Precautionary Liquidity and Worker Decisions in French Employee Saving Plans*

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15 April 2024

Abstract

This paper investigates demand for precautionary liquidity versus commitment contracts among participants in retirement saving programs. It analyzes administrative data from the largest saving plan provider in France, a country in which employers have wide discretion in structuring these plans. While these plans, which benefit from favorable tax treatment, must offer medium-term investments with restricted access for five years, they may also offer long-term investments which cannot be accessed until retirement. All plans feature auto-enrollment, and firms that offer long-term investments must include them in the plan default. Take-up of the default and overall plan participation rates are lower when employees are offered long-term investments, suggesting that a substantial share of workers prefer medium-term to long-term investments. Nevertheless, two-thirds of those who opt out of a default with long-term investment still choose some long-term investments, but they make smaller contributions than dictated by the default. The findings suggest that savers are reluctant to forego access to their accounts completely, but they also exhibit some demand for commitment contracts.

* The authors thank Alberto Abadie, John Beshears, Taha Choukhmane, Marcel Gehrung, David Laibson, Vincent Pons, and Ilan Tojerow for useful comments and discussions and are grateful to Benoit Chenet, Xavier Collot, Laure Delahousse, Corinne Laboureix, André Masson, Olivier Melennec, Jean-Pierre Poulet for insightful explanations on the institutional setting, and to Jerome Baudrand, Arnaud Delavoet for the data gathering process. Poterba is a trustee of the College Retirement Equity Fund and TIAA-CREF Mutual Funds. The data used to carry out this study, which have been analyzed anonymously for scientific, statistical, and historical research purposes, come from the processing of record keeping and account keeping of AMUNDI ESR employee and pension savings accounts.

The design of retirement saving plans is an active subject of public policy debate in many countries, as fiscal challenges place growing pressures on public pension systems and elevate the importance of workplace saving programs. One of the key design features of defined contribution retirement saving plans is the extent to which savers can access their accumulated account balance over the course of their working careers. Countries vary widely in their provisions, from very limited access, as in Australia, to access for particular hardship situations or for a fee, as in the United States, to flexible access after several years, as in some French saving plans.[1] In the US, where savers can make such withdrawals by paying an excise tax, Xu, Reed, and Grieg (2022) report that the share of retirement plan participants with outstanding hardship withdrawals reached an all-time high in 2022. Kos and Lensink (2023) find a demand for flexible withdrawals in developing countries.

Different theoretical models offer different predictions about how households may view restrictions on account access. Optimizing savers who recognize the prospect of future liquidity demands may be reluctant to tie up their funds in restricted accounts. Briere, Poterba, and Szafarz (2002) label this demand for precautionary liquidity, a concept that draws on the preference for flexibility that Nering (1999) associates with the comfort of dealing with more opportunities in the future. Demand for precautionary liquidity may reduce retirement plan participation and the fraction of earnings contributed such plans when balances cannot be accessed until retirement. In contrast, savers who are present-biased and recognize this, as in Beshears, Choi, Clayton, Harris, Laibson, and Madrian (2020), may welcome the commitment

[1] Pettit and Mitchell (2022) summarize cross-country heterogeneity. Bateman, Dobrescu, Liu, Newell, and Thorp (2022) focus on provisions related to pre-retirement withdrawals.

device of limited plan access to enhance their retirement security. It is possible that some savers are time-consistent or cash-constrained and value immediate liquidity, while others are present-biased and value commitment contracts. Distinguishing demand for future liquidity from demand for immediate liquidity is important for conceptualizing investor decision making and potentially for retirement plan design.

There is limited empirical evidence on how future restrictions on access to savings accounts affect retirement saving decisions. This paper seeks to provide evidence on whether, on average, more restrictive accounts draw higher or lower levels of participation and retirement saving. It examines workplace saving plan participation in France, where voluntary retirement saving plans exhibit a rich structure. Some workers have access to employment linked saving plans that offer both medium-term (MT) investments, which can be withdrawn after five years, and long-term investments (LT), which are blocked until retirement. All saving plan participants accept some degree of illiquidity relative to those who opt out of the plan and take a cash payment from their employer. Those who select cash forego a tax advantage associated with the saving program. French firms have more discretion in setting match rates than their U.S. counterparts. They may match contributions to different investment options at different rates and offer piecewise linear match rate schedules. The greater flexibility may reflect the modest stakes: most retirement income is provided through a public pay-as-you-go pension system.

