F nanc a L t racy an P ns on P an Part c pat on n Ita y*

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T s v rs on: Apr 21, 2011

By r qu r ng n v ua s to c w t r to part c pat n (n w y stab s) p ns on fun s, ow muc to contr but an ow to nv st t r r t r m nt w a t , p ns on r forms av ra s conc rns about t ab ty of ous o s to a w t f nanc a c s ons. Us ng t Ban of Ita y's Surv y on Hous o Incom an W a t , our mp r ca ana ys s s ows t at most n v ua s ac now g of bas c conc pts suc as nt r st rat s an nf at on. Ma s, t mor ucat an r s nts n t C ntr -Nort poss ss g r t racy. As for t ff cts, f nanc a t racy as a pos t v an s gn f cant mpact on t probab ty of p ns on p an part c pat on.

Keywords: F nanc a t racy, r t r m nt p ann ng, p ns on p an part c pat on.
JEL classification: D91

1 Introduction

S nc t ar y '90s t Ita an p ns on syst m as gon t roug a ong r form proc ss a m at mprov ng ts ong-t rm susta nab ty an r r ss ng ts ma n stort ons. T r form a so ncr as , part cu ar y for young r g n rat ons, n v ua r spons b ty n t accumu at on of r t r m nt w a t .

Two ma n f atur s c aract r z t r form. T f rst cons sts n t s ft of t PAYG syst m from a D f n B n f t (DB) to a D f n Contr but on (DC) formu a. T att r t rm n s b n f ts accor ng to "actuar a qu va nc " – . . to t (cap ta z wort of) payro tax s contr but ur ng t nt r wor ng car r an to t wor r's r t r m nt ag – an nta s, on av rag , muc ow r an mor unc rta n r p ac m nts rat os w t r sp ct to past an curr nt

* W t an Annamar a Lusar , Tu o Japp , Lu g Gu so, G ovann Mastrobuon , Tab a Buc r-Ko n n, part c pants to t "F nanc a L t racy aroun t Wor " conf r nc n Tur n, Ita y (D c mb r 2010) an part c pants n t "Mat mat ca an Stat st ca M t o s for Actuar a Sc nc s an F nanc " conf r nc n Rav o, Ita y (Apr 2010) for pfu comm nts. F nanc a support from N tspar s grat fu y ac now g .
♠ Un v rs ty of Tor no – C RP-Co g o Car o A b rto.
♦ Un v rs ty of Tor no – C RP-Co g o Car o A b rto – N tspar. -ma : c ara.mont con @un to. t

b n f ts, t rm n on t bas s of (an av rag of) t ast arn ngs. T s con f atur cons sts n a gr at r ro for p ns on fun s as a way to r stor an a quat v of futur p ns ons. Part c pat on to (pr vat y manag) p ns on p ans s vo untary but ncourag t roug f sca nc nt v s an su tab s gn of fau t opt ons; wor rs av to c bot ow muc to contr but an ow to a ocat t r p ns on w a t , w c n turn r qu r gr at r f nanc a sop st cat on n bot sav ngs an nv stm nt manag m nt. Wor rs mor av y aff ct by t f rst p ar r form w fac a g r r s t at t r sav ngs w not b suff c nt to f nanc consumpt on ur ng r t r m nt, an t s r s ma n y conc rns ow- ncom wor rs (Capp tt an Guazzarott 2010).

T s n w s tuat on app ns at a t m w n t c no og ca progr ss, f nanc a nnovat ons an ncr as ng mar ts nt grat on ar ma ng f nanc a pro ucts mor comp x. An prompts qu st ons about ous o s' *preparedness*, t v of t r f nanc a now g , t r ab ty to a w t f nanc a c s ons, an t mpact of gnoranc on sav ngs. S v ra nst tut ons (.g. t Ban of Ita y, t Aut or ty for t Ita an s cur t s mar t (Consob), t Sup rv s ng Aut or ty on P ns on Fun s (Cov p), tc.) xpr ss t r conc rns about t ab ty of c t z ns to fac t curr nt c a ng s an n t at v s av b n promot to a r ss t ssu of f nanc a t racy, n t rms of bot r gu at on an f nanc a uca t on (Banca 'Ita a 2009; Banca 'Ita a t a . 2010).

Our pap r m asur s t curr nt v an t str but on of f nanc a t racy among t Ita an popu at on, nv st gat s ts t rm nants an ts ff cts on r t r m nt p ann ng b av our. Sp c f ca y, w xam n w t r f nanc a t racy matt rs n t c s on to o n a p ns on p an. T mp r ca ana ys s raws on t 2006 an 2008 wav s of t Ban of Ita y *Survey on Household Income and Wealth* (SHIW).

T r su ts s ow t at most n v ua s ac now g of bas c f nanc a conc pts, an t at t y s m mor fam ar w t nf at on an stoc s t an w t nt r st compoun ng. T str but on of f nanc a t racy among t popu at on pr s nts f atur s s m ar to ot r countr s' r cor s (Lusar an M tc 2006, 2007; Austra a an N w Z a an Ban ng Group 2008; B rn m 1998; van Roo t a . 2011), w t wom n an n v ua s w t ow uca t on av ng t worst p rformanc . A sp c f c Ita an f atur s t r g ona v b tw n t Nort -C nt r an t Sout , w c s conf rm n r at on to f nanc a t racy. As for r t r m nt p ann ng, f nanc a t racy pos t v y an s gn f cant y ncr as s t probab ty of part c pat ng n a p ns on fun . Robustn ss c c s conf rm t at f nanc a t racy ncr as s t probab ty of:) part c pat on v n aft r contro ng for f nanc a t racy n og n ty;) a pos t v r spons to t c ang n t fau t t at occurr n 2007 as for v rt ng t *Trattamento di Fine Rapporto* (TFR) f ows to a p ns on fun (at ast for t os w o xp c t y c os to o so).

T r st of t pap r s organ z as fo ows. S ct on 2 scr b s t SHIW ata. S ct on 3 r ports t mp r ca v nc , n t rms of ow t rat Ita ans ar , w c popu at on sub-groups now t ast an t ff cts of f nanc a t racy on sav ng for r t r m nt t roug p ns on p an part c pat on. S ct on 4 conc u s.

2 The data

Ev ry two y ars, t roug t Surv y on Hous o Incom an W a t (SHIW), t Ban of Ita y co cts ta ata on ous o mograp cs, consumpt on, ncom , an w a t for a r pr s ntat v samp of t Ita an popu at on. In 2006 t surv y cov r 7,768 ous o s (samp ng un ts) an 19,551 n v ua s; n 2008 t surv y cov r 7,977 ous o s an 19,907 n v ua s.[1] T av rag ag of ous o a s s about 57; 37% ar f ma s; 64% ar marr ; 32% comp t g sc oo an on y about 9% av a un v rs ty gr (or mor). T av rag ous o s compos of 2.5 p op . M an (n t) ous o ncom s about uro 26,000 n bot y ars an 70% of ous o s own t r ous , n n w t aggr gat ata. About 45% of t ous o a s w r a r a y r t r at t t m of nt rv w, 35% w r wor ng as mp oy s an 7% w r s f- mp oy .

In t 2006 wav , n a t on to t stan ar qu st onna r , about a f of t samp (3,992 ous o s w os a was born on an v n y ar) was g v n an xtra mo u on f nanc a t racy, answ r by t n v ua nt f as t ous o a (. . "*the person primarily responsible for the household budget*"). Ev n t oug t surv y as a qu t ong ong tu na compon nt, f nanc a t racy qu st ons w r nc u n t 2006 SHIW for t f rst t m , w c xc u s any mpact of t surv y structur on r spon nts' s ns t v ty to t top c. In t subs qu nt 2008 wav , a f nanc a t racy mo u was aga n part of t surv y, nc u ng n w t sts a ong w t som of t 2006 on s.

T nt rv ws for t 2006 surv y w r con uct , by a sp c a s company, b tw n Marc an Octob r 2007; t os for t 2008 wav n t p r o January-S pt mb r 2009.[2] Data ar ma n y co ct p rsona y w t t a of comput rs, us ng t Comput r-Ass st P rsona Int rv w ng program (CAPI). T s s a opt for t vast ma or ty of t nt rv ws (about 79% n

[1] D scr pt v stat st cs about bot samp s ar sp ay n Tab A1 n t app n x, s ow ng t at t samp str but on across t ma n soc o- mograp c c aract r st cs s v ry s m ar n t two wav s.

[2] Not t at about 10-15% of t 2006 samp was nt rv w aft r t outbr a of t f nanc a cr s s (August-S pt mb r 2007). W c os two at s mar ng mportant v nts r at to t cr s s (August 9, 2007: ma n BCE an F op rat ons, stoc mar t fa ; an S pt mb r 14, 2007: run to Nort rn Roc) an c c w t r n v ua s nt rv w on or aft r t s at s w r mor now g ab as a r su t of av ng b ng xpos to f nanc a n ws an top cs n t pub c bat . S nc r su ts s ow t at t os nt rv w aft r t cr s s now t sam (or ss) t an t os nt rv w b for , w n g ct t ssu of t nt rv w at n t r st of t ana ys s.

bot 2006 an 2008). T r ma n ng nt rv ws ar con uct us ng pap r-bas qu st onna r s (PAPI, Pap r-An -p nc P rsona Int rv w ng), w c t surv y company subs qu nt y transf rs to a comput r us ng t CAPI program as t nput scr n (Banca 'Ita a 2010). Ev n t oug t s m t o o og s s ou b mor ff ct v n a ow ng t r spon nts to un rstan an t n about t f nanc a t racy qu st ons w t r sp ct to t p on nt rv ws, r spon nts ar not s own car s w t t qu st ons, so t y o not r a t m. In v ua s o not g t nc nt v s to answ r.

