The Impact of Auto Portability on Preserving Retirement Savings Currently Lost to 401(k) Cashout Leakage

By Jack VanDerhei, Ph.D., Employee Benefit Research Institute

A T   A   G L A N C E

Many of the perceived limitations of 401(k) plans were partially dealt with via previous automation practices encouraged by the Pension Protection Act of 2006, including automatic enrollment, auto-escalation, and the utilization of target-date funds as investment options, all of which served to increase participation rates, encourage savings, and optimize asset allocations.

Significantly, no effective solution has been implemented to address the problem of 401(k) cashout leakage, which occurs post-termination, where each year approximately 40 percent of terminated participants elect to prematurely cash out 15 percent of plan assets. For 2015, EBRI estimates that $92.4 billion was lost due to leakages from cashouts, representing a serious problem that affects the potential of 401(k) plans to produce adequate income replacement in retirement.

This *Issue Brief* summarizes EBRI research analyzing the impact of auto portability, where a participant's account from a former employer's retirement plan would be automatically combined with their active account in a new employer's plan. This would help keep the defined contribution (DC) assets in the retirement system and — in theory — reduce leakage from cashouts upon employment termination.

Our research found that:

- Considering auto portability as a stand-alone policy initiative, we project the present value of additional accumulations over 40 years resulting from "partial" auto portability (participant balances less than $5,000 adjusted for inflation) would be $1,509 billion, and the value would be $1,987 billion under "full" auto portability (all participant balances). Under partial auto portability, those currently 25–34 are projected to have an additional $659 billion, increasing to $847 billion for full auto portability.

- Auto portability produces significant decreases in retirement deficits for specific demographic segments, ranging from 13 percent for single females to 29 percent for married households where the female dies first. For households with 21–30 years of future eligibility, the decreases range from 21 percent for single females to 38 percent for married households where the female dies first.

- Auto portability, when combined with automatic-enrollment-enabled defined contribution plans, results in significantly higher defined benefit (DB) plan generosity parameters needed for equivalence, suggesting that auto portability could assist in the ongoing shift from DB to DC plans.

- When considered in tandem with other legislative initiatives that expand workplace access to retirement plans, we measured the incremental impact of auto portability. An analysis that combined auto portability with auto-IRAs showed that, in aggregate, the Retirement Savings Shortfalls (RSS) would be reduced by an additional $293 billion for a total reduction of $697 billion or 18.2 percent of the current deficit. This analysis suggests that while policy to expand retirement plan coverage can significantly impact aggregate savings shortfalls, an auto portability initiative that reduces plan leakage can materially augment such efforts.

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The Impact of Auto Portability on Preserving Retirement Savings Currently Lost to 401(k) Cashout Leakage

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Introduction

Many of the perceived limitations of 401(k) plans were at least partially dealt with via previous automation practices that were encouraged by the Pension Protection Act of 2006. Low participation rates, especially among the young and low-income employees, were significantly increased by automatic enrollment. Problems with employees retaining low default contribution rates for long periods of time could be at least partially mitigated by auto-escalation. Non-optimal asset allocations[1] were dealt with in large part by the increasing utilization of target-date funds as default investment options.

In each of these cases, employees retained the ability to opt out of default decisions made by the plan sponsor; however, the negative impact of non-optimal decisions that had been made by many of them in lieu of such defaults appears to have been significantly reduced in plans that adopted these features.

This *Issue Brief* deals with the potential impact of automating another segment of the defined contribution (DC) system: the decision of how to handle plan accounts upon termination of employment.

> ### 401(k) Plan Options When Employees Leave their Job
>
> Under current rules, workers have a number of options regarding their 401(k) balances when they leave a job: They may be able to leave the money in their former employer's 401(k) plan, they may be able to move the money to a new employer's 401(k) plan, they can roll their money into an individual retirement account (which may occur automatically if the balance is small), or they can cash out of the retirement system altogether. According to a March 2019 Alight report studying post-termination distribution behavior over 10 years, 40 percent of all terminated participants make the decision to cash out prematurely, accounting for 15 percent of all terminated participants' plan assets. That study also found that participants with lower balances tended to cash out much more frequently — up to 80 percent when savings are less than $1,000 and remaining at levels over 50 percent until balances surpassed $10,000.

Here, we study auto portability, where a participant's account from a former employer's retirement plan would be automatically combined with their active account in a new employer's plan. This would help keep the DC assets in the retirement system and — in theory — reduce leakage from cashouts upon employment termination. This is important because studies have found that cashouts are the most significant form of leakage from DC plans, especially among workers with low plan balances. [2]

This *Issue Brief* starts with a short background on the simulation model used to provide the analysis (EBRI's Retirement Security Projection Model®). It then reviews previous research performed by EBRI for the 2014 ERISA Advisory Council on the impact of leakages on retirement income adequacy. This is followed by a section framing the cashout leakage problem. Auto portability's benefits are then examined first as a stand-alone retirement savings public policy initiative and then addressed via their incremental benefits, in tandem with other legislative proposals.

Background: EBRI's Retirement Security Projection Model®

RSPM® simulates retirement income adequacy for all U.S. households between the ages of 35 and 64. The model's accumulation module reflects the real-world behavior of 27 million 401(k) participants as well as 20 million individuals with individual retirement accounts (IRAs).[3]

RSPM® produces two important metrics for evaluating retirement income adequacy:

- The EBRI Retirement Readiness Ratings™ (RRRs) show the probability that households will NOT run short of money in retirement.

- Retirement Savings Shortfalls (RSS) give the size of the deficits that households are simulated to generate in retirement.

EBRI Retirement Security Projection Model® Methodology

One of the basic objectives of RSPM® is to simulate the percentage of the population at risk of NOT having retirement income to adequately cover average expenses and uninsured health care costs (including long-term-care costs) at ages 65 or older throughout retirement in specific income and age groupings. RSPM® also provides information on the distribution of the likely number of years before those at risk run short of money as well as the percentage of preretirement compensation they will need in terms of additional savings in order to have a 50, 70, or 90 percent probability of retirement income adequacy.

VanDerhei and Copeland (2010) describe how households are tracked through retirement age and how their retirement income/wealth is simulated for the following components:

- Social Security.

- Defined contribution (DC) balances.

- Individual retirement account (IRA) balances.

- Defined benefit (DB) annuities and/or lump-sum distributions.

- Net housing equity.

A household is considered to run short of money in this model if aggregate resources in retirement are not sufficient to meet average retirement expenditures, defined as a combination of deterministic expenses from the Consumer Expenditure Survey (as a function of income) and some health insurance and out-of-pocket, health-related expenses, plus stochastic expenses from nursing-home and home-health care (at least until the point such expenses are covered by Medicaid). This version of the model is constructed to simulate retirement income adequacy, as noted above. Alternative versions of the model allow similar analysis for replacement rates, standard-of-living calculations, and other ad hoc thresholds.

The baseline version of the model used for this analysis assumes all workers retire at age 65; that they immediately begin drawing benefits from Social Security and defined benefit plans (if any); and, to the extent that the sum of their expenses and uninsured medical expenses exceed the projected, after-tax annual income from those sources, immediately begin to withdraw money from their individual accounts (defined contribution and cash balance plans as well as IRAs). If there is sufficient money to pay expenses without tapping into the tax-qualified individual accounts, those balances are assumed to be invested in a non-tax-advantaged account where the investment income is taxed as ordinary income. Individual accounts are tracked until the point at which they are depleted. At that point, any net housing equity is assumed to be added to retirement savings in the form of a lump-sum distribution (not a reverse annuity mortgage (RAM)). If all the retirement savings are exhausted and the Social Security and defined benefit payments are not sufficient to pay expenses, the individual is designated as having run short of money at that point.

Previous Research

To assist in the evaluation of the role of 401(k) plans, EBRI has used its RSPM® to analyze the potential of 401(k) plans to produce "adequate" income replacement. The analysis provides probabilities of successful retirement (defined below) by income quartile for 401(k) plans. Given that the objective of this analysis typically focuses on the *potential* for 401(k) plans to produce a threshold level of income replacement at retirement, the analysis is limited to individuals who are simulated to have more than 30 years of eligibility to participate (whether or not they actually choose to participate in each of those years) by the time they reach age 65.

Figure 1 summarizes the projections for the percentage of "successful" retirements for 401(k) participants, by income quartile, for those currently ages 25–29 in an automatic enrollment 401(k) plan, assuming no leakages. Workers are assumed to retire at age 65, and all balances are converted into an inflation-adjusted annuity at an annuity purchase price of 18.62 at that point. The annual income provided by this annuity in the first year of retirement is added to the simulated Social Security retirement benefit provided for the worker (spousal benefits are not included), and the combined retirement income is expressed as a percentage of the salary the worker was simulated to have earned at age 64.

One difficulty in evaluating the potential of any type of retirement income source is the determination of the threshold for "success." While there have been a number of attempts to quantify this in the past, there appears to be little consensus on the appropriate level(s). Therefore, this analysis uses four alternative "success" thresholds: attaining 60, 70, 80, and 90 percent (respectively) of the preretirement income replaced by the combination of the annuitized value of the 401(k) accumulations and the primary Social Security benefit amounts.

The simulated analysis for Figure 1 assumes that 401(k) sponsors adopting automatic enrollment provisions also adopt an automatic annual escalation of contributions. Note that while automatic enrollment plans have been in place for a number of years, there has been a substantial increase in the proportion of employers incorporating some type of an automatic escalation feature as a result of the Pension Protection Act of 2006. However, it will be a number of years before these provisions have been in place long enough to accurately assess participant response with respect to items such as opt-out behavior as they approach maximum thresholds and whether participants will retain their current savings rates when they change jobs or simply revert to the default deferral rate in the plan of the new employer. In the current analysis, plans are assumed to have automatic escalation with a 1 percent of compensation increase annually along with the current plan-specific default contribution rates and maximum limits on auto-escalation. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and to opt out of automatic escalation in accordance with the probabilities outlined in VanDerhei (September 2007).

The bottom row in the grid for Figure 1 shows that for the lowest income quartile, 92.3 percent of the workers currently ages 25–29 who will have more than 30 years of eligibility for participation in an automatic enrollment 401(k) plan are simulated to be able to replace at least 60 percent of their age-64 salary from their annuitized 401(k) accumulations and Social Security. This percentage decreases somewhat for their higher-income counterparts but goes no lower than 83.2 percent.

