

# Case of Chile

(example of transition from PAYG DB to  
FF DC and its consequences)

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# Chile

## retirement age and replacement rate

Atribut	Women 	Men 
Current retirement age (entered market at 22 y.o.)	60 y.o.	65 y.o.
Future retirement age (just entered market 22 y.o.)	65 y.o.	65 y.o.
Net pension replacement rate of 0.50 of AW	42.6%	44.6%
Net pension replacement rate of 1 of AW	34.4%	37.3%
Net pension replacement rate of 1.50 of AW	34.9%	37.9%
Expected years in retirement	19,7 years	14,7 years

Source: own calculations and OECD (2021): Pension at Glance statistics, available from [stats.oecd.org](https://stats.oecd.org)



# Basic setting since 1981

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- Participant's contribution to the new pension system is set to 10 % of his brutto salary, which is sent into his pension account / pension fund that is his property.
- Old-age pension depends just and only on his lifetime investments (savings + returns).
- Retirement age is set to 60 years for women and 65 years for men.
- For cases of disability or death, every participant contributes 3.4 % from his salary as insurance against this, also administrative costs are paid from this add-on contribution.
- Every participant has the right to choose Administrator of his fund (AFP = Administradoras de Fondos de Pensiones).

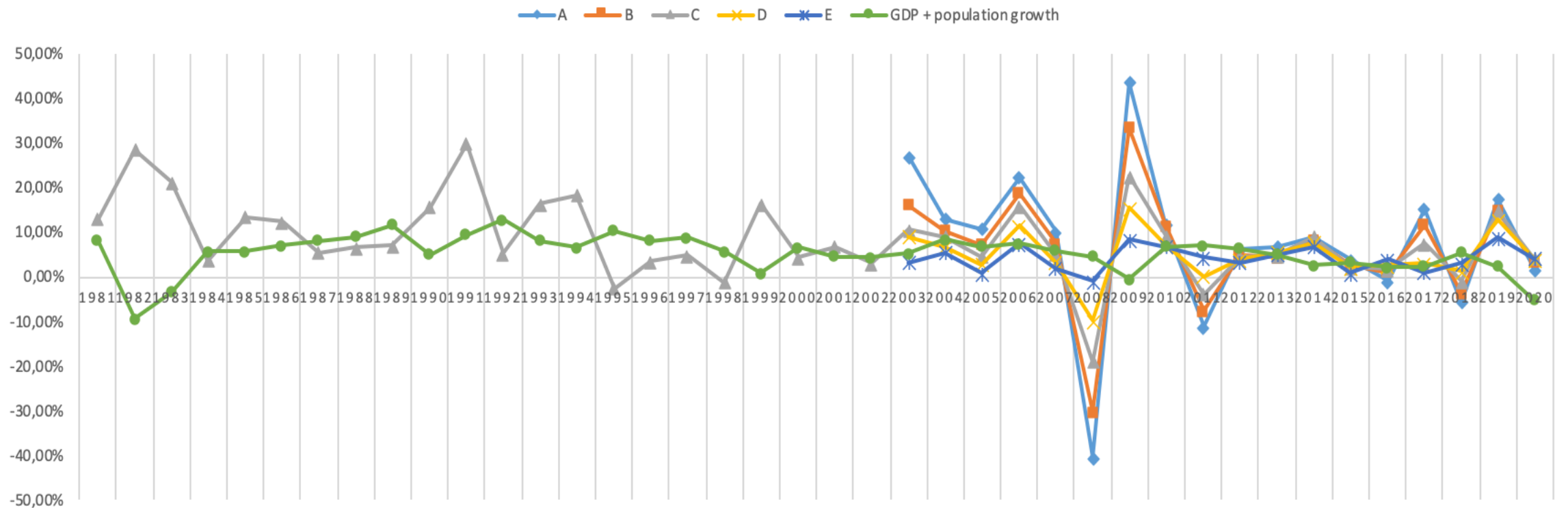
# Basic setting since 1981 + 2003

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- AFP are private investment companies that administrate and invest participant's contributions on the market.
- Since 2014 there are 5 different strategies how AFP can invest and participant can choose himself which option he will use. Strategies differ by risk and expected returns from conservative home investment to dynamic worldwide investment.
- Unsuccessful AFP have to cover losses or lower returns to participants. On the other hand, successful AFP can keep part of extra return or lower losses.
- Reaching retirement age, participant can choose from three different options of pension payment and theirs combinations – Life annuity, gradual withdrawal and direct withdrawal.
- The state/government has just a supporting and guaranteeing role.