3 Empirical evidence

3.1 How financially literate are individuals in Italy?

3.1.1 Measurement

For t sa of compar son, w w xp o t on y t r out of t s x f nanc a t racy t sts nc u n t 2006 SHIW surv y, c oos ng t most s m ar to t on s v s for t H a t an R t r m nt Stu y (HRS) by Annamar a Lusar an O v a M tc (Lusar an M tc , 2006). W t two qu st ons on nf at on an nt r st compoun ng us a most t sam wor ng as t corr spon ng qu st ons n t HRS, t 2006 SHIW o s not conta n a qu st on on r s v rs f cat on, as stat n t HRS (. ., bas on t c o c b tw n n v ua stoc s an a stoc mutua fun). In t s stu y, t qu st on about r s was r p ac w t anot r on captur ng stoc mar t now g (qu st on). T pr c s wor ng of t t r t sts s r port b ow.

. *Interest*: Imag n av ng €1,000 n a curr nt account t at pays 2% annua nt r st an as no c arg s. W at sum o you t n w b ava ab at t n of 2 y ars? L ss t an 1,020 uros | Exact y 1,020 uros | Mor t an 1,020 uros | Don't now

. *Inflation*: Imag n av ng 1,000 uros n a curr nt account t at pays 1% nt r st an as no c arg s. Imag n a so t at nf at on s runn ng at 2%. Do you t n t at f you w t raw t mon y n a y ar's t m you w b ab to buy t sam amount of goo s as f you sp nt t 1,000 uros to ay? Y s | No, I w b ab to buy ss | No, I w b ab to buy mor | Don't now

. *Stocks*: Imag n you av on y qu ty fun s an stoc mar t pr c s fa . Ar you...? (R a a ou) B tt r off | Wors off | As w off as b for | Don't now

T 2008 o s not conta n xact y t sam s t of qu st ons as n 2006, but a ows to r cov r a t st on r s v rs f cat on t at s v ry s m ar to t HRS on (qu st on), t at was m ss ng n t pr v ous surv y. T t r t sts ar aga n r port b ow.

. *Inflation*: sam as n t 2006 surv y

. *Risk HRS*: W c of t fo ow ng nv stm nt strat g s o you t n nta s t gr at st r s of os ng your cap ta ? Inv st ng n t s ar s of a s ng company | Inv st ng n t s ar s of mor t an on company | Don't now

. *Risk 2*: A company can b f nanc by ssu ng t r s ar s (qu ty s cur t s) or bon s (bt s cur t s). W c o you t n s most r s y for t nv stor? S ar s | Bon s | T y ar qua y r s y | I on't now t ff r nc b tw n s ar s an bon s | Don't now

Not t at "*Don't know*" (DK) s a ways a r spons opt on. T s m ans t r spon nts ar not forc to g v a (ran om) answ r an s ou t r for m n m z gu ss ng. Among t co answ rs t r s no xp c t cat gory for "r fusa s". S nc on y two obs rvat ons n t 2006 wav (out of 3,992) r port m ss ng answ rs for t f nanc a t racy tas , t s can b nt rpr t as r fusa s an w t us rop t corr spon ng ous o s from t ana ys s. T r ar no m ss ng va u s/r fusa s to t f nanc a t racy t sts n t 2008 surv y.

3.1.2 Descriptive statistics

Tab 1 pr s nt t 'raw' answ rs to t t sts. Pan A of Tab 1 r ports t answ rs to t nt r st compoun ng qu st on, s ow ng t at 40% g v s a corr ct answ r, w about 28% o s not now. Among t os g v ng a wrong answ r (32%), 25% answ rs " xact y €102" w c r pr s nts a r at v y ss s r ous m sta t an " ss t an €102" (7%). T answ rs to t nf at on t sts ar s own n Pan B, w r a most 60% g v s t corr ct answ r, 30% o s not now an f w prov an ncorr ct answ r (10%). F na y, n t qu st on about stoc s s g t y mor t an a f samp (52%) g v s t corr ct answ r (Pan C). Ov ra , about on fourt of t 2006 samp g v s t r corr ct answ rs, on fourt g v s no corr ct answ r, an a most on f ft o s not now t answ r to a t t sts (Pan D). Compar ng t answ rs on t t r t sts, Ita ans s m mor fam ar w t nf at on an stoc s t an w t nt r st compoun ng. T s may b r at , among ot r factors, to t p rsona m mory of an nf at onary nv ronm nt, as a arg s ar of t samp xp r nc r at v y g nf at on ur ng t r pr m ag (n t '70s an '80s). On t contrary, now g of t stoc mar t s mor un xp ct , g v n t at ous o s' prop ns ty to o r s y f nanc a ass ts s qu t ow: as of 2008 on y 9.2% of ous o s gov rnm nt s cur t s, 6.1% s ar s (r ct y), an 19.2% r s y ass ts, nc u ng pr vat bon s, stoc s, fun s, tc. (Banca 'Ita a 2010).

[Tab 1 r]

T on y t st qu st on t at s nc u n bot t 2006 an 2008 wav s s t on about nf at on. By compar ng Pan B n Tab 1 an Pan A n Tab 2, t s poss b to s t at t

s ar of corr ct answ rs ncr as an t DK cr as ov r t m , a t oug r ma n ng st qu t g . T s mprov m nt o s not s m to b not r at to a “m asur m nt ff ct” (. . r spon nts arn b caus t y w r t st tw c on t sam qu st on) but cou b attr but to m a xposur ur ng t f nanc a cr s s. By compar ng – among t 2008 r spon nts w o w r nt rv w a so n 2006 – t two sub-samp s of t os w o w r (ran om y) c os n for t f nanc a t racy t sts n 2006 an t os w o w r not (an t us r c v t FL mo u n 2008 for t f rst t m), w c c t at t answ rs to t nf at on t st ar not stat st ca y ff r nt b tw n t two groups (not r port).

As for t r ma n ng qu st ons n t 2008 surv y, about 45% of t w o samp can corr ct y n cat t at o ng s ar s of a s ng company xpos s to a g r r s of oss s t an o ng s ar s of s v ra compan s (Pan B). Mor ov r, 34% corr ct y n cat s t at s ar s ar r s r as an nv stm nt t an (pr vat) bon s (7%), w a most 13% c ar s t at t y o not now t ff r nc an an a t ona 18% o s not now t answ r at a (Pan C). About 26% n cat s t at bon s an stoc s ar qua y r s y, poss b y b caus t y ar awar t at corporat bon s ar usua y r s r t an gov rnm nt bon s. Obs rv ng Tab s 1 an 2, t s not c ab t at t s ar of DK s v ry g (aroun 30% of t 2006 samp on av rag ; b tw n 19% an 28% n t 2008 on), w c m rrors t xtr m y ow r fusa rat .

[Tab 2 r]

Aga n, t s r su ts ar cons st nt w t a ow stoc mar t part c pat on rat an scarc fam ar ty w t r s y ass ts. Mor ov r, t top cs cov r by t s f v qu st ons ar not taug t n stan ar sc oo programs n ow r s con ary sc oo s an on y n som typ s of g sc oo s, so r spon nts can ar y r y upon pr v ous now g acqu r n sc oo .

3.2 Who knows the least?

Tab s 3 an 4 s ow f nanc a t racy p rformanc by soc o- mograp c c aract r st cs n t 2006 an 2008 samp s r sp ct v y. T f nanc a t racy ag prof s ump-s ap , w t a p a n p rformanc n t ag c ass 36-50 (not , ow v r, t at n t 2008 samp t p rformanc of t ag groups 36-50 an 51-65 s ar y s gn f cant y ff r nt). As xp ct , t ag c ass s w t t g st s ar of corr ct answ rs a so r port t ow st proport on of DK. T s patt rn s t sam across a qu st ons. M n ar mor now g ab t an wom n n a qu st ons an n bot wav s, an t ff r nc s a ways stat st ca y s gn f cant at 1% v . As n ot r countr s, wom n av a so a v ry g proport on of DK. On t on an , t fact t at a r spon nts ar ous o a s s ou r uc g n r ff r nc s, b caus t s samp s r at v y mor omog n ous t an a samp of t g n ra popu at on. On t ot r an , t g n r gap can av

to o w t ag an mar ta status, as a arg s ar of f ma r spon nts ar r y w ows (38% n bot wav s, w w ow rs ar on y about 5% among ma r spon nts). F nanc a t racy s strong y monoton ca y ncr as ng w t t v of ucat on. T s s tru w n oo ng at bot corr ct an DK answ rs. For nstanc , n t 2008 SHIW on y 12% of t os w t at most pr mary ucat on (r pr s nt ng 26% of ous o s a s) cou answ r a t r qu st ons corr ct y, compar to 47% among t os w t a un v rs ty gr .

T s f- mp oy (nc u ng sma bus n ss own rs, own rs or m mb rs of a fam y bus n ss, an m mb rs of ‘ b ra prof ss ons’ suc as awy rs, arc t cts, an so fort) sp ay b tt r now g t an mp oy s, as t y ar w a t r an mor us to manag ng t r p rsona /bus n ss f nanc s (ow v r, n t 2006 samp t ff r nc n f nanc a t racy b tw n mp oy s an s f- mp oy s a most n v r stat st ca y s gn f cant, w t s a ways s gn f cant n t 2008 samp , probab y u to t g r samp s z). T fact t at mp oy s p rform b tt r t an t r t r m g t ag ff cts an c n ng cogn t v ab t s. T non- mp oy (nc u ng t un mp oy , om ma rs, stu nts an so on) av t ow st p rformanc n a m asur s.

