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The Swedish NDC system - A critical assessment

*Report to the conference session B. Longevity and annuitization, risk-sharing
in pension design*

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Problems

- A normal pensionable age that had been unchanged for decades, in spite of a raising life expectancy
- The “baby boom” generation approaches retirement
- Too generous a benefit formula, requiring only 30 years for a full pension, the amount of which was based on average earnings during the 15 best years
- Many of these problems originated from the fact that the system was designed at a time when the expectations about economic growth were much more optimistic than today

A much observed reform

- A completely changed PAYG scheme, becoming the NDC model;
 - Life-time earnings as the basis for the level of retirement pension;
 - Abolishing the “normal pension age”;
 - Taking increasing life expectancy into account in the calculation of pensions.
- The introduction of a funded pension component alongside the PAYG part;
- A successive phasing out of the minimum pension in the face of economic growth.
- A broad political consensus

The New System

- Earnings related part with two subsystems
 - PAYG, Notional Defined Contributions, 16%
 - Premium reserve, fully funded, 2,5%
- A guarantee for those who have no or only a small pension
- Various supplements, especially for housing

The minimum pension

Minimum pension

(reduced against public earnings related pension only)

- Can be awarded from age 65
- Indexed to the cost of living
- OECD: “As noted in the section on methodology, some countries, such as Sweden and the United Kingdom, in theory propose to index key parameters, such as the value of retirement safety nets, to *prices*. As previously noted, if implemented over a 40- to 50-year period, this would result in unrealistically low living standards for poorer pensioners which would not be politically sustainable. Therefore, pension-systems parameters are assumed to increase over time in line with *average earnings*.”

The Aim for a new earnings related Public Pension

The public pension system shall give a pension **at approximately the same replacement rate** (old age pension as percentage of final salary) as in today's system, i.e. somewhere between 55% and 65%, for a person who works to “a normal extent”, provided there is a 2 % real growth in the national economy, and provided **the same life expectancy** as when the reform principles were formulated

Contributions are 18, 5 % of covered earnings, unchanged indefinitely

- Contributions based on all earnings over an individual's full working career, subject to a
- ceiling, that is around $1.2 * \text{average earnings}$, indexed to average earnings
- 11% is paid by the employer, 7,5% by the employee
- Certain periods (*social security benefits, child care, military service, higher education*) give pension rights for which the individual and the state pay the contributions
- The contributions are split between PAYG-scheme (16%) and fully funded scheme (2,5%)
- Pensions can be drawn from age 61

The fully funded Premium Reserve part

The fully funded part; contributions

- contributions 2.5 per cent

The fully funded part; administration

- a State Insurance Authority is fully responsible for all functions in the scheme, with the exception of the investment funds;
 - All contacts with the funds on behalf of insured
 - Concludes agreements on fees, dissemination of information etc.
- contributions are accumulated in one or several funds which the individual chooses;
- there are both private and State funds, today more than 700 funds!

The fully funded part; pensions

- the amount in the funds increases by the investment yield on the savings which are deposited;
- the pension is determined by conventional private insurance principles.

Why a premium reserve subsystem?

- Many arguments
- Spread the risks between the capital market and the sum of wages
- Political compromise

Problems

- Too many funds
 - Causes confusion
 - High costs in spite of special arrangements
- Uncertainty
 - What about return on investment?
 - Room for manipulation with forecasts for amount of pension
- No minimum guarantee on investment yield

The PAYG, Notional Defined Contribution (NDC) part

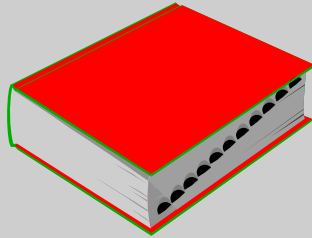
The PAYG, Notional Defined contribution part : Contributions and pension rights

- Contributions, 16 % *unchanged indefinitely*;
- it is the contributions paid to the system on behalf of each individual that constitutes the pension rights

