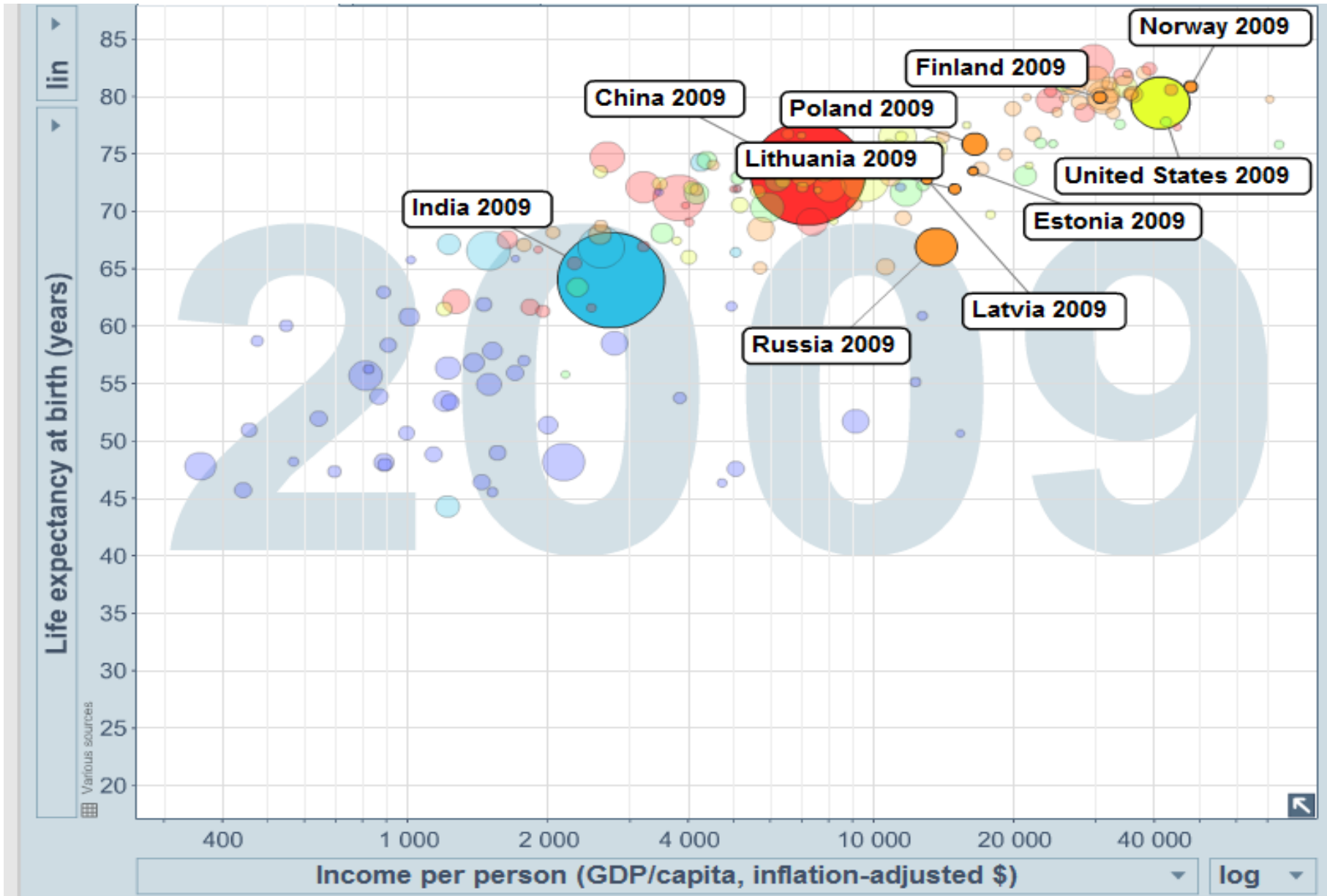




SWEDISH PENSIONS AGENCY

Presentation at the Baltic Sea Conference
8 September 2010
Ole Settergren, Director R & D



