P R O S T Application in Tanzania: impact of reform on NSSF

Tatyana Bogomolova

World Bank

Demographic and economic context

- <u>Demographics</u>
  - Young population, old age population dependency rate=10%
  - High fertility rate: 5.4 children per woman
  - Life expectancy at birth=58.6/60.7
  - Life expectancy at retirement (age 60)=17.0/18.4
- <u>Economy</u>
  - High GDP growth rates (about 7% real)
  - Relatively high inflation (6%-8%)
  - High labor force participation rates for both men and women

Pension system in Tanzania

- Fragmented: 5 mainland pension funds + Zanzibar Social Security Fund
- NSSF (private sector) and PSPF (public service) cover 75% of active members
- Very low coverage: all funds cover less than 5% of the labor force
- Funds offered different benefits until the system was harmonized in July 2014
- We will show how PROST was used to evaluate the impact of Harmonization on NSSF

NSSF: main performance indicators in 2013

- System dependency rate<=2% - very low because of young population, system immaturity, high rate of early withdrawals
- Average pension=30% of average wage of NSSF contributors
- Expenditures=0.8% of GDP
- Very high administrative costs (18% of contributions)
- Generates surpluses, accumulated assets=4.6% of GDP

NSSF design: before Harmonization

- Partially funded DB, converted from a provident fund in 1998
- Pre-1998 pension rights paid out as DB pension
- Contribution rate=20%
- Benefits:
  - Old age
  - Invalidity
  - Survivorship
  - Withdrawals
  - Health insurance
  - Short-term benefits (maternity, funeral grant)

NSSF design: before Harmonization (cont.)

- Retirement age=60
- Benefit formula:
  - Accrual rate=2% for first 15 years, 1.5% for each year above
  - Maximum replacement rate=67.5%
  - Reference wage=average of best 5 years over last 10 years, not valorized
  - Lump sum=24*reference wage
- Pension indexation: recommendations from actuarial valuation reports (recent trend close to wage growth)

NSSF design: effect of Harmonization

- Benefit formula:

	New rules	Old rules
Accrual rate	2.07%	2% for first 15 years, 1.5% for each year above (effective=2.12%)
Reference wage	Average of last 3 years, not valorized	Average of best 5 years over last 10 years, not valorized
Commutation/lump sums	Up to 25%, commutation factor=12.5	No commutation, lump sum=24*reference wage

- New formula applies to all members to pre- and post-reform years of contributions
- Harmonized pension indexation policy (assumed inflation)

