LOCKING IN:
EARLY RETIREMENT AS INSURANCE AGAINST POLICY RISK

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October 27, 2026

Abstract

This paper examines whether workers value the opportunity to lock in current pension rules before future restrictive reforms can occur. We study a one-time early retirement offer made in 2017 by a large Italian bank, which allowed eligible workers to leave employment before retirement, receive a pension-equivalent transfer, and secure the pension rules in force at entry. Take-up declines with the financial cost of acceptance but rises with years to retirement eligibility. Conditional on total income loss, retirement-age fixed effects, and demographic and job controls, an additional year to retirement is associated with a 5.4 percentage-point higher probability of acceptance. This pattern is difficult to reconcile with a standard retirement model under certainty, but can arise when workers value the option to lock in current rules and exposure to future reforms increases with distance to retirement. We discuss alternative explanations, including job insecurity, outside employment, liquidity needs, age-related work disutility, and dynamic selection, finding limited support. In reduced-form terms, the impact on take-up of one additional year of exposure to possible rule changes equals the variation associated to a reduction in annual income loss of about €750.

Keywords: retirement, social security, policy risk, uncertainty, pension reform

JEL classification codes: D91, H55, J14, J26, J38

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1 Introduction

Population ageing is putting increasing pressure on the financial sustainability of public pension systems. In response to the rising old-age dependency ratio, many advanced economies have implemented reforms aimed at delaying retirement, most notably by increasing the statutory retirement age. From a fiscal perspective, postponing retirement is an attractive policy instrument: it improves the sustainability of pension systems while allowing governments to preserve relatively generous benefit levels (World Bank, 1994). However, these reforms often run counter to workers' preferences. A large share of individuals strongly oppose working longer years and show a clear preference for earlier retirement (European Commission, 2001).

This tension between the need to restore the financial viability of pension systems and a widespread opposition to later retirement generates substantial uncertainty about future pension reforms (Pierson, 1996; Hacker, 2004; Galasso, 2008; Bello and Galasso, 2021). Pension retrenchment reforms, particularly in countries where individuals have low trust in governments, are shown to create uncertainty on the outlook of future reforms and may prompt individuals close to retirement to retire early (Bi and Zubairy, 2023). Moreover, the tension between financial sustainability and electoral incentives leads to pension systems being frequently reformed or amended, and to reform measures being sometimes reversed. The substantial uncertainty about future retirement rules, such as statutory retirement ages, eligibility conditions, or benefit generosity, faced by individuals approaching the end of their working career may impose large welfare costs (Luttmer and Samwick, 2018).

When future pension rules are uncertain, the opportunity to lock in current rules may be valuable. Workers who are still several years away from retirement remain exposed to the risk that eligibility conditions may tighten or benefit formulas may become less generous before they qualify. An early retirement offer can therefore provide insurance. By accepting the offer, workers give up part of their current labour income in exchange for earlier leisure and for securing the pension rules in force at the time of the offer. This paper asks whether workers value this opportunity to lock in current rules, and whether that value is reflected in higher take-up among those workers who are more exposed to future policy risk.

We address this question using a one-time early retirement offer made in 2017 to employees of a large Italian bank, during a period of frequent pension reforms. The offer was extended to all workers who were expected to become eligible for retirement within the following seven years, regardless of their current age. Workers who accepted the offer left employment before reaching their statutory retirement date and entered a bridge scheme. During this bridge period, they received a monthly transfer equal to the pension benefit they were expected to receive at retirement, calculated under the pension rules in force at the time of the offer. The bank also continued to pay social security contributions on their behalf, so that their pension rights kept accruing until formal retirement.

Crucially, acceptance fixed the relevant pension rules at the time of entry into the scheme. Workers were protected from subsequent changes in eligibility conditions or benefit calculations before their retirement date (see section 2). The offer therefore combined three elements: earlier leisure, an income stream before formal retirement, and insurance against future pension-rule changes. Its cost was that the transfer was typically lower than labour income, generating an implicit income loss for those who accepted.

This setting provides a rare opportunity to examine the value of locking in pension rules, an exercise that is typically difficult in standard observational data, where retirement eligibility and retirement timing are jointly determined. The offer generated rule-based variation in the number of working years employees could forgo by accepting it. Workers differed in their distance from retirement eligibility, but all faced the same one-time decision under the same institutional scheme. Workers further from retirement had more years during which pension rules could still change before they qualified. If locking in current rules is valuable, and if that value reflects exposure to future policy risk, these workers should be more willing to accept the offer, even though doing so entails giving up labour income for a longer period. Our empirical strategy therefore compares workers with different distances to retirement while controlling for the financial cost of acceptance, retirement-age fixed effects, and detailed demographic and job characteristics.

Our empirical results show that take-up declines with the financial cost of accepting the offer, but increases with the number of years remaining until retirement eligibility. A one-percentage-point increase in total income loss is associated with a 0.1–0.2 percentage-point lower probability of acceptance, corresponding to 0.13–0.26% relative to the mean take-up rate. Conditional on this financial cost, an additional year to retirement is associated with a 5.3–5.4 percentage-point higher probability of accepting the offer, or a 7.1–7.3% increase relative to mean take-up.

Several mechanisms other than policy-risk lock-in could, in principle, generate a positive relationship between years to retirement and take-up. Workers further from retirement may differ in perceived job security, outside employment opportunities, liquidity needs, health, or attachment to the firm. We examine these channels in the empirical analysis. Institutional features of the setting and the available administrative evidence make these explanations less plausible. Workforce reductions in the Italian banking sector rely on voluntary exit schemes rather than dismissals. The offer restricted post-exit employment. Moreover, the relationship between years to retirement and take-up is not explained by observable measures of job characteristics, tenure, absences, family liquidity needs, or local labour-market conditions. We therefore interpret the evidence as consistent with workers valuing the opportunity to lock in current pension rules when future reforms are uncertain.

We formalize this interpretation in a simple model of the acceptance decision. Workers compare the income loss from accepting the early retirement offer with the value of earlier leisure and the value of securing current pension rules. Under certainty, the model predicts that workers closer

to retirement should be more likely to accept. They forgo labour income for fewer years, and the disutility of continued work rises with age. With policy uncertainty, this prediction can be reversed. Workers further from retirement face a longer period during which pension rules may change before they qualify. Accepting the offer allows them to lock in current rules, making take-up more attractive despite the larger income loss.

To gauge magnitudes, we use the specification controlling for annual income loss. In that specification, one additional year to retirement has the same association with take-up as a reduction in annual income loss of about €750, relative to an average annual income of €35,000.

We contribute to the literature on the policy uncertainty and individual behaviour. Existing work shows that households face substantial uncertainty about future policy and that such uncertainty can affect savings, consumption, and expectations (Giavazzi and McMahon, 2012; Baker et al., 2016). Uncertainty about pension reforms is particularly relevant. Survey evidence shows that individuals are uncertain about future retirement rules, update their expectations in response to information, and attach welfare costs to uncertainty over Social Security benefits (Ciani et al., 2023; Caliendo et al., 2023). Luttmer and Samwick (2018) use an original survey to measure the degree of perceived policy uncertainty in social security benefits in the US and estimate that on average individuals are willing to forgo 6 percent of their expected benefits to remove policy uncertainty. We complement this evidence by studying an actual high-stakes choice: whether to accept an early retirement offer that allowed workers to secure current pension rules before future reforms could occur. The contribution is therefore to provide revealed-preference evidence that workers value policy-rule lock-in, and that this value is reflected in retirement-related choices.

The paper also contributes to the literature on retirement and labour supply at older ages. A large body of work shows that retirement responds to financial incentives embedded in pension systems and social security rules (Coile and Gruber, 2007; Mastrobuoni, 2009; Staubli and Zweimüller, 2013; Manoli and Weber, 2016; Coile et al., 2020). At the same time, estimated elasticities are often modest, and actual retirement ages frequently differ from previously stated expectations (Caliendo et al., 2023). Existing research has also emphasized the role of non-financial determinants, including health shocks (Bazzoli, 1985; Currie and Madrian, 1999; Bound et al., 2010), family responsibilities (Malisa, 2024), labour market frictions (Dorn and Sousa-Poza, 2010; Frimmel et al., 2018; Bello and Galasso, 2020), liquidity constraints (Rust and Phelan, 1997), and private pension arrangements (Gustman and Steinmeier, 1986). More recently, evidence on behavioural responses to pension rules has shown that statutory retirement ages can operate as reference points, generating sharp responses in retirement and claiming behaviour that are difficult to explain with financial incentives alone (Behaghel and Blau, 2012; Seibold, 2021; Lalive et al., 2023). We add to this literature by showing that, even when the financial cost of early retirement is measured and controlled for, take-up increases with the number of years remaining until eligibility. This pattern is consistent with workers attaching value to securing

current pension rules, a consideration that standard income-leisure models under certainty do not capture.

The rest of the paper proceeds as follows. Section 2 provides background information on the Italian pension system and the early retirement offer, along with a description of the data and a discussion of the empirical strategy. Section 3 presents our results. Section 4 discusses alternative channels. Section 5 introduces the theoretical framework. Finally, section 6 concludes.

2 Institutional context, data, and empirical strategy

We study a one-time early retirement offer made in 2017 by a major Italian bank to employees who were expected to become eligible for retirement within the following seven years. Workers who accepted the offer left employment before reaching retirement eligibility, received a monthly transfer during the intervening period, and secured the pension rules in force at the time of acceptance. Workers who rejected the offer remained employed until retirement, but continued to face the possibility that pension rules could change before they became eligible. This setting allows us to examine whether workers value the opportunity to lock in current pension rules. We first describe the Italian pension system and the early retirement offer, then introduce the data, key variables, and empirical strategy.

2.1 Institutional setting

The Italian pension system The Italian pension system heavily relies on public pay-as-you-go pensions, commonly referred to as the first pillar. Occupational and personal private pension funds (second and third pillars) comprise only a marginal share of the system. In Italy, pension expenditure represents the largest component of total public spending: in 2017 about 270 billion euros were allocated to pensions, corresponding to 15.6% of national GDP.

The first pillar includes old-age and seniority pension schemes, which provide two distinct pathways to pension benefits. Eligibility to an old-age pension depends on reaching a certain age with a sufficient number of years of contributions. In 2017, to qualify for an old-age pension, workers needed to have at least 20 years of contributions and a minimum age ranging between 65 and almost 67 years, depending on gender and employment category (e.g., 65 years and 7 months for women employed in the private sectors and 66 years and 7 months for most other workers). Eligibility to a seniority pension depends on having a minimum number of years of contributions. In 2017, to qualify for a seniority pension, workers needed to have contributed to the system for at least 42 years and 10 months, for men and 41 years and 10 months for women.

Since the early 1990s, Italy has repeatedly reformed its public pension system in response to demographic ageing and fiscal pressure. These reforms generally tightened eligibility conditions,

reduced generosity, and shifted the system from earnings-based defined benefits toward a notional defined-contribution formula. Table 1 summarizes the main reforms between 1992 and 2017. The 1992 Amato reform increased retirement ages and contribution requirements, restricted early retirement provisions, and changed pension indexation from wages to prices. The 1995 Dini reform introduced the notional defined-contribution system, linking pension benefits more closely to lifetime contributions and demographic parameters, while applying the new formula gradually across cohorts. The 2011 Monti–Fornero reform represented the sharpest tightening of retirement rules. It increased old-age retirement requirements, further restricted access to early retirement by raising contribution requirements, accelerated the harmonization of retirement ages across genders and sectors, and extended the notional defined-contribution formula to all workers for contributions accrued from 2012 onward.[1] Taken together, these reforms substantially changed retirement incentives, pension generosity, and eligibility conditions. Their frequency and, in some cases, abrupt implementation also made future pension rules salient and uncertain for workers approaching retirement.

Table 1: Main reforms of the Italian pension system, 1992–2017

Year	Reform	Main characteristics
1992	Amato	Increased statutory retirement ages and contribution requirements; restricted early retirement provisions; shifted pension indexation from wages to prices.
1995	Dini	Introduced the notional defined-contribution formula, linking benefits to lifetime contributions, GDP growth, and life expectancy; applied the new formula gradually across cohorts through defined-benefit, pro-rata, and fully contributory regimes.
1997	Prodi	Harmonized rules across worker categories and further tightened access to seniority pensions.
2004	Maroni	Introduced a discrete increase in retirement requirements from 2008 and strengthened incentives to postpone retirement.
2007	Damiano	Replaced the Maroni "retirement-age cliff" with a quota system combining age and contribution requirements for access to seniority pensions.
2010	Sacconi	Introduced automatic adjustments of retirement requirements to life expectancy.
2011	Monti–Fornero	Sharply increased old-age retirement requirements; tightened access to early retirement by raising contribution requirements; accelerated harmonization across gender and employment categories; extended the notional defined-contribution formula to all workers for contributions accrued from 2012 onward; temporarily limited indexation for higher pensions.
2017	Poletti–Renzi	Introduced APE, an early retirement loan scheme with financial penalties, and APE sociale, a subsidized early retirement scheme for workers in hardship conditions.

