The impact of the financial crisis on saving decisions: evidences from Italian PFs

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MOPACT-CeRP Workshop

Moncalieri – 9 September 2016

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Outline

- ✓ Aims of the paper
- ✓ Review of the literature
- ✓ Dataset
- ✓ Empirical strategy
- ✓ Estimates and main findings
- ✓ Conclusions

The paper

- ✓ The aims of the paper are:
- ✓ To evaluate the attitude of the Italian workforce towards pension funds (PFs)
- ✓ To highliths the main determinants of the PFs membership
- ✓ To evaluate the impact of financial crisis on households' savings decisions in private pension schemes

The attitude of workforce towards PFs
Review of the literature

- ✓ Italian and foreign survey show an increase of awareness to hedge the risk of an inadequate income at retirement, due to the overhaul of public pension schemes, but…

- ✓ … workforce, usually, do not recognize PFs as the best way to deal with old age risks

The attitude of workforce towards PFs
Review of the literature

- ✓ 2012 Mefop survey:
- ✓ 62% of the sample said that public pension won't be sufficient to cover the needs of retirement age
- ✓ Only 21% will join or increase the contribution to a PFs
- ✓ (best rank: 31% increase/start savings different from PFs; 22% retirement postponement)

The attitude of workforce towards PFs
Review of the literature

- ✓ 2015 Mefop survey:
- ✓ 62% of the sample said that public pension won't be sufficient to cover the needs of retirement age (same level as 2012)
- ✓ Only 20% will join or increase the contribution to a PFs
- ✓ (best rank: 22% increase/start savings different from PFs and retirement postponement)

The attitude of workforce towards PFs

- ✓ Istituto Einaudi & Intesa SanPaolo (2013):
- ✓ *Reaction to reforms of the pension system (Reform 2012)*:
- ✓ 57% will reduce consumption and increase savings other than PFs
- ✓ 34% Join PFs or insurance contracts
- ✓ …
- ✓ 16% Increase contributions to a PF

The attitude of workforce towards PFs

- ✓ Covip (2012):
- ✓ *Main sources to strengthen public pension*:
- ✓ 40% Savings different from PFs, shares and bond
- ✓ …
- ✓ 17% Join PFs

The attitude of workforce towards PFs

- ✓ Accenture Global Retirement Services Surveys (2013):
- ✓ Only 29% joined PFs to strengthen public pension
- ✓ HSBC – The Future of Retirement 2013:
- ✓ 48% never specifically saved for retirement

The attitude of workforce towards PFs

- ✓ Despite the fact that workforce expect a fall in the coverage of public pension treatments, the attitude towards PFs still continue to remain relatively inadequate!!!
- ✓ Therefore, three main points:
- ✓ *How to strengthen membership?*
- ✓ *What features do affect membership?*
- ✓ *Does financial crisis affect membership?*

Main determinants of membership to PFs
Review of the literature (working condition)

- ✓ Dummann (2008), Horiba and Yoshida (2002): PFs membership hugely rely on:

- ✓ Dimension of the company (Large *vs.* medium and small)

  - Costs to set up PFs

  - Bankruptcy (for Defined Benefit PFs)

- ✓ Economic field (Public sector, Financial, insurance *vs.* building constructions, commerce and trade, touristic sector)

Main determinants of membership to PFs
Review of the literature (working condition)

- ✓ Dummann (2008), Brugiavini *et al.* (2000) Disney and Cameron (2000): strong link between PFs membership, age of employees and Unions membership
- ✓ Human Capital Theory: balance between incentives and possible risks to request for a pension coverage by the employees (Lazear 1979 and 1983), but…
- ✓ … members of Unions are less likely subjected to layoff; show a longer tenure and their age is closer to retirement then non members of Unions
- ✓ More incentives to ask for a supplementary pension coverage to the employer with less risks

Main determinants of membership to PFs
Financial literacy

- ✓ Lusardi and Mitchell (2013a) pointed out the role of financial literacy to explain wealth inequalities;

- ✓ Lusardi and Mitchell (2013b) positive effect of a high financial skill on economic-decision making (including retirement planning: PFs membership, risk profile, rate of contribution, pay out phase)

Main determinants of membership to PFs
Wealth condition and trust in PFs

- ✓ Dummann (2008) pointed out a huge correlation between being member of a PF and the wealth condition (financial investment, including other PFs, housing,…)

- ✓ Zingales *et.al.* (2007) highlight an increase of the probability to join PFs when:

  - High degree of confidence towards PFs

Main determinants of membership to PFs
Social interaction

- ✓ Vermeer, van Rooij and van Vuuren (2014)
- ✓ Duflo and Saez (2004) and (2005)
- ✓ Role of social interaction, networking effect, peer effect, when evaluating retirement decisions
- ✓ Age of withdrawal
- ✓ PFs membership
- ✓ Contribution rate
- ✓ …

Main determinants of membership to PFs
Financial crisis

- ✓ First attempt to study the phenomenon in Italy
- ✓ Returns of PFs turn negative on 2008 and 2011…
- ✓ … but membership always increases, also during the years marked by financial turmoil
- ✓ Financial shocks should not affect membership of PFs

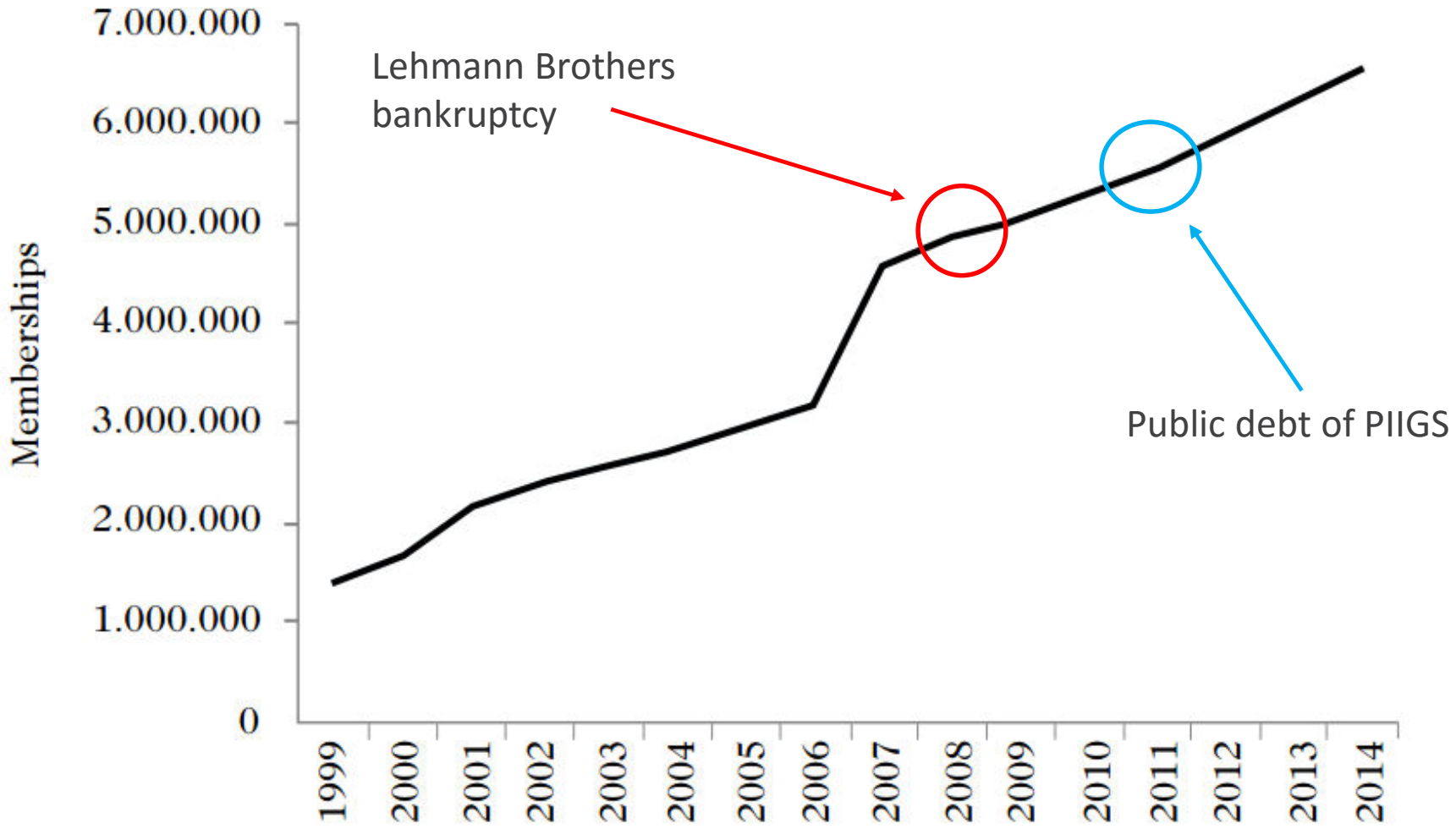
Path of net returns of Italian PFs

Anni	Fondi pensione negoziali	Fondi pensione aperti	PIP "nuovi" ramo I	PIP "nuovi" ramo III	TFR
1999	-	24,0	-	-	3,1
2000	3,5	2,9	-	-	3,5
2001	-0,5	-5,6	-	-	2,9
2002	-3,4	-13,1	-	-	3,1
2003	5,0	5,7	-	-	2,8
2004	4,6	4,3	-	-	2,5
2005	7,5	11,5	-	-	2,6
2006	3,8	2,4	-	-	2,4
2007	2,1	-0,4	-	-	3,1
2008	-6,3	-14,0	3,1	-21,9	2,7
2009	8,5	11,3	3,1	14,5	2,0
2010	3,0	4,2	3,2	4,7	2,6
2011	0,1	-2,4	3,2	-5,2	3,5
2012	8,2	9,1	3,3	7,9	2,9
2013	5,4	8,1	3,2	10,9	1,7
2014	7,3	7,5	2,9	6,8	1,3
2015	2,7	3,0	2,5	3,2	1,2

(1) I rendimenti sono al netto dei costi di gestione e dell'imposta sostitutiva per tutte le forme pensionistiche incluse nella tavola; anche per il TFR la rivalutazione è al netto dell'imposta sostitutiva. Per la metodologia di calcolo, *cfr.* anche Glossario, voce "Indice di capitalizzazione". I rendimenti dei PIP sono stati nettizzati sulla base dell'aliquota fiscale tempo per tempo vigente, secondo la metodologia di calcolo standardizzata definita dalla COVIP (cfr. *Glossario*, voce "Rendimenti netti dei PIP").

Source: Covip

Path of membership in Italian PFs



Source: Covip

Italian pension system
The first pillar: how it works

- ✓ Partially Notional Defined Contribution (NDC) from 1996 (employees with less than 18 years of contribution payed)