Main assumptions used in projections

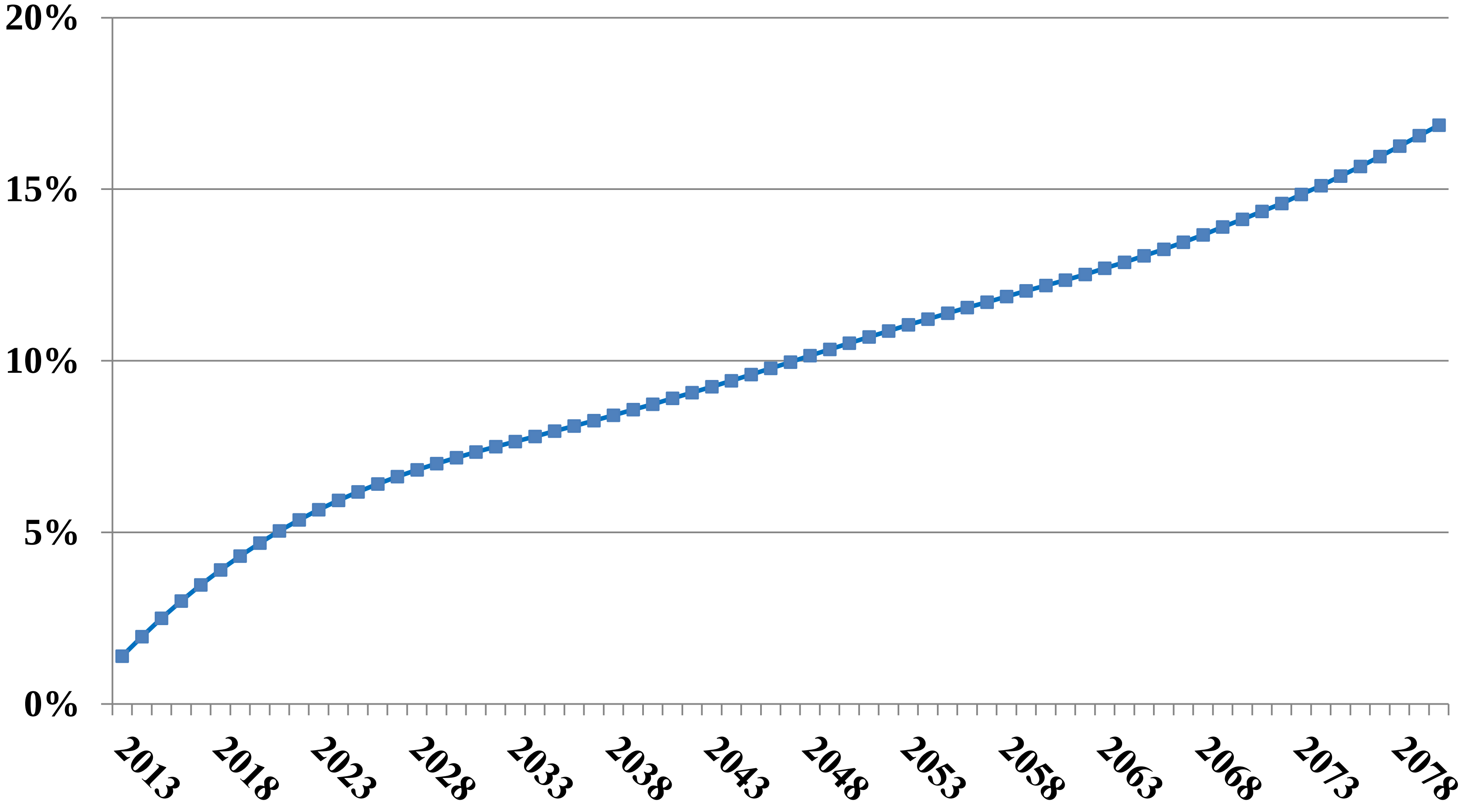
- Demographics:
  - UN population projections for Tanzania
  - Total fertility rate decreases from 5.4 to 2.6 children per woman by 2080
  - Life expectancy at birth in creases from 58.6/60.7 to 73.4/77.3 for men/women by 2080
  - Life expectancy at retirement (age 60) increases by 3.9/5.5 years for men/women by 2080
- Economy:

	2014	2015	2016	2017	2018	2019	2020	2034	2050	2080
Real GDP growth rate, %	7.1%	7.1%	7.1%	7.0%	6.9%	6.9%	6.9%	7.0%	5.0%	4.1%
Inflation, %	7.3%	6.3%	5.9%	5.3%	5.1%	5.1%	4.9%	5.0%	5.0%	5.0%
Real wage growth rate, %	3.9%	3.9%	3.8%	3.7%	3.6%	3.5%	3.5%	3.5%	2.0%	2.0%

