongly correlated with taxable distributions is age. About 75 percent of those with a gross distribution in the 55 to 59 age group are at least partially taxable.

The higher rate of taxable distributions for some taxpayers may reflect a sample selection effect. That is, a lower-income single filer, especially in the 55 to 59 age range, may be filing a tax return only because they have a qualified distribution—otherwise, they would not have been required to file a return. If the tax filer has no other income, and only the taxable portion of the qualified distribution shows up in AGI, then they are characterized as being a lower-income person who is experiencing significant leakage relative to income. This potential problem underscores the need to use the panel dimension of the SOI to better classify the particular tax filer (they might have higher income in other years) and to help understand why the withdrawal is their only source of income (they might have just experienced a divorce).

A better understanding of the role of leakage relative to income involves two more steps. The first question is how much of the gross distribution actually becomes taxable? There are

several possible outcomes when a participant receives a gross distribution (Table 1). Overall, for tax filers younger than 60, taxable distributions are 38.0 percent of gross distributions, and amount to 2.5 percent of Adjusted Gross Income (AGI). The lion's share of the non-taxable amount reflects a direct rollover from one qualified account to another. Some distributions can be characterized as "indirect rollovers" because there is evidence of a gross distribution which the tax filer did not report as taxable, and for which there is an unexplained inflow to an IRA reported on the Form 5498.

The other types of non-taxable rollovers include non-taxable Roth distributions, return of after-tax contributions to qualified plans, Section 1035 exchanges (involving the purchase of annuities and other qualified insurance products), and a residual "other" category where there is no information return-based explanation for why the taxpayer did not report the distribution as taxable. There are many explanations for why that might occur, but it is possible that some of those (inferred) non-taxable distributions reflect inconsistencies between the information returns and Form 1040 due to non-reporting of cash-outs.

The overall ratio of taxable to gross distributions is 38 percent, but the more interesting distributional question is how that propensity to cash out a distribution varies by age, income, and filing status. One of the most striking findings in the data is the nearly flat ratio of taxable to gross distributions across these dimensions (Figures 7a, 7b). If anything, there is a slight inverted u-shape to the cash-out percentages across income groups, with those in the middle of the income distribution exhibiting higher cash-out rates than in either tail. Cash-out rates are noticeably lower for the highest income group and generally lower for joint filers at any given age and income combination, but the bulk of the cash-out ratios across the groups fall into the 30 percent to 50 percent range.

The final step is characterizing taxable distributions relative to AGI across age, income, and filing status groups (Figures 8a, 8b). The effect of selecting on tax filers is evident—the older/lower income groups have high taxable withdrawals to AGI ratios, but that is in part due to the fact that some of the tax filers in the sample are there only because they had taxable distributions. The overall ratio of taxable withdrawals to AGI for the under-60 population is 2.5 percent, but it is much lower (1.0 percent, 1.5 percent, and 1.9 percent) for the younger than 35, 35 to 44, and 45 to 54 groups, respectively. Overall, these distributional estimates of taxable withdrawals relative to income are consistent with the aggregate estimates presented above.²³

4. Conclusions

There are several ways to think about what retirement plan “leakage” means, and how to measure leakage given available data. The estimates here suggest that leakage is very low relative to aggregate retirement account balances: In 1992, at most 3.9 percent of assets were distributed prematurely; in 2007, only at most 2.5 percent were distributed prematurely. System-wide, penalized withdrawals ran at most perhaps 15 percent of new contributions in any given year. In 2007, only 16 percent of tax returns with employer-sponsored retirement plan coverage or IRA ownership had leakage activity, that is, taxable withdrawals prior to age 60.

From a distributional perspective, tax returns show that the presence of employer-sponsored retirement plan coverage or IRA ownership tends to rise with age and income. Tax returns of younger individuals were less likely to have taxable distributions compared with tax returns of older individuals. Incidence of taxable distribution activity varied little by income,

²³ Aggregate penalized withdrawals are about 15 percent of contributions in any given year, and taxable withdrawals are just about double penalized withdrawals. Taxable withdrawals to AGI range from 1.0 to 1.9 percent. Given that overall contributions (from Figure 2) are running about six percent of AGI (from the data underlying Figures 5 through 8) the three to one ratio of contributions to leakage is approximately confirmed.

with the exception of the lowest income deciles, which have higher propensity to have distributions (but there is an endogeneity problem that they filed only because of the distribution).

When attempting to evaluate the extent of leakage, it is important to keep in mind that an individual's willingness to participate in and contribute to retirement accounts in the first place is to some extent dependent on their ability to access those savings prior to retirement in the event of economic need. Auto enrollment and other innovations in pension arrangements may well affect this tradeoff going forward, but the tension between participating today and having an option to cash out early if needed is likely to remain an important feature of the pension landscape. Thus, when judging "leakage," one needs to be cognizant of the fact that there might not have been anything to leak out in the first place if policy were much more restrictive. Or as Shakespeare might have said: 'Tis better to have saved and leaked, than never to have saved at all.

5. References

- Bryant, Victoria L. 2008. "Accumulation and Distribution of Individual Retirement Arrangements, 2004." *Statistics of Income Bulletin* (Spring): 90–101. Washington, DC: Internal Revenue Service, Statistics of Income Division.
- Burman, Leonard E, Norma B. Coe, and William G. Gale. 1999. "Lump Sum Distributions from Pension Plans: Recent Evidence and Issues for Policy and Research," *National Tax Journal*, 52, 553-562.
- Butrica, Barbara A., Sheila R. Zedlewski, and Philip Issa. 2010. "Are Early Withdrawals from Retirement Accounts a Problem?" *Issue Brief* no. 27, Urban Institute Retirement Policy Program. Washington, DC: The Urban Institute (May).
- Chang, Angela E. 1996. "Tax Policy, Lump-Sum Pension Distributions, and Household Saving," *National Tax Journal*, 49, no. 2, 235-252.
- Clark, Robert L., and John Sabelhaus. 2009. "How Will the Stock Market Crash Affect the Choice of Pension Plans?" *National Tax Journal* 62, no. 3 (September): 1–20.
- Congressional Research Service. 2009. "Pension Issues: Lump-Sum Distributions and Retirement Security," *CRS Report for Congress* No. 7-5700. Washington, DC: U.S. Congress (January 9).
- Copeland, Craig. 2009a. "Lump-Sum Distributions at Job Change," *EBRI Notes*. Washington, DC: Employee Benefit Research Institute, 30:1, 2-11 (January)
- Copeland, Craig. 2009b. "More Details on Lump-Sum Distributions of Workers Who Have Left a Job," *EBRI Notes*. Washington, DC: Employee Benefit Research Institute, 30:7, 2-10 (July)
- Davis, Rowland, Nayla Kazzi, and David Madland. 2010. "The Promise and Peril of a Model 401(k) Plan." Center for American Progress, American Worker Project. Washington, DC: Center for American Progress. Available at www.americanprogressaction.org. (April)
- Engelhardt, Gary V. 2003. "Reasons for Job Change and the Disposition of Pre-Retirement Lump-Sum Pension Distributions," *Economics Letters* 81, 333–339.
- Engelhardt, Gary V. 2002. "Pre-Retirement Lump-Sum Pension Distributions and Retirement Income Security: Evidence from the Health and Retirement Study," *National Tax Journal* 55, no. 4, 665-685.
- Holden, Sarah, Peter Brady, and Michael Hadley. 2006. "401(k) Plans: A 25-Year Retrospective." *Investment Company Institute Perspective*, Vol. 12, No. 2 (November).