# Impacts on participants

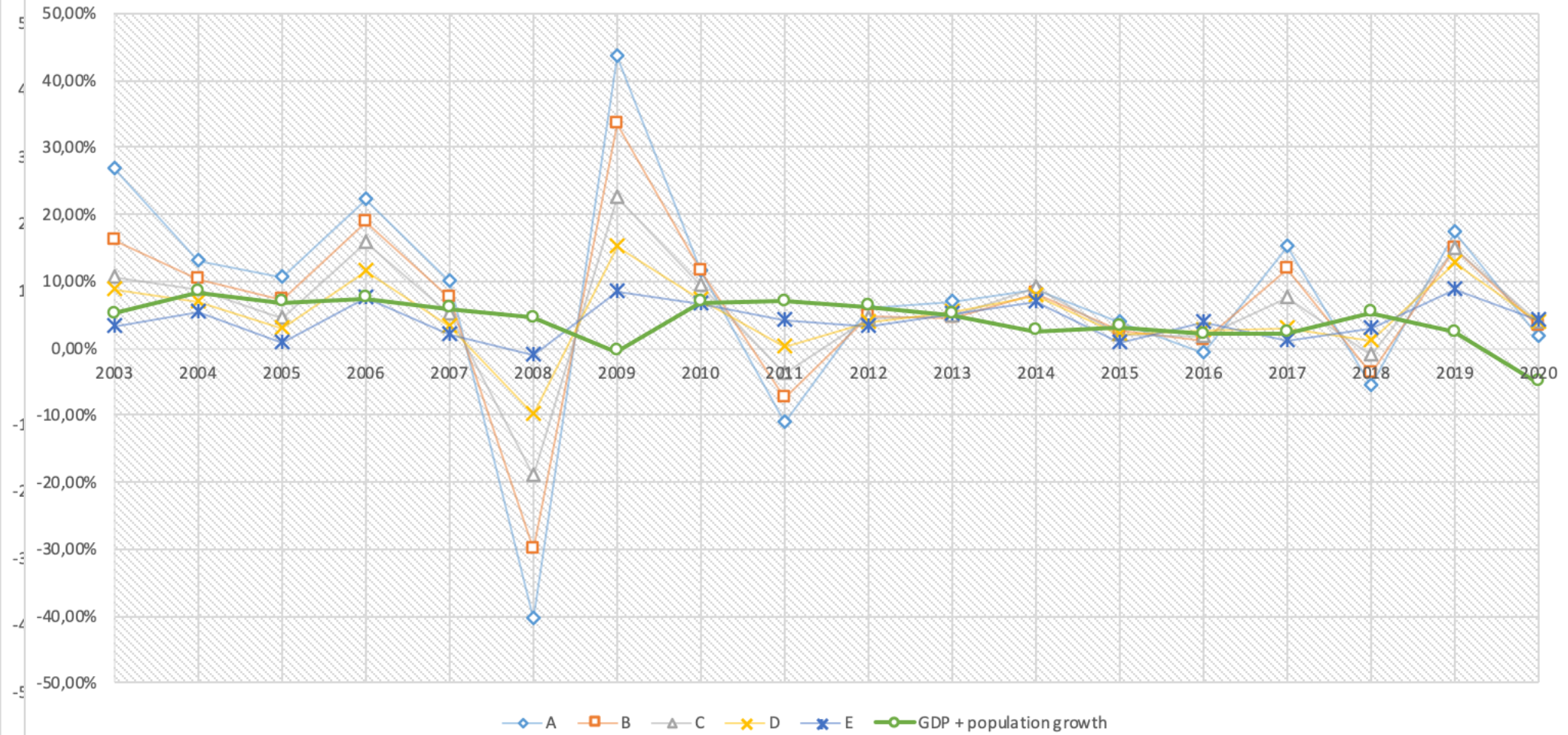
Real returns AFP Chile of all investment strategies since 1981  
compared with growth of GDP + growth of population  
(by type of strategy, 1981 - 2020)



Source: Own calculations based on FIAP (1981-2005) a SAFP (2006-2020)