[Tab s 3 an 4 about r]

Hous ng t nur s a so r at to f nanc a t racy (not r port). Hom own rs p rat n Ita y s v ry g (aroun 71% accor ng to t 2001 c nsus, Istat 2004, an 70% n t SHIW samp us for t s ana ys s), an ous ng qu ty const tut s – not cons r ng soc a s cur ty w a t – t arg st fract on of ous o s' w a t . Hom own rs sp ay g r f nanc a t racy t an r nt rs, cons st nt y w t t fact t at f nanc a now g s usua y assoc at w t g r ous o w a t (van Roo t a . 2008). Mor ov r, among om own rs, ous o s curr nt y pay ng a mortgag monstrat g r now g t an t os w o o not, w c sugg sts t at contract ng ous ng bts const tut s a arn ng opportun ty.[3]

3.2.1 Regional disparities

A p cu ar ty of Ita y s t star spar ty b tw n nort rn an sout rn r g ons as captur by mportant conom c an soc a n cators, suc as mp oym nt rat s, p r cap ta ncom an av rag ucat on. F nanc a t racy s no xc pt on.

F gur s 1 an 2 p ct t f nanc a t racy str but on across Ita an r g ons accor ng to t 2006 an 2008 t sts r sp ct v y. F gur s n t ft pan r port t ‘raw’ str but on of

[3] T cat gory of ous o s not pay ng a mortgag at t t m of nt rv w nc u s bot t os w o a r a y r pa n t past an t os w o n v r too out a mortgag . T s may b as t r su ts, r uc ng t ff r nc n f nanc a t racy b tw n own rs w t an w t out a mortgag ; t us t ff ct of mortgag s s y to b v n arg r.

f nanc a t racy (numb r of corr ct answ rs an proport on of t r corr ct answ rs) as m asur by t SHIW. T four cat gor s r pr s nt quart s of ac var ab . As xp ct , t usua Nort -Sout spar ty m rg s: broa y sp a ng, ous o s v ng n sout rn r g ons (an s s, . . S c y an Sar n a) t n to p rform wors n a qu st ons t an t os v ng n t C ntr an n t Nort - ast. How v r, t r s som var at on across r g ons b yon t s mp nort -sout v : for nstanc , n 2008 nort -w st rn r g ons fa n t ow st t racy quart for bot m asur s.

F gur s on t r g t pan , nst a , s ow t v of f nanc a t racy t at s pr ct by an conom tr c mo w t mograp cs an r g ona umm s as xp anatory var ab s.[4] As b for , t four cat gor s r pr s nt quart s of t corr spon ng var ab . T s f gur s sugg st t at t r g ona gap s not s mp y xp a n by a ff r nt popu at on compos t on; v n aft r contro ng for soc o- mograp c c aract r st cs (nc u ng ous o ncom), sout rn r g ons av ow r f nanc a t racy.

[F gur s 1 an 2 r]

3.3 Does financial literacy matter?

R c nt t ratur as s own t at f nanc a t racy s assoc at w t a w rang of f nanc a c s ons, suc as stoc mar t part c pat on, portfo o v rs f cat on, an t t n ncy to avo ov r- n bt n ss (Gu so an Japp 2008; K mba an S umway 2007; Lusar an Tufano 2008; van Roo t a . 2011). Mor ov r, Lusar an M tc (2007) av s own t at f nanc a t racy s pos t v y r at to p ann ng for r t r m nt an t at p ann rs av s gn f cant y g r w a t at r t r m nt t an non-p ann rs (w r p ann ng aff cts accumu at on, an not v c v rsa). T s v nc s corroborat by ot r stu s po nt ng out t ro of t prop ns ty to p an for w a t accumu at on (Am r s at a . 2003), an ocum nt ng a pos t v an s gn f cant ff ct of f nanc a t racy on t n t wort of Dutc ous o s (van Roo t a . 2008).

An asp ct of p ann ng an sav ng for r t r m nt t at s rv s att nt on s p ns on p an part c pat on. For nstanc , Agn w t a . (2007) stu y p ns on p an part c pat on n t US, f n ng t at n vo untary nro m nt 401( ) p ans, t ff ct of f nanc a t racy on sav ng s substant a , an t at un r automat c nro m nt, ow v s of t racy ar strong y n to mp oy s' c s on to qu t t r mp oy r's sav ngs p an.

[4] W n t p n nt var ab s t numb r of corr ct answ rs a n ar mo s st mat by OLS, w w n t p n nt var ab s a ummy for g v ng t r corr ct answ rs a prob t mo s us . Covar at s nc u ag an ag squar , g n r, y ars of ucat on, mar ta status, numb r of c r n n t ous o , ous o tota n t ncom , a ummy for s f- mp oym nt, a ummy for om -own rs p, an r g ona umm s. T nc us on of nt ract ons t rms b tw n r g ona umm s an ag , y ars of ucat on an ncom o s not c ang t r su ts. T cut-off po nts for t four cat gor s sp ay n t maps ar bas on t quart s of ac var ab .

In t s s ct on w nv st gat t ro of f nanc a t racy on p ns on p an part c pat on n Ita y, an ssu w c t arg cuts n pub c p ns on b n f ts u to p ns on r forms as broug t to t for front.

D sp t a rat r g n rous tax tr atm nt, part c pat on n p ns on fun s s st qu t ow (Cov p 2008). T s as c rta n y to o w t g man atory payro tax rat s (33% for mp oy s; 20% for s f- mp oy), g n rous p ns on b n f ts an a g n ra m strust towar s f nanc a mar ts (Cast no an Forn ro 2001, 2008).

To count ract a rat r sappo nt ng p rformanc , n 2007 a n w r form of t syst m of s v ranc paym nts (*Trattamento di Fine Rapporto*, TFR) was ntro uc , a m at ncourag ng a g r ta -up. T TFR cons sts n a fract on of t wor r's wag (approx mat y qua to on mont 's pay) t at s r ta n as a boo r s rv by t mp oy r, an pa bac to t wor r upon av ng t f rm, w t r vo untar y or not. T annua f ows ar compoun by us ng a r turn rat stab s by t aw an part a y n x to nf at on.[5] T r form a ow mp oy s to c oos , n t p r o January-Jun 2007 w t r to ma nta n t r futur f ows of TFR w t n t f rm or v rt t m to a p ns on fun , to b nv st n t f nanc a mar t.[6]

Mor ov r, t r form ntro uc a fau t opt on. For n w ntrants t c o c as to b ma w t n s x mont s from r ng, an n cas no c o c s xpr ss w t n t s t m p r o , part c pat on n t p ns on fun s cons r t fau t opt on an t TFR f ows ar automat ca y transf rr to an occupat ona fun (c os n accor ng to sp c f c an rat r comp x ru s).

Part c pat on rat s ncr as aft r t r form, but not as muc as xp ct . Apart from a poss b y na quat commun cat on campa gn, t rr v rs b ty of t c o c was on of t m nts t at most y r uc t ff ct v n ss of t r form: a wor r p ng r TFR w t n t f rm can at any t m opt for a p ns on fun , but w n s o s so s cannot r v rs r c o c .[7] P ns on p an part c pants w r about 3.2 m ons (of w c 2.1 pr vat s ctor mp oy s) n 2006 an gr w to 4.8 n 2008 (3.6 pr vat s ctor mp oy s). T s mp s t at t part c pat on

[5] T TFR s cap ta z annua y at 1.5% p us 3/4 of t nf at on rat m asur by t Ita an Stat st cs Inst tut (Istat).

[6] T r form tr at ff r nt y wor rs n f rms w t mor or ss t an 50 mp oy s. W sma -f rm mp oy s fac t c o c b tw n av ng t r futur TFR f ows w t t f rm or transf rr ng t m to a p ns on fun , mp oy s n arg r f rms cou opt for a p ns on fun or for av ng t r TFR a m n st r by t Nat ona Inst tut for Soc a S cur ty (INPS), nst a of t r f rm, at t sam con t ons as f t r ma n at t f rm's sposa . T s ff r nc n tr atm nt n uc ff r nt part c pat on rat s n t two groups, w t sma f rms' mp oy s b ng mor y to av t r TFR n t f rm an arg f rms' mp oy s b ng mor w ng to transf r t m to a p ns on sc m . S v ra r asons may account for t s ff r nt b av our, nc u ng m strust towar s f nanc a nst tut ons an INPS (Bo r an Z nga s 2008) an f ars of n gat v y aff ct ng on 's f rm sourc of f nanc ng (an t r for on 's own futur mp oym nt prosp cts) (Cors n t a . 2010).

[7] S R na (2011) for a r v w of t factors t at contr but to xp a n t m t succ ss of t r form.

rat ov r t tota mp oy popu at on w nt approx mat y from 14% n 2006 to 21% n 2008.[8] An ncr as ng part c pat on rat m rg s a so from t SHIW ata, w r part c pat on rat s among a wor rs ar about 11% an 13.5%, n t 2006 an 2008 samp s r sp ct v y.[9] G v n t r vanc of pr vat p ns ons ta -up n Ita y, t r st of t pap r s vot to xam n t r at on b tw n f nanc a t racy an p ns on p an part c pat on, as an mportant xamp of t ff cts of t racy on r t r m nt p ann ng.[10]

3.3.1 Pension plan participation

To nv st gat s t ff ct of f nanc a t racy on p ns on p an part c pat on w us bot pr - r form an post-r form ata from t 2006 an 2008 SHIW. T ana ys s s r str ct to t samp of mp oy s an s f- mp oy ag 25-65, xc u ng t un mp oy an ot r r spon nts out of t abor forc (r t r s, stu nts, om ma rs, tc.). S mp un var at stat st cs r port n Tab s 5 an 6 s ow t at f nanc a t racy s g r for r spon nts w t a supp m ntary p ns on t an for t os w t out, an t ff r nc b tw n t two groups s g y stat st ca y s gn f cant for most m asur s an n bot samp s.