Holden, Sarah, and Brian Reid. 2008. "The Role of Individual Retirement Accounts in U.S. Retirement Planning." In *Recalibrating Retirement Spending and Saving*, ed. John Ameriks and Olivia S. Mitchell: 81–111. Oxford, UK: Oxford University Press for the Wharton School, University of Pennsylvania, Pension Research Council.

Holden, Sarah, and Jack VanDerhei. 2001. "Contribution Behavior of 401(k) Plan Participants," *Investment Company Institute Perspective*, Vol. 7, No. 4, and *EBRI Issue Brief*, No. 238, Washington, DC: Investment Company Institute and Employee Benefit Research Institute (October).

Hurd, Michael, and Constantijn Panis. 2006. "The Choice to Cash Out Pension Rights at Job Change or Retirement," *Journal of Public Economics*, 90, 2213–2227.

Munnell, Alicia, Annika Sundén, and Catherine Taylor. 2000. "What Determines 401(k) Participation and Contributions?" *Center for Retirement Research at Boston College Working Paper 2000-12* (December).

Poterba, James, Steven F. Venti, David A. Wise. 2007. "Rise of 401(k) Plans, Lifetime Earnings, and Wealth at Retirement." *National Bureau of Economic Research Working Paper No. 13091* (May).

Sabelhaus, John. 2000. "Modeling IRA Accumulation and Withdrawals." *National Tax Journal* 53, no. 4 (December): 865–876.

Sabelhaus, John, and David Weiner, 1999. "Disposition of Lump-Sum Pension Distributions: Evidence from Tax Returns," *National Tax Journal*, 52, no. 3 (September) 593-613.

Sabelhaus, John, and Daniel Schrass. 2009. "The Evolving Role of IRAs in U.S. Retirement Planning," *Investment Company Institute Perspective*, 15, no. 3. Washington, DC: Investment Company Institute (November).

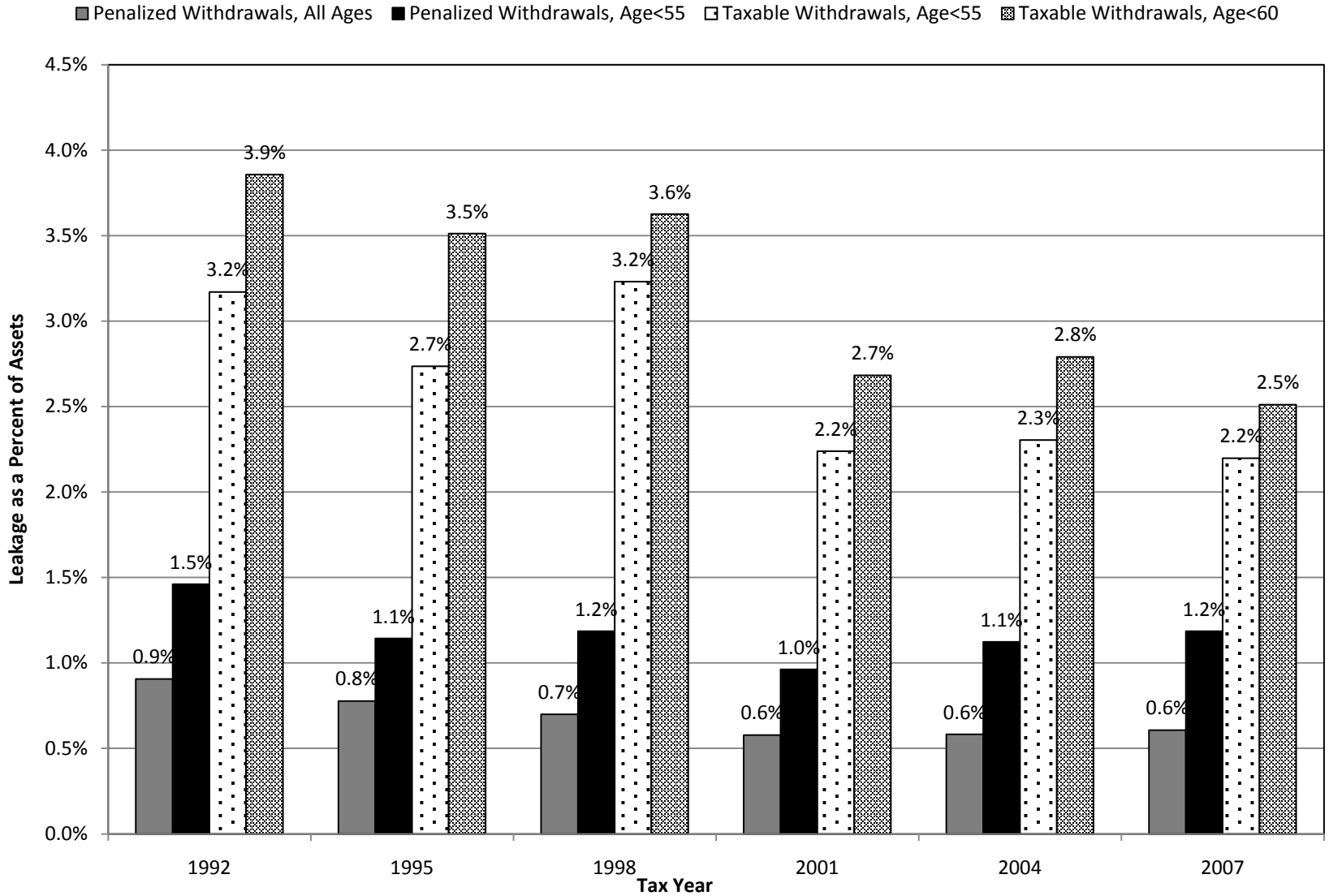
U.S. Congressional Research Service. 2009. *401(k) Plans and Retirement Savings: Issues for Congress*, CRS Report for Congress no. 7-5700. Washington, DC: Congressional Research Service (July).