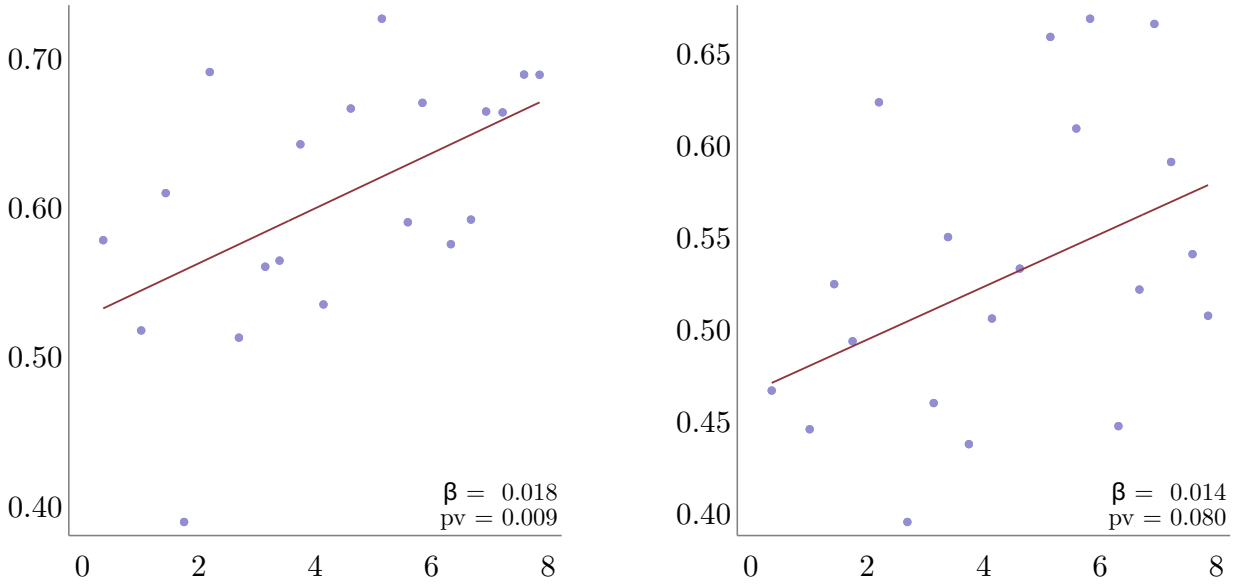
Notes. The table summarizes the main pension reforms relevant for retirement eligibility, benefit calculation, and policy uncertainty over future pension rules.

This perception is visible in survey data: Figure 1 provides suggestive evidence that pension-policy risk rises with distance to retirement. Using SHARE data for Italian workers aged 45–65 and within eight years of retirement, the figure plots the share of respondents who report that, before they retire, the government may reduce their pension benefits or raise the minimum retirement age. Both concerns are more common among respondents further from retirement, consistent with the

[1] Figure E.1 illustrates the evolution of statutory retirement age requirements in Italy from 2010 onward, before and after the Fornero reform. Table E.1 reports the eligibility requirements for retiring with full benefits as of 2017.

idea that repeated reforms made future pension rules salient and that workers with longer horizons had more time to be affected by further changes.

Figure 1: SHARE survey data, by years to retirement



(a) Fears pension reduction

(b) Fears min ret age increase

Notes. The binscatter reports the probability of answering *Yes* to the question against the temporal distance to retirement in years, grouped into 25 equal-sized (frequency) bins along the x-axis. The reported β coefficient and p-value refer to *years to retirement*, with standard errors clustered at respondent level. Survey data for Italian workers (45-65yo, up to 8 years to retirement) from SHARE, waves 5 (2013), 6 (2015), and 7 (2017). Number of respondents for each panel: (a) N=362; (b) N=360. Full questions: (a) What are the chances that before you retire the government will reduce the pension which you are entitled to?; (b) What are the chances that before you retire the government will raise your retirement age?

2.2 The early retirement offer

The early retirement offer was made in 2017 by a major Italian bank as part of a broader restructuring plan aimed at reducing employment without layoffs. The program operated through the *Fondo di Solidarietà per il Credito*, a sector-wide fund financed by banks and administered by INPS.

The offer was extended to more than 9,000 employees who were expected to become eligible for retirement within the following seven years. Eligible workers included executives, managers, and operational staff. Workers who accepted the offer left the bank before reaching retirement eligibility and entered the solidarity fund. During this bridge period, they received a monthly transfer equal to the net pension benefit they were expected to receive at retirement, calculated under the pension rules in force at the time of the offer. This transfer was fixed at entry and remained unchanged until formal retirement. Employees could alternatively choose a lump-sum payment equal to 60% of the discounted value of the instalments, but only one worker did so.

The scheme also preserved pension accrual. During the bridge period, the fund paid figurative social security contributions to INPS on the worker's behalf, calculated on pre-exit salary. Once the eligibility date certified at entry was reached, the monthly transfer ceased and the worker began

receiving the ordinary public pension. The program documentation states that changes to pension legislation normally do not apply to workers who have already terminated employment to enter the redundancy fund, and that the agreement included safeguard clauses to prevent interruptions between the fund benefit and pension receipt.[2] Thus, by accepting the offer, workers secured both bridge income and the pension rules relevant for their eventual retirement.

The offer was negotiated with labour unions and formally approved on October 12, 2017. Employees had until November 13, 2017, to accept. Participants agreed to leave the bank by June 30, 2019, with the exact exit date determined by the employer. Although the offer did not reduce future pension entitlements, it entailed an immediate income loss because the monthly transfer was typically lower than labour income. As discussed below, this loss averaged about 19% of annual labour income. Approximately 7,000 employees accepted the offer, out of more than 9,000 eligible workers. This is a substantial number, corresponding to nearly 2% of the 361,000 individuals who retired on an old-age pension in Italy in 2017.

Several features of the setting are useful for the empirical analysis. The offer was unexpected, one-time, and extended uniformly to all eligible employees. Workers therefore faced the same decision within a narrow time window, while differing in their distance from retirement eligibility and in the income loss implied by acceptance. This allows us to study how take-up varies with the financial cost of the offer and with the value of securing current pension rules before future reforms could occur. Appendix F reproduces the program documentation.

2.3 Data and descriptive statistics

We draw on a unique administrative dataset covering the entire population of 9,258 employees who received the early retirement offer from the bank, along with detailed information on whether they accepted it. The dataset contains rich demographic and economic variables, including age, gender, education, marital status, number and age of children, place of birth, and workplace location. It also includes labour-related information such as annual income (for 2016 and 2017), job type and rank, days of absence, company tenure, and workload percentage.

A key strength of the dataset is the availability of administrative records that precisely identify individuals' pension eligibility status at the time of the offer. In particular, each record reports the exact date at which an employee becomes eligible to retire, either through the old-age or the seniority scheme. This information allows us to compute, for each individual, the time elapsed between the date at which retirement eligibility is attained and the date of early retirement granted by the offer. We refer to this variable as *years to retirement*, which measures the number of additional years an individual would have to wait to retire under the pension rules in force at the time of the offer, if she declines the offer.

[2] see paragraph *Changes to Pension Legislation* from the guide to the early retirement program in appendix F

Pension-equivalent transfer For 2,744 workers, we observe the pension-equivalent transfer (PET), defined as the annual transfer paid to a worker who accepted the early retirement offer. The PET corresponds to the gross pension benefit the worker was expected to receive at retirement, calculated under the rules in force in 2017 and assuming that contributions continued to accrue until the eligibility date. We use this information to compute the net pension benefit.

For workers with missing PET, we predict the net transfer using the subsample with observed values. The prediction model relates PET to the main determinants of pension benefits: labour income, years of contributions, managerial status, gender, and age. We then use the estimated relationship to impute PET for workers without an observed transfer. Appendix C describes the procedure and shows that prediction errors in the observed subsample are not systematically related to years to retirement.

Financial cost of accepting the offer We measure the financial cost of accepting the offer as the income loss generated by replacing labour income with the pension-equivalent transfer. We first compare each worker's 2017 annual labour income with the PET she would receive upon acceptance. We then apply national and local tax rates to both amounts and compute the difference between net labour income and the net pension-equivalent transfer. Normalizing this difference by net labour income gives the annual income loss, expressed as a percentage.

Because workers who accepted the offer received the lower transfer until reaching retirement eligibility, the cumulative cost of acceptance increases with years to retirement. Our main measure of financial cost is therefore Total Income Loss, defined as annual income loss multiplied by years to retirement. This variable captures the cumulative income loss over the bridge period and is the control used in our main specifications. In robustness checks, we instead control for annual income loss, which isolates the per-period cost of acceptance but does not account for the longer duration over which workers farther from retirement bear that cost.

Final sample Our final analytical sample includes 7,085 employees. We start from the 9,258 workers who received the offer. We first exclude 944 part-time workers, leaving 8,314 full-time employees. We then exclude 206 workers who were eligible for regular retirement by the last possible early retirement date (June 30, 2019), leaving 8,108 employees. We further restrict the sample to workers covered by the seniority pension scheme, which excludes 864 observations and leaves 7,244 workers. Finally, we drop observations with missing education, income-loss, or workplace-region information, leaving 7,085 employees. The final sample therefore retains 77% of the original population, with no meaningful change in average age or gender composition across the selection steps. Table A.1 reports the full sample-selection procedure.

Descriptive statistics Table A.2 provides summary statistics for our sample. The average age of employees is 59 years, with the majority being male (61%) and married (79%); 10% hold at least a bachelor's degree. On average, individuals have 1.35 children, with 79% having at least one child and 48% having children aged 28–38. A substantial share of the sample was both born (67%) and currently employed (71%) in the northern region of the country. Overall, 59% of individuals hold managerial positions, 75% work in local branches, and 25% are employed in central offices. The average net labour income amounts to €35,030, while the average net pension transfer is €27,330 in the observed subsample, 27,930 in the estimated subsample, and 27,750 overall. The average years of contributions is 39 years, the mean annual income loss equals 19.92%, and the total income loss amounts to 55.78%. Finally, the average temporal gap between the offered early retirement and the expected date of full retirement eligibility, referred to as years to retirement, is 2.86 years.[3]

Figure A.2 reports the distribution of workers' expected retirement-eligibility dates. The vertical red line marks June 30, 2019, the latest employment-exit date under the program. Eligibility dates to the right of this line indicate the length of the bridge period between leaving the bank and reaching retirement eligibility. This dispersion is the source of variation in years to retirement used in the empirical analysis, with the bridge period extending up to five years for workers furthest from eligibility.[4]

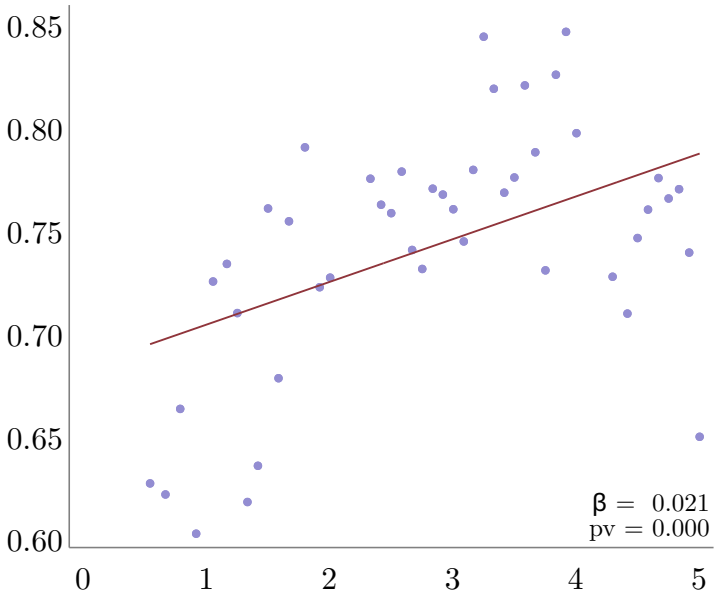
Figure 2 shows the raw relationship between take-up and years to retirement. Even before controlling for income loss or other covariates, take-up increases with distance to retirement: a binscatter of acceptance against years to retirement, grouped into 50 equal-sized bins, yields a positive slope. The estimated slope is 0.021 and statistically significant at the 1% level.

Finally, Table A.3 reports how observable characteristics vary with years to retirement. Workers further from retirement tend to have a higher expected retirement age and lower labour income, and they differ slightly in some job and family characteristics. These correlations motivate the controls used in the empirical analysis. In the main specifications, we control for demographic and job characteristics and include retirement-age fixed effects, allowing us to compare workers who are expected to retire at the same age but who differ in the number of years remaining until eligibility at the time of the offer.

[3] A small number of individuals exhibit an unusually low age at the time of the offer and at retirement. These cases may correspond to so-called *lavoratori precoci* (workers eligible for early retirement due to long contribution histories) or reflect other special circumstances. The results of the main analysis are unchanged when excluding these observations (Table B.3).

[4] The very small number of individuals expected to retire in early 2021 and early 2023 reflects a mechanical effect stemming from the discontinuous seven-month increase in years-of-contributions requirements for retirement eligibility in those years (see Figure E.1). A worker who did not qualify for retirement in December under the 2020 or 2022 rules remains ineligible in the first months of the following year, as their age and years of contributions would have increased by less than seven months. Consequently, no one could meet the eligibility criteria in the early months of 2021 or 2023 unless they had already qualified under the previous year's requirements before the stricter rules took effect.

Figure 2: Acceptance by years to retirement, unconditional correlation



Notes. The binscatter reports the probability of accepting the offer against the temporal distance to retirement in years, grouped into 50 equal-sized (frequency) bins along the x-axis. The reported β coefficient and p-value refer to *years to retirement*, with standard errors clustered at individual level.

2.4 Empirical strategy

We examine how take-up of the early retirement offer varies with two central features of the decision: the financial cost of accepting the offer and the number of years remaining until retirement eligibility. The financial cost is measured by Total Income Loss, which cumulates the annual income loss over the bridge period. Years to retirement measures the length of time between the offered early retirement and the date at which the worker would become eligible to retire under the rules in force in 2017.

Years to retirement is informative because it captures workers' exposure to future pension-rule changes. A worker who is one year from eligibility faces a short period during which eligibility conditions or benefit rules may change before retirement. A worker who is five years from eligibility faces a longer exposure window. If workers value the opportunity to lock in current rules, take-up should therefore increase with years to retirement, even though accepting the offer is financially more costly for workers further from eligibility.

A useful feature of our setting is that years to retirement is largely determined by administrative eligibility rules rather than chosen by the worker. The offer was made once, to all eligible employees, within a narrow time window, and no worker's distance to eligibility was adjusted based on her individual characteristics. This generates variation in years to retirement that is plausibly unrelated to individual characteristics, conditional on the age at which a worker is expected to retire. Table A.3 is consistent with this: workers close to and far from retirement look similar on most observable characteristics, with the expected exceptions of age and current income, which rises mechanically with years of contributions.

