

# The optimal mix of the first and second pension pillar

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## Overview of the paper

The paper compares pension systems that mix a **PAYG pillar** with a **collective DC funded pillar** in variable proportions in terms of the replacement rates offered in a stochastic environment.

- ▶ considers different proportions of PAYG and funded pensions: 100%-0%, 75%-25%, 50%-50%, 25%-75%, 0%-100%
- ▶ the replacement rate of the PAYG system is very sensitive to demographic shocks
- ▶ the replacement rate of the collective DC funded pension is very sensitive to financial shocks
- ▶ there is scope for mixing PAYG with DC pensions - better sharing of risks between different generations

**Very interesting and relevant paper, I was glad to read and discuss it!**

## Comment 1 - Welfare (1)

- ▶ If the PAYG pillar has a high share in the pension mix, then the **average** replacement rate is low. But also the **variance** of the replacement rate is low.
- ▶ It is unclear what a lower mean and a lower variance of the replacement rate implies for individual and/or aggregate welfare.
- ▶ How can we choose the optimal mix of PAYG and funded pensions?

**Suggestion:** Compute and compare the welfare across different mixes of the PAYG and funded pillars.

## Comment 1 - Welfare (2)

Birth cohort 1992	100-0	75-25	50-50	25-75	0-100
<b>Median</b>	42,1%	58,8%	76,0%	93,3%	110,5%
<b>P99</b>	50,9%	170,5%	301,5%	432,5%	563,5%
<b>P97,5</b>	49,6%	133,4%	225,2%	316,3%	406,0%
<b>P95</b>	48,1%	111,2%	180,4%	249,4%	318,6%
<b>P5</b>	36,1%	41,4%	43,3%	44,4%	45,5%
<b>P2,5</b>	34,9%	39,6%	40,4%	40,5%	40,5%
<b>P1</b>	33,7%	37,4%	36,0%	34,5%	32,5%

## Comment 2 - Intra-cohort heterogeneity

- ▶ agents are homogeneous in the simulated model.
- ▶ yet the PAYG pillar in the Netherlands has an important within-cohort redistributive component because it is flat, i.e. does not depend on an agent's life-time earnings
- ▶ neglecting intra-cohort heterogeneity may underestimate the advantages of PAYG pensions in the Netherlands

**Suggestion:** Simulate the replacement rates using a few categories of earning profiles (for eg. high, medium and low skilled agents).

## Comment 3 - Labor supply distortions

- ▶ I am not certain that the model takes into account the fact that PAYG pensions distort labor supply more than the funded pensions
- ▶ If this is not the case, a correction must be imposed to acknowledge higher labor supply distortions as the share of the PAYG pension system is higher.

## Other comments

- ▶ How does productivity risk affect the replacement rate of PAYG and funded pensions?
- ▶ How much intergenerational risk sharing does the collective DC fund provide?
- ▶ Intergenerational sharing of financial and productivity risk: new literature (Hasanhodzic and Kotlikoff (2015)) shows that with a realistic number of cohorts, in general equilibrium, the scope for intergenerational risk sharing is small. Moreover, the PAYG pension system can exacerbate intergenerational risk, while other means of intergenerational risk sharing are more efficient (bonds for example).