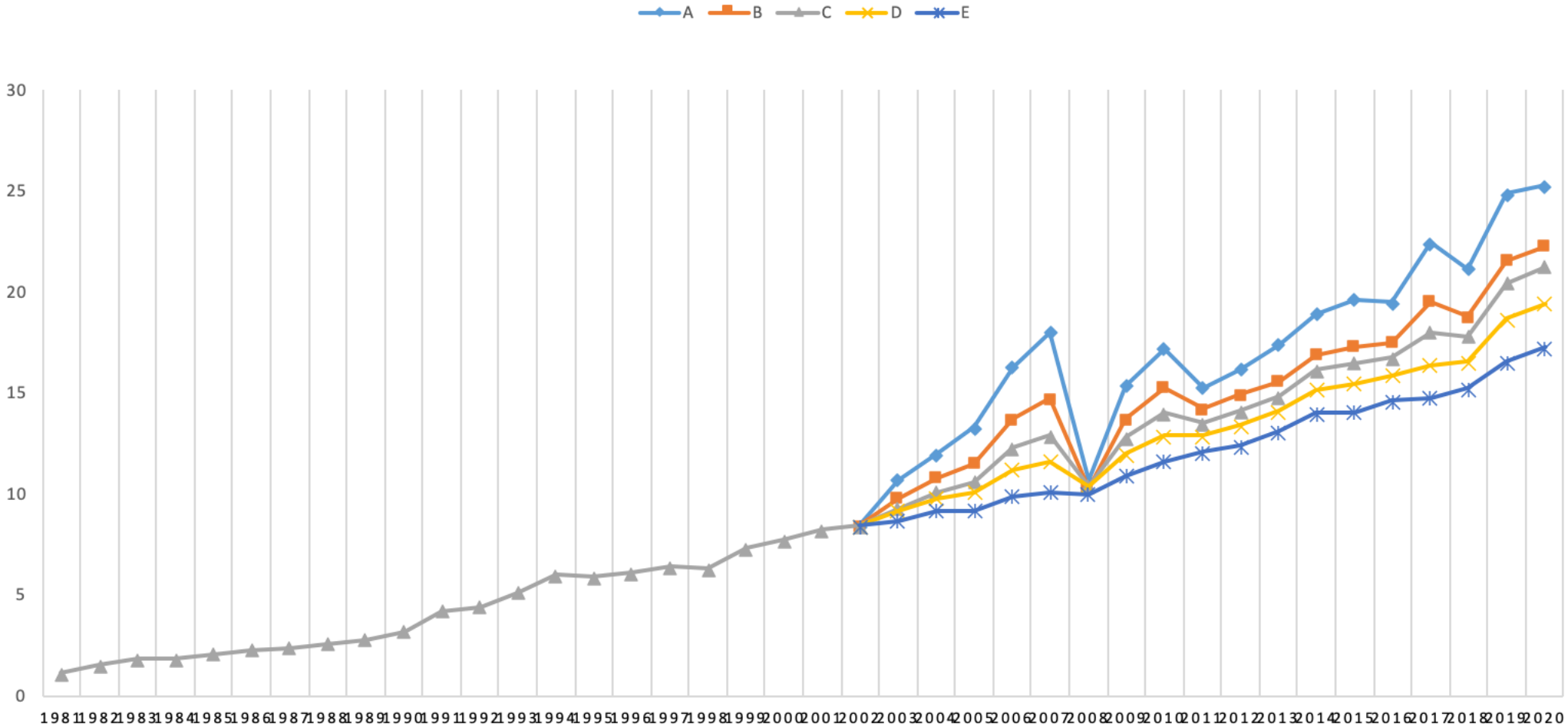


Real returns AFP Chile of all investment strategies since 2003 compared with growth of GDP + growth of population (by type of strategy, 2003 - 2020)



Source: Own calculations based on FIAP (1981-2005) a SAFF (2006-2020)

### Cumulative Real returns of the first peso invested into AFP Chile (by type of strategy, 1981-2020)

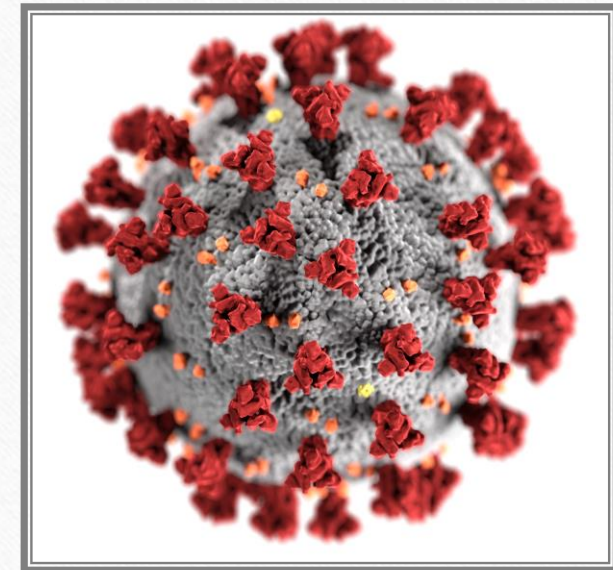


Source: Own calculations based on FIAP (1981-2005) a SAFP (2006-2020)



# Impact of Covid-19 on Chilean pension system JAN2020 – DEC2020

Fond	01JAN - 31MAR	01JAN - 31DEC	31MAR - 31DEC
A	-17,15%	1,63%	22,66%
B	-14,27%	3,27%	20,45%
C	-11,74%	4,01%	17,84%
D	-9,58%	3,94%	14,95%
E	-4,92%	4,21%	9,60%



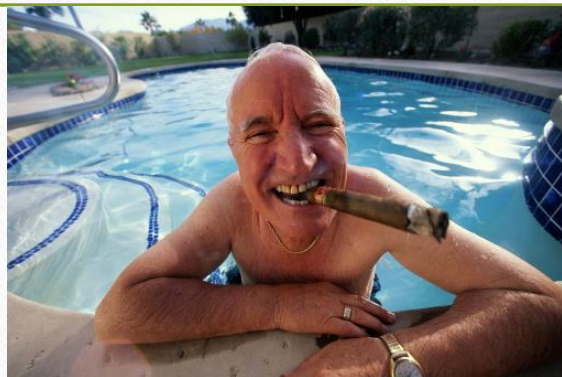
Source: own calculation based on SIAP (2021)



# Impact of the transition from PAYG to FF on state budget in Chile

Year	Direct impact of pension reform (in million of pesos 1988)			Total expenditures as % of GDP
	Old system expenditures	Bonds' expenditures	Total expenditures	
1981	52 300	200	52 500	<b>1,48</b>
1982	124 200	3 300	127 500	<b>4,19</b>
1983	138 500	6 500	145 000	<b>4,80</b>
1984	146 500	7 900	154 400	<b>4,80</b>
1985	140 500	9 900	150 400	<b>4,57</b>
1986	150 800	14 100	164 900	<b>4,74</b>
1987	160 000	17 900	177 900	<b>4,84</b>
1988	163 000	19 400	182 400	<b>4,73</b>
1990	169 000	25 750	194 750	<b>4,67</b>
1995	182 500	47 300	229 800	<b>4,52</b>
2000	175 000	63 800	238 800	<b>3,86</b>
2005	145 200	78 200	223 400	<b>2,97</b>
2010	108 600	73 500	182 100	<b>1,99</b>
2015	85 000	43 000	128 000	<b>1,15</b>

Source: Own calculation based on Bosworth, Dornbusch, Labán (1994, p280) for years 1981-1988.. For years 1990-2015 based on the same source and IMF (2014).