The third row from the bottom in the grid for Figure 1 provides the same results when the threshold is increased to 70 percent. As expected, the percentage of workers able to meet this more stringent threshold decreases, and the percentage of those in the lowest income quartile with successful retirements under this analysis is now 86.6 percent. The percentages for the second, third, and fourth income quartiles are somewhat smaller, but none are less than 72.2 percent.

The second row in the Figure 1 grid illustrates the impact of increasing the threshold for success to 80 percent. Again, the progressive nature of the benefit formula in Social Security produces a much higher probability of success for the lowest income quartile (76.5 percent) than the highest income quartile (60.7 percent). The top row provides similar results for a 90 percent real replacement rate threshold. In this case the probabilities range from 64.5 percent for the lowest income quartile to 51.0 percent for the highest income quartile.

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	64.5%	61.3%	54.9%	51.0%
80%	76.5%	72.2%	65.7%	60.7%
70%	86.6%	83.2%	77.5%	72.2%
60%	92.3%	90.9%	87.9%	83.2%
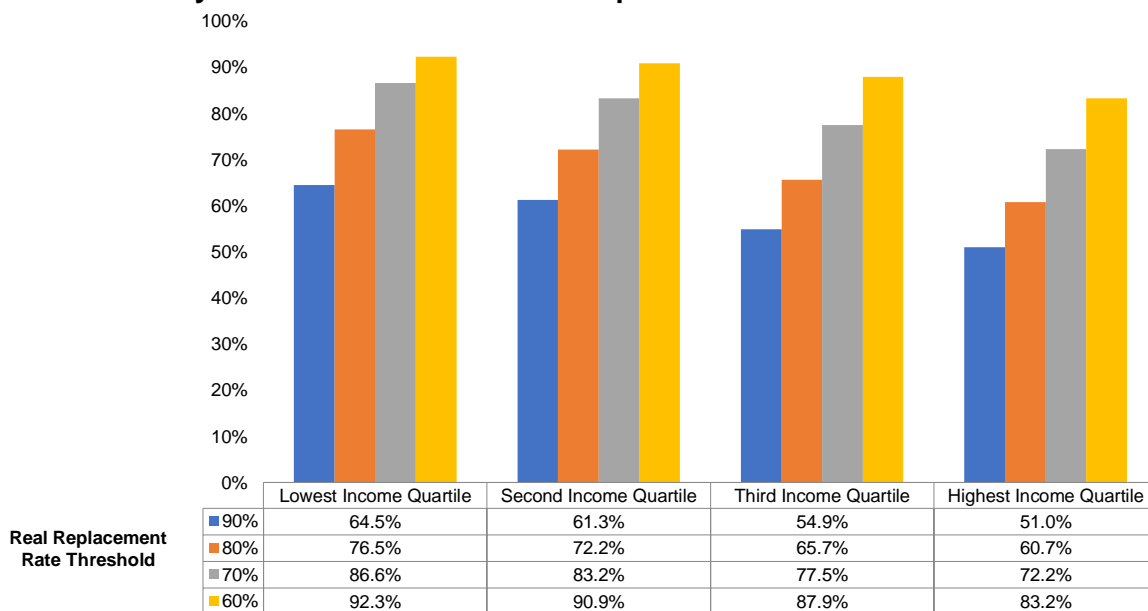
Source: EBRI Retirement Security Projection Model,® version 2107.
* "Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

In analysis for 2014 ERISA Advisory Council testimony,[4] EBRI focused on the impact of the following three leakages on 401(k) accumulations:

- Cashouts.

- Plan loan defaults.

- Hardship withdrawals accompanied by a six-month suspension of contributions.

Figure 2 builds on Figure 1 by showing how much the three leakages described above — in combination with each other — would reduce the proportion of workers in each cohort who succeed in meeting the specified real replacement rate thresholds. For example, the upper left-hand grid of Figure 2 shows that 9.9 percent fewer workers currently ages 25–29 within the lowest income quartile reach the 90 percent real replacement rate threshold if all three leakages are present (vs. if none are present). The probability of success decreases by 8.8 percent for the lowest-income-quartile 401(k) participants if we only impose an 80 percent real replacement rate threshold, by 7.9 percent at the 70 percent threshold, and by 5.6 percent at the 60 percent threshold.

Figure 3 shows the same impact as that presented in Figure 2, but this time the output metric is the percentage of those not reaching the threshold replacement rate when leakages exist who would reach the threshold replacement rate if the leakages were eliminated. Once again using the lowest income quartile at a 90 percent real replacement rate threshold, 64.5 percent of this cohort are projected to have a "successful" retirement outcome in the absence of leakages (Figure 1), but nearly 1 in 10 (9.9 percent) would end up with something less than 90 percent in the presence of all three leakages (Figure 2). Said another way, 54.6 percent of them would reach the 90 percent threshold when all three leakages are considered and 45.4 percent would not. Of those 45.4 percent, 21.8 percent (9.9/45.4) would reach the threshold if the leakages were removed.

The 21.8 percent value is shown in the upper left-hand side of the grid for Figure 3. This increases to 27.3 percent when analyzed at the lower 80 percent real replacement rates, 37.1 percent at a 70 percent real replacement rate, and 41.9 percent if the threshold is reduced to a 60 percent real replacement rate. Similar values are also shown in Figure 3 for those in the second, third, and highest income quartile, but the impact is less as the income quartile increases.

In an attempt to isolate how much of this might be attributed to each of the three leakages, figures 4, 5, and 6 provide a similar analysis as that shown in Figure 2 but for each of the three leakages individually. Figure 4 shows the impact comparison between no leakages vs. leakage due to defaults on plan loans. It finds that while all three leakages result in a 9.9 percent reduction in the percentage of workers reaching the 90 percent real replacement rate, defaults from loans alone only reduce the percentage by 1.4 percent.

In contrast, Figure 5 shows that when leakage due to hardship withdrawals is considered on its own, the percentage of workers reaching the 90 percent real replacement rate declines by 3.2 percent.

However, when only leakage from cashouts at job change are considered in Figure 6, 5.7 percent of workers who would have otherwise reached the 90 percent real replacement rate now fail to do so.

Figure 2
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. all leakages (cashouts, hardship withdrawals with six-month suspension of contributions, and loan defaults)

Percentage-Point Decrease in Probability of Success,* by Income Quartile and Real Replacement Rate Used as a Threshold

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	9.9%	8.0%	7.0%	6.5%
80%	8.8%	8.2%	7.7%	7.0%
70%	7.9%	7.6%	8.1%	7.4%
60%	5.6%	6.0%	6.6%	7.2%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
* "Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).
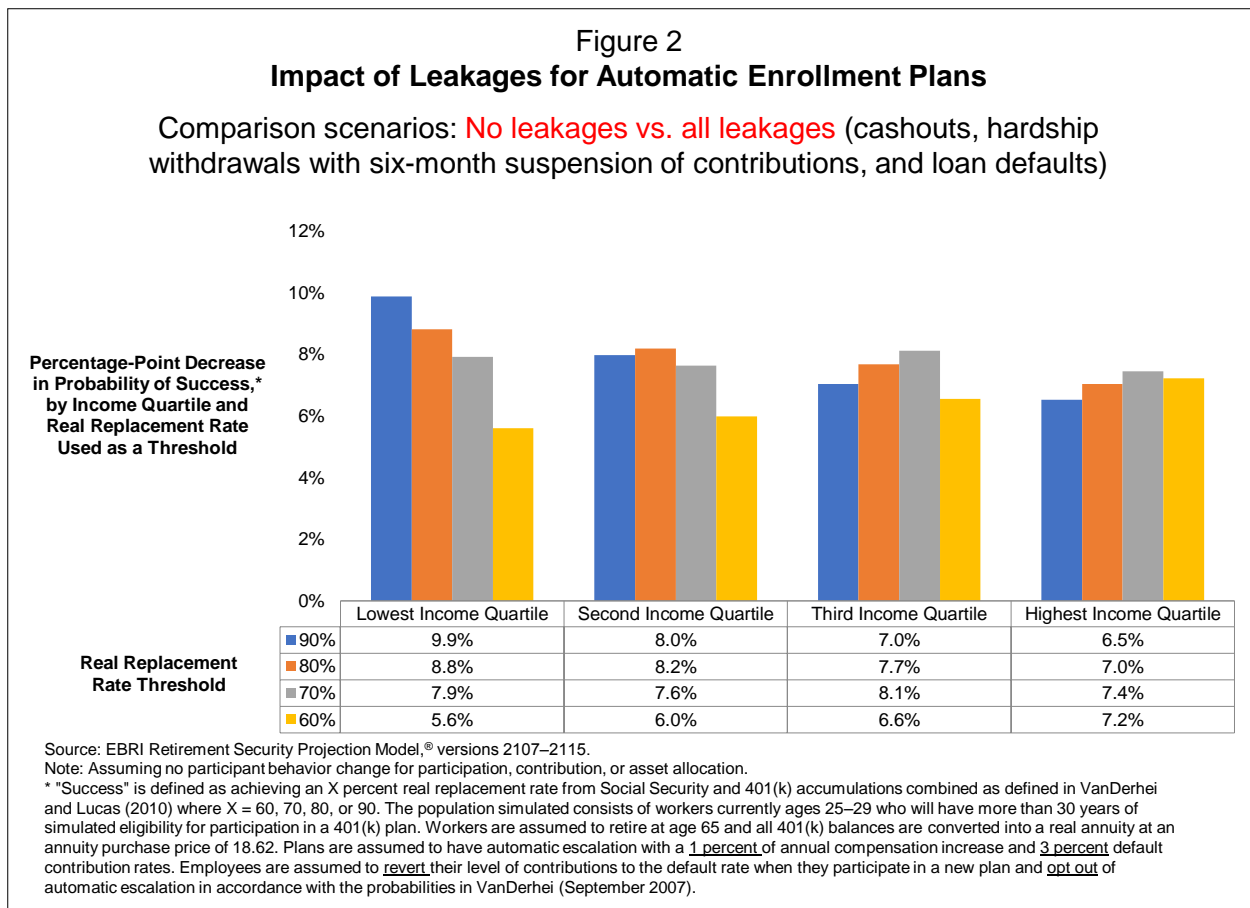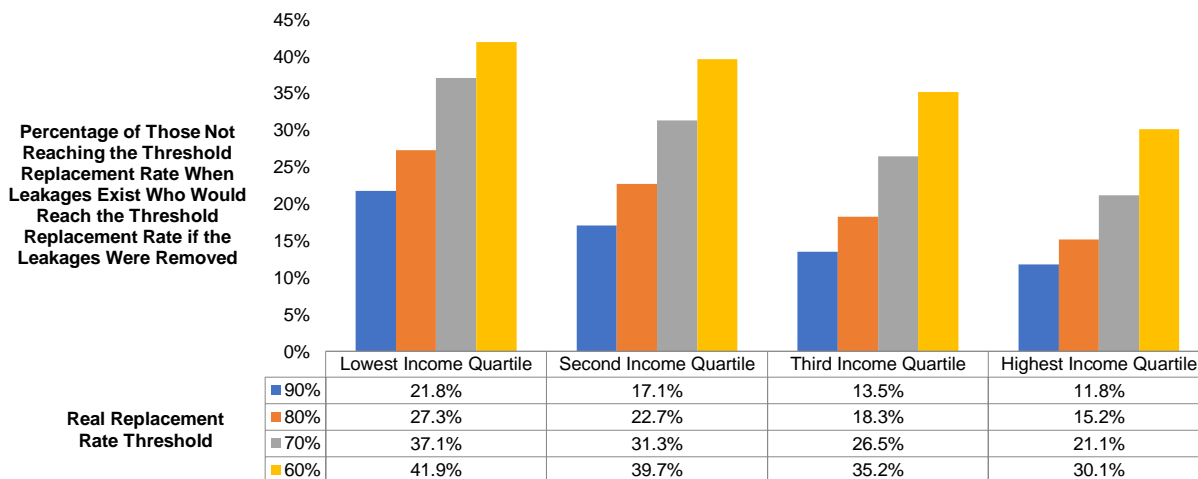
Figure 3
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. all leakages (cashouts, hardship withdrawals with six-month suspension of contributions, and loan defaults)

