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# Precautionary Liquidity and Retirement Saving

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## Abstract

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There is a large debate on the optimal degree of savings' liquidity in retirement systems. Liquid retirement savings allow people to flexibly respond to life events such as income shocks but can also lead to undersaving. This paper analyses the saving choices of 650,000 employees at more than 1,500 French firms in French employee savings plans and shows three evidence of "precautionary liquidity" (preference for holding assets in an accessible form not because of current liquidity need but because of a possible future need): (1) restricting liquidity of the default option reduces default take-up and plan participation ; (2) Employees try to avoid the illiquid saving option, unless it is matched at a large match rate ; (3) When making early withdrawals, they prioritize the liquidation of the illiquid account.

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James Poterba is the Mitsui Professor of Economics at the Massachusetts Institute of Technology and the President and Chief Executive Officer of the National Bureau of Economic Research, a non-profit research organization with more than 1600 affiliated economists. He has served as President of the Eastern Economic Association and the National Tax Association, and as vice president of the American Economic Association. He is a member of the National Academy of Sciences and a Fellow of the American Academy of Arts and Sciences, the American Finance Association, the British Academy, and the Econometric Society.

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How do restrictions on account access affect the attractiveness of employer-sponsored retirement saving plans? “Precautionary liquidity” manifests itself as a preference for holding assets in an accessible form not because of any current liquidity need, but because of a possible future need. Just as a precautionary saver will forego current consumption and build up a buffer stock of savings to prepare for possible future needs, a precautionary liquidity demander will avoid investment options with limited access, such as accounts that cannot be tapped until retirement, in favor of more liquid alternatives.

Recent research on retirement plan design has considered the role of restrictions on pre-retirement withdrawals. Beshears, Choi, Clayton, et al. (2021) suggest that a social planner designing mandatory retirement accounts for a population of present-biased households should create a saving program that combines an illiquid investment vehicle, with no access until retirement, with a liquid counterpart that can be tapped for financial needs at any time. When saving plan participation is voluntary, however, restricting liquidity could reduce contributions and employee participation. While limiting access can reduce leakage of plan assets prior to retirement age, it can also lower contributions and trigger demand for precautionary liquidity, so that its total impact on retirement security is ambiguous.

We explore this issue using data on plan participation and withdrawals from France, where employer-sponsored plans offer both medium-term and long-term saving options.

## **I. Context and Data**

Voluntary retirement saving is less important in France than in the U.S. because most retirement income is provided through a public pay-as-you-go pension system. A program requiring employers to offer defined-contribution (DC) saving plans, launched in 1967, originally included only medium-term (MT) saving options. Contributions could be withdrawn after five years. Long-term (LT) retirement saving options came much later, in 2003.

Today, French firms with more than 50 employees are still required to offer MT investment options (in PEE, for *plan d'épargne d'entreprise*). They may also offer LT investment options (in PERCO for *plan d'épargne retraite collective*). Access to assets in LT saving vehicles is restricted until retirement. There are hardship withdrawal provisions, which are more limited for LT saving

vehicles than for MT ones, exacerbating the liquidity disparity. In 2016, 56% of French employees, according to DARES (2018), participated in these saving plans.

We analyze an administrative data set from one of the largest providers of DC plans in France. It includes information collected in 2017 on the saving choices of 645,966 active employees who are younger than 67, reside in France, receive variable remuneration during the year, and work at one of 1,583 sample firms with at least 50 employees. The average firm's workforce is 40% female, and the cross-firm average of the median worker's age is 45.6 years. The average across firms of the median worker's variable remuneration is EUR 1,761. About one third of firms offer LT saving vehicles in addition to mandatory MT options; roughly one quarter offer employees the chance to purchase company stock in their saving plans.

The firm selects a collection of investment funds – ranging between 1 and 50 and averaging 7.2 at the firms in our sample - along with a default investment fund for the MT, and, if offered, LT vehicles. The most common fund categories in the MT menu are balanced and diversified stock funds. The default MT fund must be a relatively low-risk fund: a money market, bond, or balanced fund. If the employer offers an LT option, the default investment must be a balanced life-cycle fund. The employer may match contributions to different investment options at different rates, which can be as high as 300 percent. Firms may also offer company stock as an MT investment option. Unlike U.S. firms, French firms may condition their matching rates on the worker's asset allocation.

If the employee takes no action, variable compensation is automatically deposited in the firm's default investment option. Three-quarters of saving plan participants in our sample opt out of the default and make an active choice. The default may not include employer stock. If the firm offers profit sharing, as most do, and an LT saving vehicle, then the default must include an LT option.

An employee has three options with regard to variable remuneration: 1) invest it all in the default option (the passive choice); 2) decline the default option and make an active investment choice combining the plan's funds; and (3) opt out of the saving plan, thereby receiving variable remuneration as wage income and paying associated income tax.