The PAYG, Notional Defined contribution part: Pension calculation

- pension rights are indexed according to average wages and accumulated during the entire career;
- the pension amount is dependent upon a cohort's average life expectancy, on the individual age of retirement and on a “norm”;
- pension benefits are indexed in relation to growth in average wages minus 1.6 per cent;

The NDC pension is dependent on life expectancy and a "norm"



notional account



- Life expectancy at the time for retirement

Adjusted for the norm = Amount of old age pension

Basic ideas behind the calculation

- Reduce pension drawn at a certain date, for later cohorts when life expectancy increases
- with the aim to maintain financial balance
- Use the "norm" in order to
 - Increase first years pension
 - By reducing the yearly revaluationas compared with a straight wage indexation

The yearly revaluation is wage increases- 1,6%

	Growth = norm	High growth	Low growth
	%	%	%
Average rate of nominal wage increase	4.7	5.4	3.7
Rate of price inflation	3.1	3.1	3.1
Average rate of real wage increase	1.6	2.3	0.6
Deviation from the norm 1.6%	0	0.7	-1
Pension adjustment = economic adjustment index	3.1	3.8	2.1

Pension as compared to wage for people who remain in employment

	pension		earnings of people remaining in work		replacement rate	
	Average wage increase:		Average wage increase:		Average wage increase:	
	1%	2%	1%	2%	1%	2%
at the year of retirement	100	100	200	200	50	50
10 years later	94	104	221	244	43	43
20 years later	89	108	244	297	37	37

The PAYG, Notional Defined contribution part :Financial stability

- there is a buffer fund to counter variations in the flow of contributions as compared to the flow of pensions;
- at the outset, a huge fund was available
- there is an automatic balancing mechanism that sees to it that the financial stability is always maintained.

THE RESULT

Pensions from the funded part and the
PAYG part combined

THE RESULT (1): Replacement rates

Case:	2005	2050
2/3 of average earnings during 40 years	62.5%	40.4%
Broken career (30 years of seniority at retirement at average earnings)	49.6%	30.3%
“ <u>Model case</u> ”: Constant earnings for 40 years as an average production worker	53.0%	40.4%

THE RESULT (2): Work more and up to a higher age

- Longevity effect
- Further reductions

THE RESULT (3): Effect of life expectancy and age of retirement

Cohort born in	reaches 65 in	Forecast divisor at 65	Effect on pension at 65	Retirement age to neutralize effect on pension	Remaining life as a pensioner
1940	2005	15,7	–	65 years	18 years, 6 months
1950	2015	16,4	–4 %	+ 8 months	+4 month
1960	2025	17,0	–8 %	+14 months	+7 months
1970	2035	17,5	–10 %	+19 months	+10 months
1980	2045	17,9	–12 %	+24 months	+12 months
1990	2055	18,1	–14 %	+24 months	+16 months

THE RESULT (4): Further reductions

- Average pensions decrease gradually when the old system is phased out and the new one is phased in
- Work "to a normal extent" has become "work at a stable wage for 42 years" already at the outset of the new system
- You may very well end up at 69 years. Or even 71!

Replacement rates: A summary

- The replacement rates are reduced significantly over the time period studied.
- The outcome falls short of expectations and is lower than should have followed from the objectives, formulated in 1994.

The Automatic Balancing Mechanism and the Buffer Fund

The financial balance of the PAYG scheme

- The reductions mentioned above help to balance the finances
- The buffer fund helps to ease the strain following from retirement of the baby boom generation
- The automatic balancing mechanism takes care of any remaining strain

The Balance number

- New calculation methods for assets and liabilities
- If assets exceeds liabilities the Balance Number is above one
- If the Balance Number is below one; pension rights and pensions in payment are reduced