Percentage of Those Not Reaching the Threshold Replacement Rate When Leakages Exist Who Would Reach the Threshold Replacement Rate if the Leakages Were Removed

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	21.8%	17.1%	13.5%	11.8%
80%	27.3%	22.7%	18.3%	15.2%
70%	37.1%	31.3%	26.5%	21.1%
60%	41.9%	39.7%	35.2%	30.1%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
"Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

Figure 4
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. loan defaults

Percentage-Point Decrease in Probability of Success*, by Income Quartile and Real Replacement Rate Used as a Threshold

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	1.4%	1.2%	0.9%	1.2%
80%	1.0%	0.9%	1.4%	1.3%
70%	0.6%	0.8%	1.3%	1.2%
60%	0.3%	0.4%	0.6%	1.5%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
* "Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

Figure 5
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. hardship withdrawals with six-month suspension of contributions

Percentage-Point Decrease in Probability of Success*, by Income Quartile and Real Replacement Rate Used as a Threshold

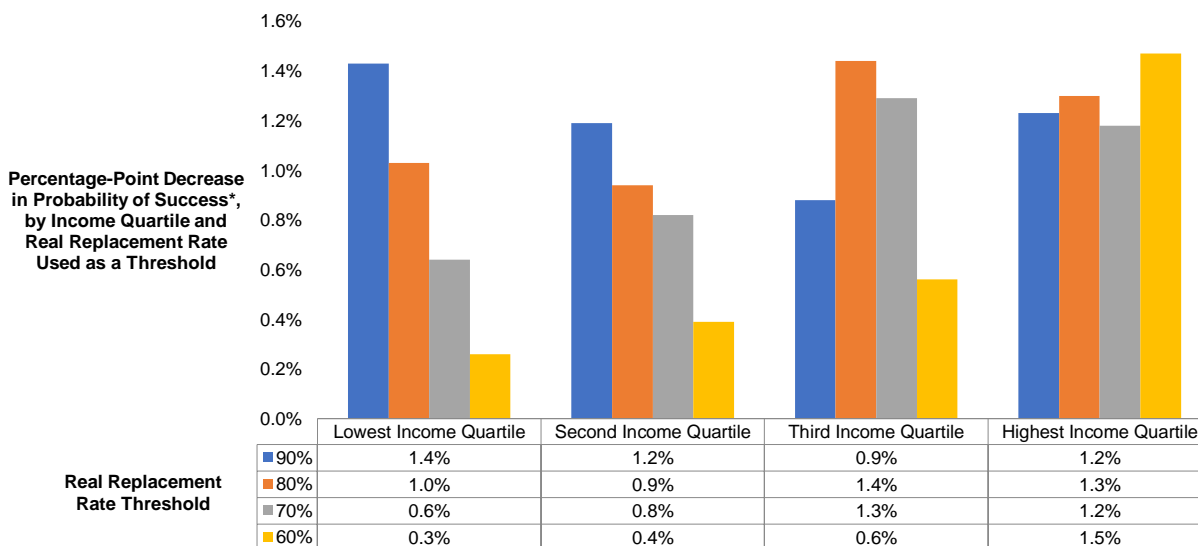| Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	3.2%	2.3%	1.8%	1.2%
80%	2.0%	2.0%	1.6%	1.3%
70%	1.2%	1.7%	1.9%	1.4%
60%	0.5%	0.6%	0.9%	0.9%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
* "Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

Figure 6
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. cashouts at job change

Percentage-Point Decrease in Probability of Success*, by Income Quartile and Real Replacement Rate Used as a Threshold

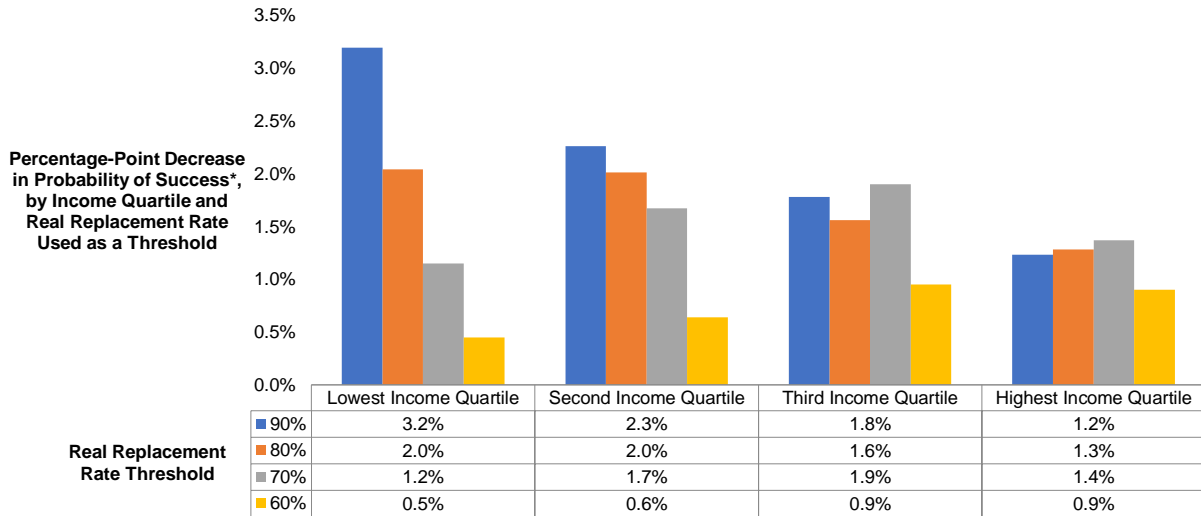| Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	5.7%	5.0%	4.4%	4.3%
80%	5.9%	5.2%	5.0%	4.5%
70%	5.9%	5.4%	5.4%	5.2%
60%	4.8%	4.8%	5.2%	5.3%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
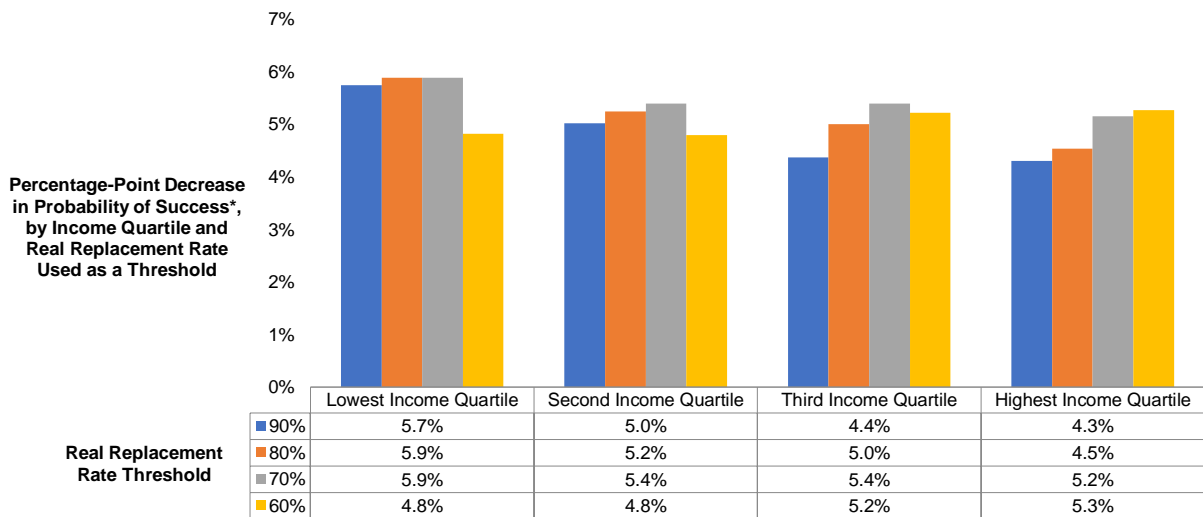* "Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

Figures 7, 8, and 9 apply the same output metric as Figure 3, showing the percentage of those who would reach given threshold replacement rates should certain types of leakages be removed.

Figure 7 shows the comparison between no leakages vs. the impact of plan loan defaults. The impact on the lowest income quartile varies between 3.2 and 4.5 percent (depending on the level of the real replacement rate threshold). The values typically remain below 5 percent for the higher income cohorts with the exception of the highest income quartile, which at a 60 percent real replacement rate threshold reaches 8.1 percent.