# Women, we have a problem!



- Net replacement ratio (NRR) based on OECD methodic incl. solidary pension is 37% for men and 34% for women. Czechia has 60,3 % (OECD 2018)
- Women contribute to the system in average just 15.5 years and spend 29 years on average in old-age pension.
- Men contribute on average just 21 years and spend 19 years in old-age pension.
- If participant worked all his life as a formal employee, man would have NRR just from AFP between 77 – 100% and woman would have between 48 – 68%.



# Changes = introduction of “zero pillar”.

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- **2008 – introduction of the “zero pillar” paid from taxes:**
  - If you lived in Chile at least 20 years after age 20 and you are not from richer household (6-10 decile), then you are entitled to:
    - **A/ Base old-age pension (PBSV):** In case the person over 65 y.o. is not entitled to any benefits from AFP, then the base old-age pension is paid in amount of 160 - 170 000 CLP (differs by age, 2021), which is valorised yearly – around 200 EUR. Currently 450 000 people over 65 y.o. are entitled to this benefit, 3/4 are women.
    - **B/ Supplementary old-age pension (APSV):** In case the participant’s pension from AFP is lower than 470 – 500 000 CLP (differs by age, 2021) currently 600 EUR, they are entitled to Supplementary old-age pension that is calculated by the formula  $APSV = PBSV - 0,31 * AFP \text{ pension}$ . Currently 400 000 people are entitled to this benefit, 2/3 are women.

# Changes = introduction of “zero pillar”.

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- 2008 Reform lowered poverty rate by 2,6 p.p. in age group 65+. From 10,9% to 8,3%.
- On the other hand, the impact to state budget is negative with negative outlook. In 2010 it was just 0,7 % of GDP, in 2025 it is predicted to be 1,5% of GDP.
- For comparison, current public expenditures to state pension system in the Czech Republic is 9% of GDP and 13 % in France.



# Future changes?

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- Involvement of self-employed was discussed since '90s and was done in 2019 (“just” 38 years after the reform started)
- Growth of contribution from 10 to 13% from salary, which reflects lowering returns of investments + 3 % to solidary pension, which would make from zero pillar, first pillar (PAYG).
- Increase of retirement age from 60/65 to 67 for both sexes.
- Two controversial proposals are in consideration also:
  - Consider women and men as one sex for life annuity calculation (EU way)
  - Mutual funds for couples.

# Case of HU, PL, SK, CZ

(example of transitions from PAYG DB to  
FF DC in CEE and its consequences)

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# Transition deficit and fiscal rules in CEE

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## Slovakia:

- Before 2005: 18% of gross wage goes on PAYG DB
- Since transition in 2005: I.p 9%, II.p 9%
- Result SEP 2012: I.p 14%, II.p 4%
- Reasons: irrational II. p setting + budget deficits + political (Fico)

# Transition deficit and fiscal rules in CEE

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## **Czech Republic:**

- Before 2013: 28% of gross wage goes on PAYG DB
- Since transition in 2013: I.p 25%, II.p 5% or I.p 28% (voluntary decision)
- Result DEC 2015: I.p 28%, II.p cancelled and assets returned to participants
- Reasons: officially low-interest, reality: political (Social democrats)



# Transition deficit and fiscal rules in CEE



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## Hungary:

- Before 1998: 30% of gross wage goes on PAYG DB
- Since transition in 1998: I.p 24%, II.p 6%
- Since 2002: I.p 18%, II.p 8%
- Temporary result since 2008: I.p 24%, II.p 8%
- Result NOV 2011: We are going to make you an offer you can't refuse = I.p 33,5%
- Reasons: irrational II.p setting + budget deficits + EU rules + political (Orban)

# Hungary

## retirement age and replacement rate

Atribut	Women 	Men 
Current retirement age (entered market at 22 y.o.)	62 y.o.	63,5 y.o.
Future retirement age (just entered market 22 y.o.)	62 y.o.	65 y.o.
Net pension replacement rate of 0.50 of AW	78.4%	84.3%
Net pension replacement rate of 1 of AW	78.4%	84.3%
Net pension replacement rate of 1.50 of AW	78.4%	84.3%
Expected years in retirement	22,9 years	15,9 years

Source: own calculations and OECD (2021): Pension at Glance statistics, available from [stats.oecd.org](https://stats.oecd.org)



# Transition deficit and fiscal rules in CEE



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## Poland:

- Before 1999: 19,52% of gross wage goes on PAYG DB
- Since transition in 1999: I.p 12,22%, II.p 7,3% with rational setting
- Temporary result since MAY2011: I.p 17,22%, II.p 2,3% -> 2,92%
- Result MAR2014:
  - Undisguised nationalization of 51,5% of all assets in II.p (Polish Government Bonds)
  - opt-out from II.p recommended
- Reasons: budget deficits + fiscal rules + political (Tusk)

# Poland

## retirement age and replacement rate

Atribut	Women 	Men 
Current retirement age (entered market at 22 y.o.)	60,8 y.o.	65 y.o.
Future retirement age (just entered market 22 y.o.)	60 y.o.	65 y.o.
Net pension replacement rate of 0.50 of AW	36.3%	35.9%
Net pension replacement rate of 1 of AW	27.3%	35.1%
Net pension replacement rate of 1.50 of AW	26.8%	34.7%
Expected years in retirement	23,4 years	17,8 years

Source: own calculations and OECD (2021): Pension at Glance statistics, available from [stats.oecd.org](https://stats.oecd.org)



