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# Plug the Drain:
# 401(k) Leakage and the Impact on Retirement

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## Introduction

When it comes to American workers' retirement income adequacy, considerable emphasis has been placed on successfully enrolling eligible employees in their 401(k) plans at robust levels—and rightly so: you need savings to create retirement income. Nonetheless, saving in the plan isn't enough; participants must also maintain their balances for retirement and avoid dipping into them beforehand. Indeed, a May 2011 Employee Benefit Research Institute (EBRI) Policy Forum analysis finds that various forms of plan leakage such as withdrawals and cashouts can have a significant impact, potentially resulting in double-digit reductions in retirement income adequacy over the full career of a plan participant.

In its Plug the Drain white paper, the Defined Contribution Institutional Investment Association (DCIIA) examines the impact of leakage factors on workers' retirement income adequacy. We will examine how loans, hardship withdrawals, distributions and cash outs impact potential outcomes. Contrary to many assumptions around leakage, the DCIIA research points to trends around cash outs and distributions to be the most harmful of the leakage points. Finally we will provide recommendations on steps plan sponsors can take now to prevent retirement savings leakage.

## Retirement Income Adequacy in 401(k) Plans

EBRI and DCIIA first studied 401(k) plan retirement income adequacy in a joint study conducted in 2010[1]. The results of the study found that plans that implemented automatic enrollment and automatic contribution escalation in a robust fashion were projected to afford low-earning workers with 31-40 years of plan eligibility nearly an 80% probability of replacing 4/5$^{ths}$ of their pre-retirement income in retirement on a real basis.

Using EBRI's simulation model, the automatic features analysis defined a "successful outcome" as one in which a pre-retirement 401(k) balance, combined with the worker-specific benefits projected under Social Security, was projected to provide a total real replacement rate of at least 80%. The analysis was limited to younger employees (with 31-40 years of 401(k) eligibility) and provided separate results for employees in the highest- and lowest-income quartiles. This paper focuses on the lowest-income workers.

In its baseline analysis of plan implementations of automatic enrollment and automatic contribution escalation, the EBRI/DCIIA analysis found that fewer than 45% of lower income workers could expect to successfully replace 4/5$^{ths}$ of their income in retirement given their plans' current, generally conservative implementation of automatic enrollment—along with assumed low increase levels and caps on auto escalation. However, when plans were assumed to implement automatic features more robustly—for example, with contributions escalating by 2% instead of 1% of pay annually and with contribution escalation capped at 15% of compensation instead of 6%—the probability of lower-wage workers replacing at least 80% of income in retirement soared 33.5 percentage points to 79.2% *(Figure 1)*.

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Reasons for conservative implementation generally include cost (e.g., company matching contributions), fiduciary concerns, and the desire to avoid participant opt outs and objections.

## "Conservative" Versus "Robust" Auto Features

The "conservative" implementation of automatic features in the November 2010 study[2] includes:

- Capping automatic contribution escalation at 6% of compensation.
- Implementing 1% annual increases in contributions.
- Assuming participants opt out of contribution escalation at rates similar to past experience.
- Defaulting participants at current, generally low initial automatic enrollment contribution rates.
- No effort to encourage employees to make contributions at a level comparable to their participation in a prior employer's 401(k) plan.

In the EBRI/DCIIA model, a "robust" implementation of automatic features includes:

- Capping automatic contribution escalation at 15% of compensation.
- Implementing a 2% annual increase in contributions.
- Successfully preventing participants from opting out of automatic contribution escalation.
- Where applicable, successfully encouraging employees to make contributions at a level comparable to their participation in a prior employer's 401(k) plan.