All employer-sponsored saving plans in France feature an auto-enrollment default, so the two key decisions facing potential participants are whether to opt-out of the plan and whether to select an investment allocation other than the default. The multi-dimensional

heterogeneity of firm-sponsored saving plans presents an opportunity to investigate how plan attributes affect worker decisions. For employees who are offered plans with long-term investment options and make an active choice by opting out of the default, their share of LT investment reveals their demand for commitment savings.

We use administrative records from the largest retirement plan manager in France to study how access to LT investments affects plan participation and asset allocation decisions. To overcome the potential endogeneity of plan attributes, we focus on workers who change employers. We find that take-up of the investment default is lower when the plan includes an LT investment than when it includes only MT investments. Participation in plans with LT investments is also modestly lower. These findings suggest that some workers demand precautionary liquidity and prefer MT to LT investments. They are also consistent with some workers being unwilling to incur the decision costs associated with making an active election, and therefore choosing not to participate at all when the default is not attractive. Two-thirds of active decision-makers who are offered LT investments nevertheless choose to invest in them, but at a level lower than in the plan default.

This paper is divided into five sections. The first presents a brief overview of the structure of French employer-sponsored retirement plans, while the second describes the administrative data on employer-provided saving plans that underlies our analysis and explains our identification strategy. Section three presents our central findings on how the presence of LT investments affects the probability of default take-up and plan participation. The fourth section examines the active choices of workers who opt out of the default allocation. A brief conclusion summarizes our results and suggests directions for future work.

1. Context: Employer-Sponsored Saving Plans in France

The compensation of French workers has three components: a fixed wage, an individual bonus, and variable remuneration.[2] The latter, which incentivizes workers as group, relates to the profits of the company and not to individual productivity. French companies with over 50 workers are obliged to offer a variable compensation scheme, but they have substantial discretion with respect to its design. French defined-contribution (DC) plans were instituted in 1967 as part of a program advanced by then-president Charles de Gaulle to require corporations share their profits with their employees. DC plans were not primarily motivated by a desire to improve retirement security. The system started with medium-term investments, which needed to be held for five years before becoming available for withdrawal without any penalty or purpose-related restrictions, and in 2003 firms were also allowed to offer their employees LT investments for which access is restricted until retirement.

The legal environment governing DC plans involves two types of plans: PEE (for plan d'épargne d'entreprise) and PERCO (for plan d'épargne retraite collective). Unless an employee opts out, their annual variable remuneration is automatically credited to a PEE or PERCO account managed by the custodian chosen by the employer. PEE is for MT savings. Withdrawals are forbidden for a five-year period, although there are exceptions for events such as marriage, birth of a child, purchase of a home, and other life events. PERCO works similarly but involves LT investment. Withdrawals are blocked until retirement, although exceptions are also allowed

[2] The fixed wage is constrained by numerous legal restrictions, including an overall minimum, and sector-based conventions with worker representatives (unions). It is a contractual unconditional amount, typically negotiated with the worker when hired. The individual bonus (if any) is fixed by the firm at the end of the year, conditional on the worker's individual productivity. It is added to the fixed wage. The bonus is designed to create performance incentives. The sum of the fixed wage and the bonus is taxed at a marginal rate that ranges from 14%, on total pay between about €10,000 and €27,000, to 41% above roughly €72,000 and 45% above €154,000.

for some life events – a more limited list than for PEE. Investments in company stock, possibly at a discount, are allowed in PEE but not in PERCO accounts.