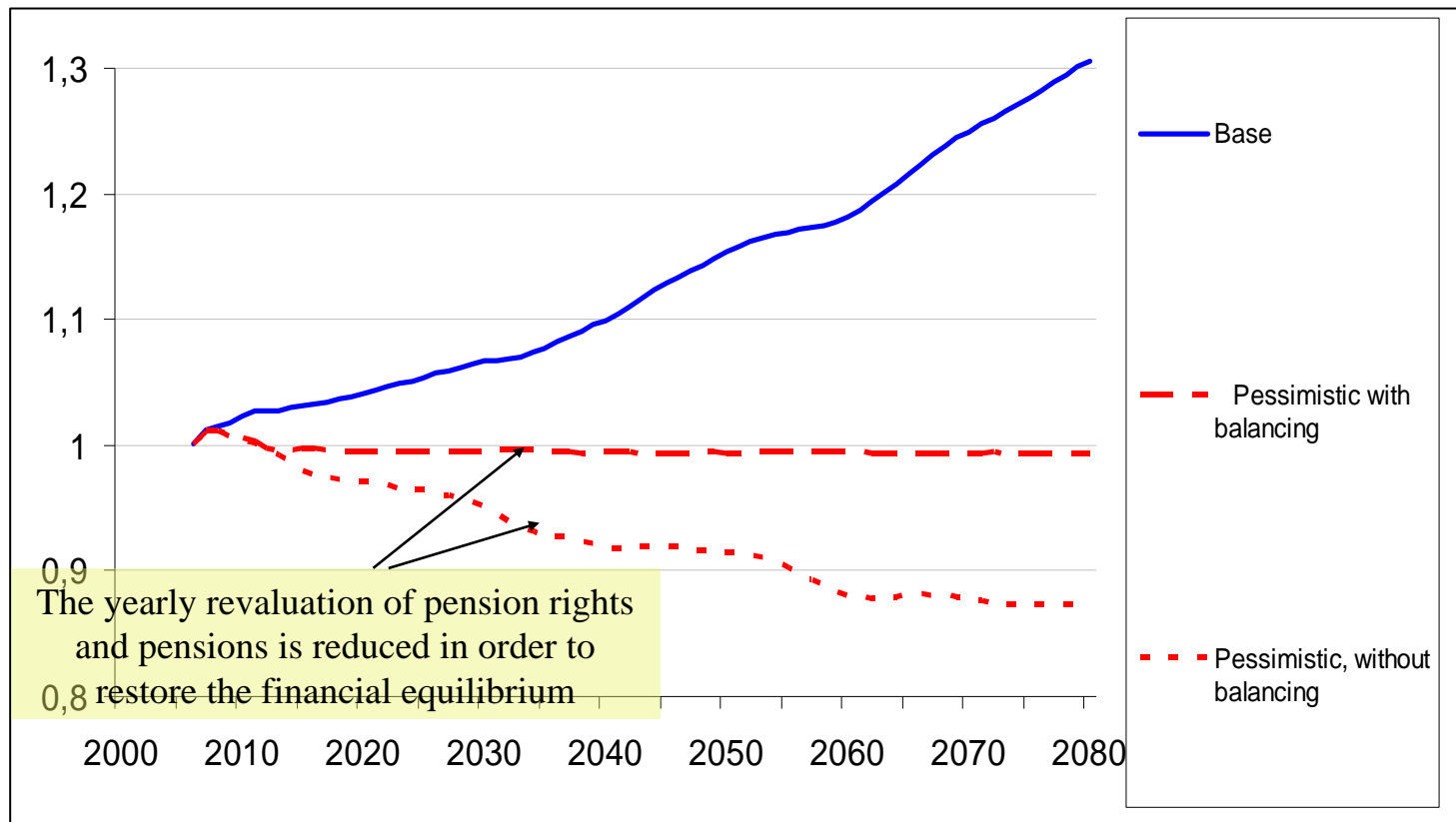
The true nature of the Balancing Mechanism

- **Automation of the first order**
 - defined once and for all in current law;
 - Longevity effect;
 - Buffer fund;
 - Other formulas making pensions dependant on demography and economy (German Nachhaltigkeitsfactor)
 - NDC, making contributions the basis for pension rights
 - All these factors operate on the benefit side alone.
- **Automation of the second order**
 - The Automatic Balancing Mechanism, that operates directly on the financial balance itself