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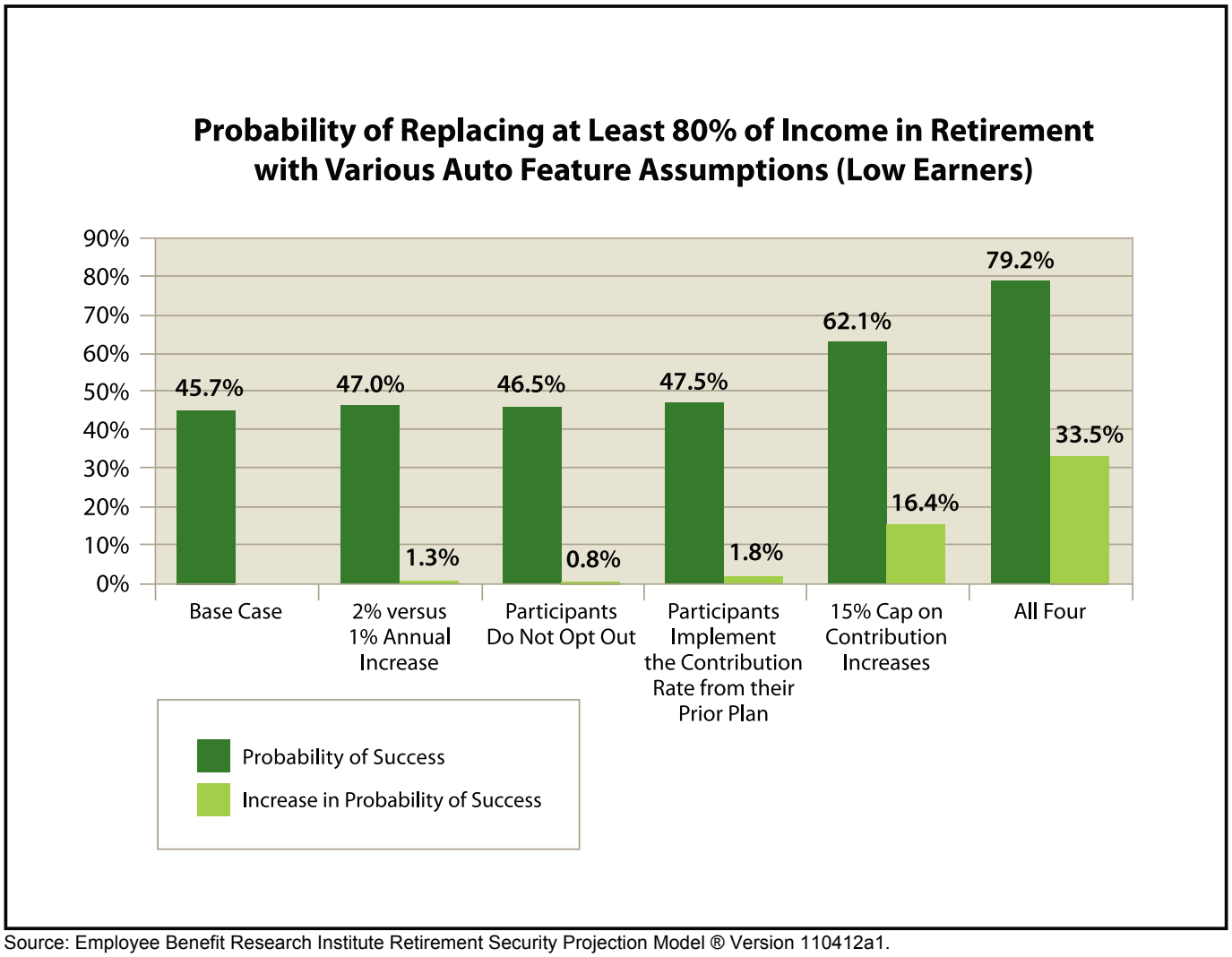
Figure 1[3]




Source: Employee Benefit Research Institute Retirement Security Projection Model ® Version 110412a1.

The EBRI/DCIIA study demonstrated that thoughtful plan design and communication when it comes to implementing 401(k) plan participation automatic features can materially alter the long-term savings levels of millions of Americans. Conversely, it showed the damage that low contributions to 401(k) plans can wreak on retirement income adequacy. But is it enough just to focus on aggressively enrolling workers into 401(k) plans? Many don't believe so.

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### How Big of a Problem Is Plan Leakage?

In a 2011 white paper that used stylized examples input into EBRI's Retirement Security Projection Model, Aon Hewitt found that "Removing cash from the retirement program [through loans, withdrawals, cashouts] decreases the participants' expected wealth by dramatic rates."[4] Likewise, a study by the Center for American Progress suggests that 401(k) loans may decrease wealth accumulation at retirement by as much as 22%.[5] In fact, the Savings Enhancement by Alleviating Leakage (SEAL) in 401(k) Savings Act, introduced in 2011 by Senators Herb Kohl of Wisconsin and Mike Enzi of Wyoming to reduce 401(k) plan leakage, notes that "Study after study has shown leakage from retirement plans can significantly reduce workers' retirement savings and the amount of money they will have when they retire." The criticism of 401(k) plan leakage—particularly when it comes to loan taking—however, is not universal. Beshears et al[6] finds that 401(k) plan loans can be a reasonable source of credit in many circumstances and that "the net impact of 401(k) loans on asset accumulation is likely to be small."