Tax incentives encourage participation in employer-sponsored saving programs. When workers are informed about the amount of variable compensation they are entitled to, they may choose to receive taxable variable income as an addition to their current pay, or they may contribute it to the firm's saving plan, in which case it is not taxed until it is withdrawn. For most workers, the tax saving associated with contributing to the plan is likely to be 14%, but it is 30% for upper-middle-class households and could be as high as 45%. Funds that are invested in a saving plan may also be eligible for employer matching. Worker and employer contributions to the saving plan are not taxed when they are withdrawn, but any growth in the value of the contributions is taxed at a 15.5% rate. The tax-cum-matching benefits to saving plan participation are therefore substantial, even for workers in the 14% tax bracket. Employees can also make after-tax voluntary contributions of up to 25% of their earnings to their employer-sponsored plan. All contributions may be eligible for employer matching contributions.

Employers make three key choices when designing a saving plan. First, they select a collection of investment funds among which employees can choose to allocate their contributions, along with a default investment fund for MT, and possibly LT, savings. The default MT fund must be a relatively low-risk fund (money market, bond or balanced fund). The default LT fund must be a balanced fund. Second, they choose whether to offer LT investments in addition to the compulsory MT ones. For most large firms, if the menu includes LT investments, the default must include an LT investment. In this case, the share of contributions allocated to

LT investment is fixed by law depending on the type of variable remuneration paid. The French Labor Code prescribes auto-enrolment in the default plan[3] and makes employers responsible for informing employees about the structure of the savings plan. Third, employers choose whether and how to match the worker's contributions. Matching requires choosing a list of match rates and match ceilings associated with each investment option. Match rates can vary across options and can be as high as 300%. A firm hoping to encourage employees to hold company stock, for example, might offer a higher match for MT company stock than other investment options.[4] The default may or may not be matched, and there can be different match ceilings for MT and LT investments.

2. Administrative Data on French Employer-Sponsored Saving Plans

We study how both take-up of the default and take-up of the plan respond to the presence or absence of LT investment. Take-up of the default is particularly interesting because at most large firms, if the plan includes LT investment, the default must too. This means that to avoid LT investing, the worker must opt out of the default. All plans must include MT investments, so a worker who does not want LT investment can opt out of the default and make an active portfolio choice. By studying the take-up of the default in plans that offer LT investments, we can indirectly assess the demand for precautionary liquidity. By studying take-

[3] In the U.S., auto-enrollment grew in popularity after regulatory action in 2007 provided employers with a safe harbor from litigation if they adopted auto-enrollment. Beshears, Choi. Laibson, and Madrian (2010) point out that many firms embraced auto-enrollment as a tool for increasing plan participation and ensuring that the retirement plan passes the Internal Revenue Service nondiscrimination test, which caps the share of contributions to the plan that can be made by highly compensated employees.

[4]Although firms can design very complex rules, and some may do so in the goal of discouraging employees' participation, in practice most choose simple ones, such as a flat match for all workers that is identical across funds.

up of the plan, we can explore whether reluctance to make an active investment choice discourages some workers from participating at all.

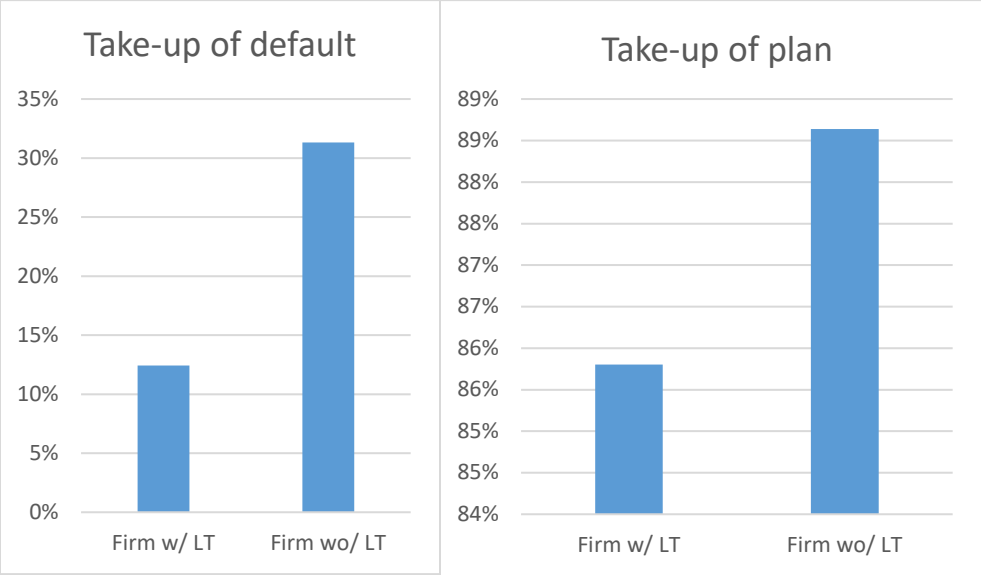
2.1 Workplace Saving Plan Data, 2015-2020