- ✓ From 2012 NDC scheme affects also employees exluded from overhaul of 1996 (at least 18 years of contribution payed at 1996). Retirement age from 65 to 67
- ✓ Actuarial fairness between contributions and pensions
- ✓ Pension age and annuity factor automatically adjusted to the life expectancy

Italian pension system
The second pillar: how it works

- ✓ Voluntary membership
- ✓ Automatic enrolment from 2007, but not sufficent to boost membership, which remain low and asymmetrically distributed
  - economic sectors, age, gender, south-island regions
- ✓ Defined contribution
- ✓ Common level playing field between occupational and personal schemes (except for employer contribution)

The panel dataset (1)

- ✓ Dataset is based on the two waves of Mefop survey (2008 and 2012, both on public and private pensions) among Italian workforce (public and private employees, self-employers)

- ✓ Our dataset: data on working conditions and working field, wealth and income, confidence in PFs, ideology, demographic variables (control variables)

The panel dataset (2)

- ✓ Random sample of 900 workers, drawn from Italian workforce
- ✓ The samples have been selected on the base of: gender, age, place of residence, type of employment (private employees, public employees, self-employers) and PFs membership (yes or not)
- ✓ The interviews have been collected with CATI method (only land-line, not mobile phones)

The panel dataset (3)

- ✓ Set of variables on confidence towards PFs to check whether financial crisis affected trust on second pillar schemes; hence the probability to join PFs
- ✓ Degree of agreement on the following statement (fully agree, partial agree, little agree, no agree)
- ✓ *«PFs are an instrument to get an adequate level of pension»*
- ✓ *«PFs are a financial investment safer than other»*
- ✓ *«PFs are a financial investment that benefits of more tax incentives than other»*
- ✓ *«PFs only make banks, insurance companies and unions richer»*

The panel dataset (4)