At the same time, years to retirement is not a direct measure of policy uncertainty and may capture other components of the retirement decision. A longer horizon mechanically increases the cumulative income loss from accepting the offer, because the worker receives the lower transfer for more years. It also increases the number of years of leisure obtained by accepting. Finally, it may be correlated with individual characteristics or job histories that affect take-up. Our empirical strategy addresses these concerns in three ways. First, the main specification controls for Total Income Loss, so that the coefficient on years to retirement is not driven mechanically by the longer period over which income losses are borne. Second, we include retirement-age fixed effects, comparing workers expected to retire at the same age but who differ in the number of years remaining until eligibility at the time of the offer. This absorbs differences in the age at which retirement occurs and in the age profile of the value of leisure. Third, we control for demographic and job characteristics, including gender, education, marital status, number of children, job position, branch employment, and region of work. Section 4 then examines alternative channels, including job insecurity, outside employment, liquidity needs, health-related work disutility, and selection.

Our baseline estimating equation is:

$$Acceptance_i = \beta_0 + \beta_1 Total\ Income\ Loss_i + \beta_2 Years\ to\ retirement_i + \beta_3 X_i + \gamma_q + \epsilon_i \tag{1}$$

where *Acceptance* is an indicator equal to one if worker *i* accepted the early retirement offer. *Total Income Loss* is the cumulative financial cost of acceptance, defined as Annual Income Loss multiplied by years to retirement. Annual Income Loss is the difference between net labour income and the net pension-equivalent transfer, divided by net labour income. *years to retirement* is the number of years between the offered date of early retirement and the standard retirement eligibility. The vector X includes demographic and job controls, and γ denotes retirement-age fixed effects.

The coefficient of interest is β_2. Conditional on Total Income Loss, retirement-age fixed effects, and individual controls, β_2 measures whether workers further from eligibility are more likely to accept the offer than otherwise similar workers who are expected to retire at the same age. Under the lock-in interpretation, a positive β_2 indicates that workers with longer exposure to possible pension-rule changes place greater value on securing current rules. We do not interpret β_2 as a direct estimate of subjective policy uncertainty. Rather, it is a reduced-form estimate of the relationship between exposure to future rule changes and take-up, net of observed financial incentives and retirement-age differences.

In robustness checks, we replace Total Income Loss with Annual Income Loss. This specification controls for the per-period income loss but not for the longer duration over which workers further from retirement bear that loss. The coefficient on years to retirement in this specification therefore combines two opposing forces: greater exposure to future rule changes, which should increase take-

up, and a larger cumulative financial cost, which should reduce take-up. For this reason, estimates controlling only for Annual Income Loss provide a conservative benchmark for the lock-in interpretation.

3 Results

Main results Table 2 reports our main results. Column (1) shows the unconditional relationship between take-up and years to retirement. Column (2) adds Total Income Loss, our measure of the cumulative financial cost of accepting the offer. Column (3) adds retirement-age fixed effects, comparing workers expected to retire at the same age but facing different distances to eligibility at the time of the offer. Column (4), our preferred specification, adds the full set of individual controls, such as gender, education, number of children, job position, and region of work.

The coefficient on *Total Income Loss* is negative throughout and statistically significant once retirement-age fixed effects are included (columns 3 and 4). In our preferred specification (column 4), a one-standard-deviation increase in Total Income Loss is associated with a 5.9 percentage-point lower probability of accepting the offer. This confirms that financial incentives matter: workers facing larger income losses are less likely to accept.

The coefficient on *years to retirement* is positive and statistically significant in all specifications. In column (1), each additional year to retirement is associated with a 2.2 percentage-point higher take-up rate. Once we control for Total Income Loss and retirement-age fixed effects, the estimate rises to 5.3–5.4 percentage points. Thus, conditional on the cumulative financial cost of the offer and on expected retirement age, workers further from eligibility are more likely to accept. A one-standard-deviation increase in years to retirement corresponds to a 2.9–7.2 percentage-point increase in take-up.

The magnitude is economically meaningful. The standardized association between years to retirement and take-up is of the same order of magnitude as the association between Total Income Loss and take-up. A one-standard-deviation increase in years to retirement raises take-up by 2.9–7.2 percentage points, while a one-standard-deviation increase in Total Income Loss lowers take-up by 2.9–5.9 percentage points. Distance from retirement eligibility therefore has explanatory power comparable to the cumulative financial cost of accepting the offer.

This pattern is difficult to reconcile with a standard retirement model under certainty. Workers further from retirement give up labour income for more years, while workers closer to retirement are older and should, if anything, attach a higher value to leisure. The positive coefficient on years to retirement is instead consistent with workers valuing the opportunity to secure current pension rules: those further from eligibility have a longer period during which rules could change before they qualify. Section 4 examines alternative explanations for this pattern, and Section 5 formalizes

Table 2: Early retirement acceptance

	(1)	(2)	(3)	(4)
Dep. variable		Acceptance		
Years to retirement	0.022***	0.026***	0.053***	0.054***
	(0.004)	(0.007)	(0.008)	(0.009)
Total income loss		-0.000	-0.001***	-0.002***
		(0.000)	(0.000)	(0.000)
Age at retirement FE	No	No	Yes	Yes
Controls	No	No	No	Yes
$\mathbb{E}(Acceptance)$	0.744	0.744	0.744	0.744
$\mathbb{E}(Total\ income\ loss)$		55.779	55.779	55.779
Adjusted-R^2	0.004	0.004	0.013	0.081
F statistic	30.126	15.269	28.622	20.467
Obs	7,085	7,085	7,085	7,085

Notes. Income loss is expressed as percentage of 2017 net income. The set of additional controls includes dummies for managerial jobs, branch or central office, level of education, marital status, gender, the region of work, and for the number of children. Standard errors are clustered at individual level and reported in parentheses. Significance at the 10% level is represented by *, at the 5% by **, and at the 1% by ***.

the lock-in mechanism in a simple model.

Table B.1 in the Appendix reports the full set of covariate coefficients. The estimates are consistent with standard determinants of early retirement take-up. Women, married workers, employees in branch offices, and workers with a high-school degree are more likely to accept the offer, while managers and workers with children are less likely to do so. These patterns indicate that take-up responds not only to income losses and distance to retirement, but also to demographic and job-related characteristics. Importantly, including these controls leaves the coefficient on years to retirement essentially unchanged.

Alternative measure of income loss Table 3 replaces Total Income Loss with Annual Income Loss. This specification controls for the per-period financial cost of accepting the offer but not for the longer duration over which workers further from retirement bear that cost. As discussed in Section 2.4, the coefficient on years to retirement in this specification therefore combines two opposing forces: greater exposure to future rule changes, which should increase take-up, and a larger cumulative financial cost, which should reduce it.

The coefficient on Annual Income Loss is negative and statistically significant once retirement-age fixed effects are included. In columns (3) and (4), a one-percentage-point increase in Annual Income Loss is associated with a 0.4–0.7 percentage-point lower probability of accepting the offer. The coefficient on years to retirement remains positive and statistically significant in all specifications, ranging from 1.5 to 2.7 percentage points. Since this specification does not net out the larger cumulative cost faced by workers further from eligibility, these estimates provide a conservative benchmark for the

lock-in interpretation.

Additional robustness checks are reported in Appendix B. Figure B.1 shows that the positive relationship between years to retirement and take-up is holds in the data across progressively saturated specifications.Table B.2 shows that the coefficient on years to retirement remains positive and statistically significant when retirement-age fixed effects are replaced by age-at-the-offer fixed effects. Table B.3 shows similar results when excluding workers who become eligible for retirement before age 60, who may be covered by special early retirement rules.

Table 3: Early retirement acceptance. Controlling for annual income loss

	(1)	(2)	(3)	(4)
Dep. variable		Acceptance		
Years to retirement	0.022***	0.022***	0.027***	0.015***
	(0.004)	(0.004)	(0.004)	(0.004)
Annual income loss		-0.001	-0.004***	-0.007***
		(0.001)	(0.001)	(0.001)
Age at retirement FE	No	No	Yes	Yes
Controls	No	No	No	Yes
$\mathbb{E}(Acceptance)$	0.744	0.744	0.744	0.744
$\mathbb{E}(Annual\ income\ loss)$		19.917	19.917	19.917
Adjusted-R^2	0.004	0.004	0.013	0.082
F statistic	30.126	15.543	29.873	24.269
Obs	7,085	7,085	7,085	7,085

Notes. Income loss is expressed as percentage of 2017 net income. The set of additional controls includes dummies for managerial jobs, branch or central office, level of education, marital status, gender, the region of work, and for the number of children. Standard errors are clustered at individual level and reported in parentheses. Significance at the 10% level is represented by *, at the 5% by **, and at the 1% by ***.

Economic magnitude To gauge magnitudes, we use the specification controlling for Annual Income Loss. In column (4) of Table 3, one additional year to retirement is associated with a 1.5 percentage-point increase in take-up, while a one-percentage-point increase in Annual Income Loss is associated with a 0.7 percentage-point decline. The implied reduced-form trade-off is therefore 2.14 percentage points of annual income loss. Given average annual net labour income of €35,030, this corresponds to approximately €750.

This number should not be interpreted as a structural willingness-to-pay estimate. It is a reduced-form equivalence in the take-up regression: one additional year of exposure to possible rule changes has the same association with acceptance as a reduction in annual income loss of about €750.

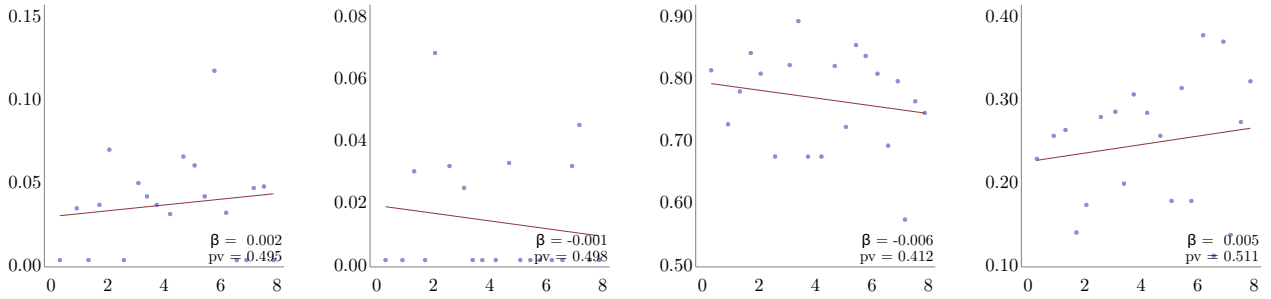
4 Alternative Channels

The positive relationship between years to retirement and take-up is consistent with workers valuing the opportunity to lock in current pension rules. However, years to retirement may also proxy for

other factors that affect acceptance. This section evaluates five alternative channels: job insecurity, outside employment opportunities, liquidity needs, age-related work disutility, and dynamic selection into the eligible sample. We use institutional features of the offer, administrative heterogeneity, and SHARE evidence to assess whether these mechanisms can account for the pattern documented in Section 3. Figure 4 summarizes the heterogeneity tests based on the administrative data. Each coefficient is the interaction between years to retirement and a characteristic that should strengthen one of the alternative mechanisms: high local unemployment, education, and managerial status for outside options; having a child aged 28–38 for liquidity needs; and chronic absence for health-related work disutility.

Job (in)security motives A first possibility is that workers further from retirement accepted the offer because they feared dismissal. This channel is unlikely to explain the result. Workforce reductions in the Italian banking sector are typically implemented through negotiated voluntary exit schemes, including the *Fondo di Solidarietà*, rather than through individual dismissals of permanent employees. Moreover, comparable SHARE respondents do not report greater job insecurity when they are further from retirement: self-reported poor job security is low and essentially flat with years to retirement (Figure 3, panel a). These facts provide limited support for a job-security interpretation.

Figure 3: SHARE survey data, by years to retirement



(a) Feels poor job security (b) Has multiple jobs (c) Wants to retire ASAP (d) Health concerns

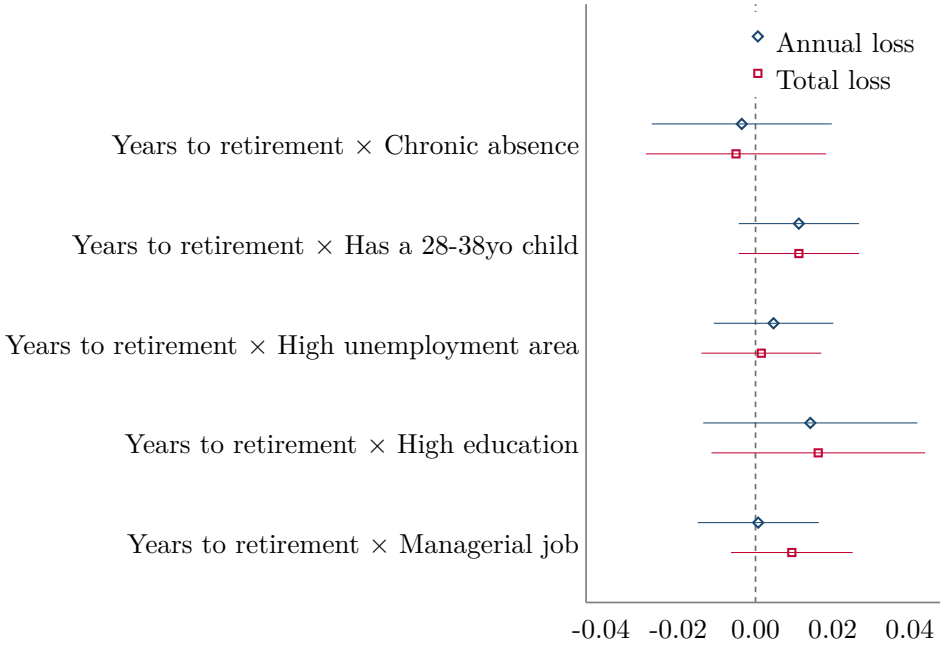
Notes. The binscatter reports the probability of answering *Yes* to the question against the temporal distance to retirement in years, grouped into 25 equal-sized (frequency) bins along the x-axis. The reported β coefficient and p-value refer to *years to retirement*, with standard errors clustered at respondent level. Survey data for Italian workers (45-65yo, up to 8 years to retirement) from SHARE, waves 5 (2013), 6 (2015), and 7 (2017). The number of respondents is 652. Full questions: (a) My job is not very secure (strongly agree); (b) Do you currently have a second job in addition to your main one?; (c) Thinking about your current job, would you like to retire as soon as possible?; (d) Are you worried that your health might limit your ability to do this job before the age at which you would normally retire?

