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Financial Crisis and Public Finances in Finland – a Generational Accounting Perspective

Risto Vaittinen - Reijo Vanne

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Contents

Institutions, methodology and parameters

Special features

Results, GA history and reforms

General government and programs

- Pension funds
 - Employment pension schemes: benefits, employers' and employees' contributions
- Central government, local government, other social security funds
 - Collective (non-age related) and individual public consumption
 - Cash transfers: family policy, health insurance, unemployment insurance, national pension and other age related or non-age related
 - Taxes: income, capital, indirect, corporate, employers' and insured people's contributions to social security funds (other than employment pension funds)

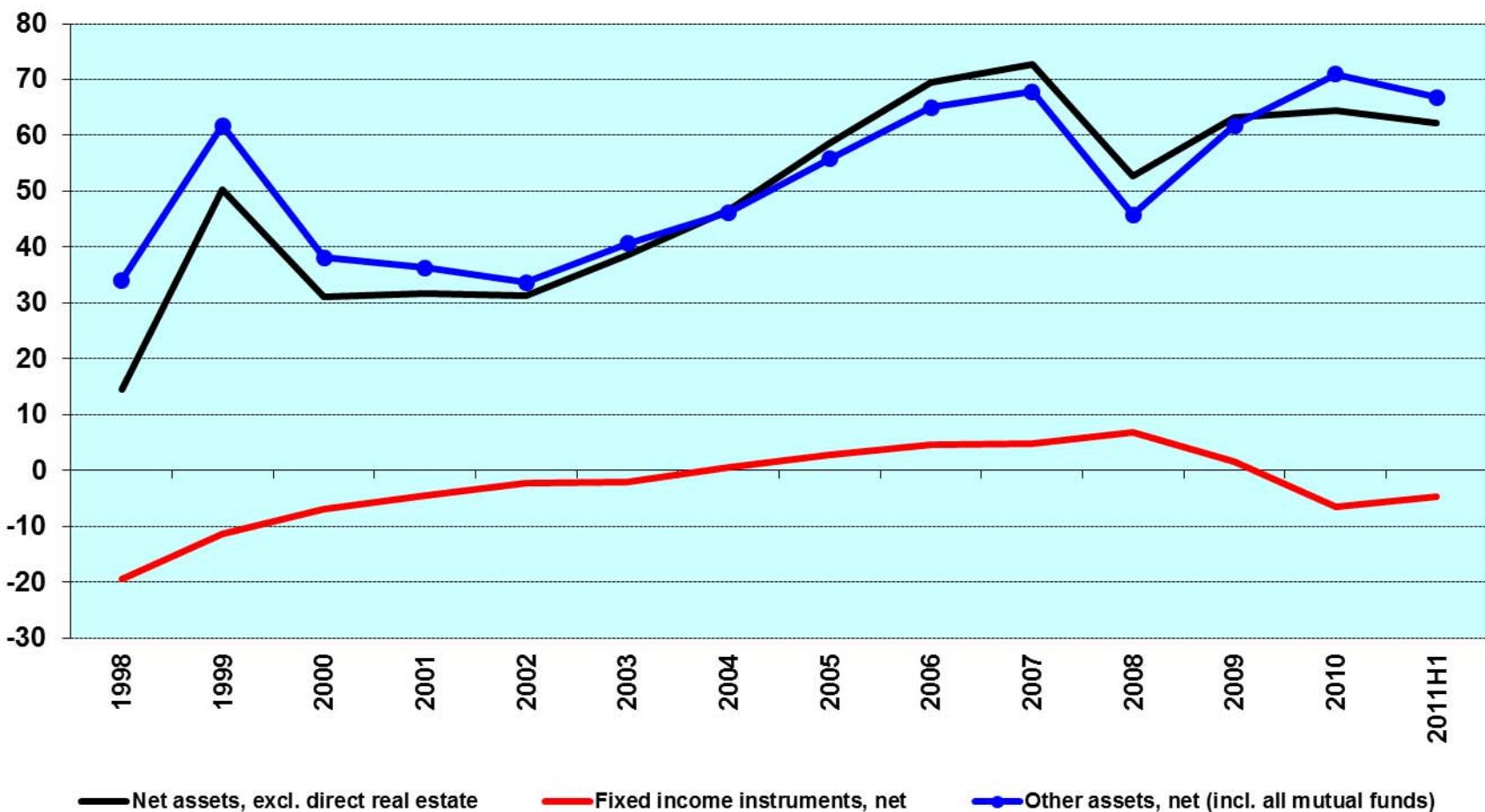
Notes on methodology and parameter values 1/2