Following is an assessment of current sources of defined contribution plan leakage:

## Distributions/Cashouts

- Under current US law, employees generally can liquidate their 401(k) balances when they change jobs (known as "cashing out").
- Terminating employees also are permitted to roll their balances into another 401(k) plan or an IRA, and may even be able to maintain their balances in the prior employer's 401(k) plan.
- Aon Hewitt finds that among workers who terminated from employment in 2010, 42% took a cash distribution—and that the lower the balance, the more likely a participant was to do so (75% of those with balances below $1,000 took a cash distribution in the study).[7]
- Cashouts represent monies that are forever lost to the retirement system.

## Hardship Withdrawals

- Hardship withdrawals are fairly universally offered by 401(k) plans.
- However, only a small number of employees take advantage of them: 6.9% of employees took any type of withdrawal in 2010 (including age 59½ in service withdrawals) according to Aon Hewitt, with one in five of these being hardships.[8]
- The issue with hardship withdrawals is that they cannot be repaid into the plan, and participants taking such withdrawals incur a 10% tax penalty (in addition to normal taxes).
- As such, those taking hardship withdrawals—while fewer in number than loan-takers—likely suffer a greater detriment to their 401(k) plan balances than loan takers, and hence to their ultimate retirement income adequacy.

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# Loans

- Virtually all 401(k) plans offer loans, and the majority allow more than one loan to be outstanding at a time.[9]
- Generally, loans are made available as a means of increasing the attractiveness of the plan.
- Research shows that plans that offer loans have higher participation than loans that do not.[10]
- On the positive side, 401(k) loans can be a cheaper source of borrowing than other alternatives (such as credit card debt). Further, interest from 401(k) loans is paid into the participant's account, instead of to an outside creditor.
- On the negative side, loans:
  - Can cost participants' balances market growth (monies borrowed from the plan are no longer invested in the market).
  - Must be repaid on an after-tax basis.
  - Can cost participants loan origination and maintenance fees depending upon the plan.
  - May fail to be repaid at all, resulting in money disappearing forever from the participant's balance.
- In a 2010 report, Fidelity finds that a record 22% of all 401(k) participants had an outstanding loan on their account. As such, the usage of 401(k) plan loans is reasonably widespread, and evidently growing.

## Leakage and Retirement Income Adequacy: EBRI Study

How much damage does leakage do to workers' retirements? EBRI asked this question in conducting a 2011 Policy Forum analysis. The analysis examined the impact of cashouts, hardship withdrawals, loans and delays in participation (following job changes) on retirement income adequacy. The analysis builds on the automatic features study cited earlier. EBRI started by updating the automatic features survey to incorporate revised cashout assumptions.[11]

### *Cashouts*

The analysis finds that 401(k) plan cashouts reduce the probability of successfully replacing the majority of income in retirement within the 401(k) environment (in the robust automatic features scenario) by more than 5 percentage points (78% with cashouts versus 83% without cashouts) *(Figure 2).*