Our analysis is based on administrative data from 2015 to 2020 collected by Amundi, the largest DC plan provider in France. The full data set includes information on the saving choices of 1,782,877 individuals who lived in France and received variable remuneration from only one employer in any given year. This sample includes workers at 7,980 distinct firms – although the number of firms in each year is smaller – and 5,035,828 worker-year observations.[5] Take-up of the default is 12% among workers at firms that offer saving plans with LT investment; there are 3,167,843 worker-year observations associated with LT plans. Figure 1 presents summary information from the full sample. At firms without LT investments (N = 1,867,985), the take-up of the default is 31%, suggesting that employee behavior may be affected by the presence or absence of LT investments. Plan participation is also marginally higher at firms that do not offer LT investment (89%) than in those with it (86%).

The comparisons in Figure 1, which are largely driven by cross-sectional differences in saving plans, are suggestive, but they cannot provide causal evidence on the effect of plan attributes on employee behavior because of the potential endogeneity of these attributes. Employers may design plans taking into account their employees' preferences, and workers may choose where to work based in part on attributes of the retirement saving plan. The

[5] This restriction excludes 74,937 individual*year observations corresponding to various situations, such as employees with at least two part-time jobs. In the case of job changers, used for identification purposes (see Section 2.2), the restriction applies to at most for one year, and the job changers remain in the database in the years before and after their job switch. In addition, most job changers are not affected by this restriction because they receive variable remuneration from only one employer in each year.

Figure 1: Take-up of Plan and Default Asset Allocation in Full Sample



former concern is probably the more important of these two considerations. At small firms, management may have information on worker preferences, and at large firms, worker preferences may be aggregated and communicated by unions, which typically have a say in plan design at large French firms. Concerns about both types of endogeneity are attenuated because the amount that can be invested in employer-sponsored plans in France is small relative to most workers' overall compensation package.

2.2 Sample Refinements and Identification Strategy

To study the causal effect of plan attributes on behavior, we focus on a subset of the full data set. First, we restrict the analysis to a subsample of firms, those with at least 50 employees, because only two plan designs are possible: the plan offers LT investment in the plan menu and the plan's default, and the plan does not offer LT investment at all.[6] This

[6]All firms with more than 50 employees must offer their workers profit sharing benefits known as "participation," and that if the firm's plan offers a long-term investment, 50% of the default investment allocation for "participation" funds contributed to the plan must be long-term.

restriction reduces our sample to 1,214,744 workers, associated with 3,140,115 worker*year observations between 2015 and 2020. Second, we focus on workers who change jobs once between 2015 and 2020. This sample includes workers who are offered saving plans with similar attributes before and after their move, as well as some who move from an employer with an LT investment to an employer without an LT investment, and vice versa. Focusing on job changers follows previous studies of how plan attributes affect retirement saving such as Chetty, Friedman, Leth-Petersen, Heien, and Olsen (2014) and Choukmane (2021). This approach implicitly assumes that workers change jobs for reasons that have little or nothing to do with the savings plans offered by different employers.[7]