The comparison scenario in Figure 8 is no leakages vs. hardship withdrawals with a six-month suspension of contributions. The impact on the lowest income quartile ranges between 5.5 and 8.2 percent (depending on the level of the real replacement rate threshold). The values drop substantially for the highest income quartile, with a range of 2.4 to 5.1 percent.

Figure 9 compares the no-leakages scenario with one that includes probabilistic cashouts (as a function of age and account balance) at job change. The values shown on this graph are much greater than those in figures 7 or 8, indicating that cashouts at job change have a much more serious impact on 401(k) accumulation than either plan loan defaults or hardship withdrawals (even with the impact of a six-month suspension of contributions included). The values for the lowest income quartile range from 13.9 percent at the 90 percent real replacement threshold to 38.3 percent at the 60 percent threshold. Not surprisingly, the impact is smaller as the level of income increases. The range for the highest income quartile is 8.1 percent at the 90 percent real replacement threshold to 23.9 percent at the 60 percent threshold.

Figure 7
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. loan defaults

Percentage of Those Not Reaching the Threshold Replacement Rate When Leakages Exist Who Would Reach the Threshold Replacement Rate if the Leakages Were Removed

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	3.9%	3.0%	1.9%	2.4%
80%	4.2%	3.3%	4.0%	3.2%
70%	4.5%	4.7%	5.4%	4.1%
60%	3.2%	4.1%	4.4%	8.1%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
"Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).
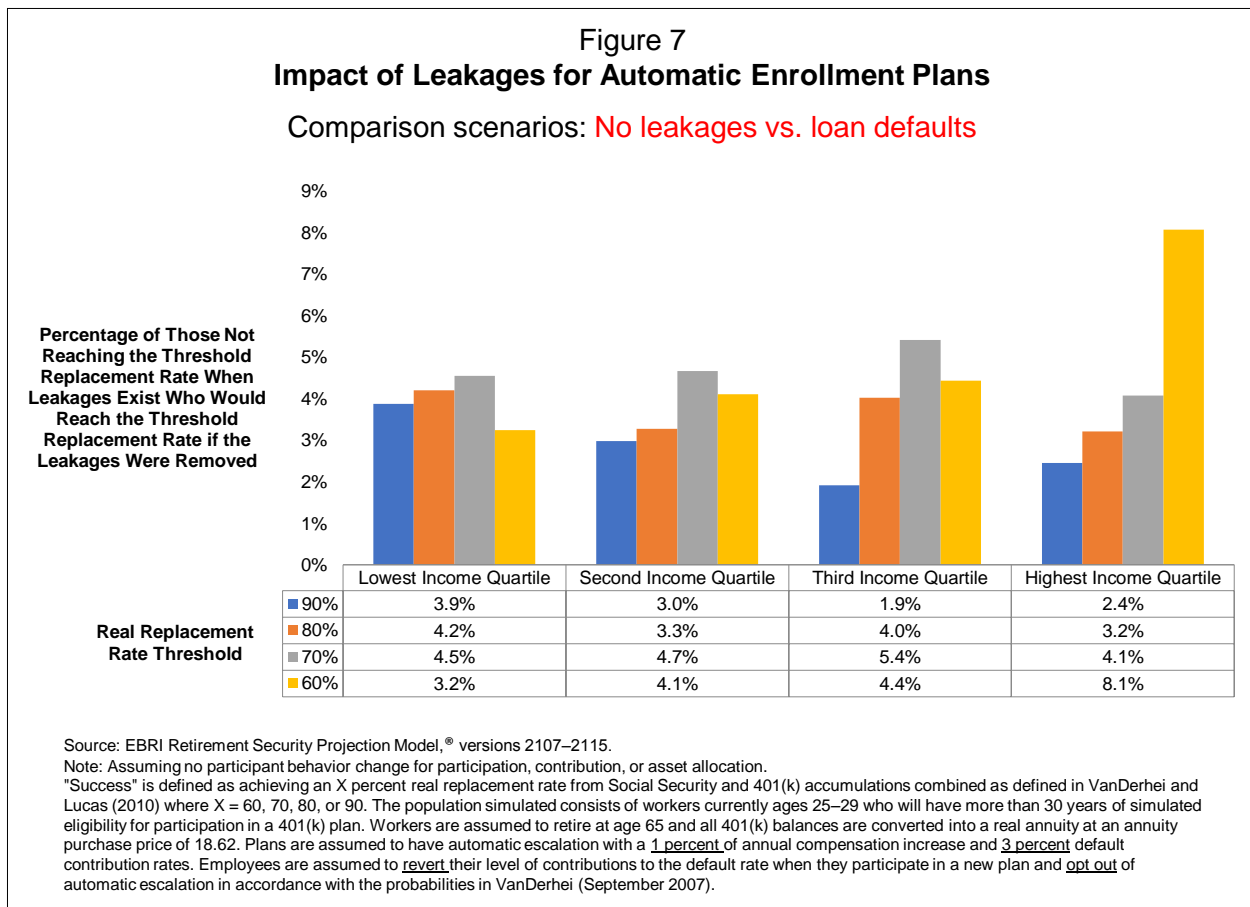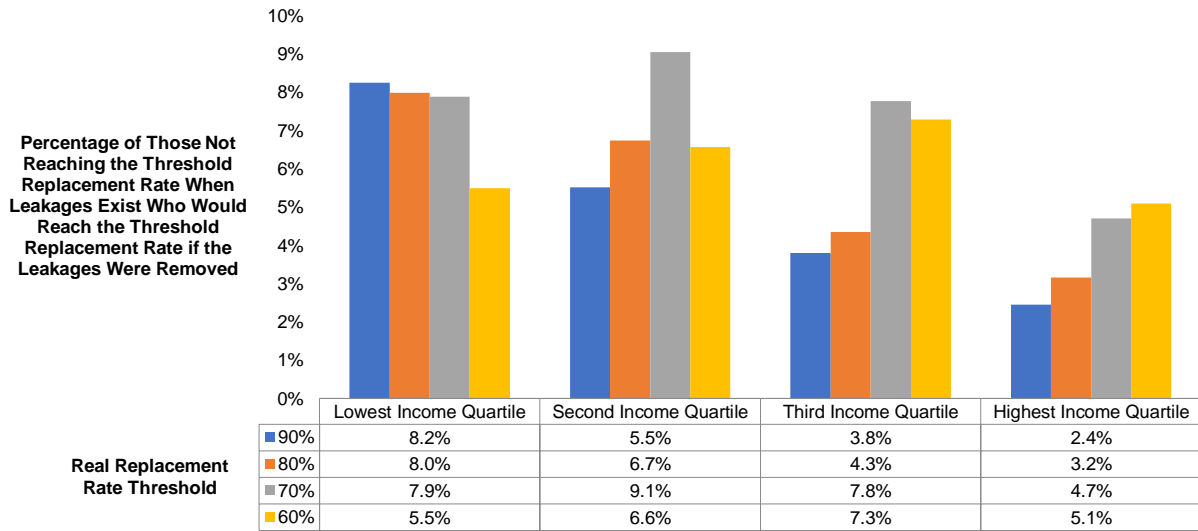
Figure 8
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. hardship withdrawals
with six-month suspension of contributions

Percentage of Those Not Reaching the Threshold Replacement Rate When Leakages Exist Who Would Reach the Threshold Replacement Rate if the Leakages Were Removed

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	8.2%	5.5%	3.8%	2.4%
80%	8.0%	6.7%	4.3%	3.2%
70%	7.9%	9.1%	7.8%	4.7%
60%	5.5%	6.6%	7.3%	5.1%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
"Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).
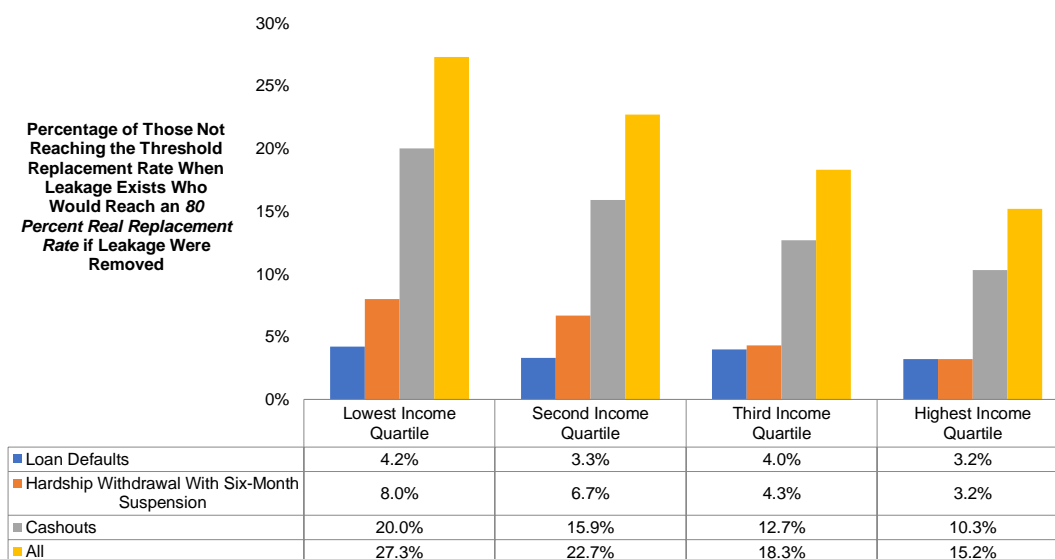
Figure 9
Impact of Leakages for Automatic Enrollment Plans

Comparison scenarios: No leakages vs. cashouts at job change

Percentage of Those Not Reaching the Threshold Replacement Rate When Leakages Exist Who Would Reach the Threshold Replacement Rate if the Leakages Were Removed

Real Replacement Rate Threshold	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
90%	13.9%	11.5%	8.8%	8.1%
80%	20.0%	15.9%	12.7%	10.3%
70%	30.4%	24.3%	19.3%	15.6%
60%	38.3%	34.5%	30.2%	23.9%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
"Success" is defined as achieving an X percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010) where X = 60, 70, 80, or 90. The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

A summary of the results for an 80 percent real replacement rate is shown in Figure 10. It shows that removing all leakage could result in as many as 27.3 percent more participants achieving "retirement success" for the lowest income quartile. For the highest income quartile, 15.2 percent more achieve "retirement success." [5] Within each income quartile in Figure 10 the overall impact of leakage is decomposed into its component parts for loan defaults, hardship withdrawals (with an attendant six-month suspension in contributions), and cashouts. In each income quartile, the impact of cashouts is significantly greater than the other two components combined. For the lowest income quartile, the elimination of cashouts by itself would be enough to boost the account balances of 20 percent of those not attaining an 80 percent real replacement rate to an amount sufficient for them to attain the threshold. In other words, Figure 10 suggests that from a policy perspective, a focus on reducing cashouts would be much more impactful than reducing loans or hardship withdrawals. It should be noted, however, that these results do not consider any potential reduction in contributions on behalf of workers who might, knowing that monies would not be available for hardship situations, decide to reduce or even cease contributing to these plans.