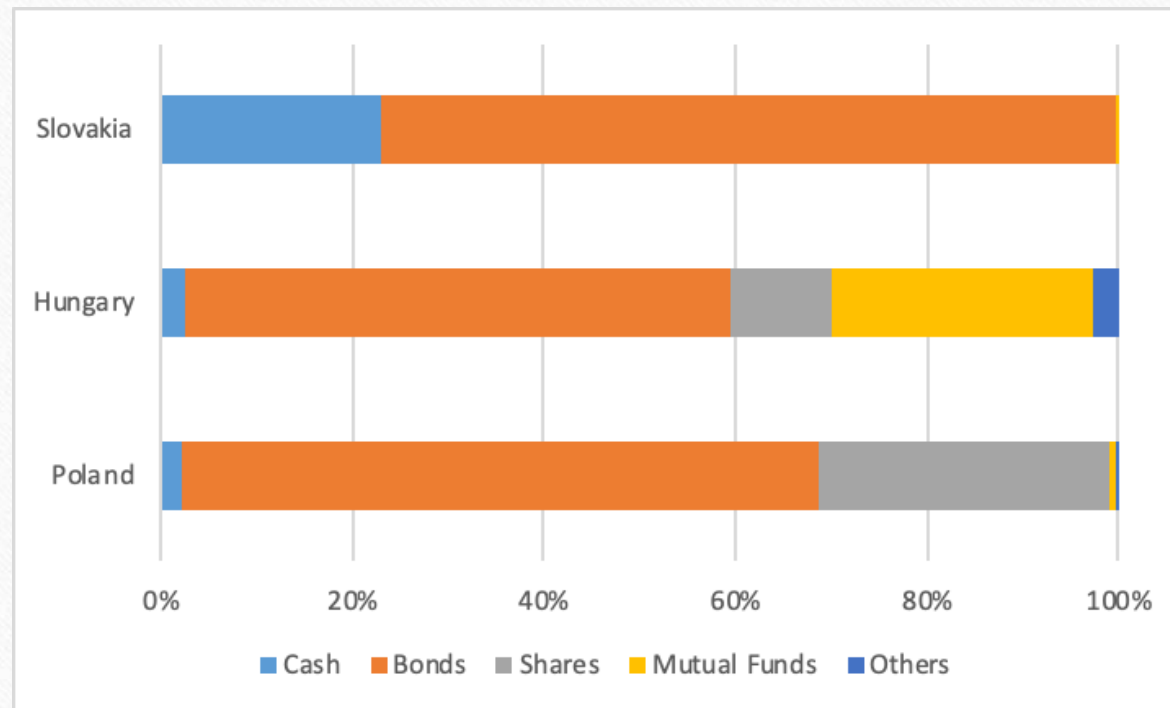
# Regulation of Minimum % of Return as a long-term killer of any returns

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- **Real returns:**

- **Slovakia** between 2005 and 2010: **-1 % p.a.**
- **Hungary** between 2000 and 2010: **0,65 % p.a.**
- **Poland** between 2002 and 2010: **6,2 % p.a.** and between 2005 and 2010: **4,4 % p.a.**
- **Chile** between both 2002 and 2010 i 2005 and 2010: **7 % p.a.**
- **But why in global markets?**

# Portfolio settings in CEE in 2010



Source: own presentation of data from Hlaváč, Schneider, 2011



# Reasons

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- Slovakia and Hungary had strong minimum rates of return regulation. This regulation forced private investing companies to invest participants' contributions very conservatively, so that real returns in both countries were lower than any pre-reform calculation predicted. Slovakia on average -1% p.a. and Hungary 0.65% p.a. compare with Polish 6% p.a. where this regulation did not exist.
- Opt-outs from PAYG systems in PL, HU, SK were higher than real economy could afford. It led to higher state budget deficits every year, mainly during the crises of 2008 and 2011.

# Risks of transformation from PAYG DB to FF DC

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- In general, we can see from the previous presented data that main risk of this transformation is, rather than market/financial risk, which is well known, the political risk and debt risk.
- The Maastricht criteria in case of Hungary and own Constitution (fiscal rules) in case of Poland, de facto, bring the incentive to political representation to undermine the trust of citizen into the II. pillars and furthermore to (quasi)nationalise the assets in FF DC.
- We can conclude that application of FF DC in CEE is possible just in case of very liberal and non-over-regulated settings. Moreover, to be applied to higher-income citizens only and also as an add-on pillar without any opt-out from PAYG to avoid the debt risk.