The sample of job changers at firms with 50 or more employees consists of 48,784 individuals, and includes 216,051 worker-year observations. data set, before we impose a number of sample restrictions for our primary research sample. The entries provide information on the attributes of the workers in the full sample as well as the sample of job changers. The average age for job changers is slightly higher than for workers in the full sample (46 vs. 45). The proportion of women is lower (31% vs. 36%), and variable remuneration is higher (EUR 3,748 vs. 2,402). Job changers tend to participate more in DC plans (96% vs. 87%) while exhibiting a lower take up of the default (8% vs. 19%), suggesting that job changers are more active choosers in general. The active choices of job changes can provide some evidence on the revealed preferences of plan participants. The low rate of take-up of the default – only

[7] We do not consider changes in access to LT investments that result from changes in plan structure at individual firms during our sample period, since we regard these changes as potentially due to evolving worker preferences.

8% among job changes, and 19% in the full sample – suggests that the defaults are unattractive to many employees.

Table 1: Summary Statistics for Full Sample and Job-Changer Sample

Variable	Full Sample (N = 5,035,828)		Job-Changer Sample (N = 216,051)	
	Mean	Standard Dev.	Mean	Standard Dev.
Age	44.7	11.5	46.0	10.7
Female	0.36	0.48	0.31	0.46
Variable Remuneration (€)	2,402.1	3,312.7	3,748.2	3,014.0
Plan with LT Investments	0.63	0.48	0.72	0.45
Plan with Matched MT Investments	0.64	0.48	0.87	0.33
Plan with Employer Stock	0.70	0.46	0.89	0.31
Employee Takes Default	0.19	0.39	0.08	0.26
Employee Participates in Plan	0.87	0.34	0.96	0.19

To assess whether movers are attracted to new firms in part because of retirement plan offerings, we compare the characteristics of the plans offered by firms that movers leave with the plans offered by their new employers, as well as the default and plan take-up rates in the old and new firms. We only consider moves by workers who were initially employed by a firm in our full sample, and who moved to another firm in our sample, since we have data on both retirement saving plans. We find only modest differences in plan characteristics. LT investments are more prevalent at the destination that at the origin firms (72% vs. 63%), as are matched MT plans (87% vs. 64%) and employee stock investments (89% vs. 70%).[8] The average

[8] The higher prevalence of LT investments at new than at old employers is inconsistent with the view that job changers are moving to avoid plans with LT investments. However, this finding is difficult to interpret because of the availability of LT investments rose between 2015 and 2020: 81% of all workers in the job-changer sample in 2015 had a plan with LT investments, compared with 72% in 2020. By construction, the worker's destination firm is always observed in the year after the origin firm, so a trend increase in LT will affect the former more than the latter.

take-up rate of the default (9%) and the plan participation rate (96%) differ by less than one percent between the origin and destination firms.

3. Estimating the Demand for Long-Term Investments

We estimate the demand for MT vs. LT investments by comparing the decisions of job changers. Because our job changer sample includes only firms for which including an LT investment on the plan menu requires including it in the default, the only way for a worker at a plan with LT investments to avoid these investments is by opting out of the default and making an active choice. We estimate the following model:

$$y_{it} = \alpha_i + \beta\ Plan\ with\ LT_{it} + \delta\ Post\ switch_{it} + X'_{it}\gamma + \mu_t + \varepsilon_{it}, \quad (1)$$

where y_{it} is either the take-up of the default or the participation to the plan. The binary variable $Plan\ with\ LT_{it}$ is equal to 1 if the plan offered to individual *i* at time *t* has LT investments, $Post\ switch_{it}$ equals 1 after the job change of individual *i*. X_{it} a vector of individual and plan time-varying characteristics (dummies for variable remuneration in quantiles Q1 Q2 and Q3, presence of employer stock, match of at least some MT investments),[9] α_i and μ_t are worker and year fixed effects. Standard errors are clustered at the firm level, reflecting the variation at the firm level in the savings plan design. The presence of worker fixed effects implies that the changes in the presence or absence of an LT option identify the LT coefficient.