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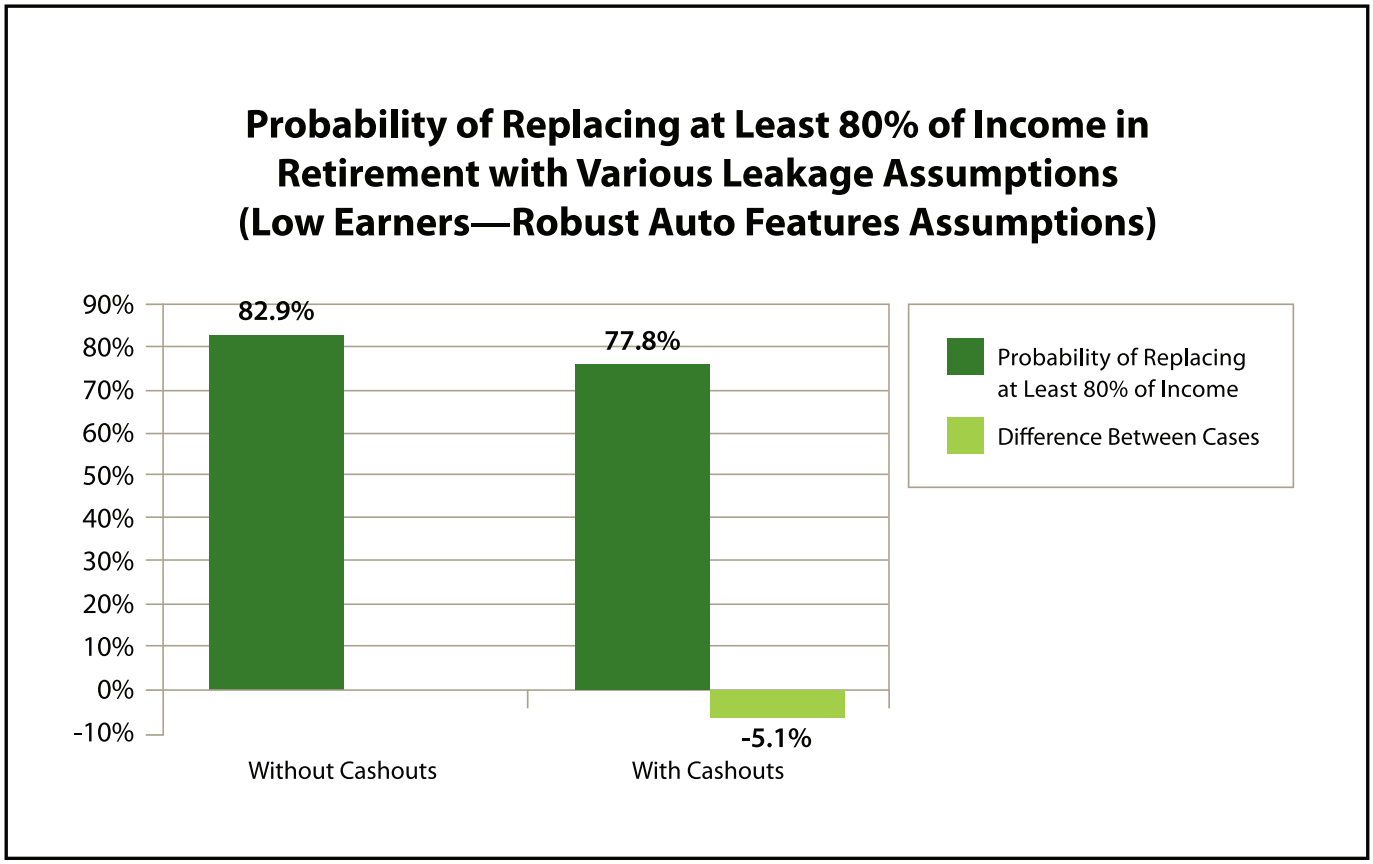
Figure 2




Source: Employee Benefit Research Institute Retirement Security Projection Model ® Version 110412a1.

A five-percentage point reduction in the probability of success is material—but clearly does not compare to the 33.5 percentage point differential seen in the automatic features analysis. As such, EBRI next asked the question, what if job changers not only cashed out, but also delayed participation in their next 401(k) plan?

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### *Delayed Participation for Job Changers*

EBRI's analysis of the impact of delayed plan participation by job changers on retirement income replacement potential finds that a one-year delay in participation has a very modest projected impact, reducing the probability of success by about half a percentage point. However, if a job changer delays participation by five years, the probability of success is reduced by more than 5 percentage points. In sum, workers who both cash out their balances when they change jobs and delay participation in their new employer's plan by five years saw an estimated 10 percentage point decrease in the probability of success. As such, while individually the impact of these two factors is material but not catastrophic, together they begin to create a steep loss in the probability of being able to replace the majority of income in retirement.

## Reasons for Delays in Plan Participation

Delays in 401(k) plan participation by eligible employees can occur for a variety of reasons such as:

- Many 401(k) plans still do not offer automatic enrollment.
- Under voluntary enrollment, employees may be prone to inertia (e.g., they never find the time to enroll, they perceive enrollment as too complicated and put it off, etc.)
- Some plans have service requirements for eligibility to participate, receive employer matching contributions, etc.

### *Hardship Withdrawals*

Next, EBRI took into account the impact of hardship withdrawals by modeling the analysis in three ways:

1) Pure impact of hardship withdrawals on retirement income adequacy.
2) Impact of hardships and the accompanying statutory requirement to suspend participant contributions for six months following a withdrawal.
3) Impact of hardships and a 24-month delay in re-starting contributions following a withdrawal due to participant inertia.

EBRI's analysis finds that hardship withdrawals alone reduced the probability of success by a modest 1 percentage point. However, when the statutory six-month suspension of contributions is also taken into account, the reduction is nearly two percentage points. Assuming that it takes participants 24 months to re-start contributions, the reduction is nearly 3 percentage points.