- Base-year 2010
 - Macro controls 2010
 - Unadjusted age-profiles from 2006 – 2010
 - Collective public consumption and non-age related cash transfers constant per capita, i.e. aggregate is adjusted by real growth and size of population
- Population projection of Statistics Finland 2009
 - "The first population projection in the world history where life-expectancy increase seems to be exaggerated"
- Population projection continued until 2100
 - Net present values of tax and expenditure aggregates by 1-year age-groups for years 2101–2125 as terms of geometric series
 - Per capita GA's for 5 first unborn generations (born 2011-2015) calculated and for those born 2016-2100 as terms of geometric series; cohort GA's are naturally cohort size at age 0 * per capita GA
 - For those born after 2100 sum of the cohort GA's is calculated as a sum of infinite geometric series

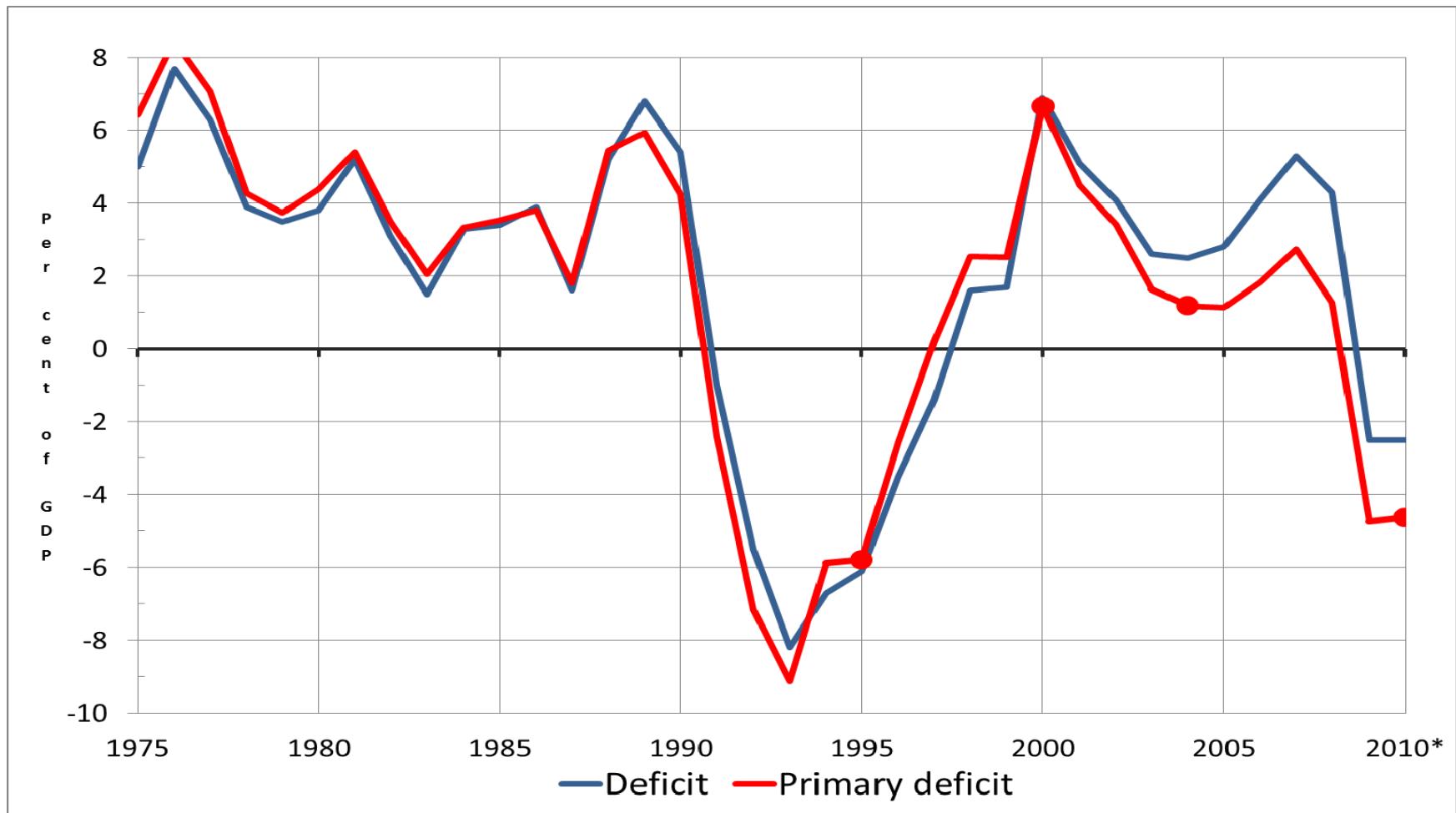
Notes on methodology and parameter values 2/2