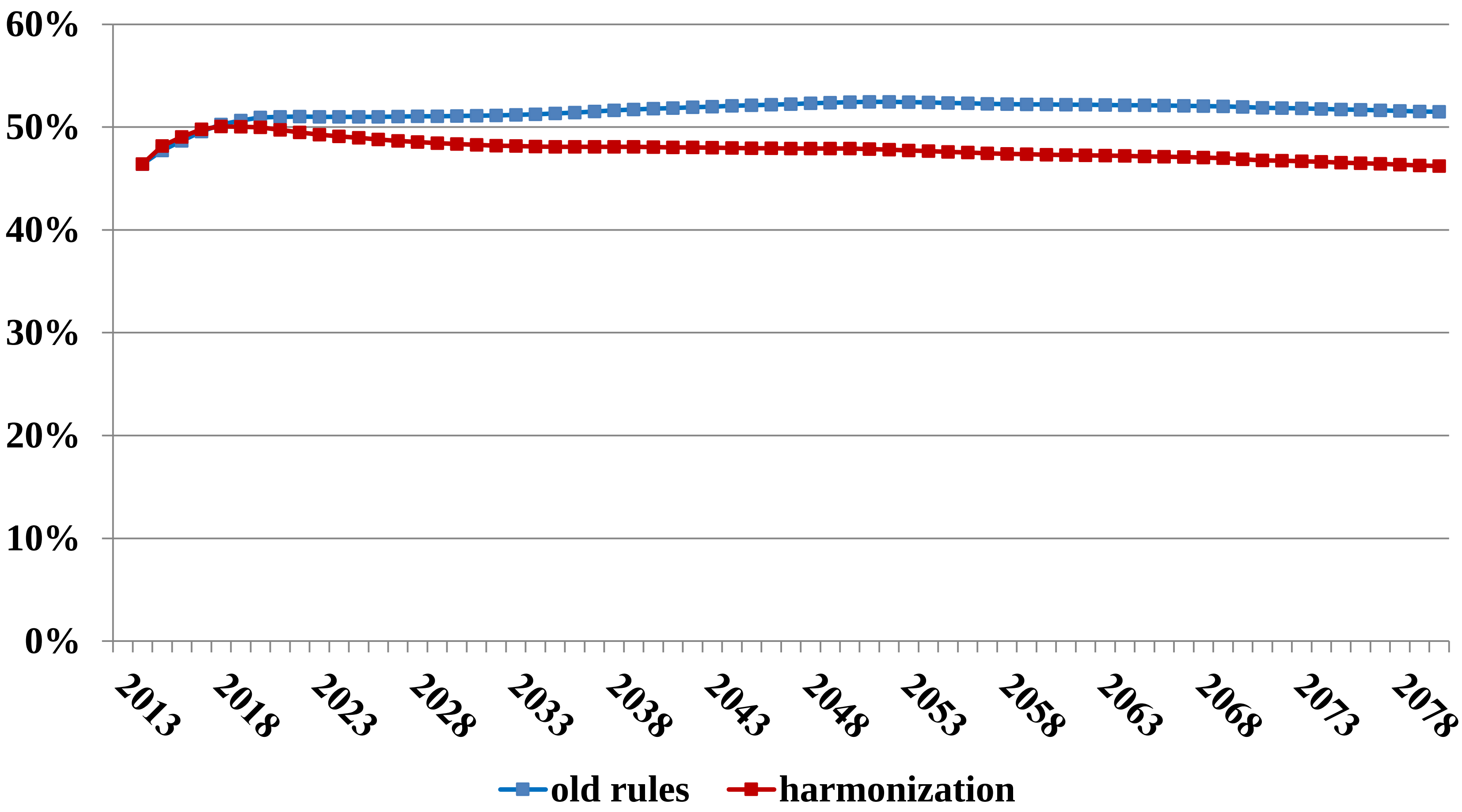
- Coverage: no expansion
- Interest rate on PF investments=inflation rate