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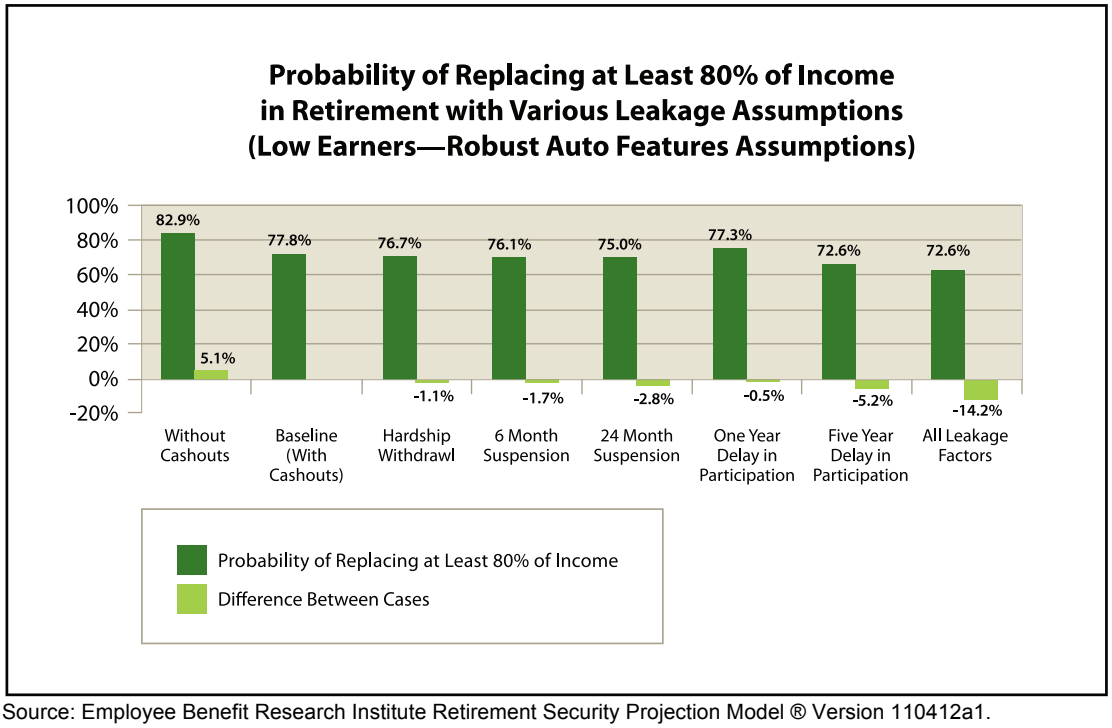
## *Cumulative Impact: Cashouts / Participation Delays / Hardship Withdrawals*

Most compelling, when EBRI combined the projected impact of cashouts, delays in participation by job changers, and hardship withdrawals, results show that the projected probability of success under this worst case leakage scenario drops by more than 14 percentage points. This outcome amounts to a significant potential derailment of retirement income replacement. *(Figure 3)*

## *Loans*

Interestingly, when modeling loans as the final leakage factor, EBRI's analysis finds that the impact of loan taking on retirement income replacement generally is negligible. This is consistent with the Beshears et al analysis.[12] However, a study by Weller and Wenger shows that the effects of loan taking are exacerbated by the fact that loan repayments entirely replace or "crowd out" contributions that participants otherwise would have made to the plan—resulting in a highly detrimental impact on retirement income replacement.[13] Others note that the majority of participants with loans at termination default. However, the Beshears et al study finds that the presence of loans in a defined contribution plan has such a positive influence on employees' savings behaviors that the negative effects of crowding out, and the potential for defaulting upon termination, are offset. Beshears et al explains "the positive effects of loan availability on savings rates are experienced by all participants, whereas only a minority of savings plan participants actually take out a 401(k) loan."[14]

Figure 3[15]




Source: Employee Benefit Research Institute Retirement Security Projection Model ® Version 110412a1.