- Net public financial wealth is positive (i.e, net debt negative)
 - Assets of pension funds the main component
 - Primary deficit 2010 much higher than net lending (i.e. borrowing) due to public net asset income
- Net portfolio is approximately equal to the value of stocks and other riskier assets (Figure 6)
 - An argument in favor of a "high" real discount rate (here 5 %/year)
- Baseline annual real growth rate (per worker) has varied between 1.5% and 1.75% at different points of time (here 1.6%)
- Keep in mind the phase of business or political cycle in terms of public deficit (Figure 7)

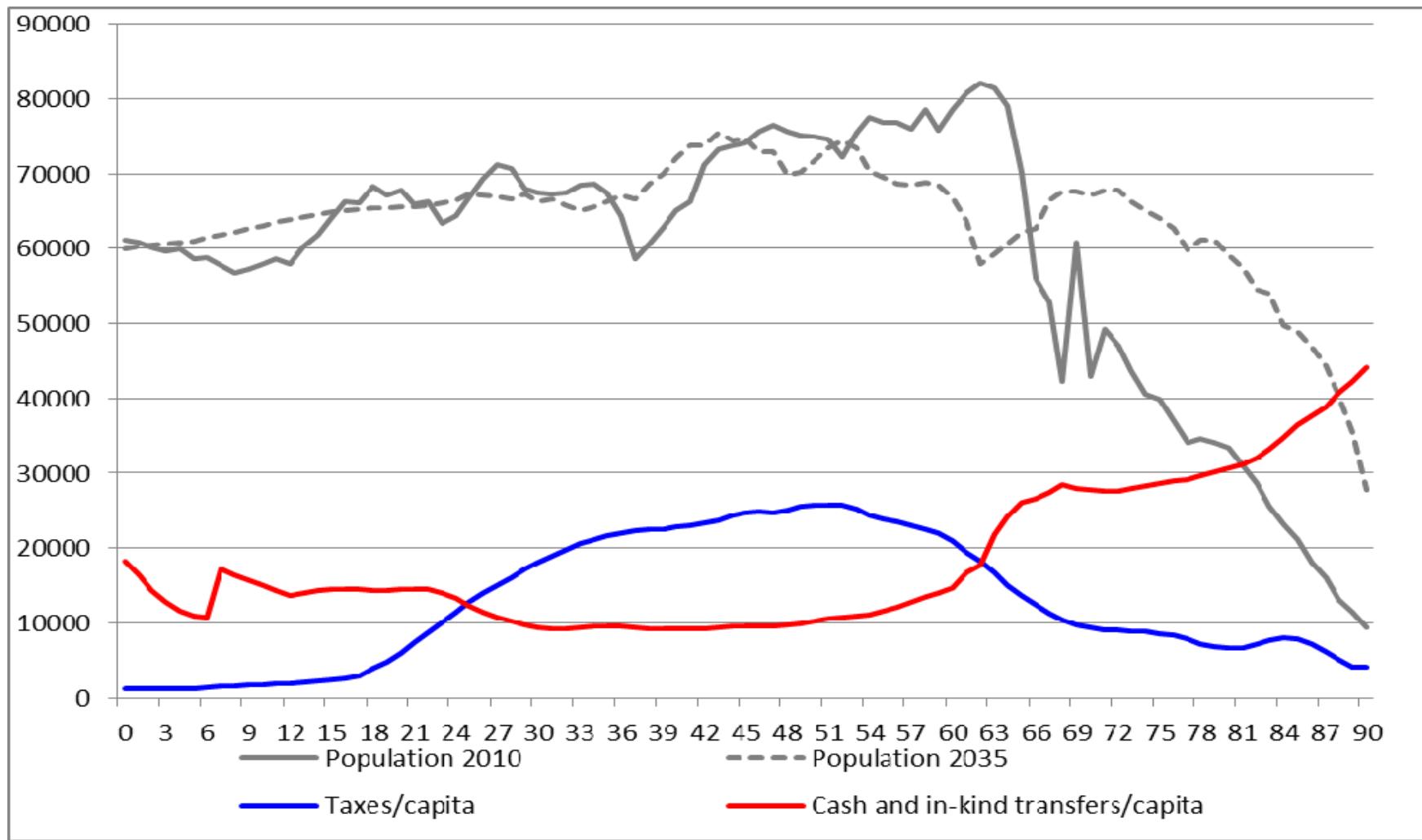
Allocation of net financial assets of the general government in Finland 1998–2011H1, % of GDP