Basics B. Swedish institution ... pension plan

The Swedish public pay-as-you-go pension plan works like a savings plan, with compulsory annuities – *notional defined contribution* plan (NDC)
- 16 % of earnings is paid to NDC

There is also a fully funded part of the public pension plan – the premium pension
- 2.5 % of earnings is paid to the premium pension

The Swedish public PAYGO pension plan has 5 basic features:

Pension credit = contribution

Indexation of account values and benefits by growth (change) in average income

(benefits with a reduction = the imputed interest rate 1.6 percentage units)

Cohort specific annuity divisors calculated annually with fresh mortality experience

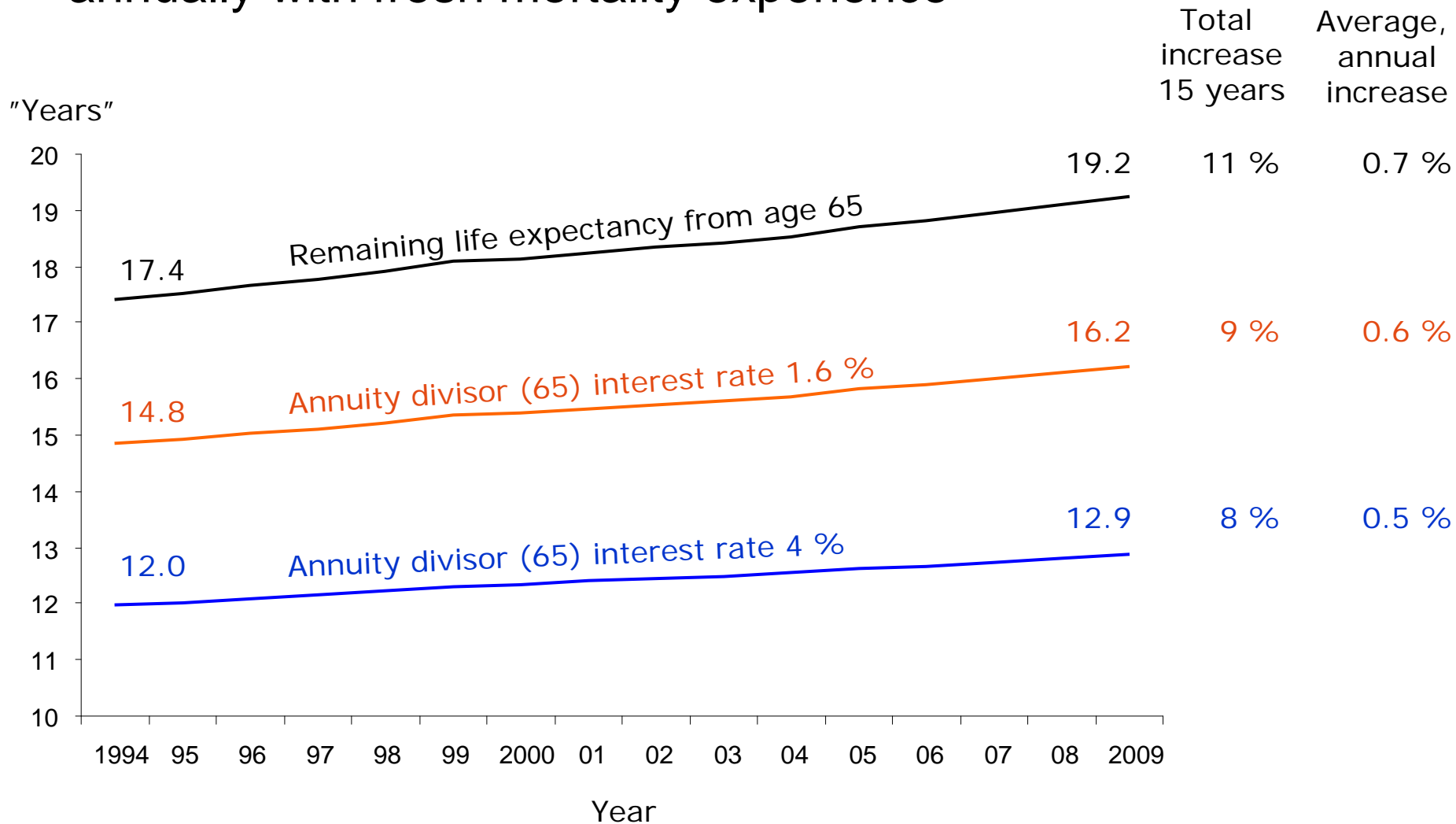
Existence of a (large) buffer fund

Also sources for positive or negative financial imbalances

dealt with by

The balance mechanism

Benefits are calculated with “annuity divisors” calculated annually with fresh mortality experience



Roughly 50 % of the financial stability of the system comes from the annuity divisors

Public pensions, in relation to income, will be lower for younger persons if they do not delay retirement. As they will live longer the higher required retirement age for an stable benefit level can be considered necessary for inter-generational fairness...