Outside option motives A second possibility is that workers further from retirement accepted because they had better opportunities to work elsewhere. The design of the offer substantially limits this channel. Participants were subject to restrictions on competing employment, and income from non-competing employment reduced the allowance once total income exceeded the worker's previous earnings. In addition, the estimated interaction between years to retirement and local unemployment, education, or managerial status does not point to stronger take-up among groups with better

outside options (Figure 4). SHARE data also show that holding a second job is rare and unrelated to years to retirement (Figure 3, panel b).

Liquidity motives A third possibility is that workers accepted to obtain liquidity. This channel is limited by the fact that virtually no workers chose the lump-sum option: only one employee selected it instead of the monthly transfer.[5] We also test whether take-up is more responsive to years to retirement among workers with children aged 28–38, a group for whom family liquidity needs may be more salient. The interaction is small and statistically insignificant (Figure 4). These results make liquidity needs unlikely to explain the positive distance gradient.

Figure 4: Interaction terms, controlling for income loss, retirement age FE and additional controls



Notes. The figure shows the coefficients of the interaction between *years to retirement* and each category of heterogeneity. When controlling for income loss, annual and total income loss are alternated. Additional controls include dummies for region of work, managerial jobs, workers in branch or central offices, marital status, number of children, education levels and gender. Confidence intervals are reported at the 95% level. Standard errors are clustered at the individual level. Unemployment is measured at the province level. Chronic absence is defined as being in the top quartile of absences in both 2016 and 2017.

Age-related work disutility A fourth possibility is that the result reflects work disutility rather than policy risk. Standard age-related work disutility cannot explain the pattern. If the disutility of work rises with age, workers closer to retirement should be more likely to accept, since they avoid work at older ages. We examine this channel using chronic absenteeism, defined as being in the top quartile of absence days in both 2016 and 2017. Workers with chronic absences do not display a stronger relationship between years to retirement and take-up (Figure 4). SHARE evidence is consistent with this. Concerns that health will limit work ability, and the desire to retire as soon as possible, do not increase with years to retirement (Figure 3, panels c and d). We cannot fully exclude a more

[5]Source: Associazione Bancaria Italiana (ABI).

reduced-form "remaining-horizon" disutility, in which workers dislike having many years left to work independently of age, but this is distinct from the standard age-related work-disutility channel.

Dynamic Selection A fifth concern is dynamic selection into the eligible sample. Workers observed close to retirement in 2017 may be a selected group. If workers with low attachment to the bank had already left before the offer, the remaining workers close to eligibility would mechanically be less likely to accept. We cannot observe workers who left the bank before the offer, so this channel cannot be ruled out directly. Several pieces of evidence, however, reduce the concern. The sample consists of long-tenured employees, with average tenure of about 39 years. The result is also robust to including age-at-the-offer fixed effects, so it is not driven only by comparisons between younger and older workers. In addition, the coefficxient is stable when controlling for observable job characteristics and pre-offer proxies for attachment or health, including managerial status, branch employment, income, and absences. Finally, because Italian workers generally cannot claim a public pension before eligibility at an actuarially reduced benefit, selection through early pension claiming is limited. Any residual selection would therefore have to operate through other pre-offer exits, such as voluntary separation, disability, or job changes. These channels cannot be fully excluded, but the available evidence does not indicate that observable attachment to the firm or health-related exit propensity drives the main result.

Overall, the evidence provides limited support for the main alternative channels. Institutional features of the setting weaken job-security, outside-employment, and liquidity-based explanations. Administrative heterogeneity does not show stronger distance gradients among groups for whom these mechanisms should be most relevant. SHARE evidence points in the same direction. Perceived pension-policy risk rises with years to retirement, whereas job insecurity, second-job holding, health-related work limitations, and the desire to retire as soon as possible do not. We therefore interpret the positive relationship between years to retirement and take-up as consistent with workers valuing the opportunity to lock in current pension rules. The next section formalizes this interpretation in a simple model.

5 A simple model of policy-rule lock-in

Sections 3 and 4 show that take-up of the early retirement offer rises with years to retirement, even after controlling for the financial cost of accepting the offer, and that the main alternative channels receive limited empirical support. This section provides a simple framework to clarify why this pattern is difficult to reconcile with standard retirement incentives under certainty, and how policy uncertainty can generate it.

Consider worker i, who receives a one-time early retirement offer. Let h_i denote the number of

years between the offer and the worker's retirement-eligibility date under the rules in force at the time of the offer. If the worker accepts, she leaves employment immediately, receives the bridge transfer until retirement eligibility, and secures the pension rules in force at the time of entry into the scheme. If she rejects, she remains employed until eligibility, but remains exposed to possible changes in pension rules before reaching that date.

Let R_i denote the worker's expected retirement age. A worker who is h_i years from retirement eligibility is therefore aged $R_i - h_i$ at the time of the offer. Let $\beta \in (0, 1]$ denote the subjective discount factor. Let D_i denote the per-period utility cost of accepting the offer, generated by replacing labour income with the lower bridge transfer. Let α_a denote the value of leisure at age a, and assume that α_a is weakly increasing with age. This captures the standard idea that the disutility of work weakly rises as workers grow older.

If the worker accepts the offer, she obtains additional leisure during the h_i years before retirement eligibility. The discounted value of this leisure gain is

$$G_i(h_i) = \sum_{s=0}^{h_i-1} \beta^s \alpha_{R_i-h_i+s}. \tag{2}$$

The discounted cost of accepting the offer is $D_i B(h_i)$ where $B(h_i) = \sum_{s=0}^{h_i-1} \beta^s$ is the discounted length of the bridge period. Under certainty, the worker accepts if $D_i B(h_i) < G_i(h_i)$. Equivalently, dividing both sides by $B(h_i)$, acceptance requires $D_i < \bar{\alpha}_i(h_i)$, where $\bar{\alpha}_i(h_i) = \frac{G_i(h_i)}{B(h_i)}$ is the discounted average value of the leisure gained by accepting the offer. This condition delivers the benchmark prediction.

Compare two workers who are expected to retire at the same age R, but differ in their distance to eligibility. A worker one year from retirement accepts if

$$D_i < \alpha_{R-1}. \tag{3}$$

A worker two years from retirement accepts if

$$D_i < \frac{\alpha_{R-2} + \beta\alpha_{R-1}}{1+\beta}. \tag{4}$$

Because the value of leisure is weakly increasing, $\alpha_{R-2} \leq \alpha_{R-1}$. The acceptance threshold is therefore lower for the worker who is further from retirement. In the absence of policy uncertainty, workers further from eligibility should be less likely to accept the offer, conditional on the financial cost of acceptance.

Let's now introduce uncertainty about future pension rules. If the worker rejects the offer, a reform may occur before she reaches eligibility. Such a reform may increase retirement requirements, delay eligibility, or reduce benefit generosity. Let $\rho(h_i)$ denote the worker's perceived probability that

a reform occurs before she reaches eligibility. This probability is increasing in h_i, because workers further from retirement face a longer period during which rules can change. Let $\Lambda_i > 0$ denote the present discounted utility loss suffered by worker i if such a reform occurs. This loss includes the cost of delayed eligibility, lower pension benefits, or both. The expected loss from remaining exposed to future reforms is therefore $\rho(h_i)\Lambda_i$. This term is the expected present discounted loss that the worker avoids by accepting the offer and locking in current rules.

With policy uncertainty, the worker accepts if

$$D_i B(h_i) < G_i(h_i) + \rho(h_i)\Lambda_i. \tag{5}$$

Dividing by $B(h_i)$, this condition becomes $D_i < \bar{\alpha}_i(h_i) + H_i(h_i)$, where $H_i(h_i) = \frac{\rho(h_i)\Lambda_i}{B(h_i)}$ is the annualized insurance value of locking in current pension rules. The first term, $\bar{\alpha}_i(h_i)$, is the standard leisure value of accepting the offer. The second term, $H_i(h_i)$, is the value of eliminating exposure to future pension-rule changes.

The model has three implications. First, take-up should decline with the financial cost of accepting the offer, D_i. Second, under certainty, take-up should be weakly higher among workers closer to retirement. They forgo labour income for fewer years and obtain leisure at older ages, when leisure is more valuable. Third, with policy uncertainty, this prediction can be reversed. Workers further from eligibility face a longer exposure window, so $\rho(h_i)$ is higher. If the resulting insurance value $H_i(h_i)$ increases sufficiently with years to retirement, workers further from eligibility may be more likely to accept the offer despite facing a larger cumulative income loss and obtaining leisure at younger ages, when its value is lower.

The empirical analysis does not estimate $\rho(h_i)$, Λ_i, or $H_i(h_i)$ separately. The coefficient on years to retirement should therefore be interpreted as a reduced-form relationship between exposure to possible future rule changes and take-up, conditional on financial incentives and retirement-age fixed effects. The model clarifies why a positive coefficient on years to retirement is consistent with policy-rule lock-in, and why it runs against the benchmark prediction of a standard retirement model under certainty.

6 Conclusion

This paper studies whether workers value the opportunity to lock in current pension rules when future reforms are uncertain. We examine a one-time early retirement offer made in 2017 by a large Italian bank, which allowed eligible workers to leave employment before reaching retirement eligibility, receive a pension-equivalent transfer, and secure the pension rules in force at the time of entry into the scheme. The setting is useful because workers faced the same decision within a narrow time

window, while differing in both the financial cost of acceptance and the number of years remaining until retirement eligibility.

The empirical results show that take-up responds to financial incentives, but not only to them. Workers facing larger income losses are less likely to accept the offer. Conditional on this financial cost, retirement-age fixed effects, and demographic and job controls, take-up increases with years to retirement. This pattern is difficult to reconcile with a standard retirement model under certainty, in which workers further from eligibility forgo labour income for more years and obtain leisure at younger ages. A simple model shows how the prediction can be reversed when accepting the offer allows workers to lock in current pension rules and when exposure to future reforms increases with the distance to retirement.

We interpret the evidence as consistent with workers valuing policy-rule lock-in. Several alternative explanations receive limited support in the data. Institutional features of the offer weaken job-security, outside-employment, and liquidity-based interpretations. Administrative heterogeneity does not show stronger distance gradients among groups for whom these channels should be most relevant. SHARE evidence shows that perceived pension-policy risk rises with years to retirement, whereas job insecurity, second-job holding, health-related work limitations, and the desire to retire as soon as possible do not. We cannot directly observe workers' subjective beliefs about future pension reforms, and the coefficient on years to retirement should not be interpreted as a structural estimate of policy uncertainty. Rather, it provides reduced-form evidence that workers further from eligibility were more willing to accept an early retirement offer that secured current pension rules.

The findings have implications for the design of pension reforms. Reforms that raise retirement ages or tighten eligibility conditions are often introduced gradually, precisely to protect workers close to retirement. Yet gradual implementation also creates exposure to future rule changes for workers who are still several years from eligibility. If workers respond to this exposure by taking opportunities to lock in current rules, policy uncertainty may affect retirement-related decisions even before reforms are enacted. Credibility, transparency, and predictability in pension policy are therefore not only desirable institutional features; they may also matter for labour-supply responses at older ages.

More broadly, the paper contributes to evidence on retirement behaviour by showing that financial incentives and statutory rules do not fully characterize retirement-related choices. In settings where future policy rules are uncertain, the option to secure current rules can itself have value. Future research could build on this evidence by directly eliciting subjective expectations about pension reforms, linking such beliefs to administrative retirement choices, and studying whether similar lock-in motives arise in other institutional settings.

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A Appendix: Sample

Table A.1: Sample Selection

		Share				
Filtering step	Obs	Cumulative	Of previous step	Just this filter	Age	Female
All employees	9,258	1.000		1.000	59	0.41
Target sample						
Full-time employees	8,314	0.898	0.898	0.898	59	0.36
Not yet eligible to retire	8,108	0.876	0.975	0.977	59	0.36
Seniority scheme	7,244	0.782	0.893	0.900	59	0.39
Non-missing						
Education	7,180	0.776	0.991	0.990	59	0.39
Income loss	7,098	0.767	0.989	0.908	59	0.39
Region of work	7,086	0.765	0.998	0.998	59	0.39

Notes. For each step *s*, the shares are computed as follows. Cumulative: the number of observations at step *s* after applying all previous filters, divided by the number of observations in the raw sample. Of previous step: the number of observations at step *s* after applying all previous filters, divided by the number of observations in the previous step *s-1*. Just this filter: the number of observations after applying only the filter at step *s*, divided by the number of observations in the raw sample. In the analysis, one additional observation is dropped due to the introduction of age-at-retirement fixed effects. This is because only one worker expects to retire at age 55.