[Tab s 5 an 6 r]

A mu t var at ana ys s of t mpact of f nanc a t racy on p ns on p an part c pat on s con uct st mat ng a n ar probab ty mo by or nary ast squar s (OLS) of t fo ow ng sp c f cat on

$$P = X_1 \beta_1 + FL\gamma + u_1 \quad (1)$$

w r P ta s t va u of on f t r spon nt (ous o a) part c pat s n a pr vat p ns on sc m at t t m of nt rv w. F nanc a t racy FL s m asur n two ways: f rst, w us a ummy t at ta s t va u of on w n t r spon nt s ab to answ r a t r qu st ons corr ct y; s con , w us a var ab count ng t numb r of corr ct answ rs to t t r qu st ons (ta ng va u s from 0 to 3). X_1 s a v ctor of covar at s, nc u ng a s con -or r po ynom a n ag , a g n r ummy for f ma s, four umm s n cat ng t g st v of ucat on atta n by t r spon nt, mar ta status umm s, t numb r of c r n v ng n t ous o , ous o ncom quart s umm s, a ummy ta ng t va u of on for om -own rs (as a proxy for ous o w a t), a ummy for b ng s f- mp oy , an r g ona umm s.

[8] Own computat ons bas on a m n strat v ata from t Aut or ty for P ns on Fun s Sup rv s on (Comm ss on V g anza su Fon P ns on , Cov p). S for r f r nc Cov p (2008, 2009, 2010) an Istat (2010).

[9] T un r st mat on of part c pat on rat s n t SHIW w t r sp ct to aggr gat ata may b u to s v ra r asons, nc u ng r spon nts' t n ncy to un r-r port or not r port nformat on about t r w a t , an ow samp ng of wor rs n s ctors w t abov av rag part c pat on rat s, suc as arg f rms (Capp tt an Guazzarott 2010).

[10] Unfortunat y, xp c t nformat on on p ann ng b av or s not ava ab n t SHIW, xc pt as far as p ns on p an part c pat on s conc rn .

Tab 7 r ports t OLS st mat on r su ts for 2006. T f rst an t r co umns s ow t at g v ng an a t ona corr ct answ r ra s s t part c pat on probab ty by 2 p rc ntag po nts, w b ng ab to answ r a t r qu st ons corr ct y ncr as s t c anc s of part c pat on by 3 p rc ntag po nts (but ts ff ct s s gn f cant on y at 10% v). Mor ov r, part c pat on s assoc at w t b ng ma an t ag prof s s g t y concav . H g r ncom s pos t v y assoc at w t t probab ty of av ng a p ns on p an, w om -own rs p an s f-mp oym nt av no ff ct.

[Tab 7 r]

In a s parat r gr ss on (not r port) w us ff r nt m asur s of f nanc a t racy, nc u ng umm s for answ r ng corr ct y on qu st on (ac t st nc u s parat y), umm s for answ r ng corr ct y two qu st ons (ac coup s parat y), t numb r of DK an a ummy for answ r ng at ast on DK. A t s m asur s av a s gn f cant ff ct, xc pt t ummy on nf at on. T ummy for answ r ng corr ct y t nt r st qu st on s ms to b t most ff ct v (t ncr as s t probab ty of part c pat on by 4.9 p rc ntag po nts).

Som ot r factors m g t aff ct t prop ns ty to o n a p ns on p an, suc as r s pr f r nc s, an xp ctat ons about ong v ty, r t r m nt ag an pub c p ns on syst m r p ac m nt rat (Gu so t a . 2009). In a s parat r gr ss on (not r port) w a a ummy for b ng v ry r s to rant, t xp ct r p ac m nt rat an t xp ct r t r m nt ag c t by t SHIW. Mor ov r, s nc t SHIW o s not r port sub ct v st mat s of f xp ctancy, w a two ummy var ab s n cat ng w t r t r spon nt's par nts ar a v , an t r nt ract ons w t par nts' ag , as prox s for ong v ty. Accor ng to t f cyc mo , n v ua s xp ct ng to v ong r s ou b mor y to r t r at r, or to sav mor for r t r m nt, or a comb nat on of t two. R s to rant n v ua s s ow a g r probab ty of av ng a p ns on p an, w t os xp ct ng to r t r at r ar ss y to o so. T xp ct r p ac m nt rat an prox s for ong v ty av no ff ct. Aft r contro ng for t s a t ona var ab s, t ff ct of f nanc a t racy m asur by t numb r of corr ct answ r s substant a y unc ang , w t ummy for t r corr ct answ rs b com s not s gn f cant.

As a s con st p, w a ow for t poss b ty t at f nanc a t racy s n og nous y t rm n . Japp an Pa u a (2011) ustrat t or t ca y t n og n ty of f nanc a t racy w t r sp ct to sav ng c s ons, s ow ng ow t racy an w a t ar accumu at o nt y. In our cas , f nanc a t racy n og n ty may r v from xp r nc (. . xp r nc of op n ng an manag ng on 's p an), from n v ua s' ffort to arn to b tt r manag t r nv stm nts, or from an unobs rv factor s mu tan ous y r v ng bot t c s on to o n a p ns on p an an t at of acqu r ng b tt r f nanc a now g (.g. an unobs rv tast for f nanc a ssu s). Mor ov r,

f nanc a t racy s ff cu t to m asur an t s y to b m asur w t rror, poss b y a ng to a ownwar b as n t OLS st mat of t f nanc a t racy.

Bu ng on (1) w st mat t fo ow ng n ar probab ty mo us ng t g n ra z m t o of mom nts (GMM), contro ng for t (poss b) n og n ty of f nanc a t racy:

$$P = X_1 \beta_1 + FL\gamma + u_1 \qquad (2)$$
$$FL = X_1 \beta_1 + X_2 \beta_2 + v_2$$

w r X_1 s a v ctor of contro s as b for an X_2 s a v ctor of f nanc a t racy nstrum nts.

D sp t t gr at ff cu ty n f n ng va nstrum nts for f nanc a t racy, w propos two var ab s r at to t cost of arn ng an acqu r ng f nanc a now g an nformat on.[11] T nstrum nts for f nanc a t racy nc u a ummy ta ng t va u of on f (at ast) on ous o m mb r as a gr n conom cs,[12] an a ummy ta ng t va u of on f (at ast) on ous o m mb r us s a comput r (t r at om , at wor or s w r). T va ty of t s nstrum nts r sts on t ypot s s t at t pr s nc of an conom st an /or a comput r us r n t ous o ma s t as r for t r spon nt to acqu r now g an nformat on about f nanc a nv stm nts, w not b ng t rm n by r spon nts' c s on to o n a p ns on fun . T s s support by t r su ts of t Hans n's t st, t at o not r ct t nu of nstrum nts va ty (p-va u 0.384 an 0.165 for t two f nanc a t racy m asur s). Mor ov r, t F t st s r at v y g (> 10), sugg st ng t at nstrum nts ar not w a . F rst stag st mat s ar r port n co umn I of Tab A2 n t app n x. Tab 7 (s con an fourt co umns) r ports t GMM st mat on r su ts for 2006. G v ng an a t ona corr ct answ r ra s s t part c pat on probab ty by 13 p rc ntag po nts.

In sp t of t t sts, t may b ar to argu t at t s nstrum nts ar comp t y xog nous. For nstanc , t pr s nc of an conom cs gra uat may corr at w t an unobs rv tast for conom cs/f nanc w t n t ous o , or t may aff ct p ns on p an part c pat on r ct y, an not t oug f nanc a t racy. To support t robustn ss of our IV r su ts, w r port n Tab A2 (co umns II to IV) n t app n x t st mat s obta n us ng ot r s ts of nstrum nts. T s a t rnat v nstrum nts may prov a mor xog nous var at on n t racy, but t n to b

[11] G v n t ff cu ty n f n ng va nstrum nts for f nanc a t racy, s v ra pot nt a nstrum nts w r turn own b caus t y t r w r not corr at w t f nanc a t racy, or t y v o at t ypot s s of nstrum nts va ty (Hans n's t st). T s nc u ucat on r at var ab s at t r g ona v (.g. co g gra uat s), r a rs p of f nanc a n wspap rs at r g ona v , var ous m asur s of a u t t racy at r g ona v n 2005 from t "A u t t racy an f s s" surv y con uct by t OECD, an num racy v n t 50+ popu at on at r g ona v from t SHARE surv y.