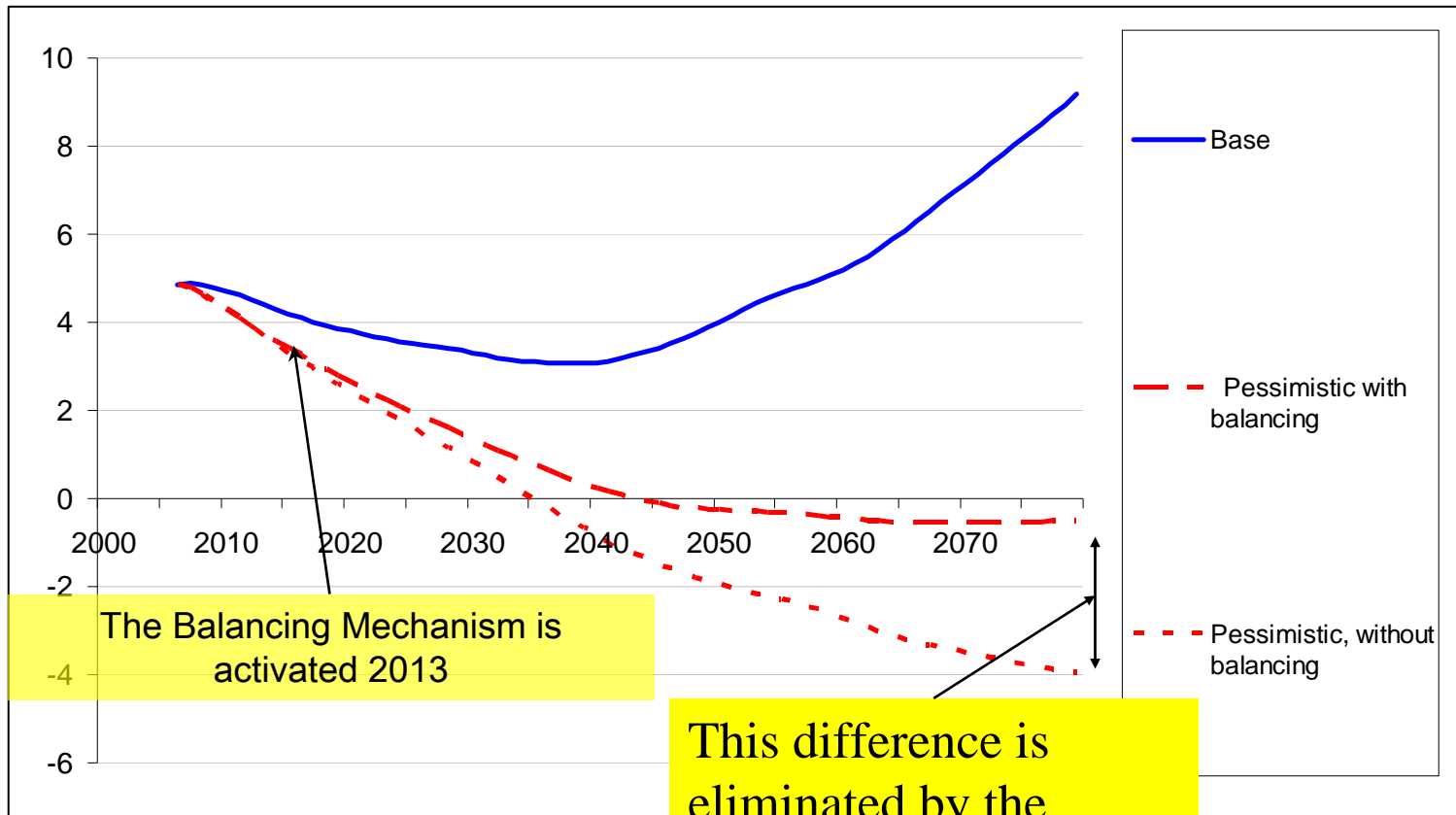
The development of the balance number 2002-2006