Variable	2008 Members	2008 Non members	2008 Total sample	2012 Members	2012 Non members	2012 Total sample
Type of occupation						
Employees of private sector	77%	53%	65%	72%	56%	60%
Employees of public sector	3%	19%	11%	3%	19%	15%
Self-employer	20%	28%	24%	25%	25%	25%
Age Cohort						
18-34 years old	19%	41%	30%	19%	30%	27%
35-54 years old	71%	49%	60%	64%	58%	59%
55 and more years old	10%	10%	10%	17%	13%	13%
Gender						
Male	67%	61%	64%	64%	58%	60%
Female	33%	39%	36%	36%	42%	40%
Place of residence						
North-West	36%	31%	34%	34%	28%	30%
North-East	28%	21%	24%	25%	21%	22%
Centre	21%	19%	20%	21%	21%	21%
South-Islands	15%	28%	22%	20%	29%	27%
Union Membership						
Yes	42%	28%	35%	38%	26%	29%
Not	58%	71%	64%	62%	74%	71%
don't know/don't answear	0%	1%	1%	0,4%	0,3%	0,2%
Ideology						
Right	16%	16%	34%	9%	8%	8%
Centre-Rights	24%	18%	12%	10%	13%	12%
Centre	11%	14%	18%	6%	6%	6%
Centre-Left	21%	16%	16%	32%	23%	25%
Left	13%	13%		16%	17%	17%
don't know/don't answear	17%			27%	33%	31%
Degree of education						
Primary degree	2%	1%	2%	1%	1%	1%
Secondary degree	21%	24%	22%	16%	15%	15%
High school degree	62%	50%	56%	61%	51%	53%
University degree /PhD	16%	23%	18%	23%	32%	30%
don't know/don't answear	0%	0%	2%	0%	0,4%	0,3%

Empirical strategy

- ✓ Probit model on PFs membership probability, pseudo panel (2008, 2012)

$$I_t = \beta_0 + \beta_1 Y_{2012} + \beta'_2 W_t + \beta'_3 D_t + \beta'_4 C_t + \varepsilon_t$$

- ✓ *t, survey wave index*
- ✓ I_t, *dummy = 1 if PFs member;*
- ✓ *Y, survey wave dummy (2008 omitted):*
- ✓ $\boldsymbol{W}_t$, *occupational wealth and income variables;*
- ✓ $\boldsymbol{D}_t$, *ideology and demographic variables;*
- ✓ $\boldsymbol{C}_t$, *confidence in PFs;*
- ✓ ε_t, *error component.*

- ✓ Financial crisis impact on PFs membership probability = β_1

- ✓ To better identify the impact exerted by the the financial crisis, the same model is estimated only on respondent not affected by the 2011 pension reform

- ✓ Regression weights to capture the probability that each observation is included because of the sampling design.

Estimates and main findings (Impact of financial crisis) – (1)

	All sample		Respondents not affected by the 2011 pension reform	
	(1)	(2)	(3)	(4)
year 2012 (effect of the financial crisis)	***-0.0805***	***-0.0706***	***0.0054***	***0.0056***
	[0.022]**	***[0.017]*****	***[0.919]***	***[0.900]***
General controls (occupational, wealth, income, ideology and demography)	YES	YES	YES	YES
PFs confidence variables	NO	YES	NO	YES
N	971	784	648	537
adj. R-sq	0.173	0.225	0.190	0.239

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings (Occupational variables Wealth and income variables) – (2)

		All sample (1)		Respondents not affected by the 2011 pension reform (2)	
Union membership	yes	0.132	[0.000]***	0.0897	[0.033]**
Type of employment (private excluded)	public employees	-0.0275	[0.593]	0.00837	[0.885]
	self empoyed	-0.0459	[0.202]	-0.0587	[0.172]
Savings (no savings excluded)	real estate	-0.34	[0.000]***	-0.32	[0.000]***
	financial savings	0.0361	[0.450]	0.0777	[0.223]
Income (<15k excluded)	15k-30k	-0.00427	[0.890]	0.0254	[0.489]
	above 30k	-0.0149	[0.791]	-0.00142	[0.983]
General controls (occupational, wealth, income, ideology and demography)		YES		YES	
N		784		537	
adj. R-sq		0.225		0.239	

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings
(Ideology and demographic var.) – (3)

		All sample (1)		Respondents not affected by the 2011 pension reform (2)	
Political orientation (left excluded)	center	0.0809	[0.038]**	0.0967	[0.038]**
	right	0.176	[0.003]***	0.143	[0.055]*
Geographic location (north west excluded)	north est	0.0337	[0.460]	0.0804	[0.161]
	center	-0.000864	[0.984]	-0.00146	[0.978]
	south	-0.0645	[0.119]	-0.0836	[0.086]*
Gender (male excluded)	female	-0.0161	[0.651]	0.00801	[0.854]
Age (18-34 excluded)	age, 35-44	0.126	[0.006]***	0.157	[0.004]***
	age, 45-54	0.271	[0.000]***	0.393	[0.000]***
	age, above 55	0.236	[0.000]***	0.325	[0.000]***
Education (graduates excluded)	high school	0.0488	[0.176]	0.0827	[0.063]*
	primary school	0.0388	[0.474]	0.0677	[0.304]
	no education	-0.0565	[0.756]	0.12	[0.516]
PFs confidence variables		YES		YES	
N		784		537	
adj. R-sq		0.225		0.239	