U.S. Department of Labor, Bureau of Labor Statistics. 2008. "Median years of tenure with current employer for employed wage and salary workers by age and sex, selected years, 2008." Economic News Release (September 26).

U.S. Government Accountability Office. 2009. *401(k) Plans: Policy Changes Could Reduce the Long-term Effects of Leakage on Workers' Retirement Savings*. Washington, D.C. GAO 09-715 (August).

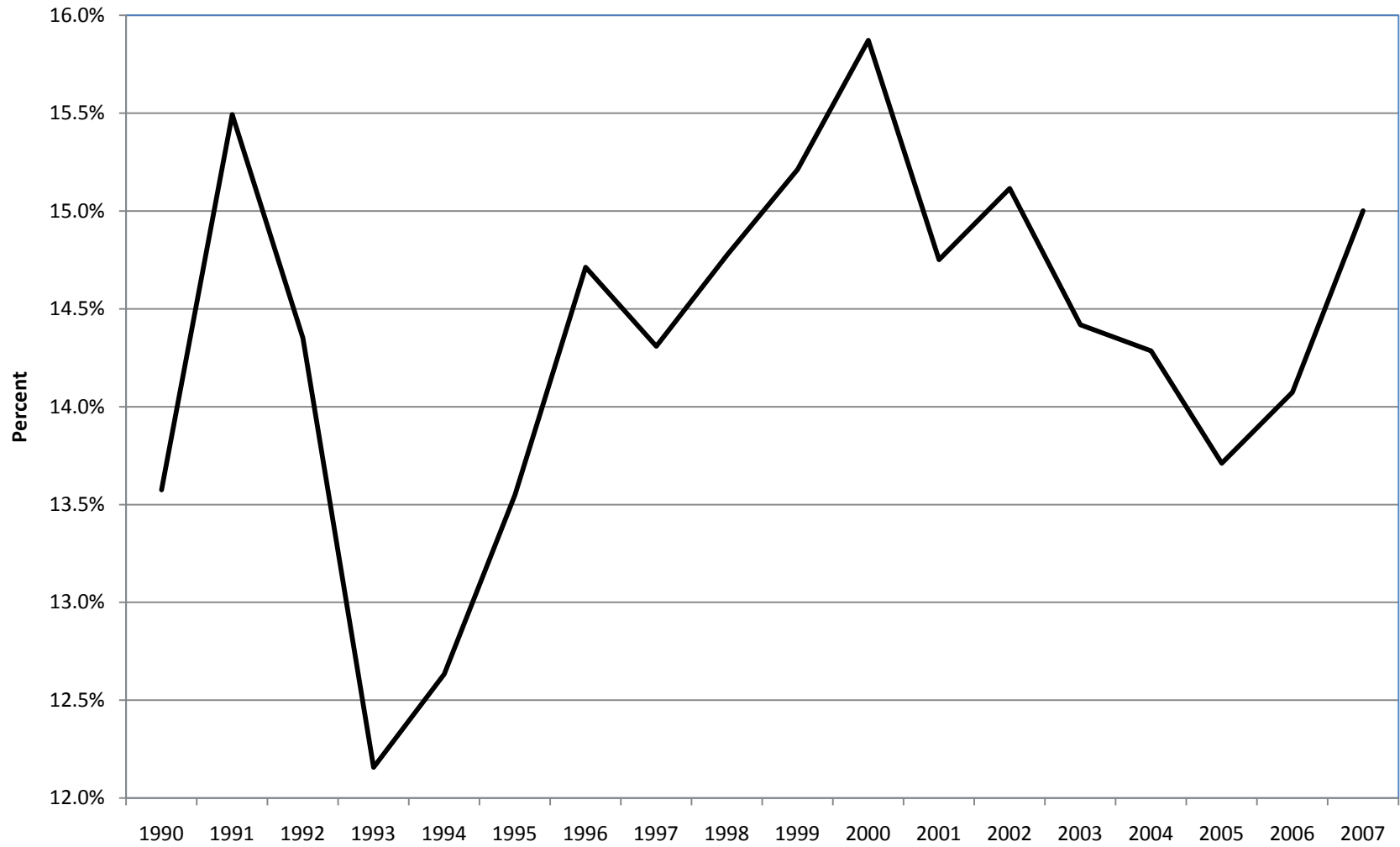
The Vanguard Group. 2010. *How America Saves 2010: A Report on Vanguard 2009 Defined Contribution Plan Data*. Valley Forge, PA: The Vanguard Group, Vanguard Center for Retirement Research.