Table A.2: Descriptive statistics

	Mean	Obs	s.d.	Min	Median	Max
			Demographics			
Female	0.39	7,085	0.49	0	0	1
Age at the offer	59.31	7,085	1.91	47	59	65
Age at retirement	63.30	7,085	1.68	52	63	67
Bachelor or higher	0.10	7,085	0.30	0	0	1
Married	0.79	7,085	0.41	0	1	1
# of Children	1.35	7,085	0.92	0	1	6
Has a child	0.79	7,085	0.41	0	1	1
Has a 28-38yo Child	0.48	7,085	0.50	0	0	1
North (birth)	0.67	6,982	0.47	0	1	1
North (work)	0.71	7,085	0.45	0	1	1
			Economics			
Years to retirement	2.86	7,085	1.33	0.50	2.84	5.01
Acceptance	0.74	7,085	0.44	0	1	1
Middle or top manager	0.59	7,085	0.49	0	1	1
Branch office	0.75	7,085	0.43	0	1	1
Full time equivalent (%)	100	7,085	0.00	100	100	100
Absence days in 2017	23.34	6,011	40.32	0.00	8.59	249.67
Net labor income (k €)	35.03	7,085	8.33	19.48	32.85	128.31
Net pension transfer (k €)	27.33	2,235	4.52	12.35	26.36	56.75
			Estimates			
Years of contributions	39.15	7,085	1.25	36.66	39.09	41.67
Net pension transfer (k €)	27.93	4,850	5.08	14.32	26.62	79.57
Annual income loss (%)	19.92	7,085	5.44	-3.70	19.66	53.74
Total income loss (%)	55.78	7,085	29.44	-6.49	52.50	187.18

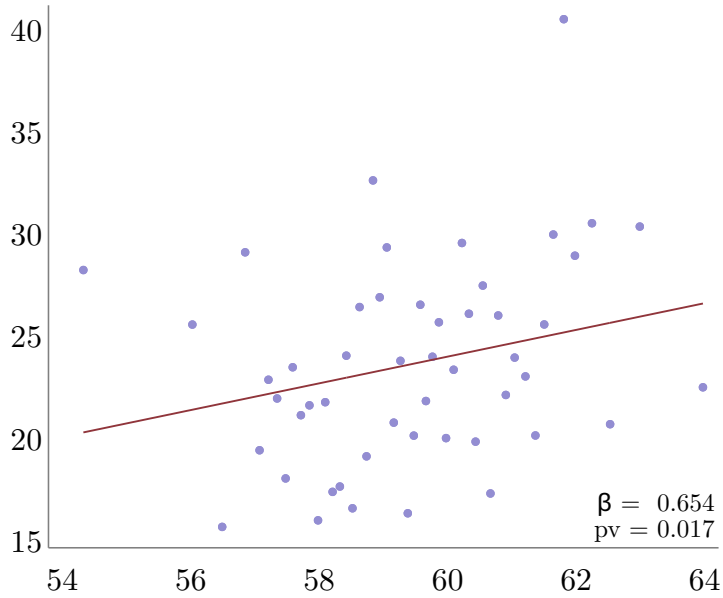
Notes. Summary statistics in this table refer to the working sample. Total and annual income losses are expressed as percentage of 2017 net income. *Full time equivalent* is equal to 100 for full-time employees. *Branch office* is a dummy equal to one for workers employed in local branch offices and zero if they are employed in central offices.

Table A.3: Balance checks

	Obs	Mean	s.d.	Coefficient	p-value
Age at retirement	7,085	63.30	1.68	0.270***	0.000
Female	7,085	0.39	0.49	-0.004	0.355
N. of children	7,085	1.35	0.92	-0.016**	0.047
Middle or top manager	7,085	0.59	0.49	-0.010**	0.029
Branch office	7,085	0.75	0.43	0.009**	0.018
Married	7,085	0.79	0.41	-0.004	0.240
Bachelor	7,085	0.10	0.30	0.002	0.350
North (work)	7,085	0.71	0.45	0.006	0.157
Net labor income (k €)	7,085	35.03	8.33	-0.306***	0.000
Net pension transfer (k €)	2,235	27.33	4.52	0.102	0.456
Net pension transfer (estimated, k €)	7,085	27.75	4.85	-0.007	0.877

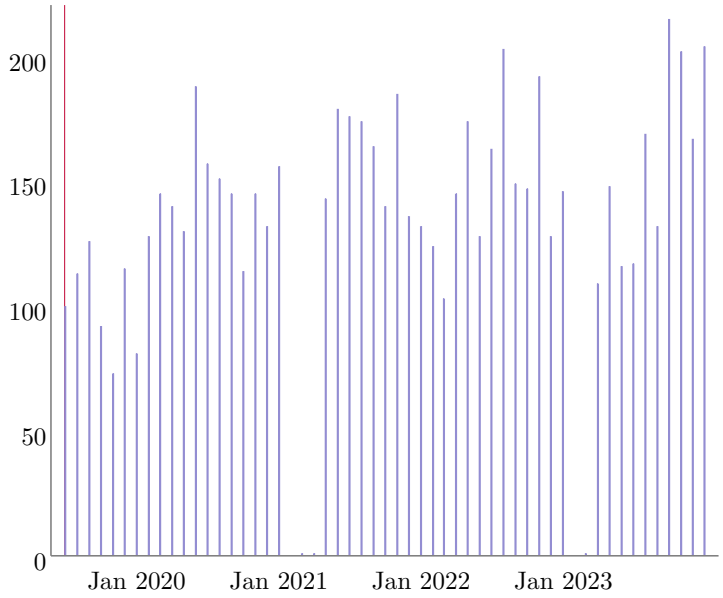
Notes. Each row reports the coefficient from regressions of each variable on years to retirement, with standard errors clustered at the individual level. Significance at the 10% level is represented by *, at the 5% by **, and at the 1% by ***.

Figure A.1: Days of absence by age, unconditional correlation



Notes. The binscatter reports the days of absence against age, grouped into 50 equal-sized (frequency) bins along the x-axis. The reported β coefficient and p-value refer to *age*, with standard errors clustered at individual level.

Figure A.2: Expected date of retirement eligibility



Notes. The figure reports day-level frequency of the expected retirement. The vertical red line marks 30 June 2019, the date of early retirement. The x-axis reports the date of retirement eligibility. The low frequencies in the first months of some years might be a mechanic result of the increase in the requirements necessary to retire. This explanation is consistent with figure E.1.

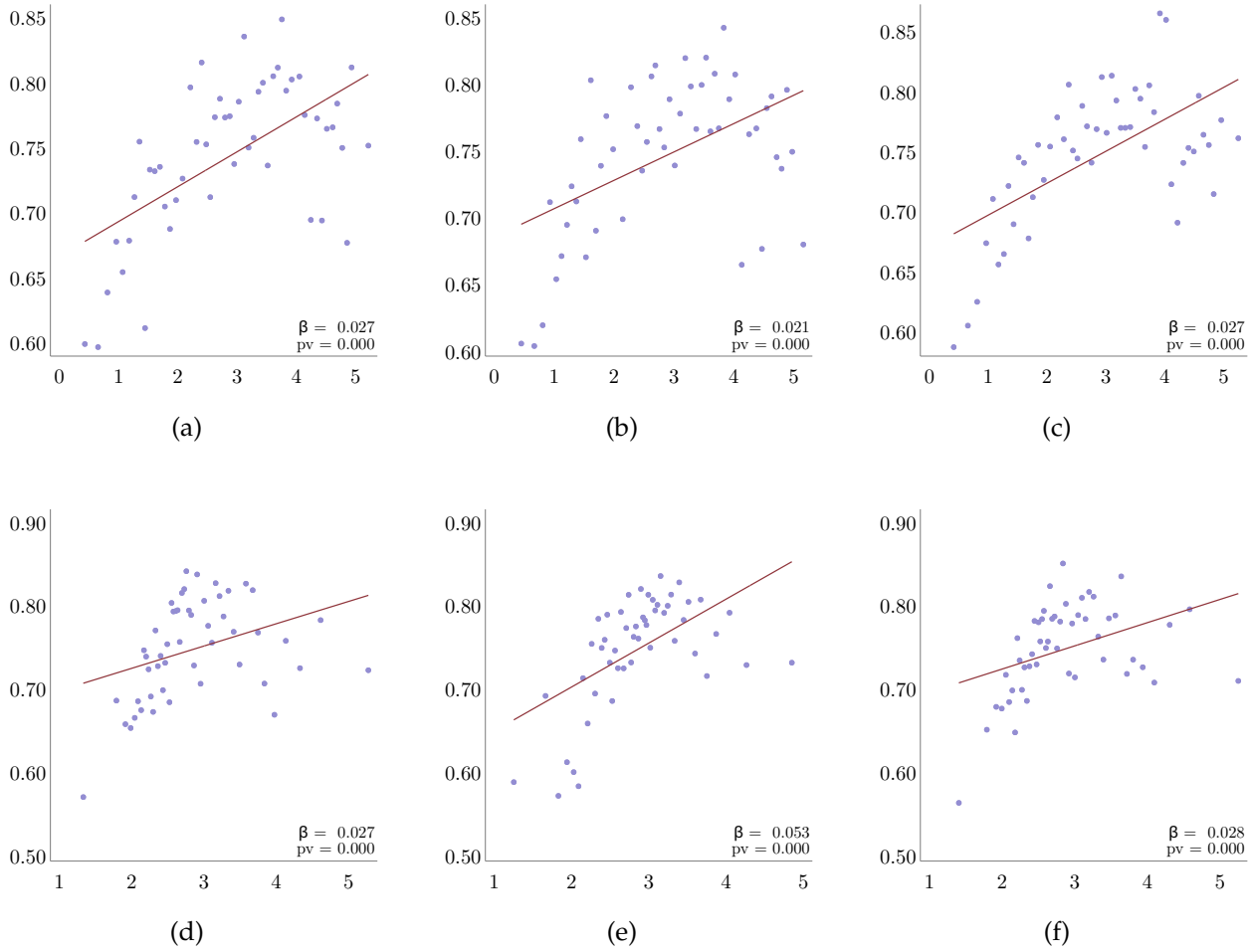
B Appendix: Robustness

Table B.1: Early retirement acceptance, expanded

	(1)	(2)	(3)	(4)
Dep. variable		Acceptance		
Years to retirement	0.022***	0.026***	0.053***	0.054***
	(0.004)	(0.007)	(0.008)	(0.009)
Total income loss		-0.000	-0.001***	-0.002***
		(0.000)	(0.000)	(0.000)
Middle or top manager				-0.031***
				(0.011)
Branch office				0.116***
				(0.013)
Married				0.051***
				(0.014)
Has 1 child				-0.049***
				(0.015)
Has 2 children				-0.066***
				(0.015)
Has 3 children				-0.059**
				(0.024)
Has 4 children				-0.094
				(0.070)
Has 5 children				-0.362**
				(0.149)
Has 6 children				0.277**
				(0.125)
High school degree				0.049**
				(0.019)
Bachelor or higher				0.007
				(0.026)
Female				0.055***
				(0.012)
Age at retirement FE	No	No	Yes	Yes
Controls	No	No	No	Yes
$\mathbb{E}(\textit{Acceptance})$	0.744	0.744	0.744	0.744
$\mathbb{E}(\textit{Total income loss})$		55.779	55.779	55.779
Adjusted-R^2	0.004	0.004	0.013	0.081
F statistic	30.126	15.269	28.622	20.467
Obs	7,085	7,085	7,085	7,085

Notes. Income loss is expressed as percentage of 2017 net income. The set of additional controls includes dummies for managerial jobs, branch or central office, level of education, marital status, gender, the region of work, and for the number of children. Standard errors are clustered at individual level and reported in parentheses. Significance at the 10% level is represented by *, at the 5% by **, and at the 1% by ***.

Figure B.1: Acceptance by years to retirement, progressively saturated models



Notes. The binscatters report the probability of accepting the offer against the temporal distance to retirement in years, grouped into 50 equal-sized (frequency) bins along the x-axis. Each panel corresponds to a separate regression; the reported β coefficient and p-value refer to years to retirement, with standard errors clustered at the individual level. Panel (a) includes age-at-retirement fixed effects. Panel (b) does not include any fixed effects but controls linearly for annual net income loss, capturing variation in acceptance driven by the financial cost of accepting early. Panel (c) combines both: age-at-retirement fixed effects and the linear control for annual net income loss. Panel (d) controls for total net income loss instead of the annual measure, without fixed effects. Panel (e) combines age-at-retirement fixed effects with the linear control for total net income loss. Panel (f) controls for total net income loss and includes age-at-the-offer fixed effects instead of age-at-retirement fixed effects.

Table B.2: Early retirement acceptance. Age at the offer FE

	(1)	(2)	(3)	(4)
Dep. variable		Acceptance		
Years to retirement	0.022***	0.026***	0.027***	0.058***
	(0.004)	(0.007)	(0.007)	(0.008)
Total income loss		-0.000	-0.001***	-0.002***
		(0.000)	(0.000)	(0.000)
Age at the offer FE	No	No	Yes	Yes
Controls	No	No	No	Yes
$\mathbb{E}(Acceptance)$	0.744	0.744	0.744	0.744
$\mathbb{E}(Total\ income\ loss)$		55.779	55.755	55.755
Adjusted-R^2	0.004	0.004	0.013	0.082
F statistic	30.126	15.269	7.274	25.792
Obs	7,085	7,085	7,083	7,083

Notes. Income loss is expressed as percentage of 2017 net income. The set of additional controls includes dummies for managerial jobs, branch or central office, level of education, marital status, gender, the region of work, and for the number of children. Standard errors are clustered at individual level and reported in parentheses. Significance at the 10% level is represented by *, at the 5% by **, and at the 1% by ***.

Table B.3: Early retirement acceptance, excluding *lavoratori precoci*

	(1)	(2)	(3)	(4)
Dep. variable		Acceptance		
Years to retirement	0.022***	0.030***	0.055***	0.057***
	(0.004)	(0.007)	(0.008)	(0.009)
Total income loss		-0.000	-0.001***	-0.002***
		(0.000)	(0.000)	(0.000)
Age at retirement FE	No	No	Yes	Yes
Controls	No	No	No	Yes
$\mathbb{E}(Acceptance)$	0.742	0.742	0.742	0.742
$\mathbb{E}(Total\ income\ loss)$		55.851	55.851	55.851
Adjusted-R^2	0.004	0.004	0.012	0.081
F statistic	28.395	15.004	27.484	20.912
Obs	6,839	6,839	6,839	6,839

Notes. The table replicates the main analysis excluding workers eligible for retirement before turning 60, this can happen due to long contribution histories, or reflecting other special circumstances. *Income loss* is expressed as percentage of 2017 net income. The set of additional controls includes dummies for managerial jobs, branch or central office, level of education, marital status, gender, the region of work, and for the number of children. Standard errors are clustered at individual level and reported in parentheses. Significance at the 10% level is represented by *, at the 5% by **, and at the 1% by ***.

C Appendix: Estimating the pension-equivalent transfer

Procedure. For workers whose pension benefit is not directly observed, we estimate it using a linear regression on the subsample of workers with observed benefits.

As a preliminary step, we estimate the number of years of contributions to the public pension system for each worker. Administrative records provide the exact date at which each employee becomes eligible to retire, defined as the earliest date at which eligibility is attained under either the old-age or the seniority retirement scheme. For employees whose age at the eligibility date is below the statutory minimum age for old-age retirement, we can infer that eligibility arises through the seniority scheme. In these cases, the eligibility rules uniquely identify the number of years of contributions, allowing us to recover individuals' contribution histories. By contrast, for employees whose age at eligibility is equal to or above the statutory minimum for old-age retirement, it is not possible to determine with certainty whether eligibility is attained through the old-age or the seniority pathway. As a result, we cannot uniquely recover their contribution histories. This applies to a subset of 926 individuals, corresponding to 10% of the original sample.