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings
(Confidence in PFs) – (4)

		All sample (1)		Respondents not affected by the 2011 pension reform (2)	
Pension funds can provide an adequate pension (agree excluded)	partial agree	-0.117	[0.013]**	-0.101	[0.069]*
	little agree	-0.203	[0.000]***	-0.166	[0.009]***
	no agree	-0.207	[0.008]***	-0.194	[0.053]*
Pension funds provide a secure form of savings (agree excluded)	partial agree	-0.0846	[0.157]	0.0124	[0.856]
	little agree	-0.142	[0.020]**	-0.0551	[0.434]
	no agree	-0.105	[0.156]	-0.0186	[0.830]
PFs benefits more tax incentives than other financial investments (agree excluded)	partial agree	-0.108	[0.055]*	-0.149	[0.034]**
	little agree	-0.11	[0.063]*	-0.143	[0.054]*
	no agree	-0.145	[0.061]*	-0.238	[0.020]**
Pension funds make banks and insurance companies richer (agree excluded)	partial agree	0.0089	[0.803]	0.0277	[0.516]
	little agree	0.0565	[0.214]	0.0898	[0.094]*
	no agree	0.0489	[0.483]	0.123	[0.159]
General controls (occupational, wealth, income, ideology and demography)		YES		YES	
N		784		537	
adj. R-sq		0.225		0.239	

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings (two waves analysis all sample) – (1)

		2008 wave (1)		2012 wave (2)	
Union membership	Yes	0.0924	[0.069]*	0.165	[0.000]***
Type of employment (private excluded)	public employees	0.0299	[0.649]	-0.0810	[0.329]
	self empoyed	-0.0295	[0.610]	-0.0690	[0.137]
Savings (no savings excluded)	real estate	-0.348	[0.000]***	-0.318	[0.000]***
	financial savings	0.0705	[0.311]	0.0605	[0.261]
Income (<15k excluded)	15k-30k	0.0537	[0.288]	-0.0147	[0.768]
	above 30k	-0.00291	[0.977]	0.0885	[0.192]
Political orientation (left excluded)	center	0.152	[0.024]**	0.0480	[0.355]
	right	0.175	[0.052]*	0.168	[0.031]**
Geographic location (north west excluded)	north east	0.106	[0.107]	-0.0191	[0.756]
	center	0.0635	[0.353]	-0.0532	[0.345]
	south	-0.0450	[0.456]	-0.0896	[0.120]
Gender (male excluded)	female	0.0588	[0.290]	-0.0688	[0.165]
Age (18-34 excluded)	age, 35-44	0.150	[0.066]*	0.134	[0.022]**
	age, 45-54	0.388	[0.000]***	0.208	[0.004]***
	age, above 55	0.330	[0.001]***	0.194	[0.024]**
Education (graduates excluded)	high school	0.0385	[0.532]	0.0518	[0.274]
	primary school	0.00545	[0.947]	0.0683	[0.398]
	no education	0.119	[0.537]	-0.561	[0.000]***
PFs confidence variables		YES		YES	
N		352		432	
adj. R-sq		0.327		0.139	

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings
(two waves analysis all sample) – (2)

		2008 wave (2)		2012 wave (3)	
PFs useful to get an adequate pension (agree excluded)	partial agree	-0.130	[0.074]*	-0.124	[0.043]**
	little agree	-0.182	[0.029]**	-0.228	[0.001]***
	no agree	-0.197	[0.115]	-0.290	[0.006]***
PFs safer than other financial investments (agree excluded)	partial agree	0.0311	[0.758]	-0.131	[0.090]*
	little agree	0.0314	[0.777]	-0.200	[0.009]***
	no agree	0.0185	[0.888]	-0.167	[0.078]*
PFs benefits more tax incentives than other financial investmets (agree excluded)	partial agree	-0.349	[0.000]***	0.00986	[0.886]
	little agree	-0.263	[0.006]***	-0.0799	[0.263]
	no agree	-0.464	[0.000]***	-0.0193	[0.849]
PFs make banks, unions and insurance companies richer (agree excluded)	partial agree	0.0168	[0.767]	-0.0115	[0.820]
	little agree	0.137	[0.057]*	-0.0162	[0.791]
	no agree	0.226	[0.029]**	-0.0873	[0.331]
General controls (occupational, wealth, income, ideology and demography)		YES		YES	
N		352		432	
adj. R-sq		0.327		0.139	