Figure 10
Impact of Various Components of Leakage on Automatic Enrollment Plans

Percentage of Those Not Reaching the Threshold Replacement Rate When Leakage Exists Who Would Reach an *80 Percent Real Replacement Rate* if Leakage Were Removed

|	Lowest Income Quartile	Second Income Quartile	Third Income Quartile	Highest Income Quartile
■ Loan Defaults	4.2%	3.3%	4.0%	3.2%
■ Hardship Withdrawal With Six-Month Suspension	8.0%	6.7%	4.3%	3.2%
■ Cashouts	20.0%	15.9%	12.7%	10.3%
■ All	27.3%	22.7%	18.3%	15.2%

Source: EBRI Retirement Security Projection Model,® versions 2107–2115.
Note: Assuming no participant behavior change for participation, contribution, or asset allocation.
"Success" is defined as achieving an 80 percent real replacement rate from Social Security and 401(k) accumulations combined as defined in VanDerhei and Lucas (2010). The population simulated consists of workers currently ages 25–29 who will have more than 30 years of simulated eligibility for participation in a 401(k) plan. Workers are assumed to retire at age 65 and all 401(k) balances are converted into a real annuity at an annuity purchase price of 18.62. Plans are assumed to have automatic escalation with a 1 percent of annual compensation increase and 3 percent default contribution rates. Employees are assumed to revert their level of contributions to the default rate when they participate in a new plan and opt out of automatic escalation in accordance with the probabilities in VanDerhei (September 2007).

Framing the Cashout Leakage Problem

Figure 11 provides an estimate of the cashout leakage by year in billions of 2015 dollars. It uses the same simulation model described above for the 2014 ERISA Advisory Council testimony but expands to all ages (not just those currently ages 25–29). For 2015, it is estimated that $92.4 billion was lost due to leakages from cashouts. Estimates were also provided back to year 2009 by a back-cast as a function of active participants and average account balances.

Figure 11
Cashout Leakage by Year in Billions of 2015 Dollars*
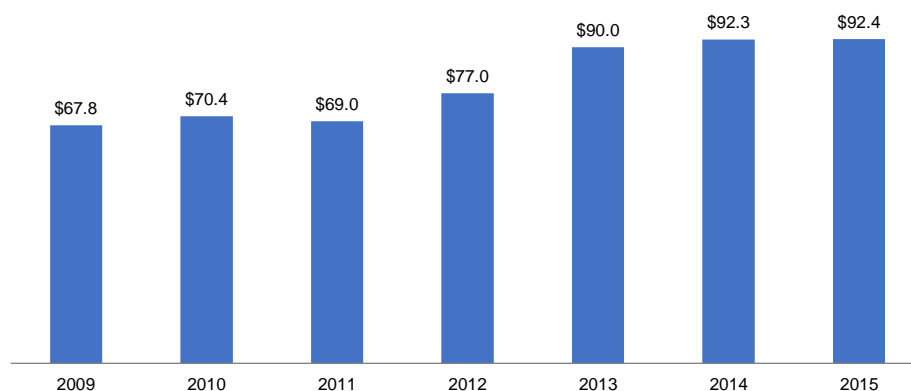
*Years prior to 2015 were based on a back-cast as a function of active participants and average account balances.
NB: This assumes the quit rates from EBRI Retirement Security Projection Model® (RSPM), version 2644.
Source: RSPM,® version 2107; 5500 historical tables; and EBRI/ICI annual updates.

Auto Portability as a Stand-Alone Retirement Savings Public Policy Initiative

High-Level, Systemic Benefits

Although the research shown in Figure 10 is useful in quantifying the relative impact of the various leakage components, it suffers from the limitation that it, like many other retirement readiness models, assumes that a specific, threshold real replacement rate would apply to *all* participants. In contrast, the analysis in Figure 12 utilizes both the accumulation and decumulation modules in RSPM® and reframes the output to show changes in the *size* of the deficits that households are simulated to generate in retirement. Specifically, it provides the percentage reductions in Retirement Savings Shortfalls (with long-term-care costs considered) for households in various groups by age and future defined contribution plan eligibility years, assuming that a full auto portability system were established. [6]

In such a system, an inactive participant's retirement account from a former employer's retirement plan would be automatically combined with their active account in a new employer's plan. The impact of full implementation of this concept (regardless of the level of the account balance at the time of job change) would be significantly larger for younger cohorts who would, of course, have more time to benefit from the cessation of cashouts. Focusing on participants ages 35–39, the size of their deficit would decline by:

- 17 percent for those with 1–9 years of future eligibility in a defined contribution plan.

- 19 percent for those with 10–19 years of future eligibility.

- 23 percent for those with 20 or more years of future eligibility.

Although the results in Figure 12 show that the potential benefits from a full auto portability system would be substantial in terms of reducing retirement deficits (especially for younger cohorts), any analysis using RSS will tell only part of the story since households who were not simulated to run short of money in retirement in the baseline analysis will not be included in the results. However, as part of a presentation at the Financial Services Roundtable event

"Retirement Plan Portability & Public Policy: Unlocking the potential in portability," EBRI simulated three scenarios to show the full impact of auto portability on the present value of accumulations at age 65:

- In the first scenario (FULL auto portability) every participant is assumed to consolidate their savings in their new employer plan every time they change jobs, i.e. all participants arrive at age 65 with one account. Any leakage in this scenario is limited to hardship withdrawals.

- In the second scenario (partial auto portability) every participant with less than $5,000 (indexed for inflation) consolidates their savings in their new employer plan every time they change jobs. Again, any leakage in this scenario is limited to hardship withdrawals.

- In the third scenario (status quo), in addition to hardship withdrawals, there is a participant-specific probability of cashing out and loan default leakage at job change.
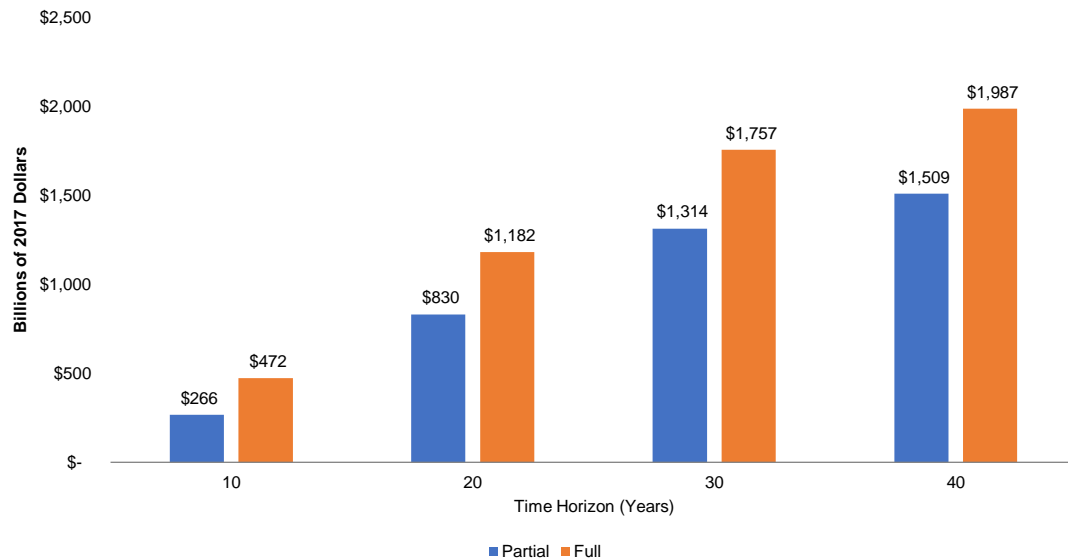
Figure 13 shows the impact of auto portability over time by simulating the present value of additional accumulations (savings) at age 65 (or the end of the time horizon if earlier). After the scenarios were in place for 10 years, there would be a projected increase (relative to the status quo scenario) of $266 billion (in 2017 dollars) under partial auto portability and $472 billion under full auto portability. The relative difference continues to increase, and after 40 years, the projected increases would be $1,509 billion under the partial auto portability scenario and $1,987 billion under the full auto portability scenario.

Figure 12
Reductions in 2014 Retirement Savings Shortfalls Under Auto Portability, by Age and Future Defined Contribution Plan Eligibility Years

	35–39	40–44	45–49	50–54	55–59	60–64
■ 1–9	17%	14%	11%	9%	8%	6%
■ 10–19	19%	17%	14%	10%		
■ 20+	23%	18%				
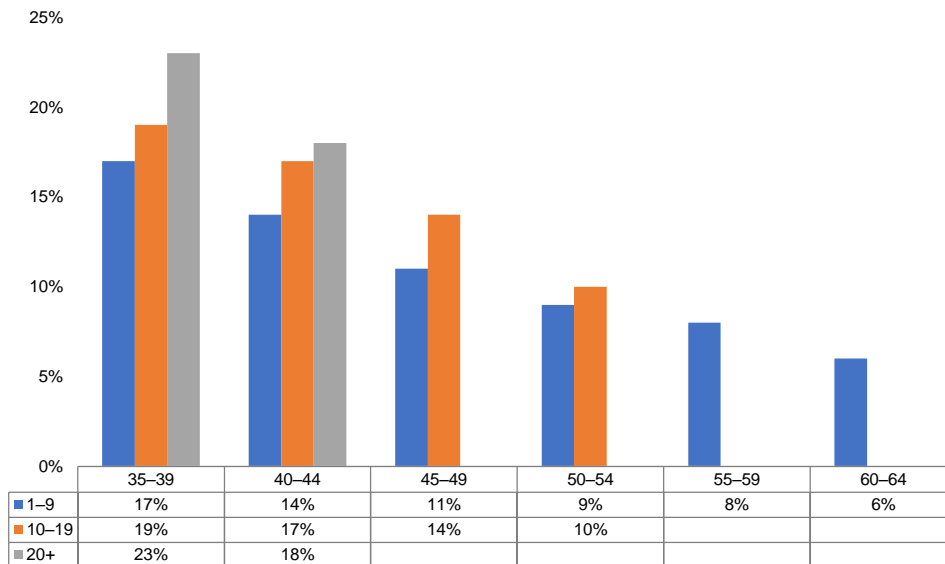
Note: Long-term-care costs included. Analysis is limited to households headed by individuals ages 35–64 in various groups, by age and future defined contribution plan eligibility years assuming no leakage from the auto portability system.
Source: EBRI Retirement Security Projection Model,® version 2749.