Two control variables included in the specification bear comment: the presence of MT matching opportunities and the presence of employer stock funds. These are important

[9] We use the matching of MT options rather than the presence of any matching (i.e., for MT and LT options). LT investments are matched 97.5% of the time, conditional on matching, and the matching of LT is often more generous than that of MT, as we report in Brière, Poterba and Szafarz (2022).

influences on the attractiveness of a saving plan, as noted in Brière, Poterba and Szafarz, (2021). Each has attracted attention in past research on retirement saving. In the rational inattention framework of Huang and Liu (2007), these variables have potentially important effects on participants' financial status and low learning costs. LT investments, matching contributions, and employer stock are correlated. The correlation is 0.23 between LT investments and matching, 0.10 between LT and employer stock, and 0.48 between matching and employee stock. There are also many other features of French DC plans, such as the number and types of funds and the matching rules, that we do not consider in our analysis.[10]

Table 2. Take-up of the Default

Explanatory Variable				
Plan Includes LT Investments	-0.061***	-0.060***	-0.061***	-0.049***
	(0.020)	(0.020)	(0.020)	(0.017)
Post Switch		0.005	-0.005	-0.010
		(0.008)	(0.008)	(0.009)
Variable Remuneration in First			0.025**	0.025**
Quantile (Q1)			(0.010)	(0.010)
Variable Remuneration Q2			0.002	0.001
			(0.004)	(0.004)
Variable Remuneration in Q3			0.003	0.002
			(0.003)	(0.003)
Plan Includes Matched LT				-0.028
Investment				(0.022)
Plan Includes Employer Stock				-0.047***
				(0.015)
Constant	0.119***	0.121***	0.117***	0.177***
	(0.014)	(0.015)	(0.015)	(0..026)
R2	0.65	0.65	0.65	0.66

All specifications include year and worker fixed effects and are estimated on a sample of 216,051 observations.

[10] Köszegi and Matejka (2020) consider an alternative to complete optimization: simplified choice based on limited attention to a small number of important and decision-relevant factors.

In Table 2, the dependent variable is default participation conditional on being offered a plan, and not default participation conditional on plan participation. The results suggest that the presence of an LT investment has a negative impact of between 4.9 and 6.1 percentage points on the take-up of the default. The post-switch dummy variable is not significantly different from zero, a finding that confirms the data in Table 1 on the similar take-up of the default and plan participation before and after the job change. The specification in the last column of Table 2 includes three plan attributes (LT investment, matched MT investment, and employer stock). The presence of employer stock has a negative effect on default take-up, consistent with workers, on average, being attracted to employer stock and having to opt out of the default to gain access to this investment option. Legal restrictions exclude employer stock from the plan default. By contrast, the effect of matched MT investments is statistically indistinguishable from zero. This may indicate that the match of LT investments is not viewed by the workers as an essential plan attribute, or it may reflect matching contributions typically being available for both in-default and out-of-default investments. A worker's position in the variable remuneration distribution is negatively associated with take-up of the default. Employees in the bottom quartile are about 2.5 percentage points more likely to accept the default than those in the top quartile. This may reflect different levels of investment knowledge and sophistication, or different valuation of portfolio customization.

For some employees, making an active choice entails a significant effort for several reasons, such as plan complexity, lack of financial literacy, and uncertainties about future income. They may be burdened by choice overload, a concept applied to the retirement saving context by Iyengar, Huberman, and Jiang (2004) and Iyengar and Kamenica (2010). For these

workers, an attractive default may increase plan participation. Caplin and Martin (2015) argue that easy-to-review choice attributes, like default investments, can be important in supporting choices without a detailed analytical assessment. Tse, Friesen, and Kalaycı (2016) present some evidence that as retirement plans become more complex, even when it does not seem like a well-suited choice for them.[11]

Table 3: Participation in the Plan

Explanatory Variable				
Plan Includes LT	-0.028***	-0.028***	-0.029***	-0.029***
Investments	(0.012)	(0.011)	(0.012)	(0.013)
Post Switch		-0.001	-0.002	-0.010
		(0.013)	(0.014)	(0.013)
Variable			0.038**	0.038**
Remuneration in			(0.012)	(0.012)
First Quantile				
(Q1)				
Variable			0.016	0.017
Remuneration			(0.007)	(0.007)
Q2				
Variable			0.004	0.005
Remuneration in			(0.003)	(0.003)
Q3				
Plan Includes				-0.046*
Matched LT				(0.024)
Investment				
Plan Includes				0.058***
Employer Stock				(0.022)
Constant	0.983***	0.984***	0.976***	0.963***
	(0.009)	(0.010)	(0.010)	(0..021)
R2	0.50	0.50	0.50	0.50

All specifications include year and worker fixed effects and are estimated on a sample of 216,051 observations.

