Voting in the aftermath of a pension reform:
the role of financial literacy

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Table 1
1990-2010 elections and major pension reforms (if any), by country

Country	*Year of parliamentary election*	*Major pension reforms signed into law before the election day*
Austria	2006	Austrian Pension Reform (2003), Harmonization of Austrian Pension Systems Act (2004)
Belgium	1999	Framework Act (1996)
Canada	2000	Canada Pension Plan reform (1998)
Czech Republic	1996	Pension Reform (1995)
Finland	1999	Pension reform law (HE 189/1996)
Finland	2007	Pension reform laws on earnings-related pensions (HE 118/2005) and on national pensions (HE 119/2005)
France	1993	Balladur reform (1993)
France	2007	Pension Reform Act (2003)
Germany	1994	Pension Reform Act (1992)
Germany	2002	Riester reform (2001)
Germany	2009	Retirement Age Adjustment Act (2007)
Hungary	1998	Pension Reform Acts LXXX on Eligibilities and finances of social insurance and private pension (1997), LXXXI on Social security pensions (1997), LXXXII on Private pensions and private pension funds (1997)
Italy	1994	Amato reform (1992)
Italy	1996	Dini reform (1995)
Italy	2006	Maroni reform (2004)
Japan	2000	Pension system reform (2000)
Japan	2004	Pension system reform (2004)
Netherlands	1998	Privatization of the public pension fund ABP (1996)
Netherlands	2006	Life Course Savings Scheme (2006)
Norway	2009	Flexible Retirement Act (2009)
Poland	2001	Pension reform (1999), Act No. 887 on the Social Insurance System (1998), Act No. 162 on Old-Age and Disability Pensions from the Social Insurance Fund (1998)
Portugal	1995	Law 329/93 (1993)
Portugal	2005	Law 60-B/2005 (2005)
Slovak Republic	2006	Social Insurance Act (2003), Old-Age Pension Savings Act (2004), Supplementary Old-Age Pension Savings Act (2004)
Spain	2000	Royal Decree 6/1997 (1997)
Sweden	1998	Pension reform (1998)
Sweden	2010	Reform of the ITP occupational pension plan (2007)
United Kingdom	2010	Pensions Act (2007)

Note: according to our coding, three countries recorded no major pension reforms over the period under analysis, namely: Denmark, Greece and Ireland.

Table 2
Major pension reforms, brief description, by country

Country	*Description of the reform*	*Comments by international organizations*
AUSTRIA	The *2003 Austrian Pension Reform* (BGBl. I no. 71/2003): • increased statutory early retirement age; • increased the base of average earnings from 15 to 40 years; • reduced the annual accrual rate from 2 to 1.78 percent; • abolished early retirement on account of unemployment, and increased the discount rate for each year of early retirement. The *2005 Act on the Harmonisation of Austrian Pension Systems*: • extended the assessment period to lifetime earnings; • reintroduced the possibility of early retirement that was a few years later tightened again; • indexed existing pensions to consumer price inflation (not much different from before but now official); • harmonized contribution rates to 22.8% of the gross wage; • introduced a sustainability factor which triggers an adjustment process in case central demographic factors deviate from their projections (that was not operational and never triggered).	"Concrete steps so far include […] a major pension reform in 2003 and harmonization of the main pension systems effective 2005" (*Austria: 2005 article IV consultation,* IMF country report no. 05/248, July 2005, p.4).
BELGIUM	The *1996 Framework Act (Document législatif no. 1-387/2):* • equalized the pension age for women and men, by gradually rising the pension age for women from 60 to 65 years by 2009; • increased gradually the minimum working period for early retirement from 24 to 35 years by 2005; • gradually reduced to zero the valorization coefficient within 9 years (up to 2005) at a rate of 0.004 per cent per year, for the 1955-74 cohorts; • indexed calculation made every two years on the basis of the actual wage increase margin.	"The most visible parametrical reform of the first pillar was the introduction of gradually increasing pensionable age[…] in 1996." (*The 2015 Pension Adequacy Report: current and future income adequacy in old age in the EU Country Profiles – Volume II,* European Commission Directorate-General for Employment, Social Affairs and Inclusion Social Protection Committee).