[12] R su ts ar unc ang f w subst tut t conom cs gra uat ummy w t a ummy for av ng a gra uat n conom cs, po t cs or aw (gr s n po t cs an aw n Ita y nc u at ast on cours n conom cs).

w a r. N v rt ss t IV f nanc a t racy co ff c nts ar qu t robust. T s nstrum nts nc u a ummy ta ng va u on f t fat r of t r spon nt atta n at ast upp r s con ary ucat on (g sc oo), a ummy n cat ng w t r t fam y s r -pay ng a mortgag to buy or r structur ts ous of r s nc (at t t m of nt rv w), an t s ar of mp oy s wor ng n sma f rms (up to 50 mp oy s) at r g ona v (Istat 2002). Par nts' ucat on can b transm tt to c r n's ucat on an aff ct t r f nanc a t racy (Lusar , M tc an Curto 2010). As for t mortgag ummy, n s ct on 3.2 w not t at mortgag rs av g r f nanc a t racy, probab y b caus ta ng out a mortgag off rs an opportun ty for arn ng about nt r st rat s an nf at on. Mor ov r, mortgag s ar typ ca y ta n out b for p ns on p ans. F na y, t s ar of mp oy s wor ng n sma f rms w t n ac r g on captur s r g ona ff r nc s n ntr pr n urs p, an Tab s 3 an 4 sugg st t at t s f- mp oy av g r f nanc a t racy (ana ogous r su ts ar obta n w t t s ar of mp oy s n sma -m um f rms). Ov ra , t r su ts obta n by us ng (var ous comb nat ons of) t s nstrum nts sugg st t at f nanc a t racy ncr as s t probab ty of p ns on p an part c pat on a so w n contro ng for ts pot nt a n og n ty.

As a robustn ss c c to t pr v ous ana ys s, t r at ons n (1) an (2) ar st mat aga n us ng t 2008 SHIW ata. T ov ra r su ts sp ay n Tab 8 broa y conf rm 2006 r su ts, a so n t rms of magn tu , sp t t fact t at t f nanc a t racy m asur s ar part a y ff r nt n t two wav s. W c c t robustn ss of OLS st mat s us ng ff r nt m asur s of f nanc a t racy (. ., umm s for g v ng on /two corr ct answ rs, t numb r of DKs an a ummy for at ast on ' o not now') an a of t m ar s gn f cant, w t v ry tt ff r nc n magn tu across qu st ons. W n t a t ona r gr ssors ar us (nc u ng, as b for , r s av rs on, xp ct r t r m nt ag , xp ct r p ac m nt rat an ong v ty), t ff ct of f nanc a t racy cr as s by about on p rc ntag po nt w t r sp ct to t bas n of Tab 8 but t r ma ns g y s gn f cant. F na y, w p rform IV r gr ss ons w t t sam nstrum nts us for t 2006 samp . D sp t t pot nt a s ortcom ngs of t nstrum nta var ab s an t ff r nt t sts m asur ng f nanc a t racy, r su ts for 2008 ar r mar ab y s m ar to t 2006 on s. Aga n, f rst stag r gr ss ons for var ous nstrum nts ar r gat to t app n x n Tab A3.

[Tab 8 r]

3.3.3 The choice about the TFR destination

As was pr v ous y m nt on , a c os y r at top c to p ns on p an part c pat on s mp oy s' c s on about t st nat on of t r TFR aft r January 2007. T r c nt 2008 wav of

t SHIW a ows to nv st gat t s ssu , as t c o c about t TFR st nat on s captur by t fo ow ng qu st on:

> "(If t ous o m mb r s an mp oy an pr s nt at t m of nt rv w) Has (ous o m mb r's nam)'s s v ranc pay fun b n transf rr to som form of supp m ntary p ns on sc m (p ns on fun or pr vat r t r m nt p an)? Y s | No | Do not now".

w r about 82% of mp oy s n t samp ft t TFR at pr -r form con t ons,[13] 10% transf rr t to a p ns on fun an 8% r port t at t y on't now. W t s poss b t at r spon nts m sr port t r TFR c s on (Gustman t a ., 2008), t s a ocat on s cons st nt w t t on m rg ng from an *ad hoc* surv y con uct soon aft r t r form on a samp of pr vat s ctor mp oy s (Bo r an Z nga s 2008), w r t s ar of wor rs xp c t y c oos ng to ma nta n t r TFR at t sam con t ons as b for t r form s about 65%.

It s not nt r y c ar ow to nt rpr t t b av or of t 8% w o answ r " o not now" to t abov qu st on. G v n t fau t opt on mb n t r form (. ., t TFR of wor rs not ma ng any xp c t c o c s to b transf rr to an occupat ona fun) t s g t mat to assum t at t r TFR was transf rr to a p ns on p an. A t rnat v y, t y may av answ r t s way b caus t y tru y not r m mb r. W w a ow for bot nt rpr tat ons n t mp r ca ana ys s t at fo ows.

As n t pr v ous s ct on, t xp ct r su t s t at mor t rat n v ua s s ou b mor w ng to transf r t r TFR f ows to a p ns on fun , not on y to b n f t from g r xp ct r turns (at ast b for t r form, w c too p ac b for t cr s s), but a so to ta a vantag of g n rous f sca nc nt v s.

B var at stat st cs n Tab 9 conf rm t s ypot s s. T ana ys s s r str ct to t samp of (ous o a) mp oy s ag 25-65.[14] T tab r ports t av rag numb r of corr ct an o not now answ rs n t t r groups of wor rs w o mov t r TFR to a p ns on fun (PF), w o xp c t y c to ma nta n t n ts pr v ous form (FIRM), an w o o not now

[13] Not t at – as was m nt on b for n s ct on 3.3 – wor rs n f rms w t mor t an 50 mp oy s cannot actua y ma nta n t r TFR w t n t f rm, but can on y c oos b tw n transf rr ng t to a p ns on fun or av ng t a m n st r by t Nat ona Inst tut for Soc a S cur ty (INPS), at t sam con t ons as f t r ma n at t f rm's sposa . For as of xpos t on, n t fo ow ng ana ys s w w r f r to t att r opt on as "f rm" r gar ss of f rm s z .

[14] Ev n t oug t 2007 r form s r ct at pr vat s ctor mp oy s, a so pub c s ctor mp oy s ar nc u n t ana ys s, s nc som of t m r port t at t y transf rr t r TFR to p ns on fun . T s may not n c ssar y b a m sta n answ r ng. For nstanc , t s not asy to s ntang mp oy s n t pub c or pr vat a t an ucat on s ctors. Mor ov r, (pub c) sc oo t ac rs r aft r 2000 av t poss b ty to transf r t r TFR to an occupat on fun , a pr vat mp oy s.

(DK). R spon nts w o transf rr t r TFR to a p ns on fun av g r t racy t an t ot r two groups, an t FIRM group as g r t racy t at t DKs. W n t st ng t ff r nc s n m an t racy b tw n t s groups w obta n t at t ff r nc b tw n t PF an FIRM groups s a ways stat st ca y s gn f cant at 1%, an t ff r nc b tw n FIRM an DK s s gn f cant at 1% n most cas s. Mor ov r, a so t ff r nc n m an t racy b tw n t 'act v c s on-ma rs' (PF an FIRM) v rsus t DKs s s gn f cant, w t ff r nc b tw n FIRM an t r st (. . t os w o o n a p ns on fun act v y or pass v y) s not. T s n cat s t at f nanc a gnoranc s to som xt nt corr at w t n rt a b av our (s nc t DKs av t ow st now g). How v r, t s not asy to r conc t n b tw n n rt a an ac of t racy w t t fact t at mor t an 80% of t wor rs act v y c not to o n p ns on fun s. T s n s to b nv st gat mor t oroug y.

[Tab 9 r]

W ana yz wor rs' c o c n a mu t var at ana ys s, w r t fo ow ng n ar probab ty mo s st mat by OLS:

$$TFR = X_1 \beta_1 + FL\gamma + u_1 \qquad (3)$$

an w r *TFR* qua s on w n t TFR s transf rr to a p ns on fun . As b for , f nanc a t racy *FL* s m asur by t numb r of corr ct answ rs an by a ummy n cat ng w t r t r spon nt s ab to answ r a t r qu st ons corr ct y. X_1 s a v ctor of covar at s, nc u ng a s con -or r po ynom a n ag , a g n r ummy for f ma s, four umm s n cat ng t g st v of ucat on atta n by t r spon nt, mar ta status umm s, t numb r of c r n v ng n t ous o , ous o ncom quart s umm s, a ummy ta ng t va u of on for om -own rs (as a proxy for ous o w a t), a ummy for b ng s f- mp oy , an r g ona umm s.

T r su ts ar sp ay n Tab 10 an conf rm t scr pt v f n ngs of Tab 9. F rst, f nanc a t racy ncr as s t probab ty of putt ng t TFR n a p ns on sc m w n DK r spon nts ar xc u from t r gr ss on (. . compar ng PF to FIRM). S con , f nanc a t racy s non-s gn f cant w n DK r spon nts ar cons r to av (unconsc ous y) o n a p ns on p an (. . compar ng t act v an pass v PF to FIRM). T s s b caus t group of DK r spon nts as muc ow r t racy t an t r st of t samp (s Tab 9). T r , f nanc a t racy (numb r of corr ct answ rs) ncr as s t probab ty of xpr ss ng an act v c s on (t r for PF or FIRM) w t r sp ct to not ma ng any xp c t c o c (DK). T s f n ngs n cat t at f nanc a t racy s a r v r of t c s on to vo untar y transf r on 's own TFR to a

p ns on fun but t s (obv ous y) n ff ct v on t os w o cannot t t r TFR st nat on. T s s xact y t sp r t b n t fau t opt on mb n t r form, t at s of ncourag ng p ns on p an part c pat on among t un c . At t sam t m , f nanc a t racy s mor strong y assoc at w t an act v c s on-ma ng n favour of p ns on fun s rat r t an n favour of t f rm.