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## Implications for Policymakers and Plan Sponsors

The implication of EBRI's analysis for policymakers and plan sponsors is that improving participation in defined contribution plans will have the greatest impact on retirement income adequacy. However, plan leakage is also an important area of focus—particularly when it comes to cashouts. To prevent such leakage, DCIIA recommends that policymakers and plan sponsors should consider the following:

### *DCIIA Recommendations for Policymakers*

- **Cashouts:** Reduce access to defined contribution balances by terminated participants. For example, instead of allowing cashouts automatically upon termination, plans should restrict cashouts to those in need (similar to in-service hardship withdrawals).[16]
- **Hardship Withdrawals:** Eliminate the six-month contribution suspension requirement for hardship withdrawals. This action may decrease the potential impact, especially given possible participant inertia when it comes to re-instating plan contributions.
- **Loans:** Implement limits on loan-taking and allow post-termination repayment of loans. While EBRI's analysis finds that loans do not appear to have a meaningful negative impact, DCIIA believes that limits may be desirable to prevent defaults by participants upon termination. At a minimum, policymakers should encourage plan sponsors to permit post-termination repayment of loans.

### *DCIIA Recommendations for Plan Sponsors*

- Actively promote the benefits to new employees of rolling over existing balances from former employer's plans into their new employers' plan, possibly as part of the new hire orientation; encourage ways to simplify and automate this process.
- Encourage retired employees to leave assets in the plan through communication efforts and through plan design (e.g., by allowing more flexibility around partial distributions).
- Facilitate rollovers by offering streamlined, online rollover options.
- Automatically restart contributions after the statutory six-month suspension period.
- Target communication messages to employees' with hardship withdrawals to encourage restarting contributions in the plan.
- Reduce the number of loans allowed and/or restrict the available loan balance.
- Allow loan payments after termination.

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## Conclusion

Based on a variety of analyses, this paper concludes overall that:

- Policy makers and plan sponsors are correct to focus on improving plan participation, especially via how automatic enrollment and contribution features are designed.
- Leakage factors in DC plans can be an insidious drain on retirement income over time, and should also be an area of concern.

The research also concludes that some forms of leakage—in particular loans—have a negligible impact on retirement income adequacy and may be necessary features to encourage robust plan participation. It is the job of policymakers and plan sponsors to weigh the positives of plan features that may result in leakage against the potential negative consequences when it comes to the ultimate goal of many DC plans: retirement income adequacy.

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## Endnotes

[1] Jack VanDerhei and Lori Lucas. The Impact of Auto-enrollment and Automatic Contribution Escalation on Retirement Income Adequacy. November 2010. EBRI Issue Brief #349

[2] Jack VanDerhei and Lori Lucas. The Impact of Auto-enrollment and Automatic Contribution Escalation on Retirement Income Adequacy. November 2010. EBRI Issue Brief #349

[3] The increase in probability of success is given relative to the base case.

[4] Leakage of Participants' DC Assets: How Loans, Withdrawals, and Cashouts Are Eroding Retirement Income. Aon Hewitt. 2011.

[5] Weller, Christian E., and Jeffrey B. Wenger (2008). "Robbing Tomorrow to Pay for Today," Center for American Progress, Washington, DC.

[6] The Impact of 401(k) Loans on Saving. John Beshears, Stanford University and NBER; James J. Choi, Yale University and NBER; David Laibson, Harvard University and NBER; Brigitte C. Madrian, Harvard University and NBER. September 29, 2010

[7] Leakage of Participants' DC Assets: How Loans, Withdrawals, and Cashouts Are Eroding Retirement Income. Aon Hewitt. 2011.

[8] Leakage of Participants' DC Assets: How Loans, Withdrawals, and Cashouts Are Eroding Retirement Income. Aon Hewitt. 2011.

[9] Hewitt Associates' 2009 Trends and Experience in 401(k) Plans Survey.

[10] The Impact of 401(k) Loans on Saving. John Beshears, Stanford University and NBER; James J. Choi, Yale University and NBER; David Laibson, Harvard University and NBER; Brigitte C. Madrian, Harvard University and NBER. September 29, 2010.

[11] Updated with 2010 industry data.

[12] The Impact of 401(k) Loans on Saving. John Beshears, Stanford University and NBER; James Choi, Yale University and NBER; David Laibson, Harvard University and NBER; Brigitte Madrian, Harvard University and NBER. September 29, 2010.

[13] Weller, Christian E., and Jeffrey B. Wenger (2008). "Robbing Tomorrow to Pay for Today," Center for American Progress, Washington, DC.

[14] The Impact of 401(k) Loans on Saving. John Beshears, Stanford University and NBER; James J. Choi, Yale University and NBER; David Laibson, Harvard University and NBER; Brigitte C. Madrian, Harvard University and NBER. September 29, 2010.

[15] The difference between cases reflects the difference between the base case and each alternative case presented in the chart.

[16] This recommendation would not apply retroactively, but only for future contributions.