We regress the pension-equivalent transfer (PET) on gross labour income, years of contributions, an indicator for management position, gender, and fixed effects for age at retirement (γ_q) and current age (δ_p), leveraging the subsample of individuals for whom this variable is directly observed, we estimate the following regression:

$$\text{PET}_i = \alpha + \beta_1 \,\text{income}_i + \beta_2 \,\text{years of contributions}_i + \beta_3 \,\text{manager}_i + \beta_4 \,\text{female}_i + \gamma_q + \delta_p + \varepsilon_i$$

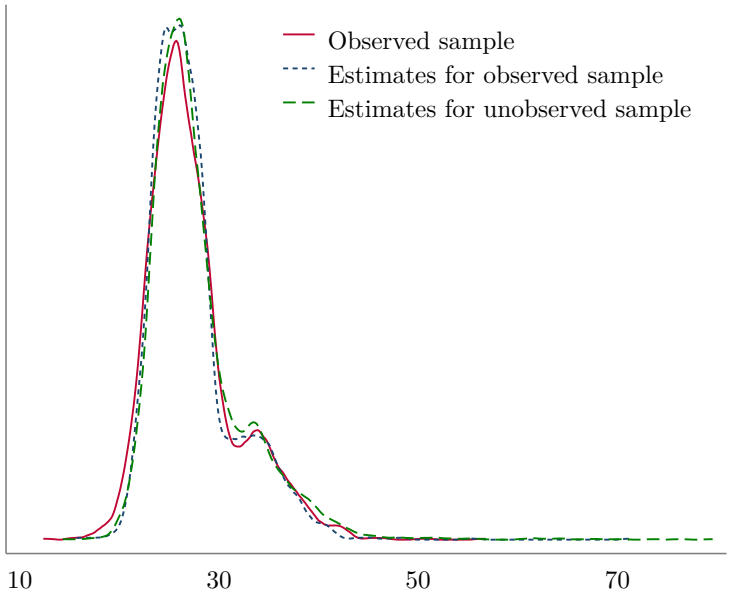
where PET_i denotes the pension-equivalent transfer expected by individual i, $income_i$ is her gross income in 2017, $years\ of\ contributions_i$ is the number of years of contributions to the social security system, $manager_i$ is a dummy indicating managerial positions. We then use the estimated coefficients to predict the PET for every worker in the full sample (both those with and without observed pensions), and convert it to a net measure by applying the same net-of-tax adjustment used for the observed pension. We then construct the (predicted) percentage income loss from retiring early and the associated cumulative loss over the years remaining until statutory retirement. Where the actual pension is observed, we replace the predicted values with the observed ones, so that the resulting variable, coincides with the observed cumulative income loss whenever available and equals the model-based prediction only for the subsample with missing administrative pension data.

Fit in the observed subsample. Figure C.1 compares the kernel density of the observed net pension benefit with the density of the fitted values for the same subsample, and with the fitted values for the subsample where the benefit is not observed in the administrative records. The predicted distribution for the observed subsample closely reproduces the empirical distribution. This indicates that the

imputation model does not generate values that are systematically out of line with the observed data, and that the observed and unobserved subsamples are not obviously different in the characteristics that drive the pension level.

Prediction error. Within the subsample with observed pensions, we compute the percentage prediction error $\frac{\text{estimated pension} - \text{actual pension}}{\text{estimated pension}}\%$. Panel (a) of figure C.2 shows that this error is symmetrically distributed around zero, with the bulk of the mass within $\pm 10\%$ and no visible skew, suggesting that the model does not systematically over- or under-predict the benefit.

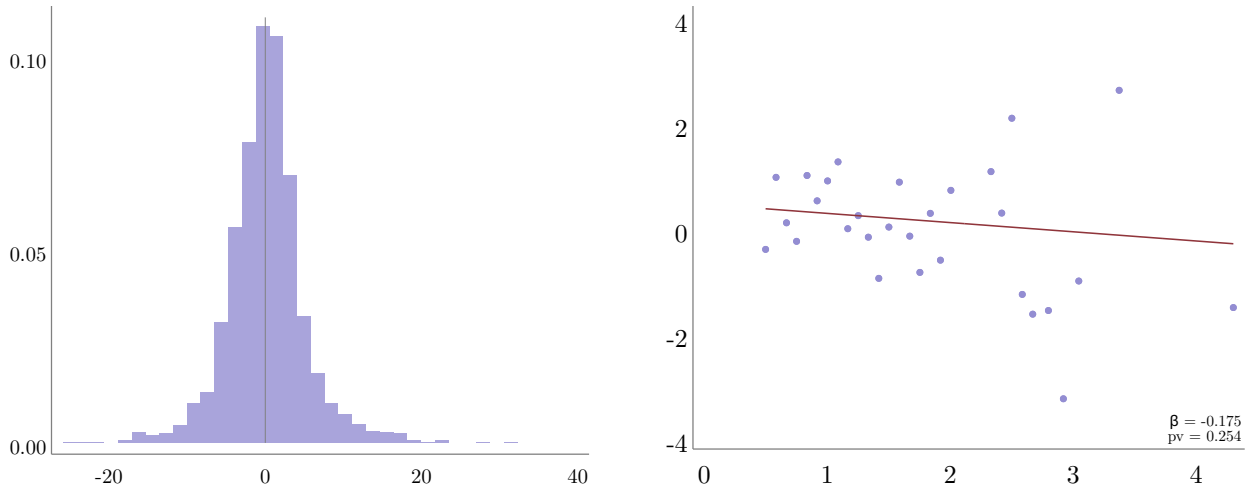
Figure C.1: Distribution of the pension benefit



Notes. The figure shows the distributions of the estimated and actual *annual net pension income* (in thousands of euros) for the observed subsample, together with the estimates for the unobserved subsample.

Orthogonality to years to retirement. Because years to retirement is the main explanatory variable in our acceptance regressions, a major concern is that prediction errors could be correlated with it. If the model fits workers closer to or further from retirement systematically better or worse, this could mechanically bias the coefficient of interest once the (predicted) net income loss is included as a control. Panel (b) of figure C.2 plots the binned relationship between the percentage error and years to retirement: regressing the error on years to retirement yields a slope of $\beta = -0.175$ ($p = 0.254$), not significantly different from zero, confirming that the prediction error is not systematically related to temporal distance to retirement.

Figure C.2: Percentage error in the observed sample



(a) Distribution

(b) Correlation with years to retirement

Notes. Panel (a) reports the distribution of the percentage difference, within the subsample with complete information, between the estimated and observed pension income. The latter being calculated as $\frac{\text{estimated pension} - \text{actual pension}}{\text{estimated pension}}$%. The binscatter in panel (b) shows the correlation between the temporal distance to retirement (x-axis) and the percentage error (y-axis).

D Appendix: Theoretical Framework

Sections 3 and 4 document that acceptance of the offer rises with distance to retirement, net of income loss, and show that the leading competing explanations for this pattern are unlikely to account for it. We now formalize the policy-uncertainty channel that we argue is most consistent with this evidence. We introduce a simple theoretical framework, in which individuals have to take an unusual retirement decision. Rather than deciding whether to retire immediately or in future periods, individuals have to consider a one-time offer provided by their employer. Every individual, who is sufficiently close to retirement, is offered the opportunity to stop working immediately and to receive a flow of income payments, y_t that correspond to the pension benefits they would receive at normal retirement age P^A. Individuals care about current and future income and leisure.

Hence, the utility associated with accepting the offer is:

$$V(\hat{A}) = \sum_{i=0}^{N} \beta^i \left[U(P^A_{t+i}) + \alpha_i V(l_{t+i}) \right] \tag{6}$$

where β is the subjective discount factor, P^A_{t+i} and l_{t+i} are, respectively, the pension benefit and the leisure at time $t+i$, and α_i is a parameter that depends on the individuals' age. In particular, we assume that $\alpha_i \leq \alpha_{i+1}$ to account for the fact that the value of leisure, or the disutility of working, weakly increases with individual age[6].

Individuals are offered this retirement option only once. At the time of the offer, they will differ in their temporal distance to retirement. Some individuals will have the opportunity to retire the period after the offer. Hence, if they do not accept the offer at time t, they will work and earn a labour income $y_t > 0$, but they will not have leisure $l_t = 0$. At time $t+1$, they can retire, receive a pension P^A_{t+1} and enjoy leisure $l_{t+1} > 0$. However, to introduce uncertainty about policy reforms, we consider that with probability ρ_I a reform occurs that (i) increases their retirement age by one period, from $t+1$ to $t+2$, and (ii) reduces their pension benefits from P^A_{t+i} to P^R_{t+i}, with $P^A_{t+i} > P^R_{t+i}$.

Hence, the utility of an individual who expects to retire the next period and decides to decline the offer is:

$$\begin{aligned} V(\hat{T}_1) = U(y_t) + \alpha_0 V(l_t = 0) + \rho_I \left[\beta \left[U(y_{t+1}) + \alpha_1 V(l_{t+1} = 0) \right] + \sum_{i=2}^{N} \beta^i \left[U(P^R_{t+i}) + \alpha_i V(l_{t+i}) \right] \right] + \\ + (1 - \rho_I) \sum_{i=1}^{N} \beta^i \left[U(P^A_{t+1}) + \alpha_i V(l_{t+1}) \right] \end{aligned} \tag{7}$$

Other individuals will have the opportunity to retire two periods after the offer. Hence, if they

[6] To provide some evidence in support of this assumption, figure A.1 shows a positive correlation between days of absence and age in our sample.

do not accept the offer at time t, in the current and future period, they will work and earn a labour income $y_t > 0$ and $y_{t+1} > 0$, but do not have leisure $l_t = l_{t+1} = 0$. At time $t+2$, they can retire, receive a pension P^A_{t+2} and enjoy leisure $l_{t+2} > 0$. However, with probability ρ_{II} a reform occurs that (i) increases their retirement age by one period, from $t+2$ to $t+3$, and (ii) reduces their pension benefits from P^A_{t+i} to P^R_{t+i}, with $P^A_{t+i} > P^R_{t+i}$.

Hence, the utility of an individual who expects to retire in two periods of time and decides to decline the offer is:

$$\begin{aligned} V(\hat{T}_2) =& U(y_t) + \alpha_0 V(l_t = 0) + \beta \left[U(y_{t+1}) + \alpha_1 V(l_{t+1} = 0) \right] + \\ &+ \rho_{II} \left[\beta^2 (U(y_{t+2}) + \alpha_2 V(l_{t+2} = 0)) + \sum_{i=3}^{N} \beta^i \left[U(P^R_{t+i}) + \alpha_i V(l_{t+i}) \right] \right] + \\ &+ (1 - \rho_{II}) \sum_{i=2}^{N} \beta^i \left[U(P^A_{t+i}) + \alpha_i V(l_{t+i}) \right] \end{aligned} \tag{8}$$

To understand the determinants of this unique retirement decision, we thus compare the utility from accepting, $V(\hat{A})$, or rejecting the offer, respectively for an individual who is expected to retire the next period, $V(\hat{T}_1)$, or in two periods time, $V(\hat{T}_2)$. In what follows, we concentrate on individuals who are of different age at the time of the offer, but who will have the same age at the time of expected retirement. To fix ideas, consider that all individuals expect to retire at age 65. Hence, an individual expecting to retire in the period after the offer will be 64 years old at the time of the offer, while an individual expecting to retire in two periods time will be 63 years old. Establishing the age of the individuals matters in this analysis, since the parameter of the utility function attached to leisure α_i is assumed to depend on the age of the individual. Furthermore, we do the following normalizations:

$$\begin{aligned} \Delta L_t =& V(l_t) - V(l_t = 0) \\ \Delta I_t =& U(y_t) - U(P^A_t) \\ K_t =& \Delta I_t / \Delta L_t \end{aligned} \tag{9}$$

where K_t measures, for a period t, the importance of the monetary loss from accepting the offer relative to the gain in leisure. We assume that this measure is constant over periods, $K_t = K \; \forall t$. This amounts to assume that the monetary loss and the difference in leisure does not differ during the years around retirement. Notice however that the utility value of leisure does change due to the fact that α_i depends on the individual age.

Case I: No Policy Reforms This represents our benchmark case, in which individuals do not expect pension reforms occurring in the future, that is $\rho_I = \rho_{II} = 0$. We consider the acceptance decision of

two individuals. A 64 years old person expecting to retire in the next period will compare the utility from accepting the offer $V(\hat{A})$ with the utility from retiring in the next period $V(\hat{T}_1)$. A 63 years old person expecting to retire in two periods time will compare the utility from accepting the offer $V(\hat{A})$ with the utility from retiring in two periods time $V(\hat{T}_2)$.

For the 64 years old individual, the difference in utility between accepting the offer and waiting one period to retire is:

$$V(\hat{A}) - V(\hat{T}_1) = U(P_t^A) - U(y_t) + \alpha_{64} V(l_t) - \alpha_{64} V(l_t = 0) = -\Delta I_t + \alpha_{64} \Delta L_t \tag{10}$$

Hence, this individual will accept the offer if $K = \Delta I_t / \Delta L_t < \alpha_{64}$

For the 63 years old individual, the difference in utility between accepting the offer and waiting two periods to retire is:

$$\begin{aligned} V(\hat{A}) - V(\hat{T}_2) =& U(P_t^A) - U(y_t) + \alpha_{63} \left[V(l_t) - V(l_t = 0) \right] + \\ &+ \beta \left[U(P_{t+1}^A) - U(y_{t+1}) + \alpha_{64} \left[V(l_{t+1}) - V(l_{t+1} = 0) \right] \right] \end{aligned} \tag{11}$$

Hence, this individual will accept the offer if $K < \frac{\alpha_{63} + \beta \alpha_{64}}{1+\beta}$

The next proposition summarizes these individual decisions.

Proposition I For $K > \alpha_{64}$, no individual will accept the offer; for $\frac{\alpha_{63} + \beta \alpha_{64}}{1+\beta} < K < \alpha_{64}$ only the (64 years old) individual retiring in T_1 will accept the offer; for $K < \frac{\alpha_{63} + \beta \alpha_{64}}{1+\beta}$ both individuals will accept the offer.