[Tab 10 r]

W p rform a furt r robustn ss c c , nc u ng a t ona contro s n t r gr ss on. T xp anatory pow r of f nanc a t racy s ar y aff ct w n r s av rs on an xp ctat ons about pub c p ns ons (r p ac m nt rat an r t r m nt ag) ar contro for. How v r, as was m nt on pr v ous y, t c s on about TFR st nat on may b r at not on y to t rm nants of p ns on p an part c pat on (suc as r s pr f r nc s an xp ctat ons about pub c p ns ons), but a so to t s z of t f rm. T s s b caus of t ‘ scont nu ty’ n uc by t r form ts f, tr at ng ff r nt y wor rs n f rms w t mor or ss t an 50 mp oy s. W n w a f rm s z umm s as r gr ssors w obta n t at wor rs n arg r f rms (mor t an 100 mp oy s) ar mor y to o n p ns on fun s, cons st nt y w t t v nc of Bo r an Z nga s (2008) an Cors n t a . (2010). At t sam t m , w n f rm s z umm s ar nc u t ff ct of f nanc a t racy on t probab ty of transf rr ng on ’s own TFR to a p ns on fun (xc u ng t DKs) s r uc an b com s non-s gn f cant w n m asur by t t r -corr ct ummy. Ov ra , t s v nc sugg sts t at t c s on about TFR st nat on s a comp x on an t at t ff ct of f nanc a t racy, w non-n g g b , s not fu y robust.

4 Discussion and Conclusions

T Ita an p ns on r forms w n anc n v ua r spons b ty n t accumu at on of r t r m nt w a t an conf r a gr at r ro to pr vat p ns ons n nsur ng o ag ncom . Bot t numb r an t comp x ty of p rsona c o c s w ncr as , part cu ar y for young r wor rs, at a t m w n f nanc a nnovat on an ncr as ng mar ts nt grat on ar ma ng t tas of sav ng for r t r m nt mor ff cu t.

T s vo v ng cont xt man s mor f nanc a sop st cat on on t part of Ita an c t z ns to manag t r sav ngs, an prompts conc rns about t v of t r now g an ab ty to a w t comp x f nanc a c s ons. T s pap r xp o ts n w qu st ons about f nanc a t racy r c nt y ntro uc n t Surv y on Hous o Incom an W a t to nv st gat f nanc a t racy str but on n t Ita an popu at on an ts mpact on r t r m nt p ann ng. In part cu ar, w conc ntrat on p ns on p an part c pat on, a so by cons r ng wor rs’ r spons to t 2007 s v ranc pay (TFR) r form.

T mp r ca r su ts s ow t at most n v ua s ac now g of bas c f nanc a conc pts, v n f t y s m mor fam ar w t nf at on an stoc s t an w t nt r st compoun ng. S m ar y to ot r countr s' f n ngs, wom n an ss ucat n v ua s sp ay t worst p rformanc . A star r g ona v b tw n t C nt r-Nort an t Sout s a so s own by t ata.

As for t ff cts, f nanc a t racy as a pos t v an s gn f cant mpact on t prop ns ty to sav for r t r m nt t roug a pr vat p ns on p an. Robustn ss c c s corroborat t s r su t. F rst, f nanc a t racy ncr as s t probab ty of part c pat ng to a p ns on fun v n aft r contro ng for f nanc a t racy n og n ty. S con , w n oo ng at mp oy s' r spons to t 2007 r form, f nanc a t racy ncr as s wor rs' probab ty of transf rr ng t r TFR f ows to a p ns on fun (at ast for t os w o o so w ng y).

T s f n ngs conf rm an r nforc pr v ous r su ts about t pos t v mpact of f nanc a t racy on f nanc a b av our (on p ann ng, sav ng, w a t v rs f cat on tc.), an prov a furt r rat ona for pub c nt rv nt on to mprov t v of f nanc a t racy n t Ita an popu at on. At t sam t m , r su ts n cat t at som popu at on sub-groups fac g r r s s of not poss ss ng suff c nt f nanc a now g an s s to a quat y fac t c a ng s pos by t r form p ns on syst m. W an mprov v of f nanc a now g wou b b n f c a n g n ra , pub c po c s on f nanc a ucat on s ou pr mar y b r ct at t s groups.

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Source: SHIW 2006 - Weighted data.

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Source: SHIW 2008 - Weighted data.

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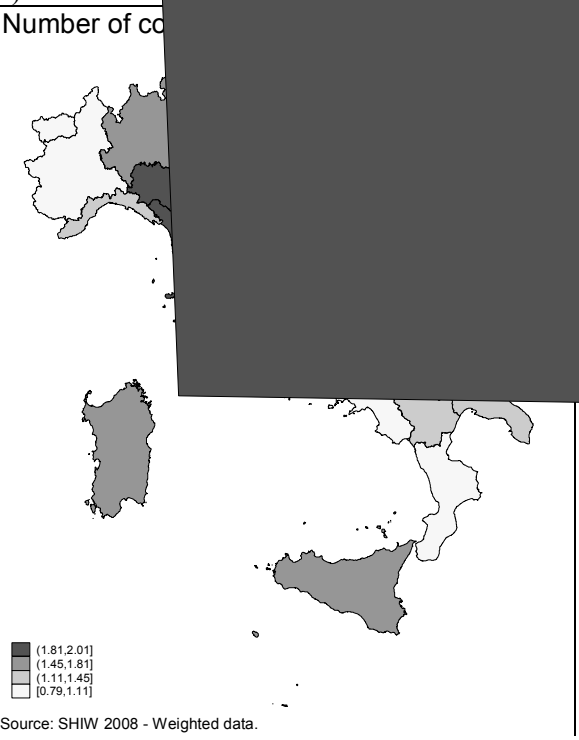

Source: SHIW 2008 - Weighted data.

Three correct answers - 2008

Source: SHIW 2008 - Weighted data.

Tab 1: Answ rs to t 2006 f nanc a t racy qu st ons (p rc ntag)

	All household heads	Household heads 25-65
Panel A -- Interest		
Less than 1,020 euros	6.76	7.39
Exactly 1,020 euros	25.03	28.12
More than 1,020 euros (correct)	40.02	44.57
Don't know	28.19	19.92
Panel B -- Inflation		
Exactly same amount	3.83	4.33
Less (correct)	59.3	65.44
More	6.18	6.7
Don't know	30.7	23.53
Panel C -- Stocks		
Better off	1.65	1.86
Worse off (correct)	52.17	59.23
As before	12.52	12.7
Don't know	33.66	26.21
Panel D -- Overall performance		
Correct answers to interest and inflation	31.51	35.69
All answers correct	24.88	28.33
No correct answer	26.43	19.76
At least one "do not know"	44.88	36.95
All "do not know"	19.93	12.91
N obs	3992	2594

Sourc : SHIW 2006 – W g t ata. T t xt of qu st ons s t fo ow ng:

- Int r st: Imag n av ng €1,000 n a curr nt account t at pays 2% annua nt r st an as no c arg s. W at sum o you t n w b ava ab at t n of 2 y ars?
- Inf at on: Imag n av ng 1,000 uros n a curr nt account t at pays 1% nt r st an as no c arg s. Imag n a so t at nf at on s runn ng at 2%. Do you t n t at f you w t raw t mon y n a y ar's t m you w b ab to buy t sam amount of goo s as f you sp nt t 1,000 uros to ay?
- Stoc s: Imag n you av on y qu ty fun s an stoc mar t pr c s fa . Ar you...?

Tab 2: Answ rs to t 2008 f nanc a t racy qu st ons (p rc ntag)

	All household heads	Household heads 25-65
Panel A -- Inflation		
Exactly same amount	4.2	5.05
Less (correct)	72.99	77.83
More	2.75	2.7
Don't know	20.05	14.42
Panel B -- Risk HRS		
One company shares (correct)	45.13	50.13
Shares of several companies	26.43	28.5
Do not know	28.45	21.37
Panel C -- Risk 2		
Shares (correct)	34.04	38.77
Bonds	7.45	8.03
Equally risky	26.88	28.45
I don't know the difference	12.85	11.23
Don't know	18.78	13.52
Panel D -- Overall performance		
All answers correct	24.33	28.3
No correct answer	21.09	16.08
At least one “do not know”	42.27	34.62
All “do not know”	13.05	8.16
N obs	7977	5063

Sourc : SHIW 2008 – W g t ata. T t xt of qu st ons s t fo ow ng:

- Inf at on: Imag n av ng 1,000 uros n a curr nt account t at pays 1% nt r st an as no c arg s. Imag n t at nf at on s runn ng at 2%. Do you t n t at f you w t raw t mon y n a y ar's t m you w b ab to buy t sam amount of goo s as f you sp nt t 1,000 uros to ay
- R s HRS: W c of t fo ow ng nv stm nt strat g s o you t n nta s t gr at st r s of os ng your cap ta ?
- R s 2: A company can b f nanc by ssu ng t r s ar s (qu ty s cur t s) or bon s (bt s cur t s). W c o you t n s most r s y for t nv stor?