CANADA	*The 1998 Reform of the Canada Pension Plan (CPP):* • increased the contribution rate from 5.6 per cent to the steady state rate of 9.9 per cent in 2003 and beyond; • introduced (modest) reductions in benefits by using a five rather than three-year average of the maximum pensionable earnings (and the earnings-related portion of disability and survivors' benefits); • froze the maximum death benefit at $2,500; • projected a gradual increase of the account/expenditure ratio of the CPP from 2 to 5 by 2020; • created an investment board to invest the CCP in a diversified investment portfolio.	"The reform was motivated by the need to correct several deficiencies of the previous framework and to accommodate shifting demographics, life-expectancy and economic conditions." (*OECD Economic Surveys: Canada 1998*, OECD 1998, pp. 87 and 89). "Concerns over the financial sustainability of the Canada Pension Plan (CPP) led to the passage of new legislation in 1998 to put the system on a firmer footing […]" (*OECD Economic Surveys: Canada 2000*, OECD 2000, p.106).
CZECH REPUBLIC	*The 1995 Pension Insurance Act No. 155/1995*, which came into force in 1996: • reformed the public PAYG pension scheme (from the former socialist social protection scheme); • set the retirement age to increase gradually from 60 to 62 years for men and from 53-57 to 57-61 years for women (depending on the number of children raised); • increased the period required for pension entitlement to 35 years; • increased to 30 years the period required to calculate the pensionable earning (in 2016).	"[…] the reforms created a role for private pension funds, which will eventually supplement the basic state pension. To ensure the financial viability of the system an increase in the retirement age by two years for men and by four years for women has been introduced. These changes are estimated to be sufficient to bring the system into balance or surplus over the medium term, at existing contribution rates." (*OECD Economic Surveys: The Czech Republic 1996*, OECD 1996, p.108)
FINLAND	The *1996 Reform (HE 189/1996):* • extended the period required to calculate the pensionable earnings from the last 4 years' earnings to the last 10; • cut pensions expenditures by defining pensionable wages as net of employees' pension contributions; • reduced the weight of wage increases in the pension indexing formula from 50 to 20 per cent, and increased the weight of the CPI to 80 per cent; • diminished the accrual rate for disability pensions; • extended means-testing for eligibility to the national pensions (eliminating gradually the basic amount of national pension paid to all). The *2005 Reform (HE 118/2005 on earnings-related pensions, HE 119/1995 on*	"Furthermore, in 1996, one of the most important reforms of the 1990s in terms of savings was to reduce the accrual of pension rights during the years in early retirement till the official retirement age of 65." (*OECD Economic Surveys: Finland 2000*, OECD 2000, p.94) "Major pension reform was introduced in Finland in

	national pensions): • aimed at making the earnings-related scheme more sustainable by increasing the extent of prefunding, and linking benefits to life-expectancy; • aimed at increasing labor force participation among older workers by introducing a flexible retirement age between 63 and 68, including an early retirement option at age 62, but with a sharp rise in the accrual rate of pension rights after reaching the age of 63 to 4.5% (compared to 2.5% for those aged over 60 under the previous system); • abolished the ceiling of the maximum pension because for somebody it was likely to mean that the pension did not increase by working beyond the early 60s; • aimed at making the system more equitable by basing benefits on all life-time earnings, equalizing the minimum age for benefit computation and contribution requirement, and redefining accrual rates for certain non-working episodes.	2005." (*Pensions at a Glance 2007*, OECD 2007, p.118)
FRANCE	*The 1993 Balladur reform:* • modified the main parameters used to calculate the pension level; • indexed pensions to prices *de jure* instead of wages; • extended the period for the calculation of the pensionable earnings: it computed the reference wage, which before the reform was based on the average best 10 years weighted by earnings growth, on the best 25 years weighted by price levels. The *2003 Pension Reform Act (Law 2003-77, 21 August 2003):* • applied the 1993 reform to public sector employees; and further increased the duration length for a full pension to 41.5 year; • introduced a system of bonuses and deductions according to the duration of contribution with actuarial neutrality.	"Several changes recommended in this report were introduced by the 1993 Balladur reform of the basic regime in the private sector." (*OECD Economic Surveys: France 2001*. OECD 2001, p.60) "A key pension reform was adopted in mid-2003. […] Executive Directors welcomed the forward-looking policies recently being pursued by the French authorities, and, in particular, commended their adoption of the milestone pension reform, which will appreciably strengthen France's long-run fiscal outlook and make a key contribution toward addressing the major challenges for future GDP growth and fiscal sustainability arising from the impending demographic shock." *(Public Information Notice: IMF Concludes 2003 Article IV Consultation with France,* 29 October 2003)