Figure 1. Measures of Aggregate Leakage Relative to DC Plan and IRA Assets



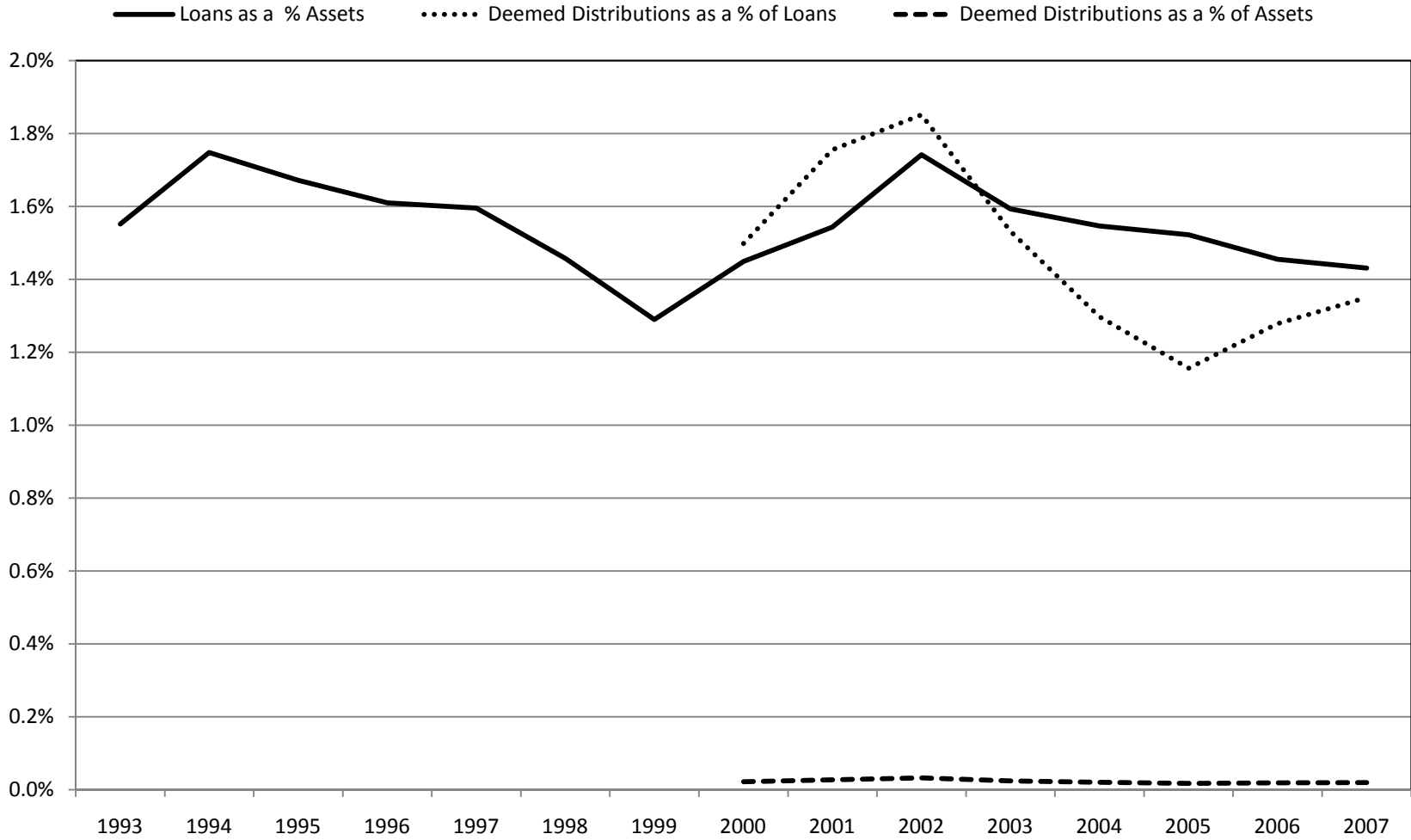
Source: Authors' tabulations of IRS Statistics of Income Tax Returns and Survey of Consumer Finances (SCF) Retirement Accounts

Figure 2. Total Penalized Withdrawals Relative to DC Plan and IRA Contributions



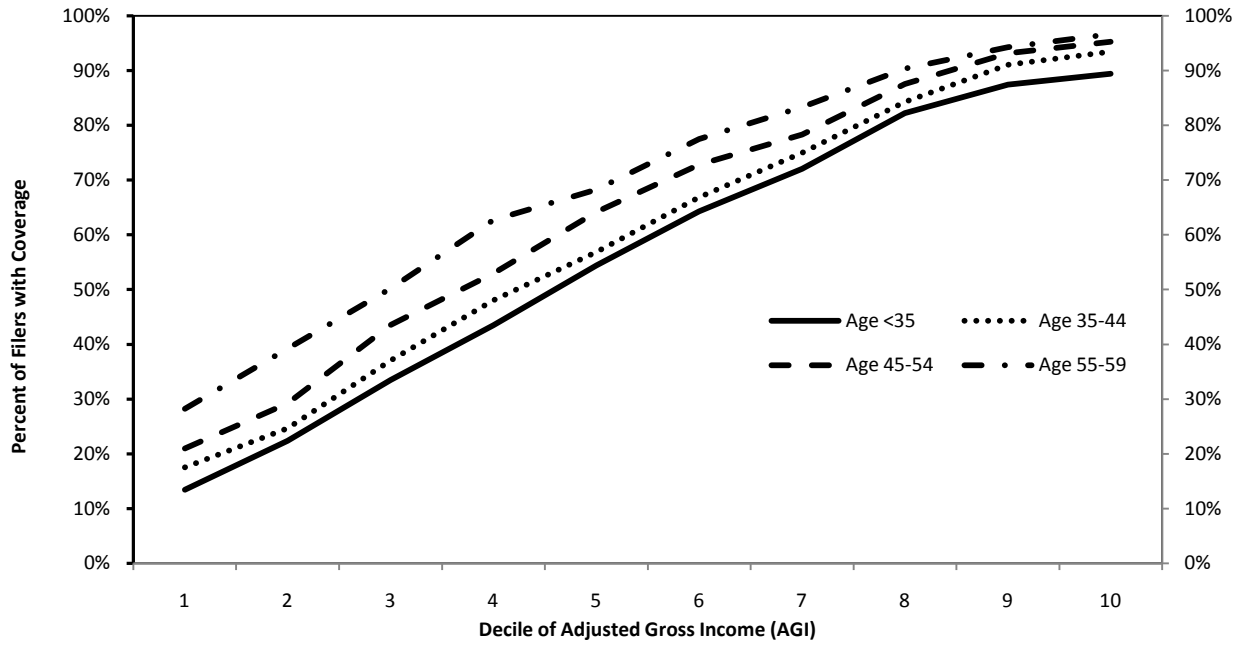
Source: Authors' tabulations of data from IRS Statistics of Income tax returns, U.S. Department of Labor Form 5500, and Federal Employees Retirement System TSP

Figure 3. Private Defined Contribution Plan Loans and Deemed Distributions



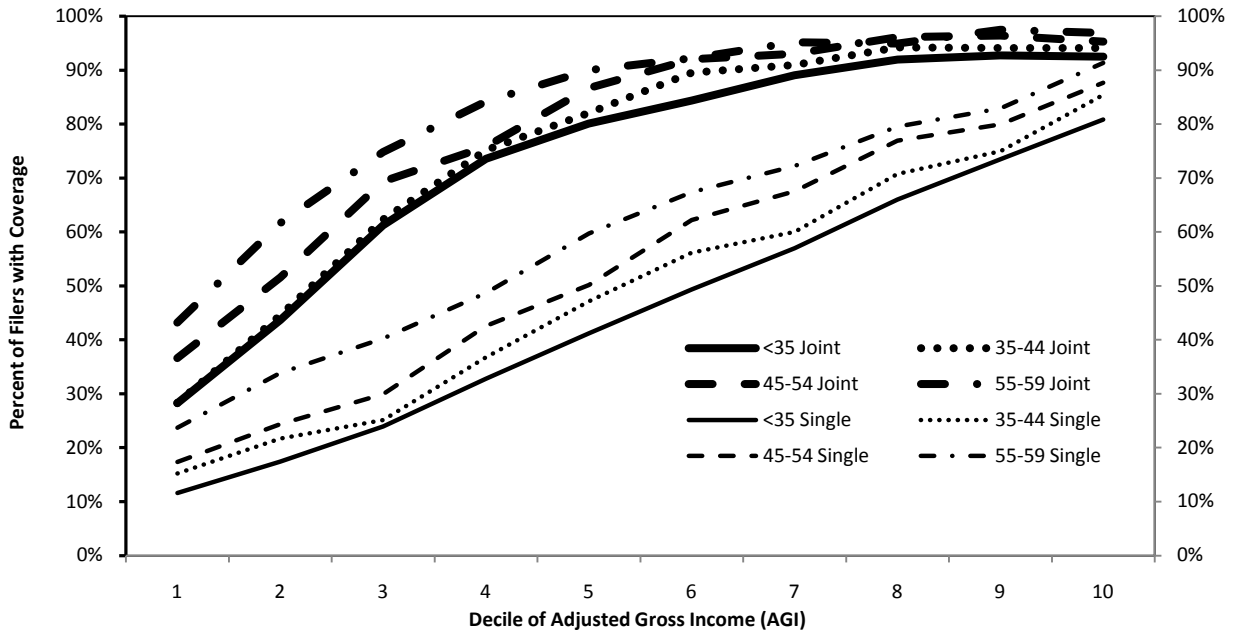
Source: Authors' tabulations of Department of Labor Form 5500 Defined Contribution plan data

