**Online Appendix**

1. **The market of Italian personal pension plans**

Besides the occupational schemes (Fondi pensioni chiusi or FPNs) for dependent workers grounded on collective agreements between trade unions and employers that determine also employers’ compulsory matching contributions, there are two types of personal pension plans.

FPAs include different sub-funds, ranging from low-risk investment style to a riskier one (i.e. all-share). PIPs’ subscribers can choose – and do for about three fourths of subscriptions - traditional life insurance products, invested almost entirely in low-risk (domestic) public bonds, or a portfolio of unit-linked investment plans, with different risk profiles, managed by the same company or by another one; a combination of both choices is also available[[1]](#endnote-1).

1. **New COVIP information system**

The COVIP statistics until 2015 were unable to properly handle multiple memberships (i.e. a person could subscribe to several personal plans). In fact, according to the new COVIP information system, implemented provisionally since 2015 and fully operative since 2016, the effective membership of the private pension system at end-2015 – the year closer to the last SHIW wave used in this paper – amounted to 6,716 million (included 434,000 in old PIPs), with a reduction of almost 8% relative to the grand total of 7,235 million. The subscribers to only one sub-fund among FPNs, FPAs and PIPs were 5,744 million. The remaining 1,108 “subscriptions” referred to 538,000 individuals, mostly with double membership (only 6,000 individuals had triple or quadruple membership). Almost two thirds involved PIPs: they were taken by 172,000 enrollees in FPNs, 78,000 in FPAs, 90,000 in other PIPs (COVIP 2017).

1. **Private pension plans participation in SHIW data.**

The averaged subscription rates computed out of HHs’ answers of the three waves for the balanced panel, adjusted for sample weights, reveal sizable differences within the SHIW data[[2]](#endnote-2) and compared with COVIP data as well (Table a.1) [[3]](#endnote-3).

The combined averaged subscription rates to all pension plans in each wave (24.8, 26.5 and 23.6 per cent) is roughly similar to the grand total only if the “real” FPNs subscribers are the ones acknowledging employers’ matching contributions, an assumption that disregards that they include also the voluntary contributions for FPAs and PIPs. The underestimation of average participation rates in surveys may be due to several reasons, including respondents’ tendency to mis-report financial decisions (Gustman et al. 2008). In the case of Italy, Cappelletti and Guazzarotti (2010) document a significantly lower participation rate in the private pension system in the 2008 SHIW, compared to COVIP data, possibly because of under-reporting and low sampling of workers in sectors with above-average participation rates, such as at large firms.

Worthy of note is that the much higher proportion of PIP subscriptions over all private pension plans (PENS) in the SHIW individual data (around 47%), compared to the reference universe (about one third in the 2015 COVIP revised data, net of multiple subscriptions; see above).

1. **The wording on being subscribed to the private pension system in the 2010-2014 SHIW questionnaires.**

(F01): In 201x, were you or a component of your household subscribed to any private pension plan? Yes/No.

(F04): To which pension plan were you subscribed at end 201x: a) FPN; b) FPA; c) PIP; d) don’t know/don’t remember; e) no answer.

Interestingly, in the 2016 SHIW, the a) alternative is redrafted, introducing explicitly also the category of preexisting occupational funds.

1. **The wording of the financial literacy questionnaire in the 2010 SHIW.**
2. Which type of mortgage allows you to determine the maximum amount and the number of instalments to pay in order to extinguish the debt? a. variable interest rate mortgage; b. fixed interest rate mortgage; c. variable interest rate and constant instalment mortgage; d. don’t know; e. no answer.
3. You have a no-costs deposit of 1,000 euro offering1 per cent interest rate. Assume 3 per cent inflation rate. Do you think that, when withdrawing your deposit one year later, you will be able to buy the same amount of goods that costs 1,000 euro today? a. yes; b. no, a minor amount; c. a greater amount; d. don’t know; e. no answer.
4. Which investment strategy is riskier: a. invest in one company; b. invest in many companies; c. don’t know; d. no answer.