	2002	2003	2004	2005	2006
Buffer Fund	488	577	646	769	858
Contribution asset	5 301	5465	5607	5721	5945
Total assets	5 789	6042	6253	6490	6803
Pension liability	5 729	5984	6244	6461	6703
Surplus	60	58	9	28	100
Balance number	1,0105	1,0097	1,0014	1,0044	1,0149

The balance number in two scenarios



The buffer fund in two scenarios

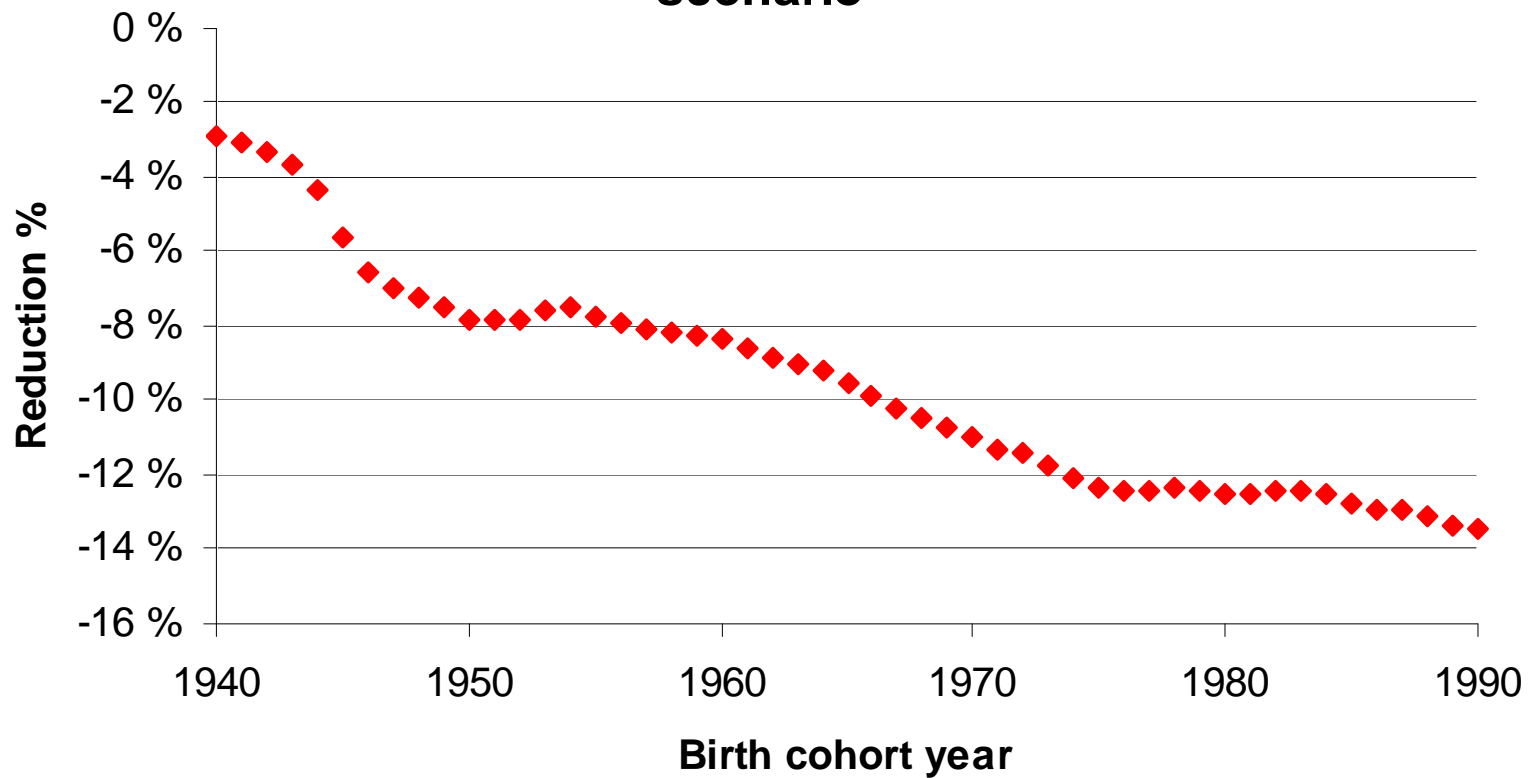


This difference is eliminated by the balancing mechanism

The risk for the balancing mechanism to be activated seems small, but (1):