Figure 4a. Evidence of Employer-Sponsored Retirement Plan Coverage or IRA Ownership by Age and Adjusted Gross Income (AGI)



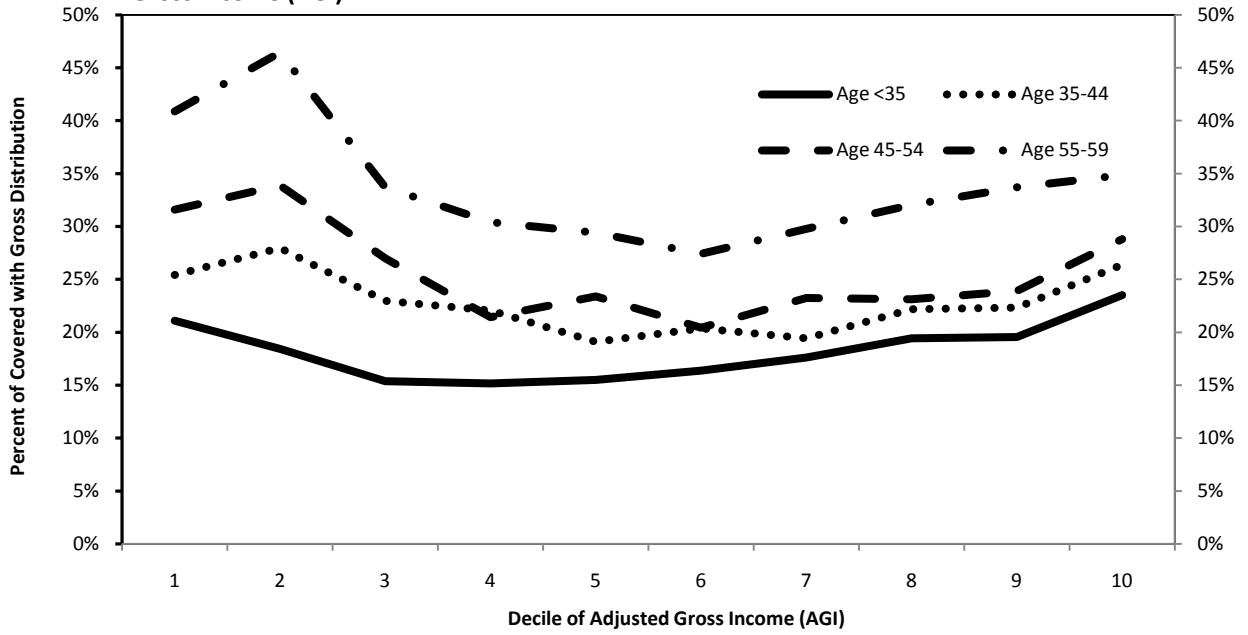
Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099-R File

Figure 4b. Evidence of Employer-Sponsored Retirement Plan Coverage or IRA Ownership by Age, Filing Status, and Adjusted Gross Income (AGI)



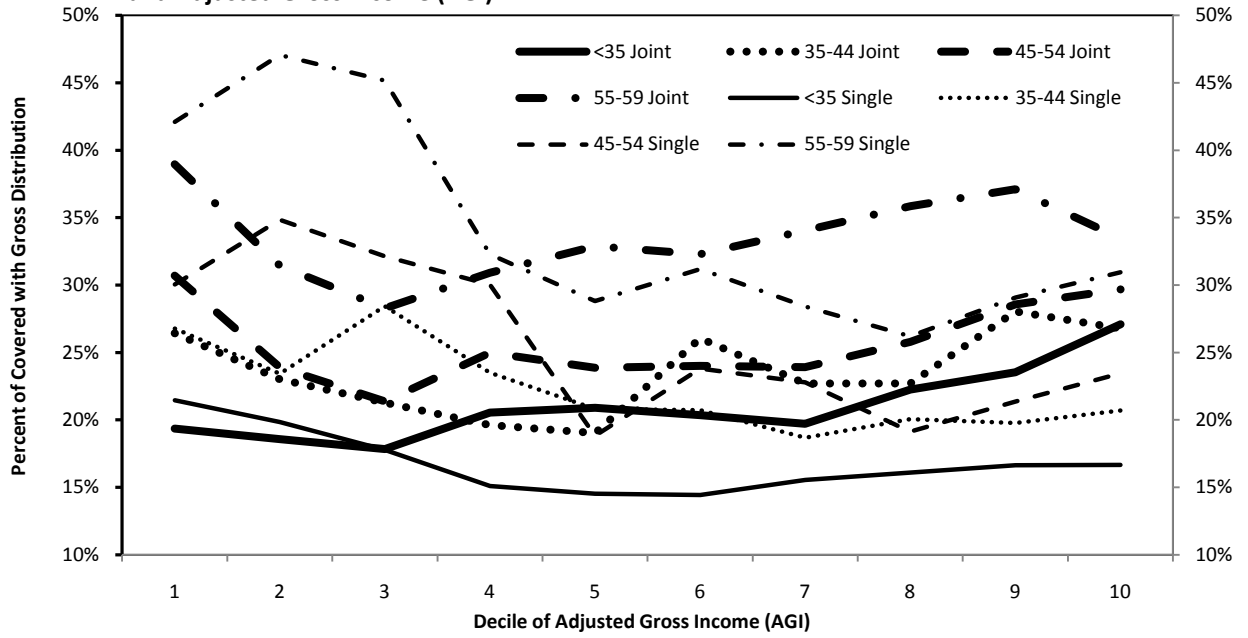
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Figure 5a. Percent of Covered Tax Returns with Gross Distributions by Age and Adjusted Gross Income (AGI)