Birth cohort	...turns 65	Life-expectancy at 65	Effect on pension from increased life-span (from divisors)	Pension age to neutralize life-span effect on pension	Time expected as retiree with "the higher pension age"
1930	1995	82 years, 5 m.	—	65 years	17 years 6 months.
1940	2005	83 y. 7 m.	-5 %	65 y. 9 m.	17 y. 10 m.
1950	2015	84 y. 10 m.	-10 %	66 y. 7 m.	18 y. 3 m.
1960	2025	85 y. 7 m.	-13 %	67 y. 2 m.	18 y. 5 m.
1965	2040	85 y. 11 m.	-15 %	67 y. 5 m.	18 y. 6 m.
1970	2035	86 y. 3 m.	-16 %	67 y. 7 m.	18 y. 8 m.
1980	2045	86 y. 10 m.	-18 %	68 y.	18 y. 10 m.

Impact on pension liability from increases in life expectancy

- Without adjustments ap. 1- 2 percent of GDP per year!

Adjustments can take one or all of the following forms:

- a) Ad hoc Increased contribution rate or government subsidy (very common in many countries for many years)
- b) Ad hoc increased formal retirement age e.g. (USA, Germany, UK, France (?) and more countries)
- c) Ad hoc reduced benefits (through "parametric" adjustments)
- d) Automatic increased formal retirement age (Denmark ?)
- e) Automatic adjustments initial benefits (Sweden, Polen, Latvia, Finland, Norway, Italy)