Figure 13
Present Value of Additional Savings at Age 65 (or End of Time Horizon if Earlier): Full vs. Partial Auto Portability
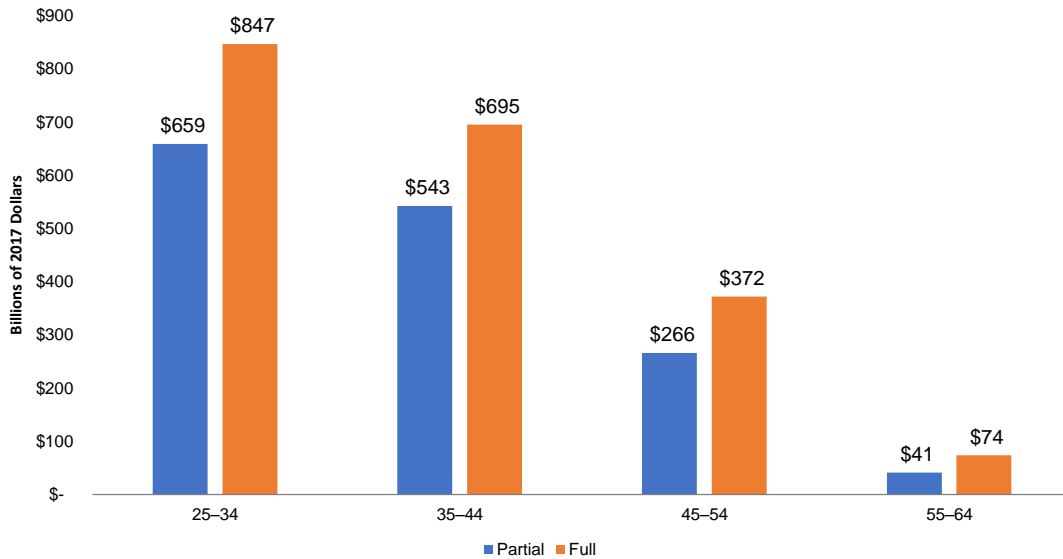

Source: EBRI Retirement Security Projection Model.®

Figure 14 provides a similar analysis with the impact of auto portability on additional savings at age 65, broken out by current age. As expected, those closest to retirement would see a smaller impact: participants currently 55–64 are projected to have an additional $41 billion under the partial auto portability scenario while those currently 25–34 are projected to have an additional $659 billion. Under the full auto portability scenario, the numbers increase to $74 billion for those 55–64 and $847 billion for those 25–34.

Figure 15 shows the impact of the partial auto portability scenarios by current age and age-specific income quartile. Within each age cohort there is a negative correlation with income quartile as expected. For those currently 25–34, the lowest income quartile is projected to have a 24.6 percent increase in balances while the highest income quartile is projected to have a 21.0 percent increase.

Figure 16 shows a similar analysis for the full auto portability scenario. Given that the benefits would potentially accrue to anyone at job change (not just those with balances under the $5,000 indexed threshold), one would expect larger absolute values than in Figure 15 as well as a larger impact of income quartiles within an age cohort. For those currently 25–34, the lowest income quartile is projected to have a 35.5 percent increase in balances while the highest income quartile is projected to have a 25.7 percent increase.

Figure 14
**Present Value of Additional Savings at Age 65, by Current Age:
Full vs. Partial Auto Portability**

Source: EBRI Retirement Security Projection Model.®

Figure 15
**Increase in Aggregate Balances at Age 65 as a Result of Implementing <u>Partial Auto Portability</u>,
by Age and Age-Specific Income Quartile**
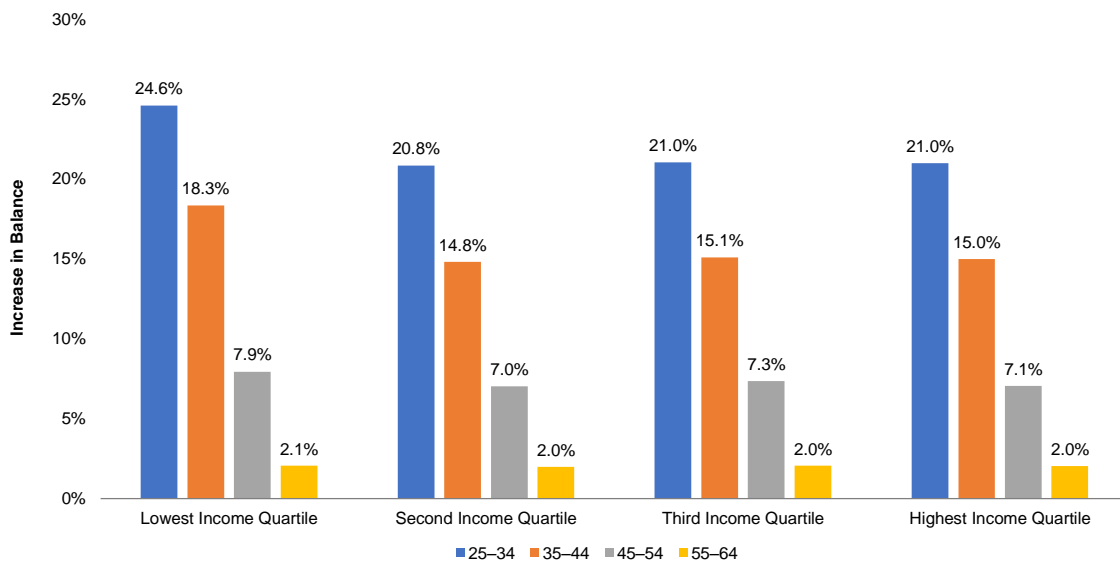
Source: EBRI Retirement Security Projection Model,® versions 2913 and 2922.
Note: 40-year time horizon.

Figure 16
Increase in Aggregate Balances at Age 65 as a Result of Implementing <u>FULL Auto Portability</u>, by Age and Age-Specific Income Quartile
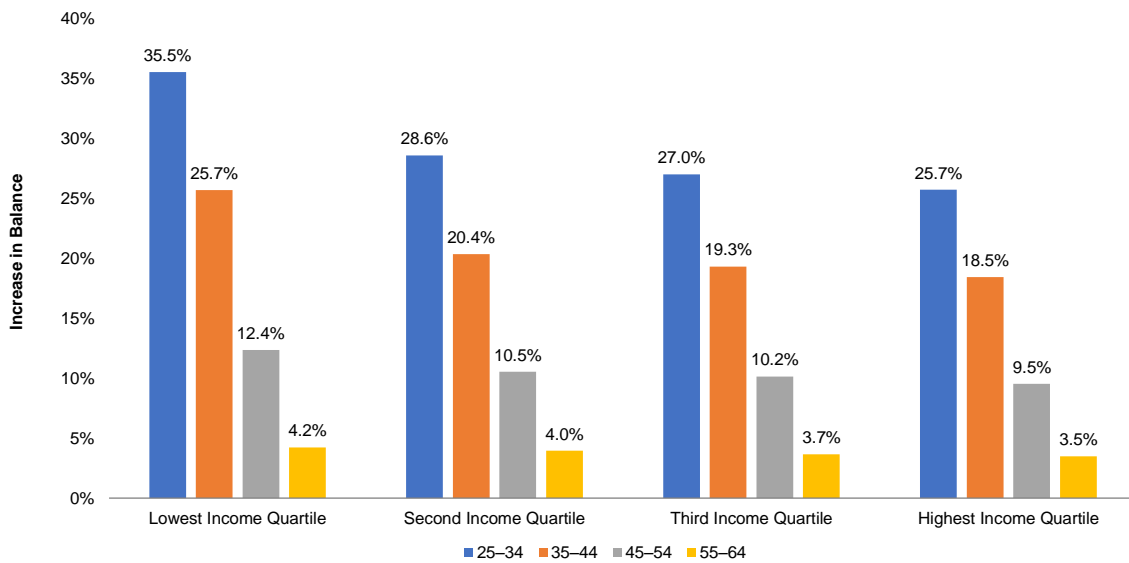
Source: EBRI Retirement Security Projection Model,® versions 2913 and 2915.
Note: 40-year time horizon.

Benefits to Specific Demographic Segments

Figure 17 shows the impact of auto portability on retirement deficits for four gender/family categories. The analysis is displayed as a function of years of future eligibility for defined contribution plans; however, to analyze the impact of auto portability, households with no future years of eligibility are excluded. Even for the case where households have only 1–10 future years of eligibility, Figure 17 shows significant decreases in retirement deficits. The decreases range from 13 percent for single females to 29 percent for married households where the female dies first. As expected, the level of the decreases becomes more significant for those with more years of future eligibility. For households with 21–30 years of future eligibility, the decreases range from 21 percent for single females to 38 percent for married households where the female dies first.

Benefits to Automatic-Enrollment-Enabled DC Plans/Assisting in the Ongoing Shift From DB to DC

Figures 18 and 19 show the median of the final-average defined benefit plan generosity parameters that would be needed for equivalence with automatic enrollment 401(k) plans, assuming a full auto portability scenario for the 401(k) plans (but not the defined benefit plans). As expected, the impact of auto portability would be greatest among the lowest income quartile given their lower account balances and the negative correlation between account balances and cashout activity. For example, for those in the lowest income quartile, the median defined benefit (DB) accrual that males (Figure 18) with 21–30 years of plan eligibility would need in order to have the same retirement income that they are projected to have with a 401(k) plan is 2.3 percent of final compensation. The results are even more dramatic for males in the lowest income quartile with only 11–20 years of plan eligibility. In this case, the break-even rate is 3.1 percent.