Tab 3: P rformanc by soc o- mograp c c aract r st cs (2006)

	Interest		Inflation		Stocks		Overall	
	Correct	DK	Correct	DK	Correct	DK	Three Correct	At least 1 DK
Age								
Age <=35	39.25	27.24	57.85	28.79	49.69	32.07	22.9	42.35
Age 36-50	45.64	16.24	68.58	19.88	62.09	23.1	30.29	32.59
Age 51-65	44.75	22.59	64.04	26.66	58.88	28.36	27.51	41.24
Age 65+	30.32	46.13	45.73	46.47	36.66	50.04	17.44	62.15
Gender								
Men	45.47	21.28	65.77	24.18	58.08	28.23	29.51	37.85
Women	30.78	39.9	48.34	41.74	42.14	42.87	17.04	56.78
Education								
No education	13.67	72.21	23.22	72.72	18.36	75.21	7.17	87.07
Primary (Isced 1)	27.87	47.8	44.75	47.51	33.96	52.62	12.96	67.37
Lower sec (Isced 2)	38.49	24.69	59.32	29.82	53.71	32.52	22.24	44.97
Upper sec (Isced 3)	50.91	14.69	71.11	17.48	64.02	18.8	35.03	27.79
Degree + (Isced 5+)	54.3	8.72	77.7	10.38	73.42	14.78	39.12	20.55
Occupational status								
Self-employed	49.98	9.4	71.2	15.07	67.19	15.74	28.92	24.72
Employees	45.33	17.27	66.79	22.07	60.11	24.6	28.74	35.11
Non-employed	31.76	38.07	49.66	40.08	47.14	40.04	20.3	55.77
Retired	34.52	41.68	50.59	41.3	41.39	46.01	20.65	57.41

Sourc : SHIW 2006 – W g t ata. Samp : a ous o a s (N = 3992)

Tab 4: P rformanc by soc o- mograp c c aract r st cs (2008)

	Inflation		Risk (HRS)		Risk 2		Overall	
	Correct	DK	Correct	DK	Correct	DK	Three Correct	At least 1 DK
Age								
Age <=35	73.91	16.02	47.72	21.16	32.41	29.89	24.38	39.86
Age 36-50	78.36	14.28	50.91	20.61	40.75	23.71	29.55	33.05
Age 51-65	78.88	13.85	49.81	22.58	38.46	24.03	28.01	34.66
Age 65+	62.32	32.5	34.44	43.87	24.16	46.6	15.95	58.82
Gender								
Men	77.51	15.86	50.18	23.86	38.87	25.62	28.22	36.07
Women	65.36	27.13	36.59	36.2	25.88	41.79	17.76	52.76
Education								
No education	37.32	57.09	15.52	72.15	5.743	80.23	3.607	87.65
Primary (Isced 1)	59.09	35.17	31.28	45.84	19.86	51.78	11.96	64.75
Lower sec (Isced 2)	74.77	17.4	42.38	27.77	32.67	31.37	22.24	43.05
Upper sec (Isced 3)	82.51	10.04	54.94	16.25	42.13	16.34	31.13	26.54
Degree + (Isced 5+)	86.41	7.307	67.69	8.524	58.51	11.94	47.15	17.18
Occupational status								
Self-employed	83.83	7.955	60.23	10.96	49.86	16.55	38.26	23.99
Employees	78.86	13.47	51.28	20.22	38.95	23.77	28.8	33.51
Non-employed	59.98	29.35	34.17	36.28	22.86	44.5	12.52	57.76
Retired	66.8	27.92	37.34	39.48	27.53	40.76	18.71	52.78

Sourc : SHIW 2008 – W g t ata. Samp : a ous o a s (N = 7977)

Tab 5: F nanc a t racy by p ns on p ans part c pat on (2006)

	Household head has pension plan	Household head has no pension plan	t-test
	Inflation		
Correct	65.24	44.03	***
Do not know	5.74	16.71	***
	Interest		
Correct	74.92	67.20	*
Do not know	11.43	21.57	***
	Stocks		
Correct	77.08	60.08	***
Do not know	15.17	23.51	**
	Overall performance		
Correct on interest and inflation	51.48	35.26	***
Number correct	2.17	1.71	***
3 correct	42.92	27.62	***
At least one DK	21.85	34.09	***
N obs	188	1588	

Sourc : SHIW 2006 – W g t ata. S gn f canc : *** p<0.01, ** p<0.05, * p<0.1. Samp : ous o a n t abour mar t n t ag c ass 25-65 (N = 1776). T tab r ports t p rc ntag of corr ct / DK answ rs n any qu st on, by p ns on p an part c pat on

Tab 6: F nanc a t racy by p ns on p ans part c pat on (2008)

	Household head has pension plan	Household head has no pension plan	t-test
	Inflation		
Correct	77.85	93.18	***
Do not know	13.85	2.32	***
	Risk (HRS)		
Correct	50.79	68.38	***
Do not know	19.51	10.91	***
	Risk 2		
Correct	38.73	57.74	***
Do not know	23.89	10.93	***
	Overall performance		
Number correct	1.67	2.19	***
3 correct	28.40	46.81	***
At least one DK	33.11	19.04	***
N obs	471	2948	

Sourc : SHIW 2008 – W g t ata. S gn f canc : *** p<0.01, ** p<0.05, * p<0.1. Samp : ous o a n t abour mar t n t ag c ass 25-65 (N = 3419). T tab r ports t p rc ntag of corr ct / DK answ rs n any qu st on, by p ns on p an part c pat on

Tab 7: Mu t var at ana ys s of p ns on p an part c pat on n 2006

	OLS	IV	OLS	IV
Number correct	0.023***	0.137***		
	(0.01)	(0.04)		
Three correct			0.034*	0.372***
			(0.02)	(0.13)
Age	0.027***	0.020**	0.028***	0.022***
	(0.01)	(0.01)	(0.01)	(0.01)
Age squared	-0.000***	-0.000***	-0.000***	-0.000***
	(0.00)	(0.00)	(0.00)	(0.00)
Female	-0.071***	-0.050**	-0.072***	-0.042*
	(0.02)	(0.02)	(0.02)	(0.02)
Primary	-0.073**	-0.106*	-0.063*	-0.019
	(0.03)	(0.06)	(0.03)	(0.06)
Secondary	-0.060*	-0.125*	-0.046	-0.040
	(0.03)	(0.07)	(0.03)	(0.06)
Tertiary	-0.013	-0.101	0.002	-0.021
	(0.04)	(0.07)	(0.03)	(0.06)
College	0.004	-0.096	0.021	-0.010
	(0.04)	(0.08)	(0.04)	(0.06)
Single	0.003	-0.003	0.004	-0.000
	(0.02)	(0.02)	(0.02)	(0.03)
Divorced	0.065**	0.048*	0.066**	0.041
	(0.03)	(0.03)	(0.03)	(0.03)
Widow(er)	0.114**	0.117**	0.113**	0.113**
	(0.05)	(0.06)	(0.05)	(0.06)
N children in house	-0.004	-0.007	-0.004	-0.006
	(0.01)	(0.01)	(0.01)	(0.01)
H income quartile 2	0.052***	0.029	0.055***	0.040*
	(0.02)	(0.02)	(0.02)	(0.02)
H income quartile 3	0.050***	0.019	0.055***	0.044**
	(0.02)	(0.02)	(0.02)	(0.02)
H income quartile 4	0.102***	0.059**	0.107***	0.066**
	(0.02)	(0.03)	(0.02)	(0.03)
Home-owner	0.016	-0.004	0.019	-0.000
	(0.02)	(0.02)	(0.02)	(0.02)
Self-employed	0.015	0.004	0.018	0.024
	(0.02)	(0.02)	(0.02)	(0.02)
Constant	-0.555***	-0.474***	-0.561***	-0.466***
	(0.16)	(0.18)	(0.16)	(0.18)
N obs	1776	1776	1776	1776
Adj. R-Squared	0.105		0.102	
F of instruments		17.67		11.92
Hansen J		0.759		1.926
Hansen J p-value		0.384		0.165

Sourc : SHIW 2006. L n ar probab ty mo st mat by OLS/GMM. Robust st rrors ar r port n par nt s s. S gn f canc : *** p<0.01, ** p<0.05, * p<0.1. Samp : ous o a n t abour mar t n t ag c ass 25-65.

Tab 8: Mu t var at ana ys s of p ns on p an part c pat on n 2008

	OLS	IV	OLS	IV
Number correct	0.033***	0.121***		
	(0.01)	(0.04)		
Three correct			0.058***	0.334***
			(0.01)	(0.10)
Age	0.018***	0.017***	0.019***	0.018***
	(0.01)	(0.01)	(0.01)	(0.01)
Age squared	-0.000***	-0.000***	-0.000***	-0.000***
	(0.00)	(0.00)	(0.00)	(0.00)
Female	-0.041***	-0.032**	-0.043***	-0.034**
	(0.01)	(0.02)	(0.01)	(0.02)
Primary	-0.047*	-0.092**	-0.034	-0.046
	(0.03)	(0.04)	(0.03)	(0.04)
Lower Secondary	-0.024	-0.082*	-0.007	-0.026
	(0.03)	(0.04)	(0.03)	(0.04)
Upper Secondary	-0.001	-0.079	0.019	-0.019
	(0.03)	(0.05)	(0.03)	(0.04)
College	0.027	-0.065	0.047	-0.017
	(0.03)	(0.06)	(0.03)	(0.05)
Single	0.023	0.017	0.023	0.016
	(0.02)	(0.02)	(0.02)	(0.02)
Divorced	0.021	0.013	0.022	0.016
	(0.02)	(0.02)	(0.02)	(0.02)
Widow(er)	-0.000	0.016	-0.002	0.019
	(0.03)	(0.03)	(0.03)	(0.03)
N children in house	-0.002	-0.004	-0.002	-0.005
	(0.01)	(0.01)	(0.01)	(0.01)
H income quartile 2	0.062***	0.049***	0.066***	0.060***
	(0.02)	(0.02)	(0.02)	(0.02)
H income quartile 3	0.071***	0.046**	0.075***	0.055***
	(0.02)	(0.02)	(0.02)	(0.02)
H income quartile 4	0.105***	0.063**	0.111***	0.066**
	(0.02)	(0.03)	(0.02)	(0.03)
Home-owner	0.028**	0.023*	0.028**	0.014
	(0.01)	(0.01)	(0.01)	(0.01)
Self-employed	-0.051***	-0.055***	-0.051***	-0.059***
	(0.01)	(0.02)	(0.01)	(0.02)
Constant	-0.386***	-0.366***	-0.384***	-0.341**
	(0.12)	(0.13)	(0.12)	(0.14)
N obs	3419	3419	3419	3419
Adj. R-Squared	0.087		0.085	
F of instruments		33.88		26.21
Hansen J		0.705		0.315
Hansen J p-value		0.401		0.575

Sourc : SHIW 2008. L n ar probab ty mo st mat by OLS/GMM. Robust st rrors ar r port n par nt s s. S gn f canc : *** p<0.01, ** p<0.05, * p<0.1. Samp : ous o a n t abour mar t n t ag c ass 25-65.