Projection results

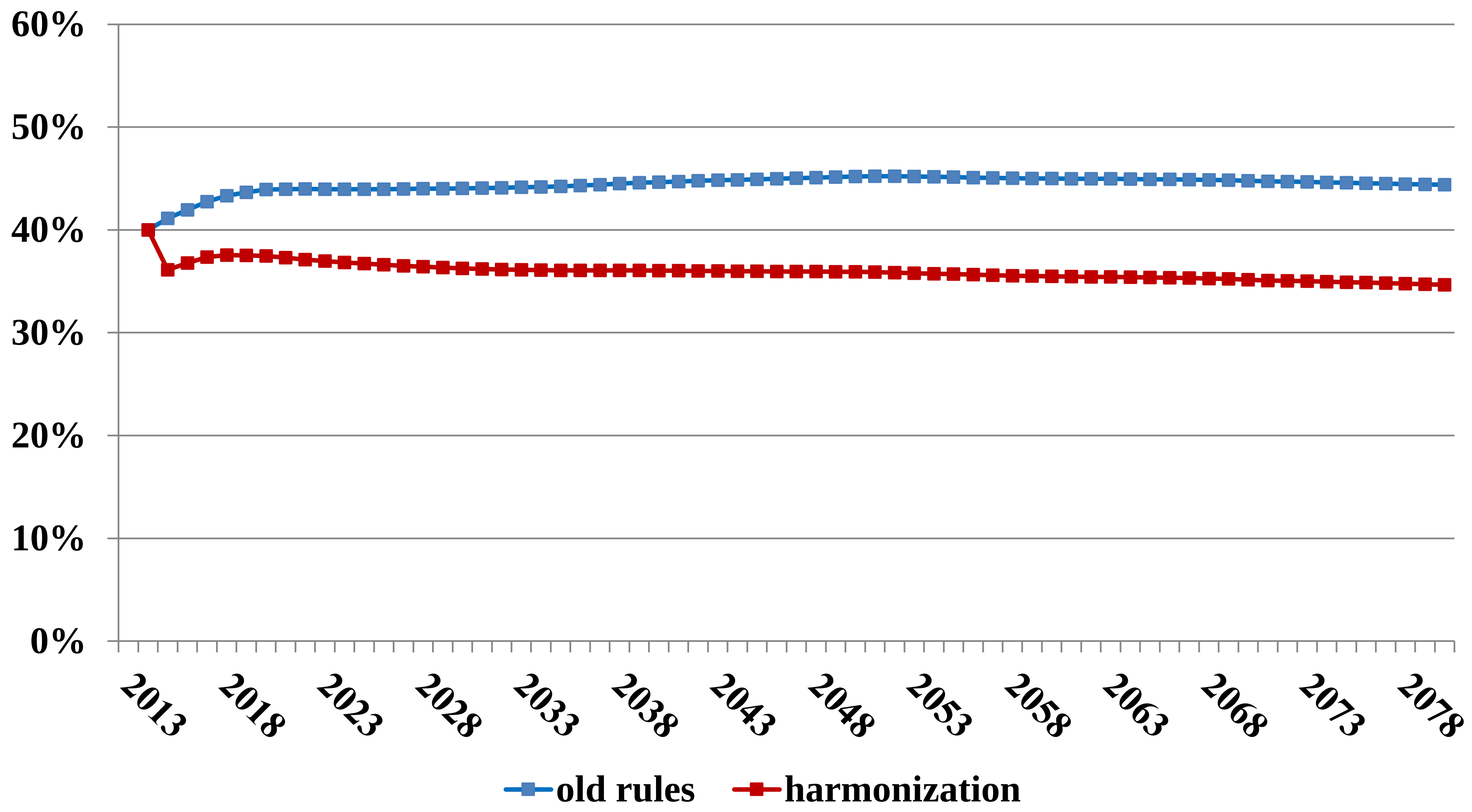
System dependency rate



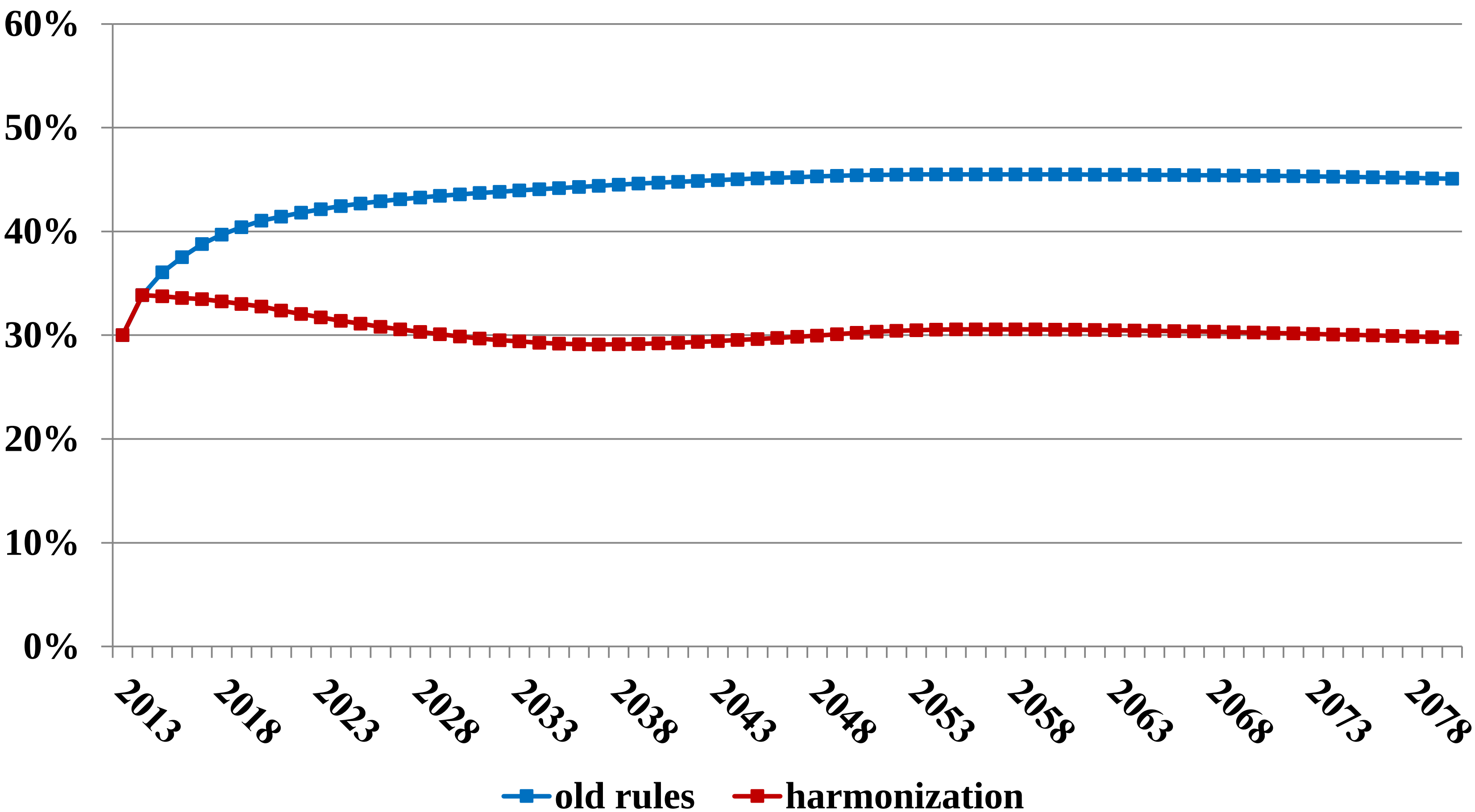
Average pension of new old age pensioners (before commutation, % of contributors average wage)