[11] Dahlquist, Setty, and Vestman (2018) suggest that in the U.S., the default is often different from the asset allocation that would be dictated by optimal portfolio selection. Goldin, Homonoff, Patterson, and Skimmyhorn (2020) find that in US Department of Defense retirement plans, plan simplification increases participation.

Table 3 presents the results of estimating equation (1) with plan participation as the dependent variable. The findings suggest that LT investments are associated with lower plan participation, but the effect is smaller than the difference in default take-up, possibly because opting out of the default allows workers to participate in the plan without committing funds to an LT investment. The lower participation rate at firms with LT investments may signal that some employees, reluctant to compose their own portfolios, opt out of participation entirely when the auto-enrollment default is not attractive.

The choice overload narrative offers one possible interpretation of the reluctance to make active portfolio decisions. For some individuals, it is easier to opt out of the plan than to opt out of the default while still participating in the plan. An alternative scenario is that there is a group of employees who dislike LT investments and who not choose them if opting out was costless. With a positive cost of opting out, these individuals may remain with the default plan, but only if it does not include LT investment. These observationally equivalent scenarios differ only in the interpretation of what can be understood as a friction.

4. Choices of Active Decision-Makers

Our finding that when plans and their defaults include LT investments, the use of both is lower than when the plan includes only MT investments, is consistent with heterogeneity among workers, and more demanders for precautionary liquidity than for commitment contracts. It does not imply, however, the absence of present-biased consumers who might value such commitment contracts.

To provide additional information on the demand for LT investments, we now focus on the allocation decisions of plan participants who make active decisions. Building on recent

work by Goldin and Reck (2020) and Choukmane and De Silva (2023), we assume that the choices of those who are offered LT investments and who opt out of their plan defaults, reveal their preferences for these investments. In contrast, the preferred allocations of plan participants who accept defaults are not directly observable because of frictions that lead them to refrain from active choice.[12]

Table 4 shows the MT vs. LT portfolio choices of all workers in the job changer sample who were offered LT investments (N = 155,723). We also consider the sub-set of this group for which at least some of the offered LT investments are matched (N = 151,838). We make this distinction in order to assess the attractiveness of matching LT funds, especially for active investors who we assume are optimizing their choices. The table shows that 69% of the workers at firms that offer LT investment hold some of these investments. The average share held by these employees is 21%. All workers who take the default (4%) are in this group, and

Table 4: Take-up of LT Investments by Active & Default Investors

Worker Group	All Workers in Plans with LT Investments	Workers in Plans with Matched LT Investments	Workers in Plans with LT Investments, No Match
All Workers in Plans with LT Investments (N = 155,723)	69%	70%	50%
Of which: Workers who Take Default (N = 6,329)	100	100	100
Of Which: Workers who Opt Out of Default (N = 149,394)	68	69	35
Sample Size	N = 155,723	N = 151,838	N = 3, 855

[12] The revealed preferences approach has the merit of providing numerical bounds on workers' demand for LT investments and the optimal share of savings invested in them, both of which are potentially relevant for the design of policies to promote retirement savings.

their average share of the default allocated to the LT investment is 37%. Most LT investments are matched. The investment share of LT is 37% when the plan includes matched LT investments and 41% when it does not.

The majority of employees are active choosers (96%). 68% of the savers who opt out of the default allocate some of their contributions to LT investments. On average, the active savers who hold LT investments devote 31% of their portfolio to LT funds. They invest less in LT investments than the default would require (37%), suggesting some demand for commitment but not as much as the default requires. The proportion of savers opting for LT investments is sensitive to matching: it is the existence of LT matching contributions. It is 69% at companies that match LT investments and 35% at those that do not. This also suggests a limited demand for commitment. The data in Table 4 also suggest that almost one third of plan participants are not interested in investing for retirement. The size of this group is affected by the presence of a match associated with LT investments.