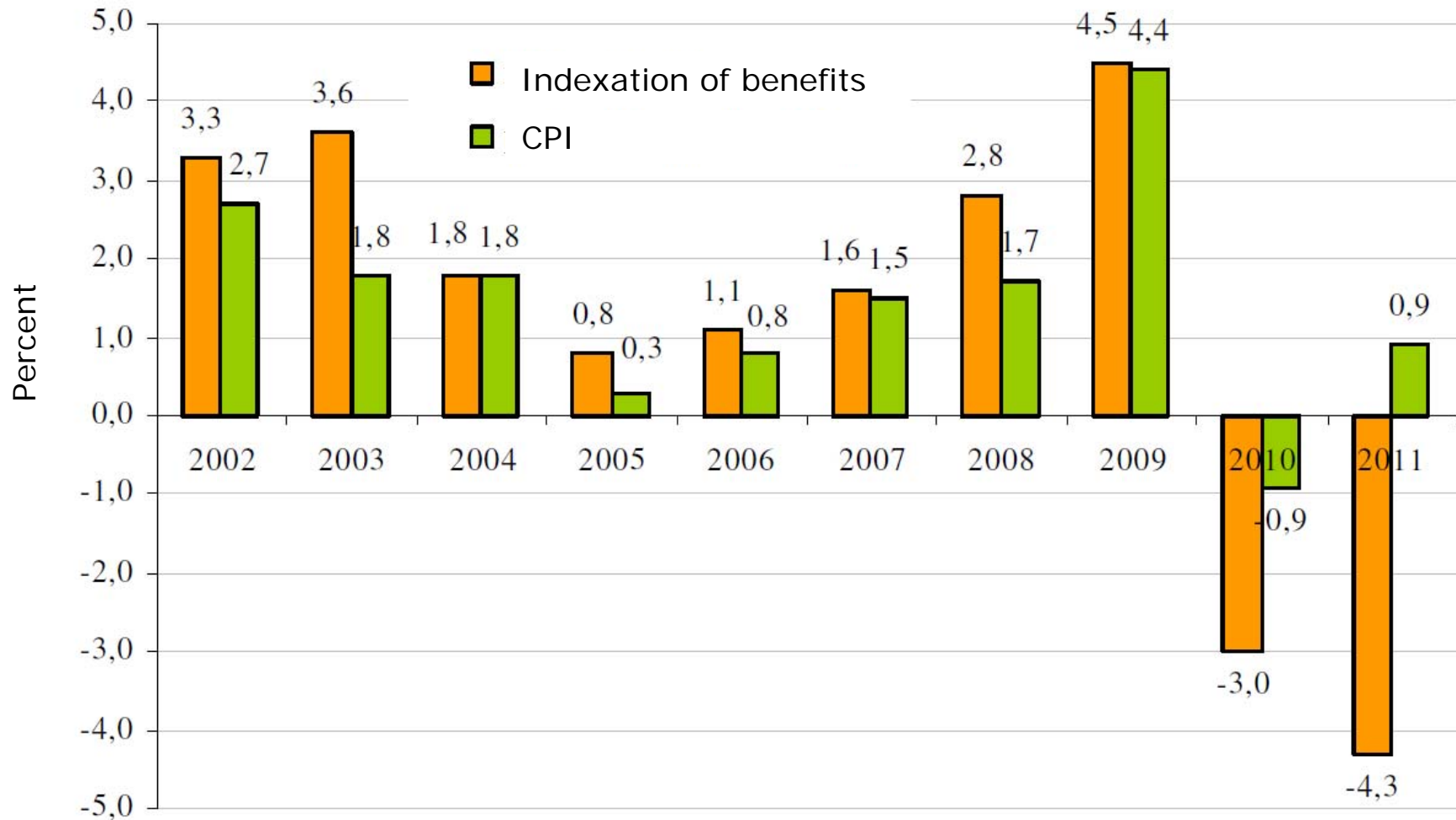
Some effects of the 2008 financial crises and the 2009 economic crises on the NDC plan?

- In 2008 the buffer fund lost 21 percent of its value, almost 7 percent of GDB
- In 2009 Swedish GDP fell by 5.2 percent
- In 2009 the contributions to the NDC pensionsystem fell by 0.2 percent

The balance sheet of the NDC system, in % of GDP

	2005	2006	2007	2008	2009
Buffer bund	27.8	29.1	28.7	22.0	26.6
Contribution asets	206.6	201.9	195.6	201.5	204.7
Total assets	234.4	231.1	224.4	223.5	231.3
Pension liability	233.4	227.7	223.8	231.1	241.7
Assets – pension liability	1.0	3.4	0.6	-7.6	-10.4

Indexation of NDC benefits compared with CPI, 2002-2011



Is the indexation too volatile?

Government ordered (2010) The Swedish Pensions Agency to analyse the rules for calculating the balance sheet. The Agency proposed:

- a) A small technical change that would have reduced volatility somewhat
- b) That Government should have the technical design of the indexation further investigated. The reason for this proposal is that the lag structure in the indexation will cause financial strain (triggering the balance mechanism) in the case of negative shifts in nominal or real growth

Tentative lessons learnt from the crises

- a) a financially stable pension system requires that benefits in adverse times be reduced
- b) the broad political agreement on pensions has been paramount for, in principle, sticking to the system rules that have cut benefits significantly two consecutive years
- c) the existence and design of the guarantee, protecting those retirees with the lowest benefits, has been important for accepting the reduction of *NDC-pensions*
- d) tax reductions has been used to reduce the burden for retirees
- e) a technical lesson - shifts in real or nominal income growth has in it self a surprisingly large impact on the financial status of a pay-as-you-go pension system if there is a lag in indexation