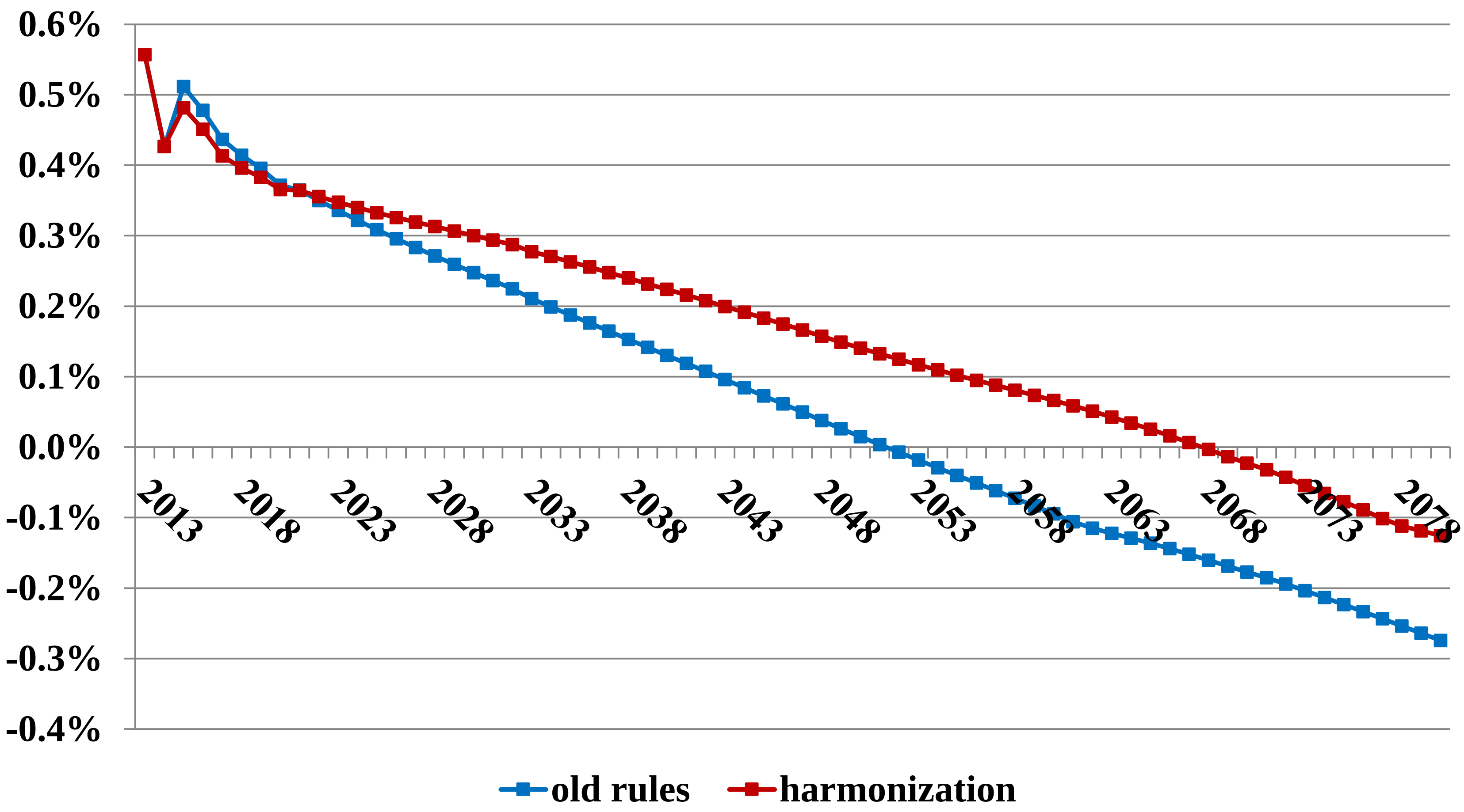
Average pension of new old age pensioners (after commutation, % of contributors average wage)