**References**

Cappelletti, G. and Guazzarotti, G. (2010) Le scelte previdenziali nell’indagine sui bilanci delle famiglie della Banca d’Italia. Banca d’Italia, *Questioni di Economia e Finanza* no 77.

Gustman, A. L., Steinmeier, T. S., and Tabatabai, N. (2008) Do workers know about their pension plan type? Comparing workers’ and employers’ pension information, in A. Lusardi (ed.) *Overcoming the Saving Slump: How to Increase the Effectiveness of Financial Education and Savings Programs*, Chicago, University of Chicago Press, 47–81.

**Tables**

#### Table A.1. Private pension plansa subscription rate in the balanced panel (%)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2010** | | **2012** | | **2014** | |
|  |  |  |  |  |  |  |
| Any private pension plans | 23.7 |  | 23.2 |  | 23.7 |  |
| FPNs | 3.0 |  | 3.6 |  | 2.3 |  |
| Matching compulsory and voluntary employers’ contribution (all plans) | 9.8 |  | 8.8 |  | 9.7 |  |
| FPAs | 2.2 |  | 3.0 |  | 2.9 |  |
| PIPs | 12.8 |  | 11.8 |  | 11.0 |  |

Source: Author’s calculations from SHIW (various years). Data adjusted for sample weights. aSHIW data do not allow to distinguish between “old” and “new” PIPs.

#### Table A.2. Positive savings by financial literacy levels *(%)*

|  |  |  |
| --- | --- | --- |
|  | **Correct answers** | **Wrong answers** |
| One: Risk diversification | 41.5 | 27.4 |
| Two: Risk diversification & interest rate and inflation | 41.3 | 30.0 |
| At least two | 38.5 | 29.6 |
| Three | 40.3 | 33.0 |

Source: Author’s calculations from 2010 SHIW.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table A.3 Descriptive statistics (averages): employed household heads estimation full sample (% of observations)** | | | |
|  | **2010 obs = 5,347** | **2012 obs = 5,158** | **2014 obs = 4,810** |
| PENS | 0.2040396 | 0.1927104 | 0.1848233 |
| PIPs | 0.0978119 | 0.0878247 | 0. 0858628 |
| FPAs | 0.0246867 | 0.0224893 | 0.0237006 |
| **Explanatory variables** | | | |
| *equivalised income deciles*  2nd  3rd  4th  5th  6th  7th  8th  9th  10th  *demographic characteristics*  age  female  upper secondary  university degree  single  widow(er)  private employee  public employee  small firm (5- 49)  medium firm (50-99)  big firm (100+)  household location in the North  household location in the Centre  *housing wealth*  home owner  mortgagee  *financial strength*  saving > 0  risky asset owner  *sellers’ local availability*  medium city (20,000 to 40,000)  large city (40,000 to 500,000)  big city (500,000+) | 0.0684496  0.0710679  0.090144  0.0965027  0.1095942  0.1217505  0.1344679  0.1322237  0.135216  46.55152  0.4346362  0.4572658  0.1829063  0.117823  0.0922012  0.5447915  0.2545353  0.2605199  0.0475033  0.1421358  0.4729755  0.2208715  0.6861792  0.1673836  0.4043389  0.1406396  0.1864597  0.4580138  0.0979989 | 0.0779372  0.084335  0.0911206  0.1013959  0.1157425  0.1147732  0.1213649  0.1221404  0.1219465  47.31873  0.4290423  0.4567662  0.191547  0.1203955  0.0946103  0.565917  0.2382706  0.2557193  0.0407135  0.1475378  0.4682047  0.2200465  0.7022102  0.1903839  0.283637  0.1101202  0.1882513  0.475378  0.084335 | 0.0715177  0.0814969  0.0891892  0.1079002  0.1079002  0.1201663  0.12079  0.131185  0.129106  48.58462  0.4405405  0.460499  0.2  0.1405405  0.1068607  0.6130977  0.1925156  0.2650728  0.0575884  0.1746362  0.5072765  0.2066528  0.712266  0.1754678  0.3012474  0.122869  0.1972973  0.45634  0.0808732 |

Source: Author’s calculations from SHIW (various waves).