Tab 9: F nanc a t racy by TFR st nat on

	TFR in PF	TFR in firm	TFR: DK
Inflation			
Correct	90.76	79.39	55.37
Do not know	3.24	13.46	29.04
Risk (HRS)			
Correct	66.04	50.45	41.98
Do not know	11.51	19.92	33.79
Risk 2			
Correct	53.73	38.10	27.91
Do not know	11.05	23.55	46.75
Overall performance			
Number correct	2.11	1.68	1.25
3 correct	43.04	28.17	16.28
At least one DK	20.80	33.00	56.30
N obs	289	2,178	164

Sourc : SHIW 2008 – W g t ata. Samp : ous o a s wor ng as mp oy s ag 25-65.

Tab 10: Probab ty of transf rr ng TFR nto a p ns on fun

	Dependent var: TFR in PF (vs. firm, excluding DKs)		Dependent var: TFR in PF (including DKs) vs. firm		Dependent var: Explict decision (PF or firm) vs. DK	
Number correct	0.021***		0.004		0.018***	
	(0.01)		(0.01)		(0.01)	
Three correct		0.035**		0.019		0.017*
		(0.02)		(0.02)		(0.01)
Age	0.007	0.007	-0.004	-0.004	0.012**	0.013**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age squared	-0.000	-0.000	0.000	0.000	-0.000**	-0.000**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Female	-0.030*	-0.030*	-0.026	-0.026	-0.003	-0.004
	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
Primary	-0.043	-0.044	-0.162	-0.162	0.108	0.112
	(0.03)	(0.03)	(0.13)	(0.13)	(0.12)	(0.12)
Lower Secondary	0.003	0.006	-0.152	-0.151	0.140	0.146
	(0.03)	(0.03)	(0.13)	(0.13)	(0.12)	(0.12)
Upper Secondary	0.010	0.015	-0.154	-0.154	0.149	0.158
	(0.03)	(0.03)	(0.13)	(0.13)	(0.12)	(0.12)
College	-0.006	-0.001	-0.159	-0.160	0.137	0.147
	(0.04)	(0.04)	(0.13)	(0.13)	(0.12)	(0.12)
Single	-0.002	-0.001	-0.031	-0.031	0.032*	0.033**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Divorced	0.017	0.018	-0.018	-0.019	0.035**	0.036**
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)
Widow(er)	-0.017	-0.020	-0.009	-0.008	-0.009	-0.012
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)
N children in house	0.009	0.009	0.006	0.005	0.003	0.003
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
H income quartile 2	0.065***	0.067***	0.052**	0.052**	0.006	0.008
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
H income quartile 3	0.078***	0.082***	0.047*	0.047*	0.028	0.032*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
H income quartile 4	0.065***	0.070***	0.040	0.038	0.021	0.027
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)
Home-owner	0.047***	0.047***	0.007	0.006	0.041***	0.041***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Constant	-0.159	-0.152	0.392*	0.395*	0.432**	0.430**
	(0.14)	(0.14)	(0.21)	(0.21)	(0.17)	(0.17)
N obs	2467	2467	2631	2631	2631	2631
Adj. R-Squared	0.069	0.068	0.035	0.036	0.030	0.026

Sourc : SHIW 2008. St rrors robust to t ros ast c ty ar r port n par nt s s. S gn f canc : *** p<0.01, ** p<0.05, * p<0.1. Samp : ous o a s wor ng as mp oy s ag 25-65.

App n x

Tab A1: Soc o- mograp c c aract r st cs

	2006			2008		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Age (years)	57.646	58	15.613	58.240	58	15.828
Age <=35	0.078	0	0.268	0.078	0	0.268
Age 36-50	0.276	0	0.447	0.268	0	0.443
Age 51-65	0.301	0	0.459	0.296	0	0.457
Age 65+	0.344	0	0.475	0.358	0	0.479
Female	0.370	0	0.483	0.381	0	0.486
No edu	0.055	0	0.228	0.053	0	0.223
Primary	0.265	0	0.441	0.258	0	0.437
Lower secondary	0.282	0	0.450	0.287	0	0.452
Upper secondary	0.309	0	0.462	0.308	0	0.462
College+	0.089	0	0.285	0.094	0	0.292
Single	0.116	0	0.320	0.113	0	0.317
Married	0.632	1	0.482	0.633	1	0.482
Divorced	0.071	0	0.257	0.073	0	0.261
Widow(er)	0.182	0	0.385	0.181	0	0.385
Num H components	2.517	2	1.265	2.496	2	1.256
N children in house	0.771	0	0.965	0.757	0	0.968
Household total net income (th)	31.893	26.217	27.276	32.344	26.702	24.357
Home-owner	0.700	1	0.458	0.707	1	0.455
Employees	0.348	0	0.477	0.345	0	0.475
Self-employed	0.076	0	0.266	0.073	0	0.260
Retired	0.454	0	0.498	0.465	0	0.499
Not employed	0.095	0	0.293	0.096	0	0.294
North-west	0.256	0	0.436	0.250	0	0.433
North-east	0.222	0	0.415	0.219	0	0.414
Center	0.203	0	0.402	0.206	0	0.404
South	0.209	0	0.406	0.218	0	0.413
Isles	0.111	0	0.314	0.108	0	0.310
Household head has private pension plan	0.061	0	0.239	0.061	0	0.240
Economist in house	0.024	0	0.153	0.023	0	0.150
A household member uses a computer	0.414	0	0.493	0.473	0	0.499
Mortgage for house of residence	0.100	0	0.300	0.092	0	0.289
Father's education: upper secondary+	0.088	0	0.284	0.088	0	0.283
% employees in firms <50 at regional level	67.97	68.18	4.147	67.86	67.97	4.255

Sourc : SHIW 2006, 2008. Samp : a ous o a s

Tab A2: F rst stag r gr ss ons an a t rnat v nstrum nts (2006)

	I		II		III		IV	
FIRST STAGE – Dependent variable: financial literacy								
	(a)	*(b)*	*(a)*	*(b)*	*(a)*	*(b)*	*(a)*	*(b)*
A household member uses a computer	0.348***	0.115***			0.410***	0.139***		
	(0.06)	(0.03)			(0.06)	(0.02)		
Economist in house	0.065	0.095	0.069	0.098			0.128	0.117*
	(0.14)	(0.06)	(0.13)	(0.06)			(0.14)	(0.06)
Father's education: upper sec+			0.020	0.039			0.061	0.055
			(0.07)	(0.04)			(0.08)	(0.04)
Mortgage for house of residence			0.234***	0.055*				
			(0.06)	(0.03)				
% employees in firms <50 at regional level					0.020*	0.011**	0.021*	0.011**
					(0.01)	(0.00)	(0.01)	(0.00)
N obs	1776	1776	1776	1776	1776	1776	1776	1776
Adj. R-Squared	0.172	0.125	0.160	0.117	0.085	0.058	0.059	0.045
IV regression – Dependent variable: pension plan participation								
Number correct	0.137***		0.237**		0.154***		0.276***	
	(0.04)		(0.12)		(0.03)		(0.10)	
Three correct		0.372***		0.598*		0.390***		0.435***
		(0.13)		(0.36)		(0.08)		(0.11)
N obs	1776	1776	1776	1776	1776	1776	1776	1776
F of instruments	17.67	11.92	5.06	2.37	29.74	19.54	3.74	4.65
Hansen J	0.759	1.926	3.947	4.002	0.016	0.256	3.391	2.636
Hansen J p-value	0.384	0.165	0.139	0.135	0.899	0.613	0.184	0.268

Sourc : SHIW 2006. Robust st rrors ar r port n par nt s s. In pan s III an IV stan ar rrors ar robust to c ust r ng on r g ons. In co umns (a) t p n nt var ab of t f rst stag s t numb r of corr ct answ rs; n co umns (b) t p n nt var ab n t f rst stag n a ummy n cat ng t r corr ct answ rs. S gn f canc : *** p<0.01, ** p<0.05, * p<0.1. Samp : ous o a n t abour mar t n t ag c ass 25-65. T usua r gr ssors ar nc u n r gr ss ons but not r port n t tab .

Tab A3: F rst stag r gr ss ons an a t rnat v nstrum nts (2008)

	I		II		III		IV	
FIRST STAGE – Dependent variable: financial literacy								
	(a)	*(b)*	*(a)*	*(b)*	*(a)*	*(b)*	*(a)*	*(b)*
A household member uses a computer	0.334***	0.121***			0.348***	0.125***		
	(0.04)	(0.02)			(0.06)	(0.02)		
Economist in house	0.211**	0.108**	0.228***	0.114**			0.211**	0.112*
	(0.09)	(0.05)	(0.08)	(0.05)			(0.10)	(0.06)
Father's education: upper sec+			0.139***	0.065**			0.188***	0.078***
			(0.05)	(0.03)			(0.06)	(0.03)
Mortgage for house of residence			0.210***	0.059**				
			(0.04)	(0.02)				
% employees in firms <50 at regional level					0.021	0.007	0.022	0.007
					(0.02)	(0.01)	(0.02)	(0.01)

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