GERMANY	*The 1992 German Pension Reform Act:* • increased gradually the statutory retirement age for regular pensions to 65 years for men and women; • linked pensions benefits to net rather than gross wages; • introduced a flexible early retirement age with a reduction of benefits of3.6 per cent per year of early retirement. *The 2001 Riester reform:* • introduced contribution rate ceilings (20% until 2020 and 22% until 2030); • modified the pension indexation formula by linking annual changes in pension levels to annual changes in wage levels; • introduced a multipillar pension system with a pre-funded pillar; • partially substituted the pay-as-you-go financed pensions with funded pensions. *The 2007 Retirement Age Adjustment Act:* • increased the statutory retirement age from 65 to 67 years • strengthened the employment of older people.	"As the most recent occurrence of substantial piecemeal pension reforms in Germany, the 1992 Pension Reform Act introduced: […]" (*Germany: Selected Issues - IMF Staff Country Report No. 92/101*, IMF 1997, p.151) "Germany also experienced an important increase in coverage, especially for low earners, thanks to the introduction of Riester pensions in 2001 as part of a major pension reform". (*Reviews of Pension Systems: Ireland,* OECD 2014, p.128) "The 2001 reform is a major change in the system". (*Pension Reform Issues and Prospects for Non-Financial Defined contribution (NCD) Schemes*, World Bank 2006, p.589) "In 2007, a major reform step was the legislated gradual increase of the pensionable age from age 65 to age 67 by the year 2029." (*Pension Adequacy in the European Union 2010-2050,* Directorate-General for Employment, Social Affairs and Inclusion of the European Commission and the Social Protection Committee, May 2012, p.259)

HUNGARY	*The 1997 Pension Reform Acts LXXX, LXXXI, and LXXXII:* • introduced a new three-pillar pension system that began operating in January 1998; • increased the pensionable age (55 years for women and 60 years for men till 1998) to 62 years for both sexes, but smoothly by 2009; • replaced wage indexation of continuing pensions with a combined wage-price indexation by 2001; • established the same worth for each year of service and the accrual rates referred to gross rather than net earnings from 2013.	"Structural reform continued in 1997. The import surcharge, after having been progressively reduced, was eliminated on schedule in July, and a major pension reform was passed." (OECD Economic Outlook, volume 62, OECD 1997, p.110) "The two most important reform measures, the increase in the retirement age and the shift toward mixed indexation, have a major impact" (*The Hungarian Pension System in Transition*, Social Protection Unit - Human Development Network - The World Bank, April 1998, p.28)
ITALY	*The 1992 Amato reform:* • increased the retirement age from 60 to 65 for men and from 55 to 60 for women, by 2002; • increased the years of contribution to become eligible for old age pensions, and for seniority pensions in the public sector; • changed the calculation of old age pensions: earning-based, with the assessment of the reference wage based on the earnings the entire career, adjusted for inflation and real growth; • harmonized the accrual coefficients across most schemes. *The 1995 Dini reform (law 335/95):* • introduced a defined contribution system instead of a defined contribution system; • introduced an age threshold for seniority pensions (57 years) for all workers; • standardized the rules for public and private employees; • introduced stricter rules on the cumulability of disability benefits and income from work, as well as tighter controls on beneficiaries. *The 2004 Maroni reform (law 243/04):* • modified the minimum age to obtain a pension, moving it from 57 years to 60 years from 2008, to 61 from 2010 and to 62 from 2014, while keeping constant the contribution period requirement to 35 years,;	"In response to the financial crisis of 1992, the Amato government succeeded in adopting a far-reaching package of adjustments to the parameters of the pension system" (*The Political Economy of Reform. Lessons from Pensions, Product Markets and Labour Markets in Ten OECD Countries*, OECD 2009, p.107*)* "The pension reform represents a milestone in the direction of a more uniform and viable system" (*OECD Economic Surveys: Italy 1996,* OECD 1996, p. 54) "The reform is a major step in the right direction" (*OECD Economic Surveys: Italy*, OECD 2005, p.67)