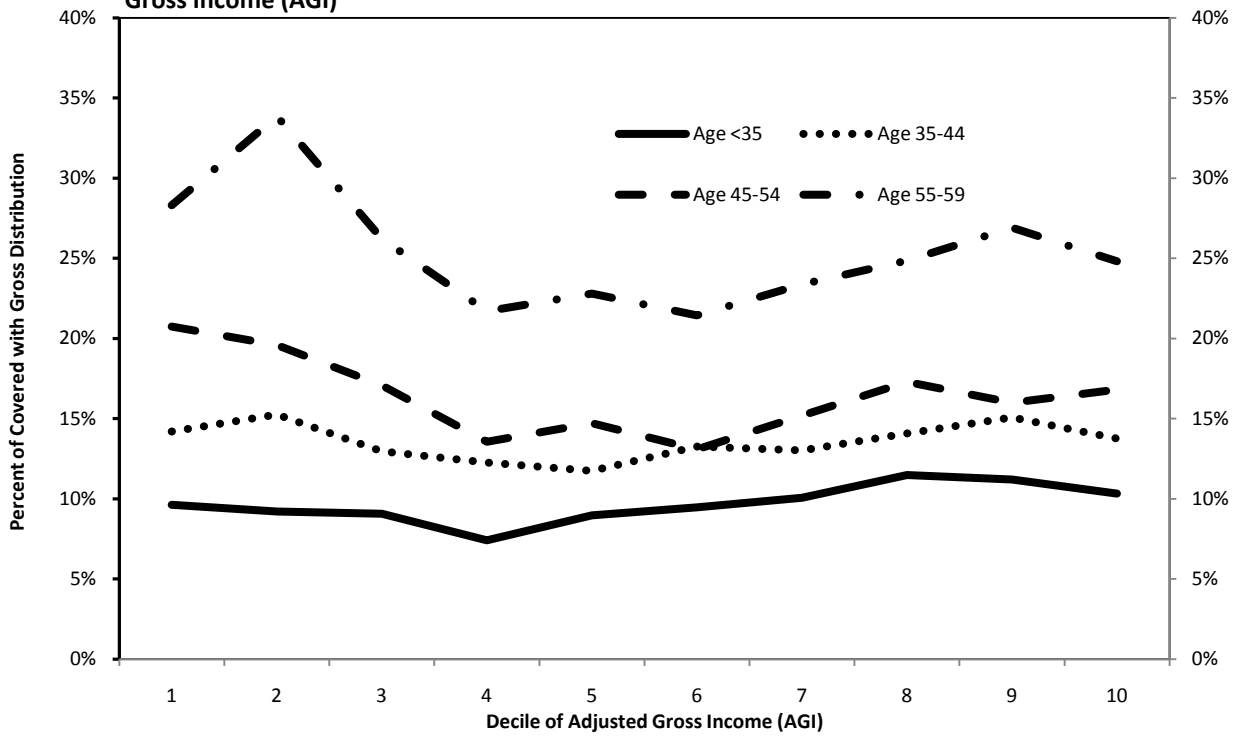
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Figure 5b. Percent of Covered Taxpayers with Gross Distributions by Age, Filing Status, and Adjusted Gross Income (AGI)



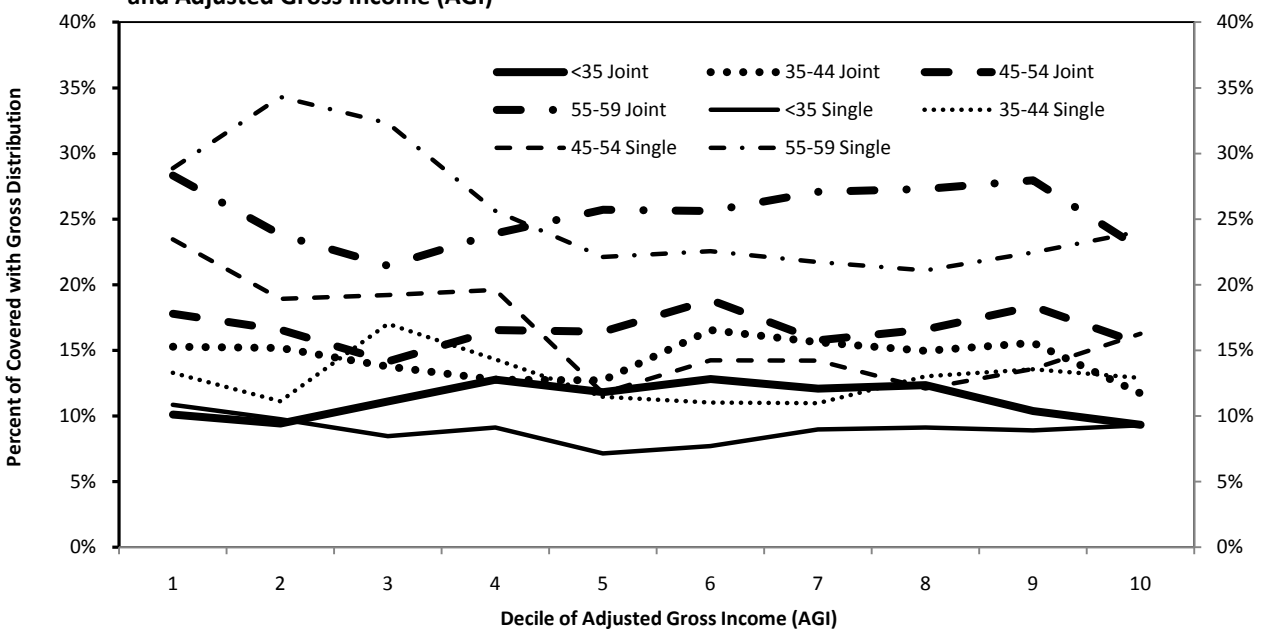
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Figure 6a. Percent of Covered Tax Returns with Taxable Distributions by Age and Adjusted Gross Income (AGI)