Public deficit and primary deficit in Finland 1975–2010, % of GDP



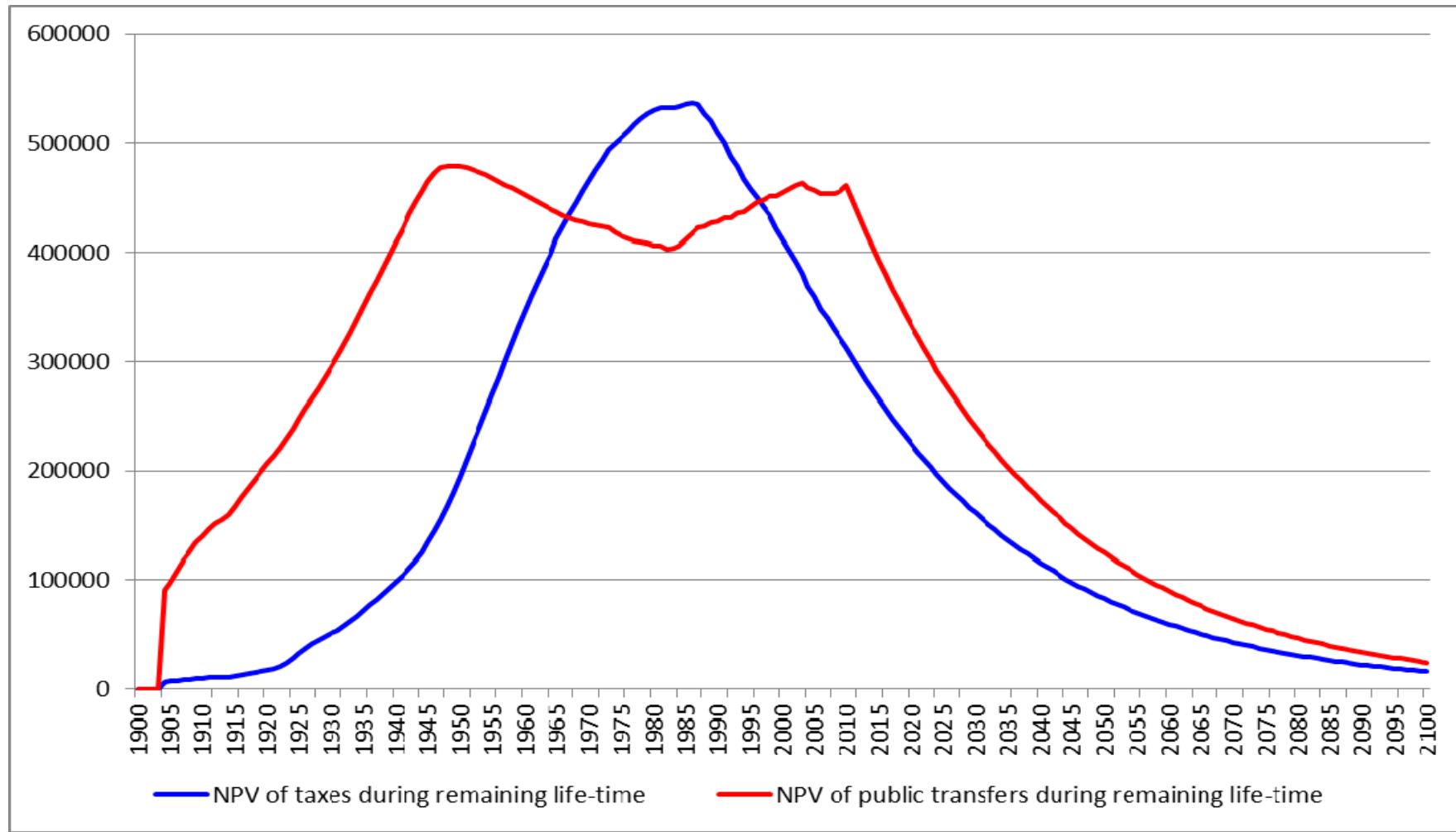
Taxes and public transfers and services by age 2010 (euros), population by age 2010 and 2035