# Source

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- BOSWORTH, B. - DORNBUSCH, R. - LABÁN, R.: The Chilean economy : policy lessons and challenges. 1. vyd. Washington, D. C.: The Brookings Institution, 1994. ISBN 0-8157-1046-1.
- CÁSERES, C.: Důchodové systémy a hospodářská krize. Výroční přednáška. 10. října 2013, Liberální institut 2013, citace 7.10.2016, Link:: [goo.gl/Y0p5gm](http://goo.gl/Y0p5gm).
- CASTAÑEDA, T. 1992. Combating Poverty – Innovative Social Reforms in Chile during the 1980s. 1. vyd. San Francisco: International Center for Economic Growth, 1992. ISBN 1-55815-192-3.
- FIAP: Estadísticas - Rentabilidad Nominal In local currency and adjusted by inflation (Chile en UF 1981–2015), Federación Internacional de Administradoras de Fondos de Pensiones 2016, citace 1.10.2016, Link:: [goo.gl/UIg7Jt](http://goo.gl/UIg7Jt).
- HLAVÁČ, J. – SCHNEIDER O.: Finanční výkonnost penzijních fondů ve střední Evropě: proč jsou české fondy nejhorsí?, CERGE-EI a AVČR 2011, citace 8.10.2016, Link:: [goo.gl/oQCGq1](http://goo.gl/oQCGq1).
- INSTITUTO DE PREVISIÓN SOCIAL: Aporte Previsional Solidario de Vejez (APSV), Ministerio del Trabajo y Previsión Social 2016, citace 3.10.2016, Link:: [goo.gl/7lfd5](http://goo.gl/7lfd5).
- KOMPA, K. - WITKOWSKA, D.: Pension Funds in Poland: Efficiency Analysis for Years 1999–2013. Dynamic Econometric Models. 2015, 14(5), 105-. DOI: 10.12775/DEM.2014.006. ISSN 1234-3862.
- LOWE, C. - POMEROY, R.: Hungarian savers say government is stealing their pensions, Reuters 2014, citace 11.10.2016, Link: [goo.gl/Yck4Mb](http://goo.gl/Yck4Mb).
- OECD: OECD Global Pension Statistics 2014, Knoema 2014, citace 9.10.2016, Link:: [goo.gl/d6A7z5](http://goo.gl/d6A7z5).
- OECD: General government debt, OECD 2016, DOI: 10.1787/cc9669ed-en citace 11.10.2016, Link:: [goo.gl/ccvLC1](http://goo.gl/ccvLC1).
- SZIKRA, D.: Democracy and welfare in hard times: The social policy of the Orban Government in Hungary between 2010 and 2014. Journal of European Social Policy. 2014, 24(5), 486-500. DOI: 10.1177/0958928714545446. ISSN 0958-9287.
- SUPERINTENDANCIA DE PENSIONES: Boletín Estadístico No. 1 – No. 221, SAFP 2016, citace 7.10.2016, Link:: <http://www.safp.cl/apps/boletinEstadistico/>.
- WORLD BANK: Guarantees - counting the cost of guaranteeing defined contribution pensions. World Bank pension reform primer series. Washington, DC: World Bank 2005, citace: 9.10.2016, Link:: [goo.gl/SkL9WG](http://goo.gl/SkL9WG).

# Source

- CHILE:
- ACUÑA, R.; INGLESAS, A. 2001. *Chile's pension reform after 20 years*, [Social Protection Discussion Paper No. 0129]. Washington D.C.: The World Bank, 2001. [online]. [cit. 2014-04-05]. <http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Pensions-DP/0129.pdf>.
- ANDREWS, E. 2006. *Pension Reform and Development of Pension System*. 1. vyd. Washington, D. C.: IBRD (WB), 2006. ISBN 0-8213-6551-7
- BANCO CENTRAL DE CHILE. 2014. Indicador mensual de actividad económica, Imacec, volumen a precios del año anterior encadenado, (promedio 2008=100). In: Base de Datos Estadísticos - Cuentas Nacionales: Serie Original, 2014. [online]. [cit. 2014-04-18]. <http://si3.bcecentral.cl/Siete/secure/cuadros/arboles.aspx>
- BOSWORTH, B.; DORNBUSCH, R.; LABÁN, R. 1994. *The Chilean economy : policy lessons and challenges*. 1. vyd. Washington, D. C.: The Brookings Institution, 1994. ISBN 0-8157-1046-1
- BNAMERICAS. 2014. Chile's pension system unaffected by tax reform, says finance ministr. *Business Insight in Latin America*, 17. 4. 2014. [online]. [cit. 2014-05-15]. <http://www.bnamericas.com/news/insurance/chiles-pension-system-not-affected-by-tax-reform>
- BRAHAM, M. B. 2007. *Structural Pension Reform: The Chilean Experience*. Networks
- Financial Institute. Indiana State University. October 2007. [online]. [cit. 2014-11-21]. [http://indstate.edu/business/NFI/leadership/papers/2007-WP-20\\_Ben\\_Braham.pdf](http://indstate.edu/business/NFI/leadership/papers/2007-WP-20_Ben_Braham.pdf)
- CASTAÑEDA, T. 1992. *Combating Poverty – Innovative Social Reforms in Chile during the 1980s*. 1. vyd. San Francisco: International Center for Economic Growth, 1992. ISBN 1-55815-192-3
- COOPERATIVA.CL. 2014. *Bachelet firma este lunes el proyecto de AFP estatal*, 16. 6. 2014. [online]. [cit. 2014-06-20]. <http://www.cooperativa.cl/noticias/economia/sistema-previsional/afp/bachelet-firma-este-lunes-el-proyecto-de-afp-estatal/2014-06-16/091546.html>
- CORBO, V.; SCHMIDT-HEBBEL, K. 2003. Macroeconomic Effects of Pension Reform in Chile. In *Pension Reforms: Results and Challenges*, edited by Federación Internacional de Administradoras de Fondos de Pensiones. Santiago: CIEDESS, 2003. [online]. [cit. 2014-05-02]. [http://www.fiap.cl/p4\\_fiap\\_eng/site/artic/20040525/asocfile/ASOCFILE120040525110346.pdf](http://www.fiap.cl/p4_fiap_eng/site/artic/20040525/asocfile/ASOCFILE120040525110346.pdf)
- ECONOMIST INTELLIGENCE UNIT. 2014. *Pension reform debated in the heat of electoral campaigns*. May 15th 2013. [online]. [cit. 2014-05-03]. <http://country.eiu.com/article.aspx?articleid=1020498286&Country=Chile&topic=Economy&oid=291299613&aid=1>
- FIAP. 2014. Estadísticas - Rentabilidad Nominal en moneda local (Chile en UF 1981-2005). [online]. [cit. 2014-03-25]. [http://www.fiap.cl/p4\\_fiap/site/artic/20050823/asocfile/ASOCFILE120050823102429.xls](http://www.fiap.cl/p4_fiap/site/artic/20050823/asocfile/ASOCFILE120050823102429.xls) (heslo) nebo <http://ulozto.cz/xX2gZADH/asocfile120050823102429.xls> (bez hesla)
- GIMÉNEZ, D. 2003. *Género, revisión y ciudadanía social en América Latina*. Santiago de Chile: United Nations, 2003. [online]. [cit. 2014-03-20]. <http://www.eclac.cl/publicaciones/xml/7/13057/le1937c.pdf>
- HACHETTE, D.; LÜDERS, R. 1992. *Privatization in Chile – An Economic Appraisal*. San Francisco: ICS Press, 1992. ISBN: 1-55815-208-3
- IMF. 2014. *Report for Selected Countries and Subjects* [Chile: 1991,1992,1995]. [online]. [cit. 2014-04-02]. <http://www.imf.org>
- INGLESAS, A. 2009. *Pension reform in Chile revisited: what has been learned?* OECD Social, Employment and Migration Working Papers, No. 86, OECD Publishing, 2009. [online]. [cit. 2014-05-10]. <http://dx.doi.org/10.1787/224473276417>
- LIBERÁLNÍ INSTITUT. 2013. *Důchodové systémy a hospodářská krize. Výroční přednáška*. 10. října 2013. [online]. [cit. 2014-05-03]. <http://libinst.cz/Files/KoLFv4r2/news/452/10102013.pdf>