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings
(two waves analysis restricted sample) – (1)

		2008 wave (1)		2012 wave (2)	
Union membership	Yes	0.0924	[0.069]*	0.0823	[0.319]
Type of employment (private excluded)	public employees	0.0299	[0.649]	-0.0208	[0.874]
	self empoyed	-0.0295	[0.610]	-0.0870	[0.206]
Savings (no savings excluded)	real estate	-0.348	[0.000]***	-0.161	[0.196]
	financial savings	0.162	[0.041]**	0.175	[0.032]**
Income (<15k excluded)	15k-30k	0.0537	[0.288]	-0.0533	[0.509]
	above 30k	-0.00291	[0.977]	0.0906	[0.367]
Political orientation (left excluded)	center	0.152	[0.024]**	0.0914	[0.272]
	right	0.175	[0.052]*	0.0148	[0.912]
Geographic location (north west excluded)	north east	0.106	[0.107]	0.0354	[0.772]
	center	0.0635	[0.353]	-0.0764	[0.465]
	south	-0.0450	[0.456]	-0.182	[0.051]*
Gender (male excluded)	female	0.0588	[0.290]	-0.0876	[0.281]
Age (18-34 excluded)	age, 35-44	0.150	[0.066]*	0.223	[0.012]**
	age, 45-54	0.388	[0.000]***	0.572	[0.001]***
	age, above 55	0.330	[0.001]***	-0.405	[0.127]
Education (graduates excluded)	high school	0.0385	[0.532]	0.183	[0.018]**
	primary school	0.00545	[0.947]	0.152	[0.389]
	no education	0.119	[0.537]	0.107	[0.426]
PFs confidence variables		YES		YES	
N		352		185	
adj. R-sq		0.400		0.232	

p-values in brackets, coefficient point estimates report marginal effects

Estimates and main findings
(two waves analysis restricted sample) – (2)

		2008 wave (2)		2012 wave (3)	
PFs useful to get an adequate pension (agree excluded)	partial agree	-0.130	[0.074]*	-0.115	[0.215]
	little agree	-0.182	[0.029]**	-0.243	[0.035]**
	no agree	-0.197	[0.115]	-0.397	[0.038]**
PFs safer than other financial investments (agree excluded)	partial agree	0.0311	[0.758]	-0.0606	[0.564]
	little agree	0.0314	[0.777]	-0.128	[0.222]
	no agree	0.0185	[0.888]	-0.0601	[0.671]
PFs benefits more tax incentives than other financial investmets (agree excluded)	partial agree	-0.349	[0.000]***	0.0522	[0.623]
	little agree	-0.263	[0.006]***	-0.0772	[0.493]
	no agree	-0.464	[0.000]***	0.0368	[0.842]
PFs make banks, unions and insurance companies richer (agree excluded)	partial agree	0.0168	[0.767]	-0.0166	[0.834]
	little agree	0.137	[0.057]*	0.0205	[0.820]
	no agree	0.226	[0.029]**	-0.0612	[0.675]
General controls (occupational, wealth, income, ideology and demography)		YES		YES	
N		352		185	
adj. R-sq		0.400		0.232	

p-values in brackets, coefficient point estimates report marginal effects

Summary of the results

- ✓ The financial crisis does not negatively affected PFs membership
- ✓ Controling for the impact of the 2011 pension system reform, the empirical evidence show an increase in PFs membership
- ✓ Confidence in PFs only slightly affected by financial crisis

Summary of the results

- ✓ Main determinants of PFs membership:
  - Union membership
  - Age
  - Confidence in PFs
  - Political orientation
  - Type of employment (private employment)
  - Financial savings
  - Education
  - Geographical region

Policy conclusion

- ✓ Attitude towards second pillar still relatively low, despite the reduction in public schemes coverage…
- ✓ … and financial crisis did not affected membership
- ✓ PFs are efficient way to provide savings&income for old age
- ✓ The dog did not bark!

Policy conclusion

- ✓ Political economy: is the current legislative framework able to capture the outsider, who presumably more will need of Pfs coverage or not?
  - ✓ Flexibility of job market and effects on public pension
- ✓ How to increase PFs coverage and deal with main determinants of membership?
  - ✓ Mandatory enrolment?
  - ✓ New wave of auto-enrlment? Through collective bargaining?
  - ✓ Revision of silenzio-assenso on UK style?