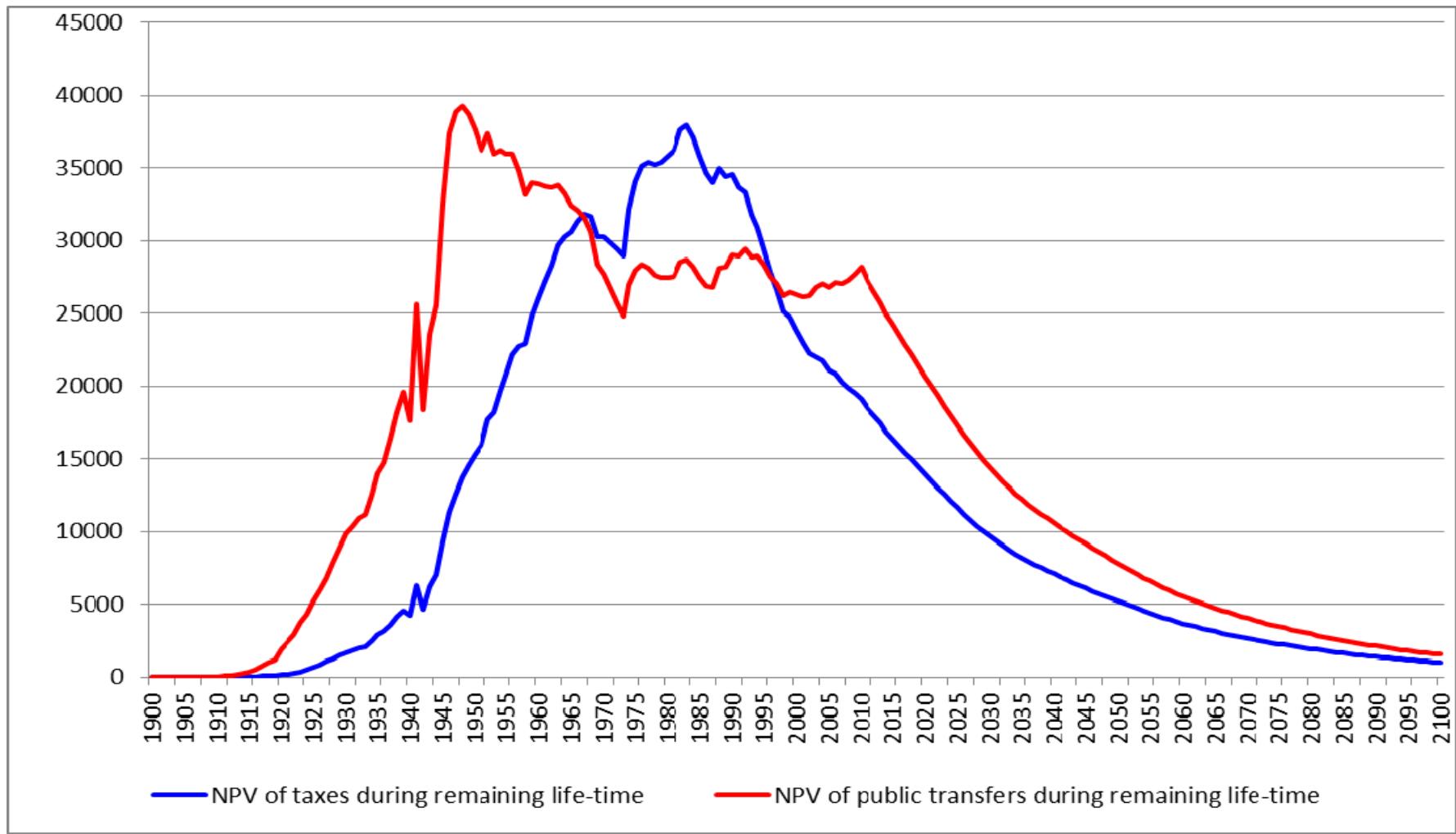
Source: Statistics Finland, Social Security Institution, Finnish Centre for Pensions, Riihelä - Vaittinen - Vanne 2011