|  |  |  |  |
| --- | --- | --- | --- |
| **Table A.4 Descriptive statistics (averages): employed household heads estimation in the sample out of the balanced panel (% of observations)** | | | |
|  |  |  |  |
|  | **2010 (obs = 1660)** | **2012 (obs = 1653)** | **2014 (obs = 1621)** |
| PENS | 0.2174699 | 0.2171809 | 0.2220851 |
| PIPs | 0.1072289 | 0.102843 | 0.102406 |
| FPAs | 0.0222892 | 0.029038 | 0.029611 |
| **Financial literacy level indicators: correct answers to 2010 SHIW three questions** | | | |
| Three | 0.4481928 | 0.4440411 | 0.4361505 |
| At least two | 0.7716867 | 0.7701149 | 0.770512 |
| Risk diversification & interest rate and inflation | 0.5903614 | 0.5898367 | 0.5848242 |
| Risk diversification & mortgage | 0.4783133 | 0.4742892 | 0.4663788 |
| Mortgage & interest rate and inflation | 0.6198795 | 0.61464 | 0.6125848 |
| Risk diversification | 0.6445783 | 0.6448881 | 0.6403455 |
| Interest rate and inflation | 0.8319277 | 0.8294011 | 0.8297347 |
| Mortgage | 0.696988 | 0.6908651 | 0.6890808 |
| **Explanatory variables** | | | |
| *+equivalised income deciles*  2nd  3rd  4th  5th  6th  7th  8th  9th  10th  *demographic characteristics*  age  female  upper secondary  university degree  single  widow(er)  private employee  public employee  small firm (5- 49)  medium firm (50-99)  big firm (100+)  location in the North  location in the Centre  *housing wealth*  home owner  mortgagee  *financial strength*  saving > 0  risky asset owner  *sellers’ local availability*  medium city (20,000 to 40,000)  large city (40,000 to 500,000)  big city (500,000+) | 0.0771084  0.0680723  0.0939759  0.1072289  0.1120482  0.1186747  0.1283133  0.1289157  0.1277108  46.45361  0.4343373  0.4686747  0.1801205  0.0855422  0.0704819  0.5427711  0.2674699  0.253012  0.0638554  0.1409639  0.4481928  0.203012  0.7337349  0.1759036  0.4204819  0.1674699  0.1927711  0.4566265  0.0656627 | 0.0786449  0.0816697  0.0931639  0.0949788  0.1028433  0.1058681  0.1246219  0.1361162  0.1409558  48.38113  0.4361766  0.4700544  0.1869328  0.0865094  0.0816697  0.5517241  0.2625529  0.2450091  0.0429522  0.1578947  0.4506957  0.200242  0.7477314  0.1857229  0.322444  0.1300665  0.1972172  0.4519056  0.0653358 | 0.0666255  0.089451  0.0808143  0.1098088  0.1030228  0.114744  0.1135102  0.1264651  0.1505244  50.2992  0.4380012  0.4682295  0.1893893  0.0851326  0.0869833  0.5959284  0.2140654  0.2646514  0.057372  0.1739667  0.446021  0.2048118  0.7532387  0.1616286  0.3103023  0.1468229  0.2029611  0.4528069  0.0623072 |

Source: Author’s calculations from SHIW (various waves).

1. A noticeable difference, on transparency ground for potential subscribers, is that FPAs and unit-linked based PIPs adopt a market price valuation and there is no guarantee on the sum of nominal contributions, gross of the management costs; PIPs that replicate traditional life insurance products are instead valued at historical cost and provide a guarantee on the cumulated contributions. [↑](#endnote-ref-1)
2. SHIW data do not allow to identify old and new PIPs and provide data on all private pension funds with employers’ matching contributions that do not distinguish between FPNs and FPAs. [↑](#endnote-ref-2)
3. SHIW data do not allow to take into account how many subscribers have not paid contributions, in the year or at all. According to COVIP data, these subscribers amount to at least one fifth, and are more concentrated on personal pension plans, and especially among self-employed, with a proportion of almost one third (for data up to 2014 see COVIP 2015). [↑](#endnote-ref-3)