Assuming the auto portability scenario for 401(k) plans, the results for those with only 1–10 years of eligibility are at least 6.2 percent for all income quartiles for males (Figure 18) and at least 5.9 percent for females (Figure 19). This reflects the larger propensity for those who end up in this category to have shorter tenure positions and hence lower account balances at job change.
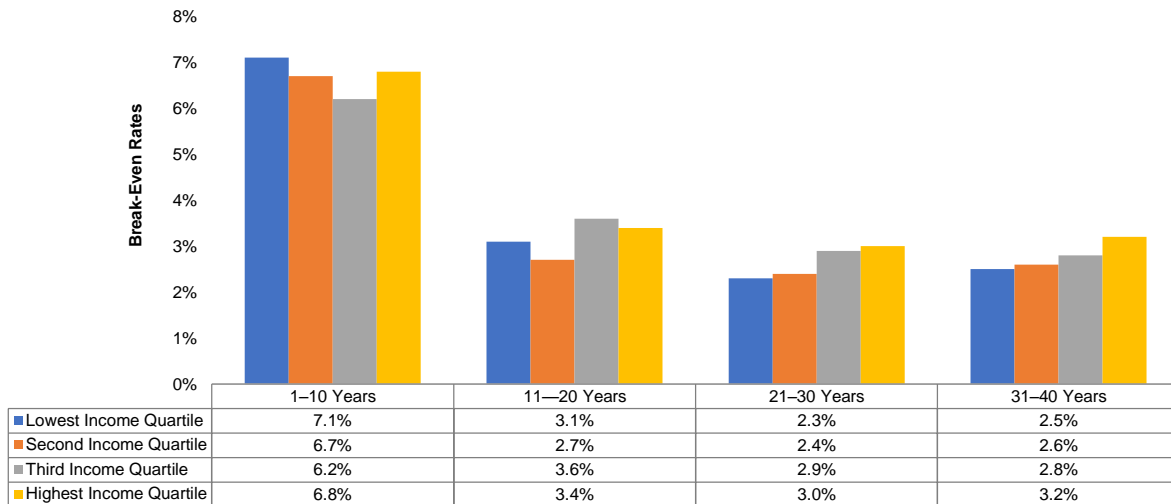
Figure 17
Reduction in Retirement Savings Shortfalls From the Introduction of Auto Portability for Gen Xers, by Future Years of Defined Contribution Eligibility, Marital Status, and Gender
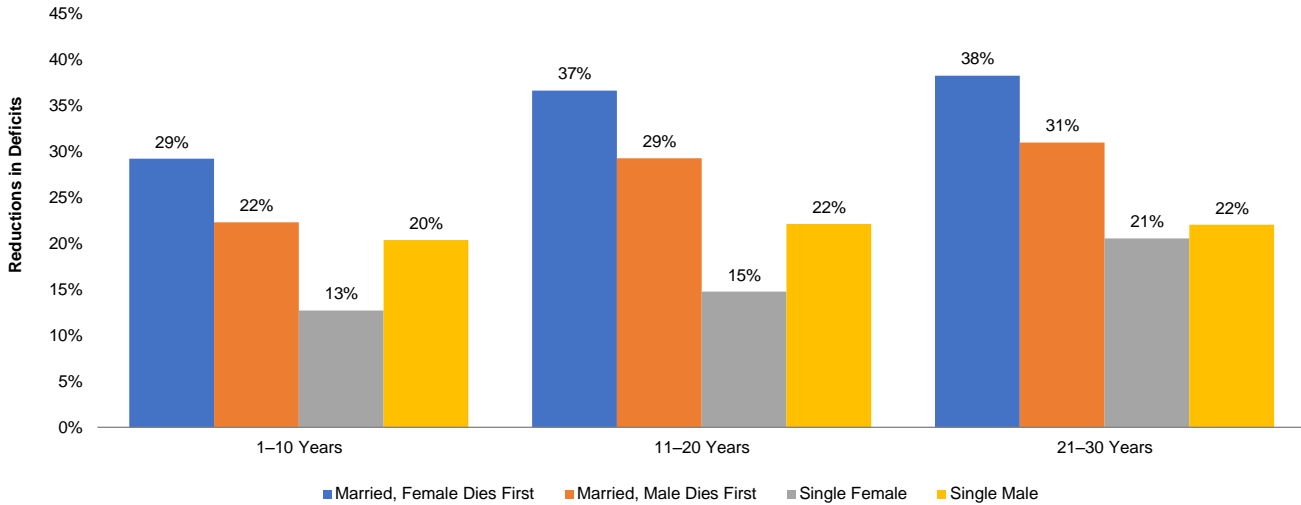
Source: EBRI Retirement Security Projection Model,® versions 3449 and 3451.
Note: Includes bifurcation for sequence of death for married couples.

Figure 18
Median of Final-Average-Pay Defined Benefit Plan Generosity Parameters Needed for Equivalence With Automatic Enrollment 401(k) Plan Among Employees Currently Ages 25–29, by Salary Quartile and Years of Eligibility

Note: *Benchmark Male-Adjusted Annuity Purchase Prices and Auto Portability*

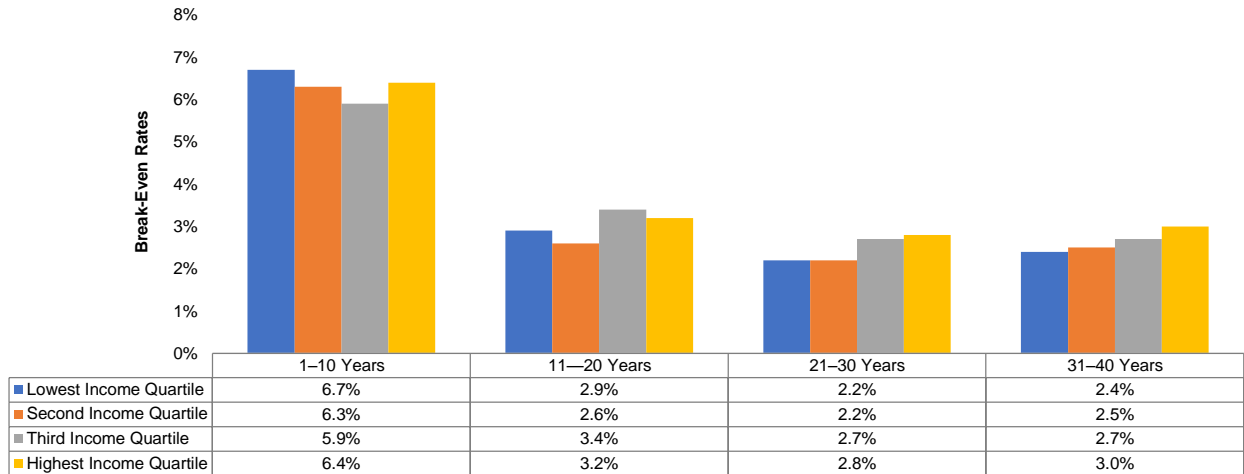|	1–10 Years	11—20 Years	21–30 Years	31–40 Years
■ Lowest Income Quartile	7.1%	3.1%	2.3%	2.5%
■ Second Income Quartile	6.7%	2.7%	2.4%	2.6%
■ Third Income Quartile	6.2%	3.6%	2.9%	2.8%
■ Highest Income Quartile	6.8%	3.4%	3.0%	3.2%

Source: EBRI Retirement Security Projection Model,® version 3431.
The numbers represent the annual accrual percentage that would be multiplied by final average salary and years of participation.
Assumptions: historical rates of return; fees of 0.78%; average wage growth 3.9% until age 55 and 2.8% thereafter; participation probability = (1+unconditional probability)/2 once they have participated; cashouts for defined contribution suppressed by auto portability; cashouts for defined benefit participants follow Vanguard 2012 experience assuming employees react to the lump-sum distribution (LSD) amount in the same manner as the account balance in the 401(k) plan; annuity purchase price = 11.61.

Figure 19

Median of Final-Average-Pay Defined Benefit Plan Generosity Parameters Needed for Equivalence With Automatic Enrollment 401(k) Plan Among Employees Currently Ages 25–29, by Salary Quartile and Years of Eligibility

Note: *Benchmark <u>Female</u>-Adjusted Annuity Purchase Prices and Auto Portability*

	1–10 Years	11—20 Years	21–30 Years	31–40 Years
■ Lowest Income Quartile	6.7%	2.9%	2.2%	2.4%
■ Second Income Quartile	6.3%	2.6%	2.2%	2.5%
■ Third Income Quartile	5.9%	3.4%	2.7%	2.7%
■ Highest Income Quartile	6.4%	3.2%	2.8%	3.0%

Source: EBRI Retirement Security Projection Model,® version 3431.
The numbers represent the annual accrual percentage that would be multiplied by final average salary and years of participation.
Assumptions: historical rates of return; fees of 0.78%; average wage growth 3.9% until age 55 and 2.8% thereafter; participation probability = (1+unconditional probability)/2 once they have participated; cashouts for defined contribution suppressed by auto portability; cashouts for defined benefit participants follow Vanguard 2012 experience assuming employees react to the lump-sum distribution (LSD) amount in the same manner as the account balance in the 401(k) plan; annuity purchase price = 12.34.

Auto Portability in Tandem With Other Legislative Initiatives

Figure 20 shows the reduction in retirement deficit by age for three different proposed coverage enhancements as well as the additional impact of auto portability.