5. Conclusion

This paper exploits administrative data on participants in French retirement saving plans to investigate the effect of long-term commitment features in these plans and the rates of plan participation and default take-up. The participation rate is about three percentage points lower in plans that offer long-term investment than in those that do not, and the take-up of the default is about six percentage points lower. These findings are consistent with some workers demanding precautionary liquidity, meaning that they are reluctant to forego access to their savings until retirement, but are not prepared to exert the decision effort that is needed to select investment options other than the default. They may opt out of the plan entirely, rather

than participate and opt-out of the default. While precautionary liquidity alone can rationalize the low take-up of the default option for plans that offer LT investment, it cannot explain why a menu that includes both LT and MT investment choices is associated with lower overall participation. This leaves room for behavioral explanations of the observed patterns.

Our findings contribute to the growing literature on the demand for commitment devices among retirement savers. Amador, Werning, and Angeletos (2006) frame the general problem facing a consumer who wishes to constrain herself to avoid present-biased consumption choices. Several studies, including Thaler and Benzarti (2004), analyzing 401(k) plan innovations in the U.S., Ashraf, Karlan and Yin (2006), studying a commitment saving product in the Philippines, and Beshears, Choi, Harris, Laibson, Madrian, and Sakong (2020), in an experimental setting, find evidence of demand for commitment. Our findings suggest that limiting access to funds in retirement accounts can discourage plan participation. When the default includes investments with such limitations, workers are more likely to opt out. In Brière et al. (2022), we refer to the underlying mechanism as precautionary demand for liquidity. The French workplace saving setting differs from other contexts in which the demand for commitment has been studied. French workers may value commitment less than those in other nations because their access to an unconditional retirement pension makes them less responsible for personal retirement security than workers in some other nations. At the same time, French LT and MT investments allow early withdrawals under hardship conditions, so funds contributed to LT investments may be more accessible than workers who do not think they can access them until retirement believe.

Among the workers in our job-changer sample who were offered plans with LT investments, 96% made active decisions. 68% of these active investors hold LT funds, but in a smaller proportion than in the default plan. We suspect that the demand for lifetime commitment instruments that support retirement saving is context-dependent, a function both of the costs of inadequate self-control and of the specific features of the commitment device, in particular the match rate on contributions to LT investments. Further research, potentially using the rich variation in French workplace saving plans and informed by more detailed information on worker attributes, might be able to estimate demand functions for different plan attributes.

To overcome the potential endogeneity of retirement plan attributes, we have focused only on a group of job changers at firms with more than 50 employees. These firms are legally committed to include LT investments in their plan defaults if they offer such investments. At smaller French firms, there are important tax-planning opportunities associated with workplace saving and employer matching contributions. Organizational considerations, such as the fraction of the firm's workforce with close ties to an owner-manager, can have important effects on the optimal structure of the retirement plan offerings. We hope to explore these and other issues in future work.

One issue that emerges from our analysis is the central role of retirement plan defaults for worker behavior. Beshears, Choi. Laibson, and Madrian (BCLM) (2010) and Clark and Young (2018) note the growing popularity of auto-enrollment. There is robust evidence that defaults matter, a finding that is consistent with some participants following simple heuristics to reduce the cost of choosing contribution levels and investment options. Madrian and Shea (2001)

attribute the widespread take-up of defaults in part to inertia. BCLM (2009) show that characteristics of defaults in the U.S. affect the likelihood of making an active choice. Besedeš, Deck, Sarangi, and Shor (2015) find that choice architecture in retirement plans affects the likelihood of participants making active decisions and the nature of their choices. In France, regulatory restrictions on acceptable defaults may render them unattractive and encourage active choice, but at the cost of imposing a complex decision task on workers. Altogether, these findings draw the attention of regulators on the potential impacts of the default composition on plan participation.

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