	• introduced a "bonus" for those who decide to keep working even though they satisfy all the requirements to obtain a pension.	
JAPAN	*The 2000 Pension system reform:* • increased gradually the retirement age in the second pillar from 60 to 65 years; • reduced income-related benefits by 5 per cent; • indexed lump-sum and income-related benefits only to an inflation rate; • imposed to the working elderly aged 65 to 70 to pay contributions, and partially cut their benefits according to their earned incomes. *The 2004 reform:* • introduced an automatic adjustment of benefit levels to changes in demographic structures—the so-called "macro indexing"; • increased the ratio of the government subsidy to the basic pension benefit from ⅓ to ½; • adapted the social security pension schemes to the changing life style of people (e.g. increase in part-time workers and in female workers); improved the organizational structure of the investing and managing the reserve fund of the social security pension schemes.	"An important step was taken in pension reform in March 2000 with the passage of a bill which, once fully effective, is designed to cut benefits payments by some 20 per cent." (*OECD Economic Surveys: Japan 2000*, OECD 2000, p.18). "The system was reformed substantially in 2004." (Kenichiro Kashiwase, Masahiro Nozaki and Kiichi Tokuoka, *Pension reforms in Japan,* IMF working paper 12/285, December 2012, p. 6)
NETHERLANDS	*The 1996 privatization of the public pension fund ABP (Algemeen Burgerlijk Pensioenfonds).* *The 2006 Life Course Savings Scheme* (Levensloopregeling; LCSS): • offered employees the opportunity to save tax free to finance periods of unpaid leave; • abolished tax deductions for early retirement schemes for people who were younger than 57 years on 1st January 2005: these people could participate in the LCSS and save up to 12% of the gross salary per annum, and the contributions to the savings fund were tax free, as well as the returns on the fund.	"Although participation (still) is low, the LCSS has a potential to contribute to promote freedom of choice for employees, to balancing the work-life balance over the life cycle, and may also contribute to the objectives of transitional labour markets." (*Working Party on Social Policy, Seminar on the life risks, life course and social policy ins and outs of the Dutch life course savings scheme*, Directorate for employment, labour and social affairs, OECD, May 2007).

NORWAY	*2006 Stoltenberg White Paper (Report No. 5 to the Storting:"Earning and drawing old age pension from the National Insurance Scheme, 2006–2007") and new legislation in the Spring of 2009:* • introduced a flexible retirement from age 62 to 75 on actuarially neutral terms; • changed the calculation of old-age benefits to be based on the worker's average lifetime contributions (from ages 13 to 75) plus credits for missing periods that are due to unemployment or caregiving; • replaced the current flat-rate contributory public pension with the income-tested pension; • reformed the Contractual Early Retirement Schemes (AFP).	"A major pension reform was implemented from 2011" (Statement by Mr. Audun Gronn, Alternate Executive Director for Norway, January, 27, 2012, in "*Norway: 2011 Article IV Consultation—Staff Report; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Norway*", IMF Country Report No. 12/25, p.69[2])
POLAND	*The Pension reform (1999), and the Acts No. 162 (1998) and No. 887 (1998)*: • established a defined-contribution, multi-pillar system involving: a pay-as-you-go (PAYG) pillar based on notional defined contributions (NDC), a mandatory funded pillar in which private pension funds manage individuals' contributions, and a voluntary third pillar consisting of company pension plans and other savings vehicles; • established that special public pension schemes for uniformed services should be extended to judges and public prosecutors.	"The 1999 pension reform stands out for having been designed and adopted under two successive governments of very different political orientations – perhaps the most important reform since 1989 to so transcend the partisan divide." (*The Political Economy of Reform. Lessons from pensions, product markets and labour markets in ten OECD countries*, OECD, 2009, p.139) "The 1999 pension reform—which phased out the old pay-as-you-go (PAYG) system and created a new mixed private-public pension system—was a major effort to restore the solvency of the public pension system." (*Republic of Poland: Selected Issues— IMF Country Report No. 05/264* , IMF 2005, p.55)
PORTUGAL	*The 1993 Reform of the Social Security general regime (Decree-Law 329/93 of 25 September):* • increased the legal retirement age for women to 65 years (the same as for men); • increased the minimum entitlement contributory period from 10 to 15 years. *The 2005 reform (Law 60-B/2005):*	"The Portuguese pension system has undergone a number of substantial reforms in recent times, most notably in 1993" (*Portugal: Selected Issues— IMF Country Report No. 04/80*, IMF 2004, p.43)