Hence, when the monetary loss from stop working (relative to the acquired leisure), as measured by K, is large, no individual will accept the offer. For lower level of monetary loss, the individual who will only suffer the loss for one period will be willing to accept. Finally, when the monetary loss is low, both individuals will accept.

Case II: Policy Reforms Uncertainty We now analyze the same choice of accepting the offer or continuing to work and waiting for retirement, by these two individuals, but we introduce policy reform uncertainty. These two individuals now expect that pension reforms may occur in the future, that is $\rho_I > 0$ and $\rho_{II} > 0$.

For the 64 years old individual, the difference in utility between accepting the offer and waiting one period to retire becomes:

$$
\begin{aligned}
V(\hat{A}) - V(\hat{T}_1) =& U(P_t^A) - U(y_t) + \alpha_{64}\left[V(l_t) - V(l_t = 0)\right] + \\
&+ \beta\rho_I\left[U(P_{t+1}^A) - U(y_{t+1}) + \alpha_{65}\left[V(l_{t+1}) - V(l_{t+1} = 0)\right]\right] + \\
&+ \rho_I \sum_{i=1}^{N-1} \beta^{i+1}\left[U(P_{t+1+i}^A) - U(P_{t+1+i}^R)\right] = \\
=& -\Delta I_t + \alpha_{64}\Delta L_t - \beta\rho_I\Delta I_{t+1} + \beta\rho_I\alpha_{65}\Delta L_{t+1} + \rho_I\Delta P_{t+1}^D
\end{aligned}
\tag{12}
$$

where $\Delta P_{t+1}^D = \sum_{i=1}^{N-1}\beta^{i+1}\left[U(P_{t+1+i}^A) - U(P_{t+1+i}^R)\right]$. It is convenient to define as $C_{t+1} = \Delta P_{t+1}^D/\Delta L_t$ the importance of the net present value of the monetary loss associated the pension reform relative to the one-period gain in leisure at time t.

Hence, this individual will accept the offer, that is $V(\hat{A}) > V(\hat{T}_1)$ if

$$
\rho_I > \frac{K - \alpha_{64}}{\beta\left(\alpha_{65} - K\right) + C_{t+1}} = \rho_I^* \tag{13}
$$

For the 63 years old individual, the difference in utility between accepting the offer and waiting two periods to retire becomes:

$$
\begin{aligned}
V(\hat{A}) - V(\hat{T}_2) =& U(P_t^A) - U(y_t) + \alpha_{63}\left[V(l_t) - V(l_t = 0)\right] + \\
&+ \beta\left[U(P_{t+1}^A) - U(y_{t+1}) + \alpha_{64}\left[V(l_{t+1}) - V(l_{t+1} = 0)\right]\right] + \\
&+ \rho_{II}\beta^2\left[U(P_{t+2}^A) - U(y_{t+2}) + \alpha_{65}\left[V(l_{t+2}) - V(l_{t+2} = 0)\right]\right] + \\
&+ \rho_{II} \sum_{i=1}^{N-2} \beta^{i+2}\left[U(P_{t+2+i}^A) - U(P_{t+2+i}^R)\right] = \\
= -\Delta I_t + \alpha_{63}\Delta L_t - \beta\Delta I_{t+1} + \beta\alpha_{64}\Delta L_{t+1} - \beta^2\rho_{II}\Delta I_{t+2} + \beta^2\rho_{II}\alpha_{65}\Delta L_{t+2} + \rho_{II}\Delta P_{t+2}^D > 0&
\end{aligned}
\tag{14}
$$

where $\Delta P_{t+2}^D = \sum_{i=1}^{N-2}\beta^{i+2}\left[U(P_{t+2+i}^A) - U(P_{t+2+i}^R)\right]$ and $C_{t+2} = \Delta P_{t+2}^D/\Delta L_t$.

Hence, this individual will accept the offer, that is $V(\hat{A}) > V(\hat{T}_2)$ if

$$
\rho_{II} > \frac{(1+\beta)K - \alpha_{63} - \beta\alpha_{64}}{\beta^2\left(\alpha_{65} - K\right) + C_{t+2}} = \rho_{II}^* \tag{15}
$$

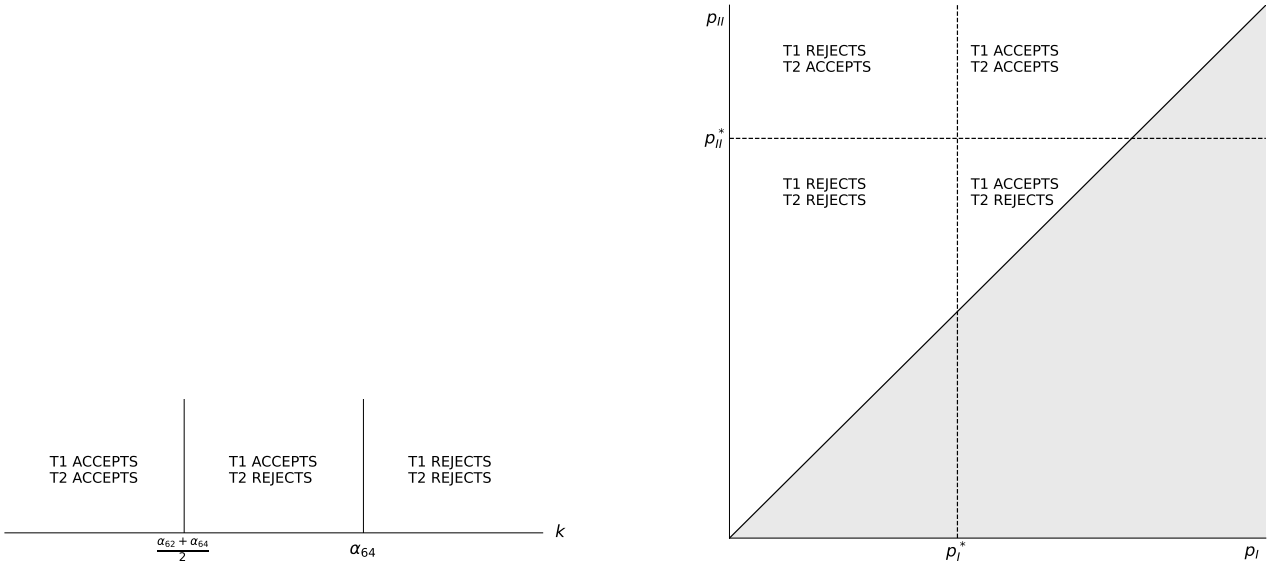
The next proposition summarizes these individual decisions.

Proposition II For $\rho_I < \rho_I^*$ and $\rho_{II} < \rho_{II}^*$, no individual will accept the offer; for $\rho_I < \rho_I^*$ and $\rho_{II} > \rho_{II}^*$, only the (63 years old) individual retiring in T_2 will accept the offer; for $\rho_I > \rho_I^*$ and $\rho_{II} < \rho_{II}^*$, only the (64 years old) individual retiring in T_1 will accept the offer; for $\rho_I > \rho_I^*$ and $\rho_{II} > \rho_{II}^*$, both individuals will accept the offer. Both ρ_I^* and ρ_{II}^* are increasing in K.

Hence, with policy uncertainty, the acceptance decision will depend on the subjective probability that an individual assigns to a reform taking place before retiring in the next period ρ_I or in two

periods time ρ_{II}, where clearly, $\rho_{II} \geq \rho_I$, since with more time available the probability of a reform occurring increases. If a reform that increases retirement age and reduces pension benefits is likely to happen, individuals will be more willing to accept the offer, despite the monetary loss (measured by K), in order to secure the current retirement conditions. Notice that the threshold probabilities, ρ_I^* and ρ_{II}^*, are increasing in K, since for a larger monetary loss individuals will be willing to accept the offer only if the probability of a future reform increases[7].

Figure D.1: Graphical representation of the decision



(a) Case I: without uncertainty

(b) Case II: with uncertainty

Summary The model shows that, when policy uncertainty exists regarding potential pension reforms, individuals who are further from retirement may be more likely to accept an early retirement offer than those closer to retirement, even when both share the same statutory retirement age. This finding contrasts with the standard prediction under certainty, where the rising value of leisure with age would make older workers more prone to retire early. The mechanism underlying this reversal is that uncertainty about future increases in the retirement age or reductions in benefits provides younger workers with a stronger incentive to secure existing pension conditions, even at the cost of a temporary monetary loss. This is exactly the pattern we document empirically in Section 3: acceptance of the offer rises, rather than falls, with distance to retirement, net of the associated income loss. Figure D.1 provides a graphical description of the individual acceptance decisions in the case with no policy reforms (panel a) and with policy uncertainty (panel b).

[7]We can also inspect the limiting case in which the reform is certain to occur ($\rho_I = \rho_{II} = 1$). As long as K is not too large, so that $\rho_I^*, \rho_{II}^* < 1$, Proposition II implies that both individuals accept the offer, irrespective of their distance to retirement. This case removes any role for distance-varying uncertainty, what remains is only the economic trade-off summarized by K and since the individual closer to retirement forgoes labour income for fewer periods, that individual would, if anything, be relatively more willing to accept. This is the opposite of the pattern we document, suggesting that the empirical results are unlikely to reflect a generic desire to avoid an anticipated reform. Rather, they require that the perceived probability of a reform itself increases with distance to retirement, consistent with the policy uncertainty and locking-in motives.

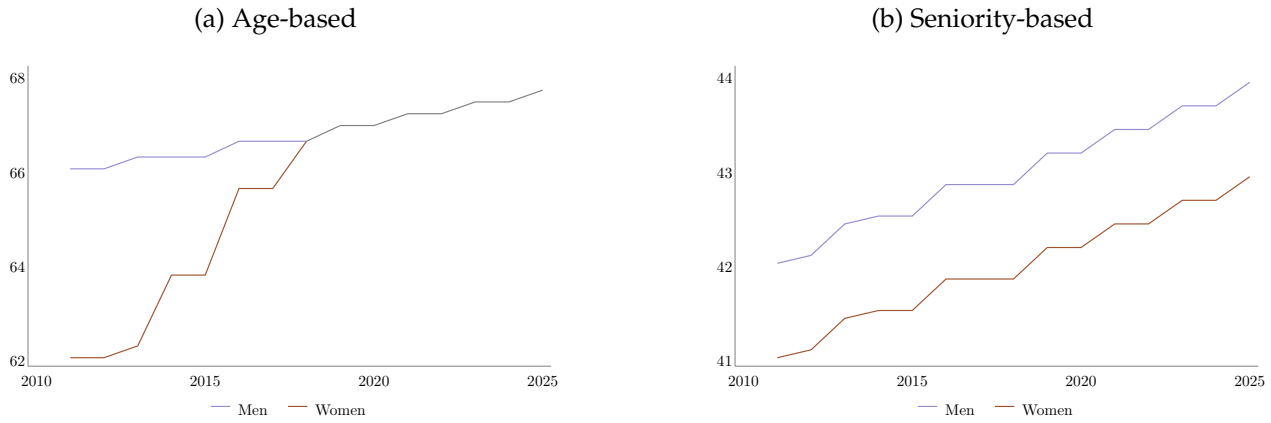
E Appendix: Details on Italian retirement policy

Table E.1: Requirements to retire with full benefits

	Old Age		Pure seniority	
	Men	Women	Men	Women
Years of contributions	20y	20y	42y 10m	41y 10m
Age	66y 7m	65y 7m	62y	62y

Notes. The table presents the requirements for employees to retire with full benefits in 2017. These requirements are indexed to automatically adjust over the years to align with the demographic and economic trends of the Italian economy.

Figure E.1: Retirement requirements over time



Notes. The requirements in this figure refer to employees under the Monti-Fornero reform.

F Guide to the early retirement program

In this section, we provide the documentation related to the early retirement program. Compared to the original documents, we only translate the text into English and omit the names of the banks involved in the operation.

The performance defined as "extraordinary" consists of providing an economic treatment (extraordinary allowance) for the period between the date of termination of the employment relationship and the date of pension payment, as well as the payment of the related contributions. It is therefore a form of pension support, from which the term "Fondo esodi" or "Fondo esuberi", commonly attributed to the solidarity fund, originates.

The Extraordinary Allowance is paid by INPS, and the bank takes care of the necessary provision for the allowance in favor of the employee and the related figurative contributions.

We highlight that in the preliminary phase before accessing the Fund, the employee will receive from the Company, in triplicate, the "Extraordinary Allowance Request". This document contains all the necessary information for remaining in the fund and calculating the extraordinary allowance. Therefore, it is crucial to verify the data before signing.

Extraordinary Allowance in Installments is equal to the sum of the following amounts:

- The net amount of the pension treatment due with the increase in the missing years of contributions for achieving the first AGO requirement (early retirement or old-age pension);
- Percentage reduction, as specified below, of the salary portion for those whose pension treatment, as of December 31, 2011, is calculated entirely under the salary-based system;
- Amount of statutory deductions on the extraordinary allowance.

Essentially, the net benefit provided is equivalent to the net amount of the pension treatment due with the increase in the missing years of contributions. In other words, the extraordinary allowance provided is equal to the net pension the worker would have received by accumulating the contributions required to reach the pension entitlement (either early or old-age, depending on which occurs first), minus any reduction as indicated in point B, and will remain unchanged throughout the period of staying in the Redundancy Fund.

During this period, the bank will continue to pay the figurative contributions to INPS so that even the period without employment is covered for the purpose of pension rights accrual and future pension calculation.

For part-time employees, it is advisable to request full-time reinstatement in the month before accessing the fund, to benefit from the full contributions paid by the employer to INPS.

(Protocol for the start of the integration of former OMITTED banks into OMITTED 13/7/2017) – Regarding colleagues from the perimeter of the former OMITTED banks who are accessing the redundancy program, "The Company will accept, during the month preceding the termination of the employment relationship, the requests for the reinstatement of full-time contracts submitted by part-time employees who wish to access the Solidarity Fund."

Reductions – For employees whose pension treatment up to December 31, 2011, is calculated entirely under the salary-based system (employees with at least 18 years of contributions as of December 31, 1995), the amount of the allowance is reduced according to the following percentages:

- 8% if the last gross annual salary (RAL*) is less than or equal to €38,000;
- 11% if the last gross annual salary (RAL*) is greater than €38,000.