# Source

- MARTÍNEZ, J.; DÍAZ, A. 1996. *Chile – The Great Transformation*. 1. vyd. Geneva: UNRISD, 1996. ISBN 0-8157-5478-7
- MERCER. 2013. *Melbourne Mercer Global Pension Index 2013*. Australian Centre for Financial Studies, Melbourne. October 2013. [online]. [cit. 2014-05-02]. <http://globalpensionindex.com/2013/melbourne-mercero-global-pension-index-2013-report.pdf>
- OECD. 2013. *Pensions at a Glance 2013: OECD and G20 Indicators*. OECD Publishing. [online]. [cit. 2014-11-25]. [http://dx.doi.org/10.1787/pension\\_glance-2013-en](http://dx.doi.org/10.1787/pension_glance-2013-en)
- PALACIO, R.; ROFMAN, R. 2001. *Annuity Markets and Benefit Design in Multipillar Pension Schemes: Experience and Lessons from Four Latin American Countries*. [SP Discussion Paper no. 0107]. Washington, D. C.: World Bank, 2001. [online]. [cit. 2014-03-20]. [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2001/11/28/000094946\\_01111004151321/Rendered/PDF/multi0page.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2001/11/28/000094946_01111004151321/Rendered/PDF/multi0page.pdf)
- PERRY, G.; LEIPZIGER, D. M. 1999. *Chile - Recent Policy Lessons and Emerging Challenges*. 1. vyd. Washington, D. C.: World Bank, 1999. ISBN 0-8213-4500-1
- PINOCHET, A. 2014. *Aki Frases*, 1, Santiago de Chile, Aki Frases, 2014. [online]. [cit. 2014-03-05]. <http://akifrases.com/frase/142095>
- PIÑERA, J. : Nunca más - Un ensayo sobre el quiebre de la democracia en Chile, [online]. [cit. 2014-04-14]. [http://www.cedecibertad.org/CHILE\\_Nunca\\_mas.pdf](http://www.cedecibertad.org/CHILE_Nunca_mas.pdf)
- PIÑERA, J. 2014. CV. [online]. [cit. 2014-04-10]. [http://www.josepinera.com/josepinera/jp\\_ip\\_cv.htm](http://www.josepinera.com/josepinera/jp_ip_cv.htm)
- ROFMAN, R.; APELL, I.; VEZZA, E. 2013. *Más allá de las Pensiones Contributivas: Catorce experiencias en América Latina*. Buenos Aires: The World Bank, 2013. [online]. [cit. 2014-04-20]. [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/11/21/000333037\\_20131121153001/Rendered/PDF/827240WP012960siones0contributivas.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/11/21/000333037_20131121153001/Rendered/PDF/827240WP012960siones0contributivas.pdf)
- RUIZ-TAGLE, J.; CASTRO, F. 1998. Le Régime de Retraite Chilien [Document de travail AWP 5.6F]. Paris: OECD, 1998. [online]. [cit. 2014-03-01]. <http://www.oecd.org/fr/retraites/pensions-publiques/2429351.pdf>
- SUPERINTENDENCIA DE PENSIONES (SAFP) 2014. Rentabilidad real de los fondos de pensiones [online]. [cit. 2014-04-15]. <http://www.safp.cl/safpstats/stats/rentabilidad/getRentab.php?tiprent=FP>
- SENADO – REPÚBLICA DE CHILE. 2014. Comisión – Aspectos considerados [online]. [cit. 2014-04-30]. [http://www.senado.cl/appsenado/index.php?mo=comisiones&ac=ficha&cid=950&tipo\\_comision=10#](http://www.senado.cl/appsenado/index.php?mo=comisiones&ac=ficha&cid=950&tipo_comision=10#)
- SCHMIDT-HEBBEL, K. 2013. *Diez preguntas sobre el sistema y el nivel de las pensiones en Chile*. El Mercurio, 19. 2. 2013. [online]. [cit. 2014-05-13]. <http://www.elmercurio.com/blogs/2013/02/19/9416/diez-preguntas-sobre-el-sistema-y-el-nivel-de-las-pensiones-en-chile.aspx>
- SCHNEIDER, O. 2011. *Důchodové systémy v Evropě: reformují všichni*. Institut pro demokracii a ekonomickou analýzu (IDEA). Krátká studie 6/2011. 12. 8. 2011. [online]. [cit. 2014-11-25]. [http://idea.cerge-ei.cz/documents/kratka\\_studie\\_2011\\_06.pdf](http://idea.cerge-ei.cz/documents/kratka_studie_2011_06.pdf)
- TERRIER, G. a kol. 2005. *Chile: Selected Issues* [IMF Country report No. 05/316]. Washington D. C.: IMF, 2005. [online]. [cit. 2014-04-19]. <http://www.imf.org/external/pubs/ft/scr/2005/cr05316.pdf>
- WORLD BANK. 2014a. Datos del País: Crecimiento del PIB (anuales %). In: *Chile* [online]. 2014 [cit. 2014-04-18]. <http://www.bancomundial.org/es/country/chile>
- WORLD BANK. 2014b. Datos del País: Crecimiento del PIB (anuales %). In: *Argentina* [online]. 2014 [cit. 2014-05-14]. <http://www.bancomundial.org/es/country/argentina>
- YAZIGI, A. F. 2003. *The Chilean Pension System*. 4. vyd. Santiago: Superintendencia de Administradoras de Fondos de Pensiones, 2003. [online]. [cit. 2014-04-28]. <http://www.spensiones.cl/portal/informes/581/w3-article-3523.html>