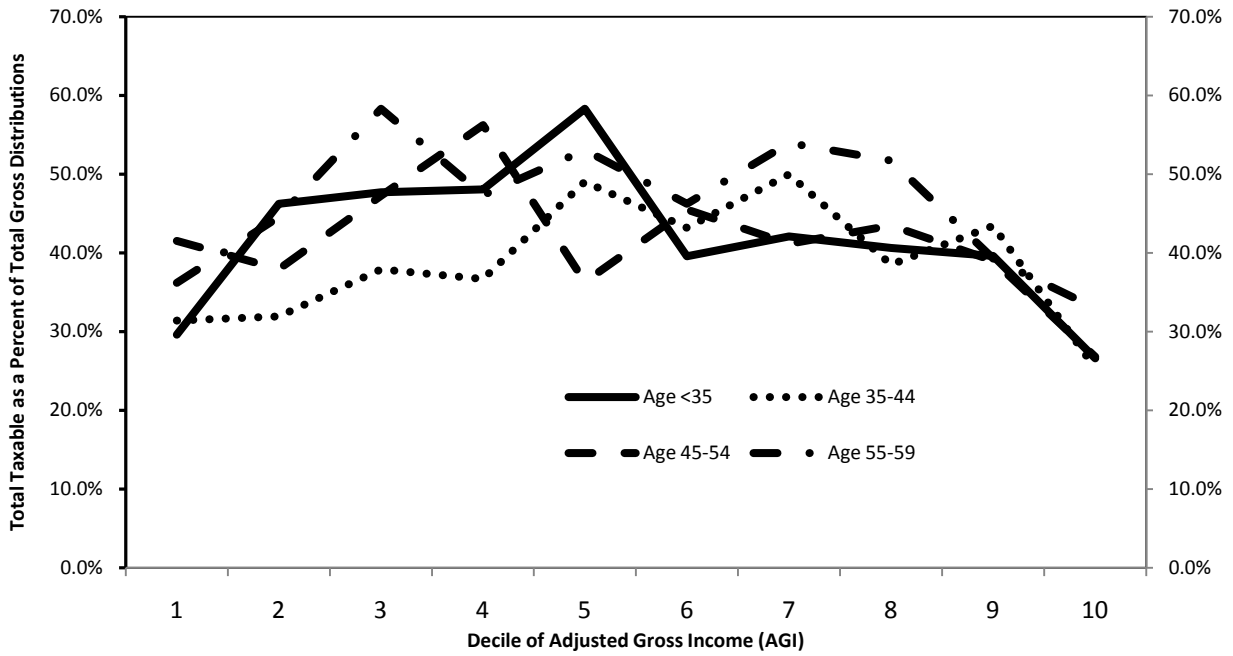
Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099R File

Figure 6b. Percent of Covered Tax Returns with Taxable Distributions by Age, Filing Status, and Adjusted Gross Income (AGI)



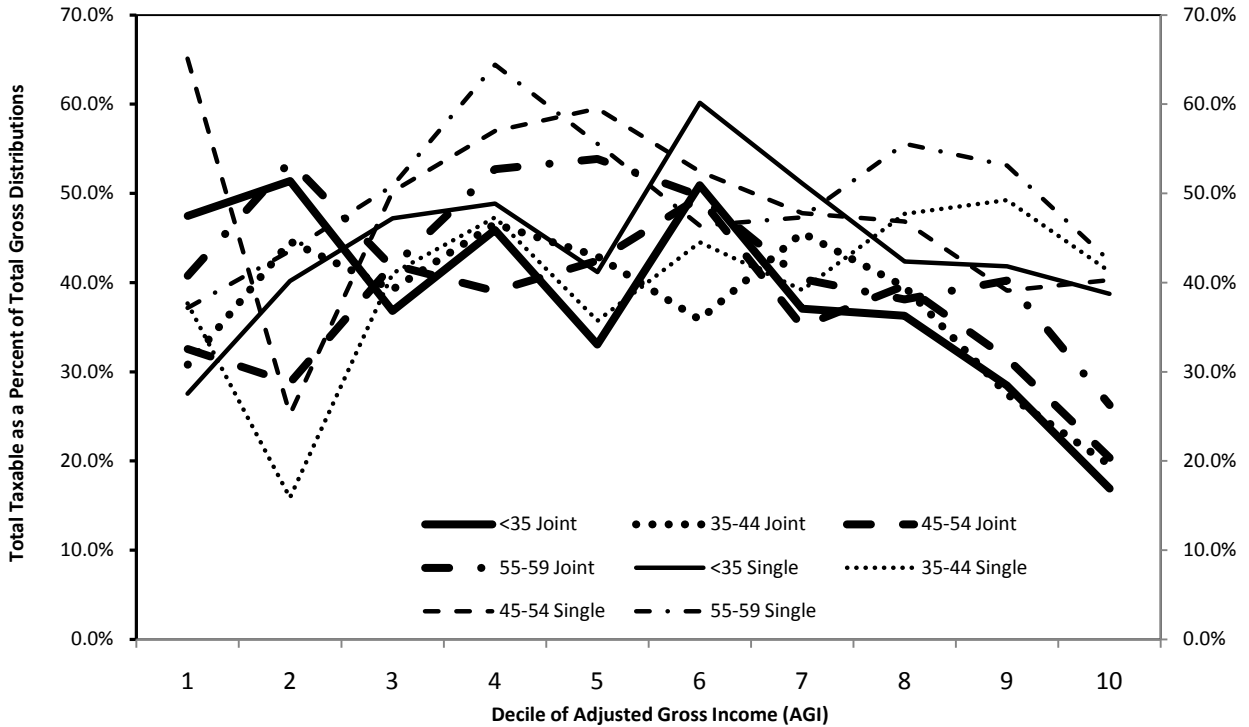
Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099R File

Figure 7a. Ratio of Taxable Distributions to Gross Distributions by Age and Adjusted Gross Income (AGI)