*RAL: Gross Annual Salary. Essentially, the gross value of the fixed part of the salary, such as base pay, seniority increases, etc.

These reductions apply only to the salary treatment portions derived from the years of contributions accumulated before January 1, 2012; they do not apply to employees accessing the Fund under agreements made before July 8, 2011.

For part-time employees, the salary is based on full-time proportions.

It is important to emphasize that these reductions do not apply in the following cases:

- In cases of pension calculation under the mixed system (workers with fewer than 18 years of contributions as of December 31, 1995);
- In cases of pension calculation under the fully contributory system (workers with no years of contributions as of January 1, 1996 and workers opting for early retirement under the "women's option").

Extraordinary Allowance in a Lump Sum – The employee can choose to receive the allowance in a lump sum. In this case, the one-time extraordinary allowance is equal to an amount corresponding to 60% of what would be due if the extraordinary benefit were paid in installments, updated to the official ECB reference rate at the time of the benefit start date.

In the case of a lump sum payment, the related pension contributions are not due and are not paid by the exiting company (unlike what happens with installment payments). In this case, the employee will be responsible for completing their pension plan to reach early retirement. Alternatively, they will be able to access the old-age pension when the established date arrives, provided the necessary requirements are met, receiving an amount based on the actual contributions paid.

Therefore, this is a choice that should be carefully considered, possibly with union assistance (e.g., if considering taking up another job).

Allowance Estimation – Our Union Association is always able to calculate the amount of the extraordinary allowance. Therefore, please contact your union representative or call your local office.

The following updated documents are required in copy:

- Latest pay slip
- INPS eco-cert or alternatively the INPS pension statement
- ID and tax code
- Telephone contact

Please note that the simple pension statement can be obtained either from the INPS website if you are a registered user (and in this case, it is already downloadable in PDF format), or at the nearest INPS office.

Upon receiving the request, complete with all documents, we will promptly communicate the estimated amount of the allowance.

Notice of Termination of Employment Relationship – The extraordinary allowance and the related contributions are paid upon explicit renunciation of:

- Notice and related substitute indemnity;
- Any additional benefits provided by collective agreements – however, union agreements may provide exceptions, such as maintaining preferential conditions, insurance coverage, etc.

(Protocol for the start of the integration of former OMITTED banks into OMITTED 13/7/2017) – For employees of the former OMITTED banks who are joining the Redundancy Fund, it was established that healthcare coverage and preferential banking and credit conditions will be guaranteed until retirement. Furthermore, during the period of the fund, for those enrolled in defined-benefit pension schemes, no additional payments will be made to the extraordinary allowance, while the period will still count for calculating the supplementary benefits to be paid individually at the time of retirement.

In cases where the indemnity for lack of notice exceeds the total amount of the "extraordinary allowances" due, the employer will pay the employee, who has formally waived the notice, an additional one-time indemnity equal to the difference. Therefore, a total amount at least equal to the indemnity for lack of notice will be guaranteed.

Without such renunciation, the worker loses the extraordinary allowance and the related contribution.

Duration – According to D.M. n. 83486/2014, extraordinary allowances for income support are paid by the Fund for a maximum period of 5 years (60 months) from the date of termination of the employment relationship.

The Law of June 30, 2016, n. 119, converting Decree-Law 3 May 2016, n. 59, provided that, limited to 2016 and 2017, the maximum duration of the extraordinary allowance was increased from 5 to 7 years (84 months). The possibility of using the extraordinary allowance for up to 7 years was then extended by the 2017 Budget Law to 2018 and 2019.

(Protocol for the start of the integration of former OMITTED banks into OMITTED 13/7/2017) – For the reduction of personnel from the former OMITTED banks, it was established that all those who meet the pension requirements by December 2024 could apply for access to the Redundancy Fund, within the deadline of September 18, 2017, for a maximum duration of 7 years (84 months). The reduction of personnel in the rest of the Group will be defined and regulated later, and applications for early retirement will be accepted from all those who meet the pension requirement by December 31, 2022, for a maximum duration of 5 years (60 months).

Tax Regime – Extraordinary allowances, whether paid in installments or as a lump sum, do not need to be reported in the income tax return as they are subject to separate taxation, with the TFR tax rate applied. This tax regime also exempts them from additional regional and municipal IRPEF taxes. The net amount provided to the employee, however, accounts for ordinary taxation.

The employee in the exit program cannot claim tax deductions unless they have other taxable income for IRPEF purposes. Alternatively, the employee who does not receive personal income (excluding the allowance) exceeding the annual limit, currently set at €2,840.51, can be considered tax-dependent by their spouse or another family member according to tax rules, and the latter will benefit from additional deductions.

Given the complexity and specificity of the tax regulations, those requiring clarification can contact our local tax service.

Settlement and Additional Information – The extraordinary allowance is settled starting from the first day of the month following the termination of the employment relationship (subject to technical processing times by INPS, generally on the order of 3–4 months), and is paid over 13 monthly installments.

Payment of the extraordinary allowances is made in advance monthly installments, payable on the first banking day of each month.

The allowances are identified by the numeric category 027, corresponding to the alphabetic category "VOCRED".

Since this is a pension-accompanying benefit, entirely at the employer's expense, and not a pension, the following do not apply:

- Annual revaluation (cost-of-living adjustment);
- Statutory interest or monetary revaluation;
- Family allowances (assegno al nucleo familiare).

Pension – The employee is responsible for submitting the pension application in due time (at least 60 days before the end of the benefit period), since the extraordinary allowance is not automatically converted into a pension.

Extraordinary allowances are "direct" benefits and are not reversible. In the event of the beneficiary's death, survivors are paid the indirect pension, under ordinary rules, also taking into account the related contributions paid on behalf of the employee during the period the extraordinary allowance was paid.

!!! Attention !!!

- **Workers with a recognized disability of at least 80%** – Workers with a recognized disability of at least 80% can qualify for a pension earlier than the ordinary requirements set out under general legislation. In particular, pursuant to Legislative Decree No. 503 of 31/12/1992, these individuals qualify for the "early old-age pension" at 55 years and 7 months of age for women and 60 years and 7 months for men, with the related deferral window (minimum 12 months) under the previously applicable rules. Workers who choose to benefit from this provision to qualify for their pension early cannot access the sector's Redundancy Fund.
- **Deaf-mute/blind workers, workers with a disability greater than 74%** – Deaf-mute workers or those with a disability greater than 74% can benefit, for the purpose of qualifying for a pension, from an increase equal to 2 months for every year worked while disabled, up to a maximum credited period of 5 years. This increase is raised to 4 months in the case of blind individuals. By making use of this provision, these workers can therefore qualify for retirement up to 5 years early. This increase can be useful for bringing forward retirement through the sector's Redundancy Fund, but it will not be taken into account when calculating the allowance/pension.
- **Workers holding a disability allowance/pension** – Individuals with a disability who hold an ordinary disability allowance or a disability pension may apply for the exit program only if they qualify for the old-age pension, i.e., the one linked to age. Disability benefits, in fact, cannot be converted into a seniority pension, which is accrued solely on the basis of years worked.

Redemption or Reunification of Contribution Periods Useful for Qualifying for a Pension, at the Employer's Expense – The 2017 Budget Law introduced, for the three-year period 2017–2019, the possibility for employers to pay into the Solidarity Fund the resources necessary for the redemption or reunification of periods useful for employees to qualify for a pension within the following 7 years. The purpose of this provision is to allow access to early retirement for those workers who, following such redemption or reunification, can claim periods useful for pension purposes, such as, for example, the redemption of university degree years.

(Protocol for the start of the integration of former OMITTED banks into OMITTED 13/7/2017) – The agreement recently signed at OMITTED does not provide for the possibility of redemption or reunification of periods useful for qualifying for a pension at the employer's expense.

Employment Activity During the Exit Period

Competing Activity – The extraordinary allowance is incompatible with income from employed or self-employed work arising from an activity carried out for other parties engaged in an activity that competes with the employer for whom the employee previously worked. Therefore, for the periods during which such activity is carried out, both the payment of the allowance and the payment of contributions cease.

Non-Competing Activity

- **Employed work**: Income from non-competing employed work. The extraordinary allowance can be combined with such income up to the maximum limit of the last monthly salary received, annualized. If the combination of such income and the extraordinary allowance exceeds this limit, the allowance is reduced accordingly. For the purposes of the related contributions, the taxable salary base is reduced by an amount equal to the income from employed work, with a corresponding reduction in the contribution payment due.
- **Self-employed work**: Income from non-competing self-employed work. The extraordinary allowance can be combined with such income up to the amount corresponding to the minimum pension treatment of the employees' pension fund, plus 50% of the amount exceeding that minimum treatment.

The beneficiary of the allowance is obliged to promptly notify the start of any employment relationship, in any capacity (employed, self-employed, collaboration, etc.):

- to the exiting Company, for the release of clearance;
- to the Fund, through the INPS office managing the extraordinary allowance.

The notification must indicate the new employer, the period during which the activity is carried out, and the income earned.

In the event of failure to comply with this obligation, the employee forfeits the right to the benefit and is required to return any amounts wrongly received – in addition to interest and monetary revaluation – and the related contribution is cancelled. The body responsible for deciding on such matters is the Fund's Administrative Committee.

Severance Pay (TFR) – Upon termination of the employment relationship, the employer is required to immediately settle any TFR (severance pay) not paid into pension funds.

Together with the TFR, any incentive provided for under the agreement is also paid out.

(Protocol for the start of the integration of former OMITTED banks into OMITTED 13/7/2017) – The agreement recently signed at OMITTED does not provide for incentives to be granted to colleagues from the perimeter of the former OMITTED banks, with the exception of what is provided for in the "Notice of Termination of Employment Relationship" paragraph.

Pension Fund: Taxation upon Redemption for Access to the Redundancy Fund – Under current legislation, upon termination of employment to access the exit program, a member of a pension fund can redeem all or part of their accrued position ("zainetto"/individual pot), or leave it invested, without the possibility of further contributions, in order to continue benefiting from any returns achieved.

Generally, in the case of redemption of 50% of the accrued position ("MOBILITY"), there are no tax penalties. In the case of full redemption, however, the second 50% ("OTHER CAUSES") will be subject to less favorable taxation than would apply if one waited until qualifying for a pension.

Below is a summary of the taxation applied in the case of redemption for access to the Redundancy Fund, which differs depending on whether the member is an "old" or "new" member, the reference period, and the reason for redemption, bearing in mind that:

- in the case of partial redemption, the amounts redeemed are attributed starting from the earliest periods;
- "old members" may request payment of their entire position as capital. All others may do so only for up to 50% of the accrued amount.

Old Members (those who, as of 28/4/1993, were enrolled in a supplementary pension scheme and have not redeemed their position)

Reason	**Amount**	**Balance accrued as of 31/12/2000, net of exempt amounts and taxed returns**	**Balance from 2001 to 2006, net of non-deducted contributions and already taxed income**	**Balance accrued from 2007, net of non-deducted contributions and already taxed income**
MOBILITY	50%	TFR rate*	Fund-internal rate**	15% rate, decreasing to as low as 9%***
OTHER CAUSES	50%	TFR rate*	Ordinary taxation*****	23% rate****

New Members (those who, as of 28/4/1993, were not enrolled in a supplementary pension scheme and have not redeemed their position)

Reason	**Amount**	**Balance accrued as of 31/12/2000, net of exempt amounts and any TFR allowance**	**Balance from 2001 to 2006, net of non-deducted contributions and already taxed income**	**Balance accrued from 2007, net of non-deducted contributions and already taxed income**
MOBILITY	50%	Fund-internal rate**	—	15% rate, decreasing to as low as 9%***
OTHER CAUSES	50%	Fund-internal rate**	Ordinary taxation*****	23% rate****

*) Separate taxation at the same rate applied to the TFR as determined by the Employer;

**) Separate taxation at the Fund-internal rate, calculated following criteria similar to those used for the TFR rate;

***) A final withholding tax of 15%, reduced by 0.30% for each year of Fund membership beyond the fifteenth, down to a minimum of 9%. For old members who choose to withdraw the entire capital, this favorable taxation is granted if converting 70% of the accrued balance would result in an annuity of less than 50% of the social allowance (assegno sociale). Otherwise, the taxation provided for amounts accrued between 2001 and 2006 applies;

****) A final withholding tax of 23%;

*****) Ordinary taxation: such amounts are combined with any other income received in the year the redemption is collected. It should be noted, however, that the solidarity allowance is subject to separate taxation, and therefore, in the absence of other income, the redeemed amounts subject to ordinary taxation will constitute the sole income for that year.

For further details, special cases, and in-depth analysis, please refer to the relevant legal sources.

Changes to Pension Legislation – Changes made by the legislator to the rules governing public pension provision normally do not apply to workers who have already terminated their employment relationship to access the Redundancy Funds.

Likewise, agreements typically include clauses protecting those who have exited employment in the event of changes to life-expectancy assumptions linked to the accrual of pension requirements.

(Protocol for the start of the integration of former OMITTED banks into OMITTED 13/7/2017) – Indeed, the recently signed agreement provides that "the Parties acknowledge that the calculation of the accrual of pension requirements is carried out on the basis of the pension legislation in force as of the date this Protocol is signed, and confirm that, should the calculation of life expectancy result in a reduction or extension of the time spent in the Solidarity Fund, the National Sector Parties will take action to ensure that the former employees concerned do not experience any interruption between the extraordinary benefits paid by the Fund and the receipt of their pension, with the Company bearing any related cost."

Union Enrollment – Even while in the exit program, employees can maintain or take out membership in our union by signing the clause included in the Redundancy Fund enrollment form, or by using the specific proxy that our offices can provide upon request to those concerned.

We remind you that it is of fundamental importance to maintain or activate union membership even after termination of the employment relationship with the Company. This allows for constant updates on any developments that may occur in the sector, as well as access to professional and ongoing assistance during the delicate exit phase while awaiting retirement.

As always, our organization remains available to all colleagues who need clarification on this subject. You can contact UNISIN Falcri Silcea Sinfub representatives in your area, or contact our local union offices directly.