# Source

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- APS ČR. Zhodnocení prostředků účastníků. Praha: Asociace penzijních společností ČR, 2015. Link:: <http://www.apfcr.cz/cs/vybrane-ekonomicke-ukazatele/>
  - BEBCZUK, Ricardo a Alberto MUSALEM. Can the Financial Markets Generate Sustained Returns on a Large Scale? In: HOLZMANN, Robert. Aging population, pension funds, and financial markets: regional perspectives and global challenges for central, eastern, and southern Europe. Vienna: ERSTE Stiftung, c2009, 83-96. Directions in development (Washington, D.C.). ISBN 978-0-8213-7732-1.
  - BEZDĚK, Vladimír a kol. Závěrečná zpráva Výkonného týmu. Praha: MPSV a MF, 2005. Link:: <http://goo.gl/v6h0az>
  - BEZDĚK, Vladimír a kol. Závěrečná zpráva Poradního expertního sboru. Praha: MPSV a MF, 2010. Link:: <http://www.mpsv.cz/cs/8895>
  - BRIDA, Juan Gabriel a María Nela SEIJAS. The impact of funded pension schemes in domestic capital markets: evaluating global reforms. Economics Bulletin. 2016, 2016(Vol.36, 1), 493-514. ISSN 1438-261X.
  - ČSSZ. Výpočet a výplata důchodu a náhradní doba pojištění. Praha: Česká správa sociálního zabezpečení, 2016. Link: [www.cssz.cz](http://www.cssz.cz)
  - ČSÚ. Hlavní makroekonomické ukazatele. Průřezové statistiky – Makroekonomické údaje ČR. Praha: Český statistický úřad, 2015. Link:: <http://goo.gl/aAPujD>
  - EBBINGHAUS, Bernhard. The Privatization and Marketization of Pensions in Europe: A Double Transformation Facing the Crisis. European Policy Analysis. 2015, 2015(1), 56-73. ISSN 2380-6567.
  - KOMPA, Krzysztof a Dorota WITKOWSKA. Pension Funds in Poland: Efficiency Analysis for Years 1999–2013. Dynamic Econometric Models. 2015, 14(5), 105-. DOI: 10.12775/DEM.2014.006. ISSN 1234-3862.
  - MPSV. Pojistněmatematická zpráva o důchodovém pojištění 2014. Praha: Ministerstvo práce a sociálních věcí, Odbor sociálního pojištění, 2014. <http://goo.gl/B0FUIE>
  - MPSV. Kalkulačka k důchodové reformě. Praha: Ministerstvo práce a sociálních věcí, 2016. Link:: <http://duchodovakalkulacka.mpsv.cz/>
  - ORENSTEIN, Mitchell A. Pension Privatization: Evolution of a Paradigm. Governance. 2013, 26(2), 259-281. DOI: 10.1111/gove.12024. ISSN 09521895.
  - POTŮČEK, Martin. ZÁVĚREČNÁ ZPRÁVA O ČINNOSTI V ROCE 2015. Odborná komise pro důchodovou reformu [pdf]. Praha: MPSV, 2016. Link:: <http://goo.gl/1HqfId>
  - RUSNOK, Jiří a Juraj DLHOPOLČEK. End to Age of Naivety: Pension Reforms in Post-Transition Countries. ACTA VŠFS. Praha, 2010, 2010(1), 59-70. ISSN 1802-7946.
  - SZIKRA, D. Democracy and welfare in hard times: The social policy of the Orban Government in Hungary between 2010 and 2014. Journal of European Social Policy. 2014, 24(5), 486-500. DOI: 10.1177/0958928714545446. ISSN 0958-9287.





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