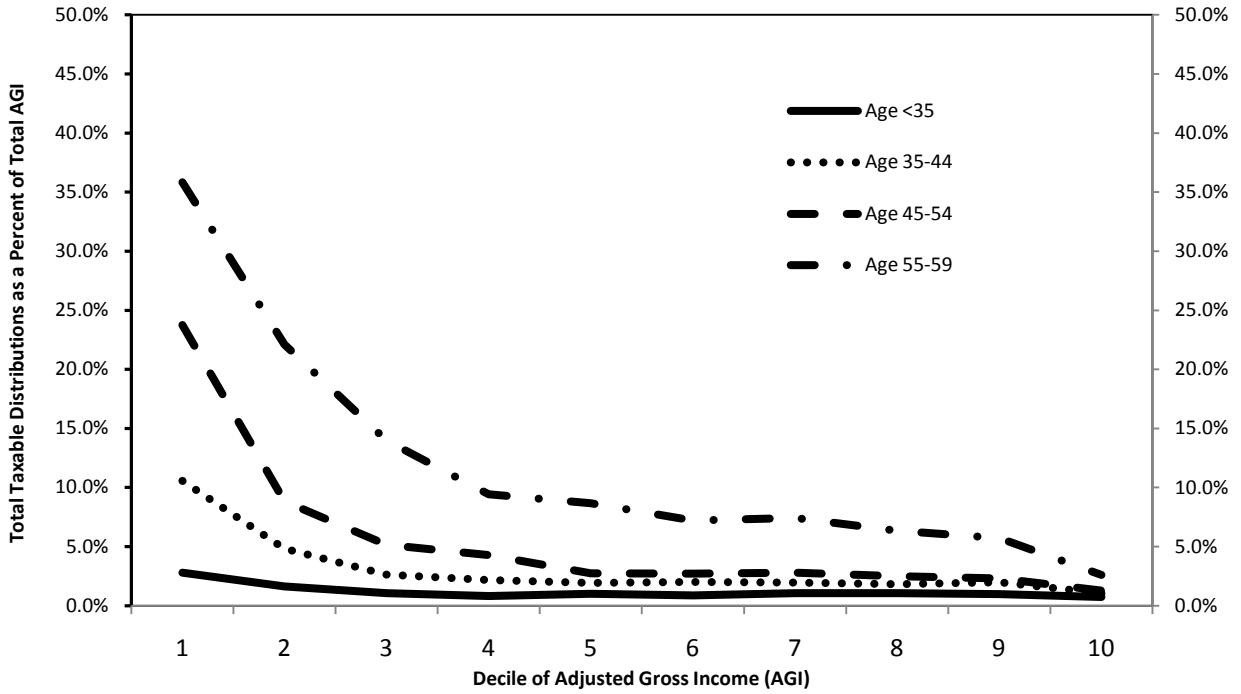
Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099R File

Figure 7b. Ratio of Taxable Distributions to Gross Distributions by Age, Filing Status, and Adjusted Gross Income (AGI)



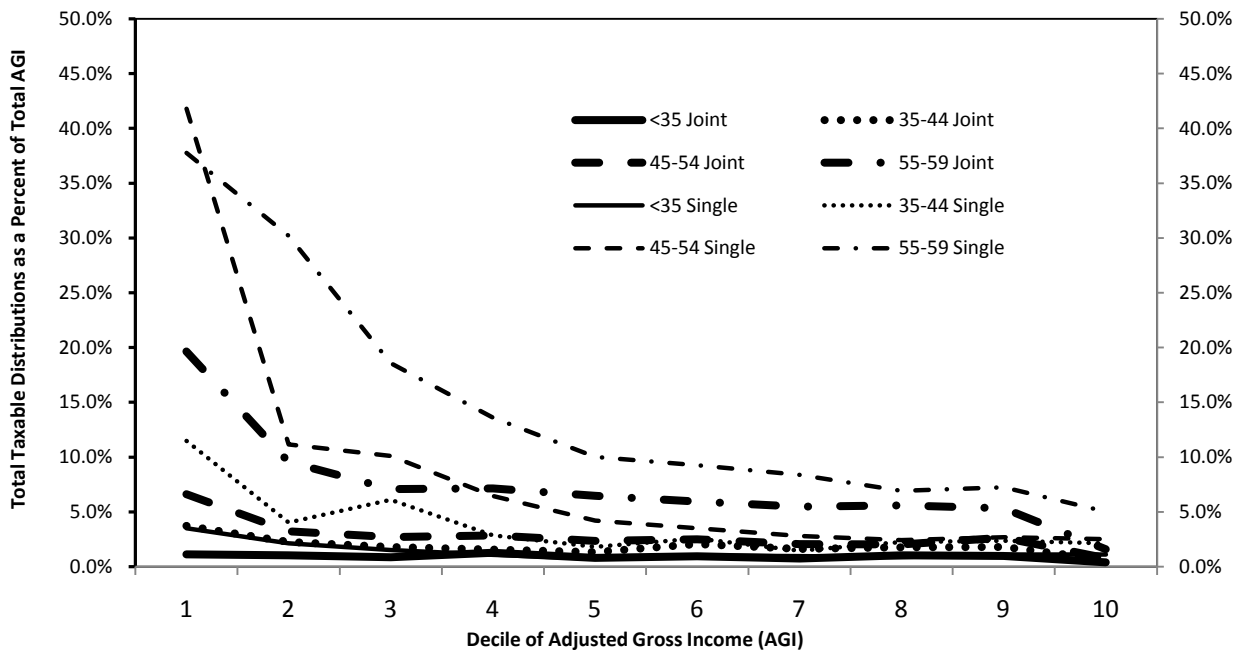
Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099R File

Figure 8a Ratio of Taxable Distributions to Adjusted Gross Income (AGI) by Age and AGI



Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099R File

Figure 8b. Ratio of Taxable Distributions to Adjusted Gross Income (AGI) by Age, Filing Status, and AGI



Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099R File

Table 1. Gross and Taxable Distributions from Qualified Retirement Accounts for Taxpayers Above and Below Age 60
Billions of dollars

	All Taxpayers	Age Less Than 60	Age 60 and Older
Taxpayers with Gross Distributions			
Gross Distributions	\$1,157.8	\$348.9	\$808.9
- Non Taxable Distributions	\$489.5	\$214.4	\$275.1
Direct rollovers to other qualified accounts	335.8	172.5	163.3
Indirect rollovers to other qualified accounts	6.8	2.3	4.4
Non-taxable distributions from Roth accounts	4.8	0.8	4.1
Return of after-tax contributions to qualified plans	59.1	14.4	44.6
Section 1035 exchanges	49.5	8.9	40.6
Other non-taxable distributions	33.1	15.3	17.8
= Taxable Distributions	\$661.8	\$132.7	\$529.1
Non-Penalized	612.2	85.8	526.4
Penalized	49.5	46.9	2.7

Addendum

Number of returns with qualified coverage (thousands)	87,925	62,114	25,811
Number of returns with gross distributions (thousands)	36,065	15,057	21,008
Gross distributions as a percent of AGI for covered	15.7%	6.7%	37.2%
Taxable distributions as a percent of AGI for covered	9.0%	2.5%	24.3%
Taxable distributions as a percent of gross distributions	52.9%	13.4%	0.3%

Notes: Age for joint returns is based on the older of the primary or secondary taxpayer. Excludes dependent filers.

Source: Tax Year 2007 Statistics of Income Individual Complete Report Matched Form 1040, Form 5498, and Form 1099-R File