The rich menu of options that are presented to employees makes France an attractive environment for studying behavioral factors in retirement saving choices and for building on the

finding in Beshears, Choi, Laibson, and Madrian (2021) that the characteristics of a plan's default option affect the likelihood that plan participants make an active choice.

The next two sections present three tests of whether employees avoid LT options. There is likely to be significant heterogeneity across workers; we focus only on averages. The first test investigates whether the presence of an LT fund in the plan default affects take-up of the default. The second examines how the spread between the first-euro match rates for a plan's MT and LT options affects take-up of the LT options. The final test considers withdrawals from MT and LT saving vehicles when workers experience hardship conditions.

## **II. Do Workers Avoid Less Liquid Investment Options?**

Figure 1 shows that employees are 31.7 percentage points less likely to accept the default allocation when it includes an LT component. We reject the null hypothesis of equality at the 99% confidence level, clustering standard errors either by firm or by firm and geographic region. This suggests that workers opt out of the default to avoid LT options.

Most plan attributes are endogenous, and we cannot exclude the possibility that this finding reflects unobservable factors that make LT vehicles less attractive for reasons besides their limited liquidity, or unobserved differences between the workers who are offered LT options and those who are not. However, conditional on a plan offering LT options, inclusion of an LT component in the default is not an employer choice. When an employer decides to offer LT options, the default must include an LT component. Brière, Poterba, and Szafarz (2021) show that the result in Figure 1 is robust to including worker- and firm-level controls in discrete choice models for default acceptance.

Table 1 shows how the take-up of LT options varies with the match rate spread, which is a rough proxy for the compensation offered for accepting the liquidity loss that comes with an LT saving vehicle. Here, we exclude matches that are offered on company stock, an asset class that is, by law, only available in MT vehicles. We stratify the firms that offer LT options and matching contributions, which collectively employ 149,950 workers, into three groups: those with an LT match premium that is less than or equal to zero, those with an LT match premium between 0 and 100%, and those with an LT match premium above 100%.

Table 1 shows that for plans with a lower match rate on LT than on MT saving, only 38% take up the LT option. This share is 63% when the LT match premium is positive and less than

100%, and to 72% when the premium is larger than 100%. A bivariate regression shows that a 10 percentage point increase in the LT match rate, holding the MT match constant, is associated with a 1.4 percentage point increase in LT take-up. More than half of the workers who are offered LT options are employed at firms with higher matches on LT than MT saving.

### **III. Early Withdrawals: Do Workers Demand Precautionary Liquidity?**

Our third test is based on the patterns of early withdrawals from MT and LT accounts, not on contributions. Early withdrawals are only possible under hardship conditions. Disability or death of the participant or a close relative, over-indebtedness, buying a primary residence, disaster recovery, and the end of unemployment rights allow access to assets in both MT and LT accounts.

We attempt to disentangle withdrawals that are associated with current needs from those that could be attributed to precautionary demand for liquidity. In the latter case, participants take advantage of the occurrence of hardship conditions to access otherwise illiquid assets.

We focus on the 481,163 plan participants with employer-sponsored saving accounts for the full year 2017. Among these participants, 38.1% were eligible to make regular withdrawals from their MT accounts, because at least some of their MT contributions had been made in or before 2012. Within this group, 25.9% made a regular withdrawal, 4.4% took an early withdrawal associated with hardship, and 71.0% did not make a withdrawal. Some participants made more than one type of withdrawal.

Among those who took a hardship withdrawal, more than two thirds had access to, *but did not take*, a regular withdrawal. This is consistent with these workers recognizing that their hardship offered a transitory opportunity to withdraw otherwise-restricted funds, while their unrestricted funds could be withdrawn at any time. The decision to withdraw illiquid funds, while preserving the balance in the liquid account, is consistent with a precautionary demand for liquidity.

Figure 2 shows early withdrawals from MT and LT accounts, divided by the sum of the beginning-of-year balance and any within-year contributions prior to the withdrawal. We split the sample depending on whether the participant held only MT, or both MT and LT, accounts. We focus on the 6,404 participants who either have only an MT account or both MT and LT accounts, and who experience a hardship that permits withdrawals from both MT and LT accounts.

Figure 2 presents withdrawals by those workers who have only an MT account as a reference group. The average withdrawal among these participants is 86% percent of their MT balance. For workers with both MT and LT accounts, the share of the LT account withdrawn (92%) is significantly larger than the 68% for the MT account. We reject the null hypothesis of equality at the 99% confidence level. This suggests that at least some workers with both MT and LT accounts prioritize the liquidation of the LT account. The liquidity benefit of withdrawing assets from a restricted account is greater if the term of the account restriction is longer.

#### **IV. The Burden of Choosing**

Figure 1 shows that workers whose plans offer LT options are less likely than others to take up the plan default, which must include an LT component. The figure also shows that workers are 6.4 percentage points less likely to participate in the plan *at all* when it offers LT options. The null hypothesis of equal take-up is rejected at the 99% confidence level when we cluster standard errors by firm and region, and at the 89% level when we cluster by firm alone.