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GA/capita by birth year in 2010, GA = NPV of taxes - NPV of transfers, EUR



GA/generation by birth year in 2010, GA = NPV of taxes - NPV of transfers, m EUR



Public intertemporal net liability and its components at different points of time in Finland, % of GDP

	2010*	2004	2000	1995
Net liability	348	121	- 90	253
Population aging	277	217	159	114
Net financial wealth	-65	- 47	- 59	- 8
Business cycle and economic policy	136	- 49	- 191	147
Balancing tax rate adjustment, percentages	10.9	4.7	- 3.2	8.8
Actual tax rate	42.1	43.6	47.2	45.7

* Without pension reform transitions

Sources: Feist et al 1999, Vanne 2002, Vaittinen - Vanne 2006 and 2011

Why

- **...ageing effect is increasing**
 - Baby-boomers approach and have just entered the phase of negative net taxes and "power of discounting" becomes weaker
 - Assumed life-expectancies have increased projection by projection
- **...the balanced tax rate (actual + adjustment needed) seems to vary**
 - Actual expenditure level variations are not reported and they may cause variation
 - The futures differ depending on the point of time (cf. above mentioned)

Two reforms

- Already in force
 - Pension reform 2005 including, among other things, adjustment of benefits according to life-expectancy, and a decision in 2009 to raise pension contribution rates by approx. 2 percentages during 2011-2014
 - Intertemporal net liability is decreased 181 percentages of GDP and the sustainability gap will be 7.7 percentages of GDP instead of 10.9 percentages
- Maybe...
 - "Harmonizing" of relative public debt levels in euro area, operationalized here by assuming true public net wealth to be zero, i.e. increase of public gross debt by 65 percentages of GDP (from 90 bn to 200 bn euros)
 - Intertemporal net liability will be increased by 64 percentages of GDP and the sustainability gap will be 13 percentages of GDP instead of 10.9 percentages
 - Assuming a 5 per cent real discount rate may still be realistic