- *Basic scenario is optimistic*
 - Current record level of equity values assumed to become the average level
 - Growth in average real wages is assumed to 1,8% p.a.
 - Real return on investment is assumed to 3.25% p.a.
 - Much higher immigration than before.
 - Fertility, 1.85 is high compared to recent decades.
 - Assumed increase in life expectancy stops around 2050

Reduction of PAYG pension as a result of the automatic balancing mechanism in the pessimistic scenario



The risk for the balancing mechanism to be activated seems small, but (2):

- Over the coming decades special factors operate
 - Pensions in the new system are lower than in the old one, far more than follows from the longevity effect
 - At the outset there is a huge fund
 - There is in fact a successive increase in contributions, following the phasing in of the funded part
- When these special factors do not operate any more a new wave of demographic shocks will fall on pensions, causing pensions to fall dramatically, much more than would be the effect of the pessimistic alternative over coming decades, just described

A sustainable system?

Core questions

- Financial stability and adequate pensions?
- Coherent old age policy and social justice?
- A proper balance between retirement ages and employment opportunities?
- Has the reform been carried out in an open and transparent manner?
- Overriding questions in all these dimensions are:
 - A fair sharing of risks?
 - Is the system possible to understand?

The earnings related pension system is financially stable, ...

...but the public finances at large are not
secured

...and the replacement rates are not
adequate

...and the need for a coherent old age
policy is not met

...so, the automatic balancing mechanism
must be rescinded

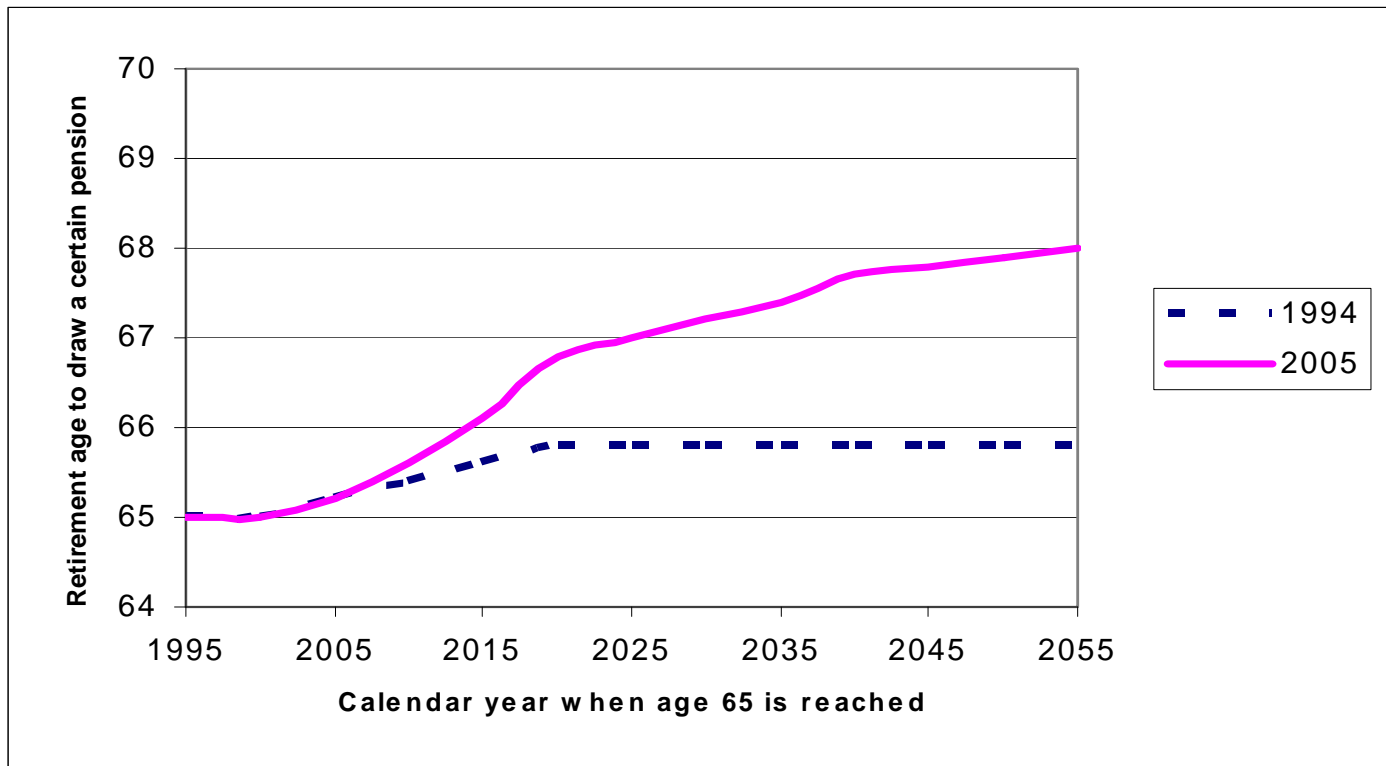
...and the contributions must be increased