While this could be the result of unobserved worker heterogeneity or omitted other attributes of plans with LT options, a cursory comparison of plans with and without LT options suggests that the former are more attractive on at least some other dimensions. Employees who are offered LT options are 9% more likely to be offered employer stock (69% versus 60%), and 45% more likely (90% versus 45%) to be offered an employer match. Plans with LT options also offer more investment possibilities, on average, in their MT menus. These cross-plan differences make the finding of lower take-up of LT-inclusive plans more puzzling.

Since plans with LT options are typically more complex than those without them, choice overload could explain the lower participation rate. For some workers, the decision cost of reviewing the menu of investment options and making an active choice may outweigh the benefits of reduced taxes and improved retirement security associated with plan participation.

#### **V. Next Steps**

Our research has only begun to exploit the rich across-plan and within-plan variation in the choice architecture of French saving plans. Employers may match some but not all of the investment options on a plan menu, and they may offer match rates that vary with the amount of the participant's contribution. This presents a new opportunity for studying how matching affects participant behavior.

Endogeneity concerns notwithstanding, workplace saving plans offer a particularly attractive setting for studying the effects of illiquidity. In general, the liquidity properties of an asset depend on the opportunities for trading it, on the depth of its market, and in some cases on tax considerations. Ang, Papanikolaou, and Westerfield (2014) analyze portfolio choice with differential asset liquidity. Some of an asset's liquidity attributes may be difficult to measure. In French pension plans, however, restrictions on account access over various horizons create variation in liquidity that is transparent and quantifiable. We plan to further explore how liquidity restrictions and other investment attributes affect workplace saving decisions.

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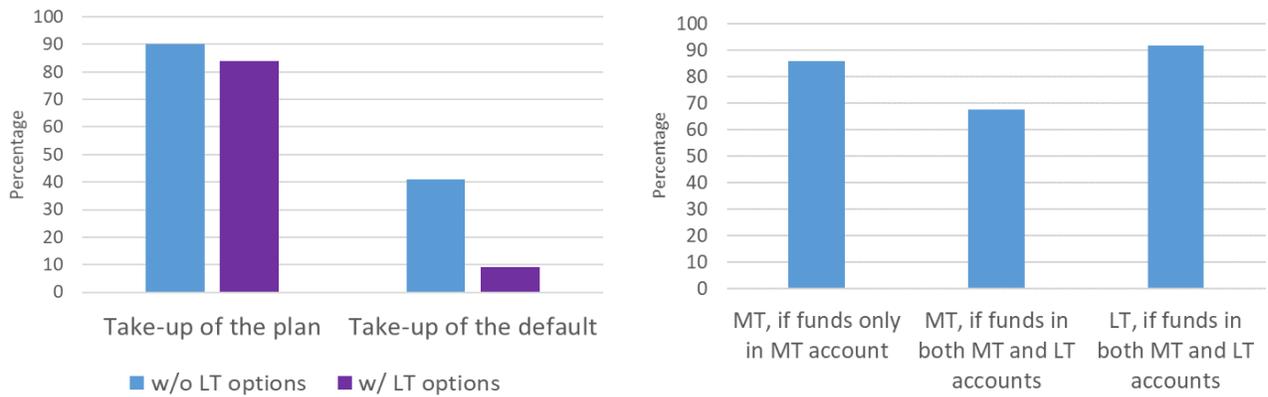


FIGURE 1. SHARE OF WORKERS TAKING UP THE SAVING PLAN AND TAKING UP THE DEFAULT INVESTMENT ALLOCATION, FIRMS WITH AND WITHOUT LONG-TERM (LT) INVESTMENT OPTIONS

FIGURE 2: SHARE OF ACCOUNT BALANCE WITHDRAWN FROM MEDIUM-TERM (MT) AND LONG-TERM (LT) ACCOUNTS WHEN HARDSHIP OCCURS, BY PARTICIPANT'S ACCOUNT COMPOSITION.

TABLE 1: TAKE-UP OF LONG-TERM (LT) PLAN DEPENDING ON THE DIFFERENCE IN EMPLOYER FIRST-EURO MATCH RATES ON CONTRIBUTIONS TO LONG-TERM (LT) AND MEDIUM-TERM (MT) ACCOUNTS

First-euro match rate differential (LT – MT) (%)	Number of workers	Average MT match rate (%)	Take-up of an LT-inclusive plan (%)
$LT - MT \leq 0$	57,290	103	38
$0 < LT - MT < 100$	70,819	8	63
$LT - MT \geq 100$	21,841	22	72

Source: Authors' tabulations using administrative data on employees at firms that contract with Amundi to administer their workplace saving plans. See text for further sample description.



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