	• raised the minimum age for retirement and the number of necessary years of service to receive a full pension; • closed the public sector employee pension system to new entrants, to generate convergence to the conditions prevailing in the private sector social security system.	"A courageous reform of the generous public sector employee pension system was approved in 2005. […] Not only should this reform help reducing spending pressure, but it should also facilitate the mobility of public employees to the private sector." (*OECD Economic Surveys: Portuga*l, OECD 2006, p.54)
SLOVAK REPUBLIC	*The 2003 Social Insurance Act (No. 461/2003 Coll.):* • increased gradually the statutory retirement age for both men and women to 62 (by 2014) and decide that legal retirement age will gradually increase depending on growth and like expectancy from 2017; • reformed the public pension system, reforming pension insurance, which includes: a mandatory old-age DC insurance financed by redistribution managed by the Social Insurance Agency; a mandatory pension savings system with DC finances by capitalization managed by private companies. *Old-Age Pension Savings Act (No. 43/2004 Coll.):* • regulated the mandatory pension tier. *Supplementary Old-Age Pension Savings Act (No. 650/2004 Coll.):* • regulated the voluntary pension system.	"Recognizing the problem, the government implemented a major reform of the pension system, first removing the public defined-benefit (DB) pay-as-you-go (PAYG) pillar and then introducing a fully-funded defined-contribution (DC) pillar." (*OECD Economic Surveys: Slovak Republic 2009*, p.72, OECD 2009).
SPAIN	*The 1997 reform (Royal Decree 6/1997):* • established that the number of contributive years over which the benefit base is computed would have progressively increased from 8 to 15 between 1997 and 2001; • made the formula for the computation of the replacement rate less generous; • reduced the 8% per-year penalty to early retirees between the ages of 60 and 65 to 7% for those individuals with 40 or more contributive years at the time of retirement.	"The 1997 legislation is the most important pension legislations of recent years" (*The Spanish Pension System: Issues of Introducing NDCs,* Carlos Vidal-Meliá and Inmaculada Domínguez-Fabián, World Bank 2006, p.617)
SWEDEN	*The 1998 reform:* • replaced the pay-as-you-go defined benefit (DB) system with a pay-as-you-go notional defined contribution (NDC) system;	"From the perspective of longer-term fiscal sustainability, the long-awaited reform of old-age pensions entered into force in 1999. […] fiscal

	• was implemented in 1999 and applied to people aged 45 or under at the time of the reform. *2007 reform of the Sweden's white collar industry-wide pension scheme (ITP):* • new entrants to the ITP scheme will change from a DB scheme that provides 65% of final salary integrated with the social security system, to a DC scheme.	consolidation and pension reform have brought public finances back on a sustainable footing […]". (*OECD Economic Surveys: Sweden 1999*, OECD 1999, pp.12-13) "The ITP occupational pension plan was extensively upgraded in 2007 after a decade of negotiations between the employers and white-collar unions." (*OECD Private Pensions Outlook 2008*, OECD 2009, p.280)
UNITED KINGDOM	*The 2007 Pensions Act:* • linked cost of living increases to wages rather than prices; • raised the pension age for women to 65 by 2020; • raised the pension age for both women and men from 65 to 68 between 2024 and 2046.	"The current Government is committed to continue largely upon the trajectory laid down by the previous government in its major pension reforms of 2007 and 2008, which themselves were based on the Recommendations of the Turner Commission which had sought cross party consensus on its proposals." (*Pension Adequacy in the European Union 2010-2050,* Directorate-General for Employment, Social Affairs and Inclusion of the European Commission and the Social Protection Committee, May 2012, p.381)