Scenario A assumes all employers are required to offer DC plans, save those with fewer than 10 employees. This analysis assumes that all new plans would be auto-IRAs with a 6 percent default contribution rate that escalates by 1 percent per year until it reaches 10 percent of pay. Based on experience observed from OregonSaves,[7] a 30 percent opt-out is assumed for all new eligibles.
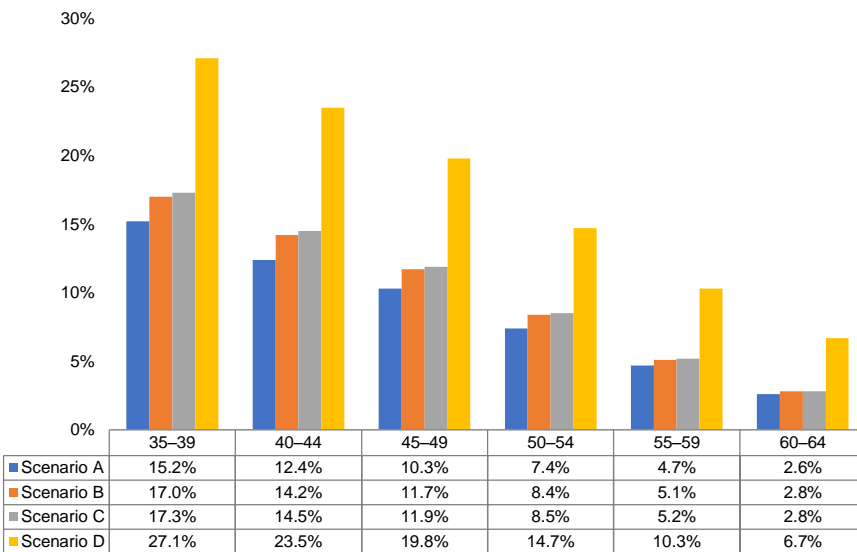
As expected, the youngest age cohort (35–39) would have the largest benefit — a 15.2 percent decrease in retirement deficit — since they would be exposed to the enhanced coverage for a longer period of time. Those in the 40–44 age cohort are simulated to have a 12.4 percent reduction in deficit and those 45–49 are simulated to have a 10.3 percent reduction in deficit. Cohorts over 50 are also simulated to have reductions in retirement deficits; however, the reductions are less than 10 percent.

Scenario B is similar to Scenario A but with a cap on auto-escalation of 15 percent of pay. In this case, the youngest cohort (those ages 35–39) is simulated to have a 17.0 percent reduction in retirement deficit, while those in the 40–44 age cohort are simulated to have a 14.2 percent reduction in deficit. Those ages 45–49 are simulated to have an 11.7 percent reduction in deficit, while cohorts over age 50 are also simulated to have reductions in retirement deficits that are less than 10 percent.

Scenario C is similar to Scenario B, except that all non-excludable employees are covered. [8] In this case, the youngest cohort (those ages 35–39) is simulated to have a 17.3 percent reduction in retirement deficit, while those in the 40–44 age cohort are simulated to have a 14.5 percent reduction in deficit. Those 45–49 are simulated to have an 11.9 percent reduction in deficit, while cohorts over age 50 are simulated to have reductions in retirement deficits that are less than 10 percent.

Finally, in Scenario D of Figure 20, we analyze the impact of auto portability on retirement deficits. When auto portability is in place, the youngest cohort (those ages 35–39) is simulated to have a 27.1 percent reduction in retirement deficit, while those in the 40–44 age cohort are simulated to have a 23.5 percent reduction in deficit and those 45–49 are simulated to have a 19.8 percent reduction in deficit. Those in the 50–54 age cohort are simulated to have a 14.7 percent reduction in deficit, and those 55–59 are simulated to have a 10.3 percent reduction in deficit. Cohorts over age 60 are also simulated to have reductions in retirement deficits; however, the reductions are less than 10 percent.

Figure 20
Reduction in Retirement Savings Shortfalls Across Various Scenarios, by Age

	35–39	40–44	45–49	50–54	55–59	60–64
Scenario A	15.2%	12.4%	10.3%	7.4%	4.7%	2.6%
Scenario B	17.0%	14.2%	11.7%	8.4%	5.1%	2.8%
Scenario C	17.3%	14.5%	11.9%	8.5%	5.2%	2.8%
Scenario D	27.1%	23.5%	19.8%	14.7%	10.3%	6.7%

Description of Scenarios:
A. Plan required for all employers except the smallest. Auto-IRA for new sponsors. 6% default with escalation to 10%. 30% opt-out for new eligibles.
B. Same as A with escalation to 15%.
C. Same as B but includes non-excludable employees.
D. Same as C but includes full auto portability.

Source: EBRI Retirement Security Projection Model,® version 3565.

Figure 21 shows that in aggregate, the RSS would be reduced by $404 billion or 10.6 percent of the current $3.83 trillion retirement deficit. If auto portability were added to the system simultaneously with Scenarios A, B, and C, the deficit would be reduced by an additional $293 billion for a total reduction of $697 billion or 18.2 percent of the current deficit. In other words, EBRI's analysis shows that while policy to expand retirement plan coverage can significantly impact aggregate savings shortfalls, initiatives to reduce plan leakage can materially augment such efforts.

Figure 21
Reduction in Retirement Savings Shortfalls for Households Headed by Those Ages 35–64
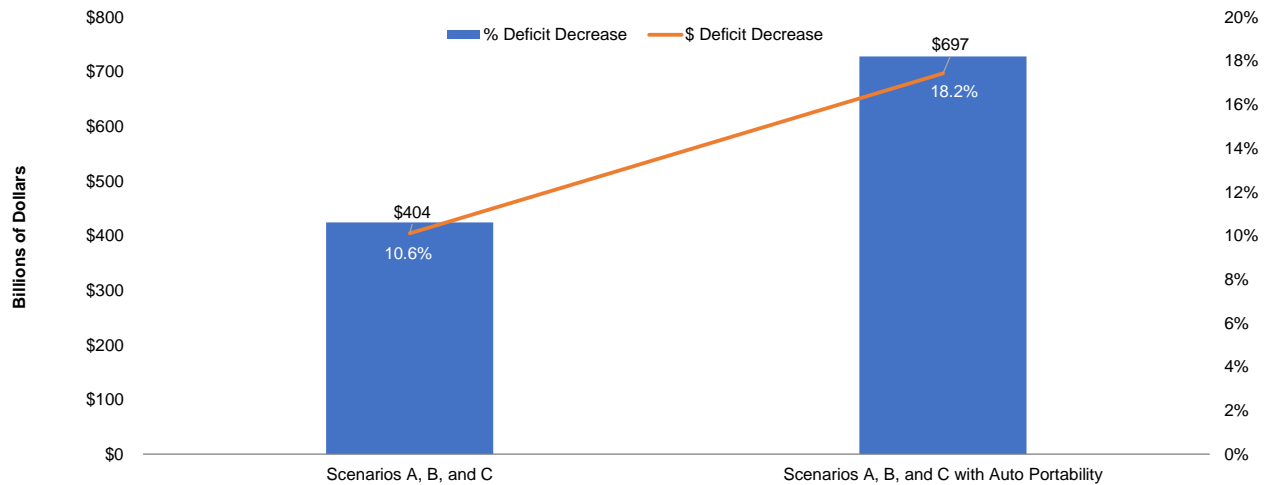
Source: EBRI Retirement Security Projection Model,® versions 2258, 2370, 2373, 2375, 2749, and 3425.
Note: Assumes long-term-care costs are present. Assumes current retirement deficit of $3.83 billion.
*Retirement Savings Shortfalls (RSS) represent the present value (at age 65) of all simulated deficits in retirement for households where the head of household is ages 35–64.

Summary and Conclusions

Our research indicates that auto portability, where a participant's account from a former employer's retirement plan would be automatically combined with their active account in a new employer's plan, could help keep DC assets in the retirement system and reduce leakage from cashouts upon employment termination. Whether evaluated as a stand-alone policy initiative or in tandem with other legislative initiatives, implementation of auto portability could significantly reduce retirement savings deficits. We found:

- As a stand-alone policy initiative, we project that the present value of additional accumulations over 40 years resulting from "partial" auto portability (participant balances less than $5,000 adjusted for inflation) would be $1,509 billion, and the value would be $1,987 billion under "full" auto portability (all participant balances). Under partial auto portability, those currently 25–34 are projected to have an additional $659 billion, increasing to $847 billion for full auto portability.

- Auto portability produces significant decreases in retirement deficits for specific demographic segments, ranging from 13 percent for single females to 29 percent for married households where the female dies first. For households with 21–30 years of future eligibility, the decreases range from 21 percent for single females to 38 percent for married households where the female dies first.

- Auto portability, when combined with automatic-enrollment-enabled defined contribution plans, results in significantly higher defined benefit plan generosity parameters needed for equivalence, suggesting that auto portability could assist in the ongoing shift from DB to DC plans.

- When considered in tandem with other legislative initiatives that expand workplace access to retirement plans, we found that the addition of auto portability with auto-IRAs resulted in an aggregate reduction in the RSS by an incremental $293 billion for a total reduction of $697 billion or 18.2 percent of the current deficit. While policies that expand retirement plan coverage can significantly impact aggregate savings shortfalls, our analysis

further suggests that an auto portability initiative that reduces plan leakage can materially augment such efforts.

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Endnotes

[1] For examples of a significant percentage of young employees with zero equity exposure in their 401(k) plans, large numbers of employees on the verge of retirement with virtually all of their 401(k) balances in equities, and a significant concentration of employees of all ages with substantial portions of their 401(k) balances invested in company stock prior to 2006, see Holden and VanDerhei (August 2006).

[2] VanDerhei (June 2014).

[3] RSPM® was derived from efforts in the late 1990s on behalf of certain states to determine whether their residents would have sufficient income when they reached retirement age. After conducting studies for Oregon, Kansas, and Massachusetts, a national model was developed in 2003. It was updated in 2010 to incorporate several significant changes, including the impacts of defined benefit (DB) plan freezes, automatic enrollment provisions for 401(k) plans, and the crises in the financial and housing markets. New versions of the model have been generated on a periodic basis since then to include updates for financial and real estate market performance, employee demographics, etc.

[4] VanDerhei (June 2014).

[5] The analysis assumes no participant behavior change for participation, contribution, or asset allocation.

[6] The analysis assumes no leakage from the auto portability system.

[7] For additional detail on OregonSaves, see VanDerhei (October 2018).

[8] The only employees not required to be covered are:

- Employees who have not attained age 21.

- Employees subject to a collective bargaining agreement.

- Nonresident aliens with no U.S.-source income.

- Employees until they have attained (1) a year of service (generally a year in which the employee has at least 1,000 hours of service), or (2) two consecutive years in which the employee has at least 500 hours of service.