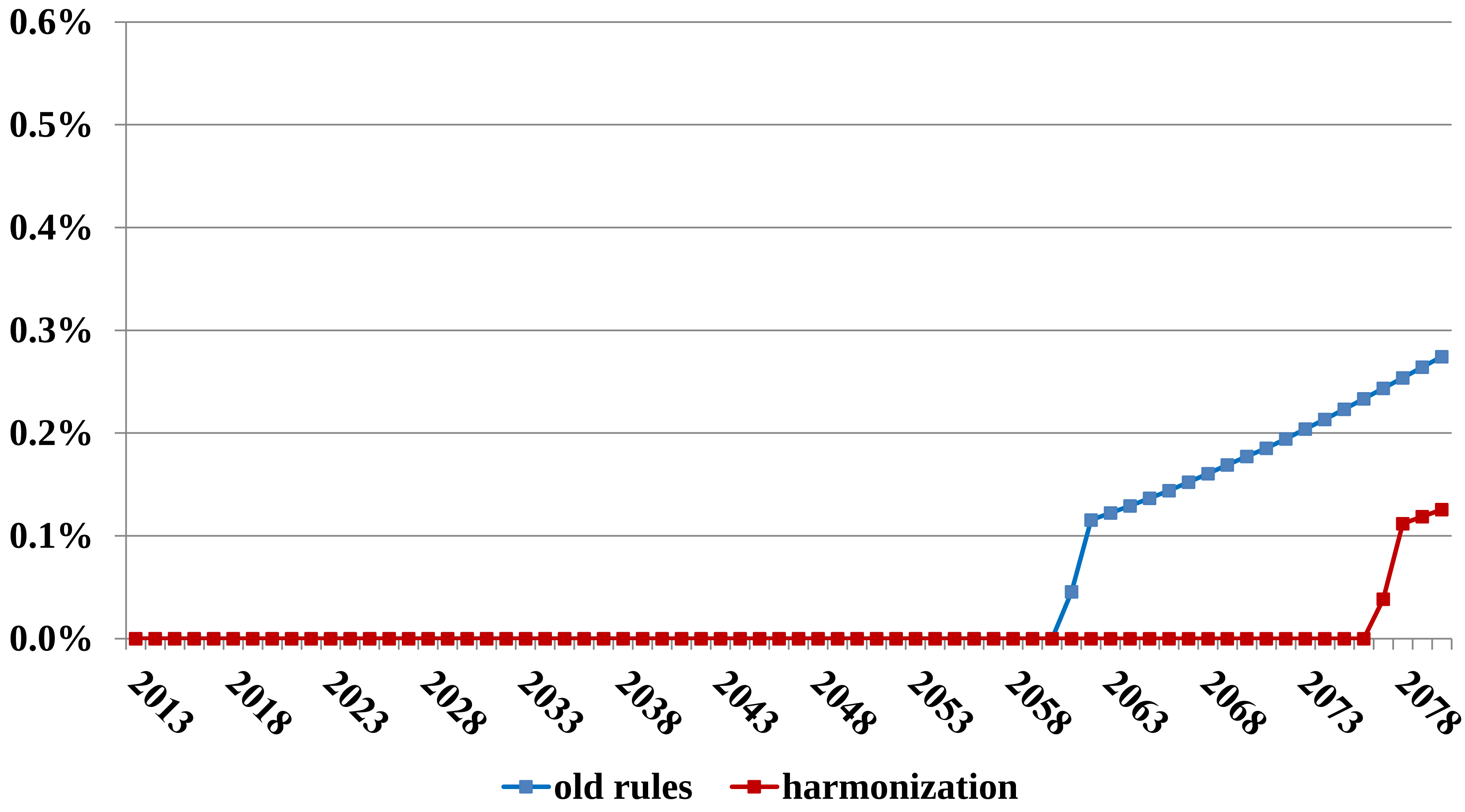
Average pension of all existing old age pensioners (% of contributors average wage)



Annual current balance, % of GDP



Government annual obligations to finance deficits (% of GDP)



Summary of projection results

- System dependency rate grows fast from current <2% to 17% as DB system matures and longevity increases
- Early withdrawals put a strain on cash flows; in the longer run fewer people are eligible for regular pension
- Benefits at retirement: full benefits around 50%, slightly lower after Harmonization; regular pensions (after commutation) decrease after Harmonization to <40% due to commutation
- Post-retirement pensions most affected by Harmonization due to less generous indexation: go down from 45% to 30%, would be higher if commutation were not allowed
- Overall, benefit levels on average are quite adequate

Summary of projection results (cont.)

- Harmonization results in cost savings, mostly due to changes in pension indexation policy
- Finances look healthy in the short- to medium term due to low initial system dependency rate and high contribution rate
- However, in the longer run, as the system dependency rate grows, annual current balance turns negative: in around 2052 under the old rules, 2068 after Harmonization
- Assets projected to deplete in around 2061 and 2077 respectively
- Overall, over the projection period the system is insolvent under the old rules, may become solvent after Harmonization if the future interest rate on PF investments is at least >1 p.p. above inflation

Some remaining issues

- Relatively high contribution rate (20%) may have negative effect on labor markets and broader economy, encourage evasion and under-reporting of wages
- Very high administrative costs largely due to competition among funds; funds merger is being considered which may help reduce them but other measures may be needed
- Early withdrawals remain a big issue in NSSF; so far has proven to be difficult to resolve
- In the longer run, there is an imbalance between the contribution rate benefit levels and retirement age
- More broadly, fragmentation and very low coverage are major issue