...and further changes are also needed in
order to meet the need for social justice

Expand work careers and raise the retirement age

- The generational contract is all about *mutual* solidarity
- The national economy need people working
- People's behavior need to be influenced in an effective *and transparent* way
- The state becomes involved in providing jobs
- Employment opportunities must be improved

About the need for public responsibility: Development of expected pension ages since 1994



Transparency and democracy

- A "paradigm shift" has occurred, but only gradually
- Over optimistic projections were transformed into overriding principles
- All priorities but financial stability at an unchanged contribution rate were abandoned
- Hence, the automatic balancing mechanism

A complete change of focus: No-one is interested in pension levels

Average pension level at 65, according to Annual Reports	2001	2002	2003	2004	2005	2006
Cohort 1940 (1938 in the first two columns)	69	69	64	68	70	66
Cohort 1990	51	55	50	51	54	53
Difference	18	14	14	17	16	13
Of the difference is due to life expectancy	9	7	7	7	8,5	9,6
Other factors	9	7	7	10	7,5	3,4

A complete change of focus: No-one is interested in retirement ages

Retirement age according to Annual reports	2004	2005	Increase
Cohort 1940	65 years	65 years 9 months	9 months
Cohort 1985	67 years, 1 month	67 years 11 months	11 months

Summary (1)

- The request to work more and up to a higher age for a decent pension is a realistic approach
- A financially stable earnings related pension system is a valuable result
- But the new system does not offer
 - neither adequate pensions,
 - nor social justice,
 - nor transparency.
- And it has transferred to much risk onto the individual
- Therefore it must be revised and other welfare systems as well as labor market policy must come into focus
- The request for a fair balance can not be handled by formulas

Summary (2)

- That a “paradigm shift should add clarity and consistency to reform” is not backed by practical evidence. Questions arise:
 - Which are the priorities?
 - Who is responsible for what?
 - Free choice: Which are the alternatives?
 - How long am I supposed to work?
 - What is regarded as a decent pension?
- Complete indifference and/or complete ignorance has become the result

Conclusions about NDC

- The introduction of a NDC system– that is a system designed to keep the contribution rate unchanged –means that, with a continuously aging population, pension levels will fall.
- Hence, a NDC system, whatever kind it is, does not offer any way out of the hard questions on how to balance pension ages, contributions and benefits, today and in the future.
- **The reality is that retirement ages as well as contribution rates must be increased**
- *And should there be an interest in participation from the general public, the “paradigm shift” approach is unsuitable*

A puzzling diagram

problematic demography and labor market

growth	2%	0,5%	0,5%
return	2%	1,5%	0,5%

