NDC: strengths and limitations

A perspective from the Netherlands

Lans Bovenberg

Netspar

Network for Studies on Pensions, Aging and Retirement

Outline

- Labor-market incentives
  - Retirement and labor-supply incentives
- Macro-economic risks
  - Intergenerational risk sharing and fiscal sustainability
- Transparency and transaction costs
  - Compulsory collective schemes

Netspar

Labor-supply incentives

- Strengths
  - Close individual link contributions and benefits
  - More actuarially neutral retirement decision
- Neither necessary …
  - Most non-NDC countries moved into same direction
- …nor sufficient
  - Intragenerational redistribution
    - Other means-tested programs imply high marginal tax rates
  - Remaining implicit tax component in mandatory contributions
    - Myopia, means-tested benefits, and service legacy debt
      - ✓ Especially for young and low skilled

Netspar

Macro-economic risk and fiscal sustainability

- Strengths
  - Longevity risk and fiscal sustainability: complete contract
    - Transparent ex-ante risk-sharing contract: rules versus discretion
    - Prevent rising premium rates and political strive
  - Wage risks: intergenerational risk sharing
- Neither necessary….
  - Most non-NDC countries moved into same direction
- …nor sufficient
  - Other paths to early retirement
  - Other (welfare) programs to provide adequate incomes
    - Adequacy and credible sustainability: human capital utilization
      - ✓ Especially low skilled with high morbidity
      - ✓ NDC not credible

Netspar

Intergenerational risk sharing

- Other demographic risks
  - ➢ Fertility risk: low fertility generations should save
    - financial markets: partial shift to funded systems
    - human capital: work longer and reconcile family/work
  - ➢ Longevity risk retirees: only at 75+ shift to other cohorts

- Protect retirees from risks: macro-economic stability
  - ➢ Habit formation and elderly depend on pension wealth
  - ➢ Shift risks to younger generation = smoothing
    - Which risk-sharing rules (balancing mechanism), which projections (expectations), and which rewards?
      - ✓ Balancing mechanism and reserve funds: actuarial approach
      - ✓ Funded systems and tradable bonds: objective pricing of risk and expectations
        - » Integrate funded systems and GDP-linked bonds
      - ✓ Flexible contribution levels: leave room for upward adjustments

Netspar

Transaction costs

- Collective schemes
  - Trade off low transaction costs versus tailor-made arrangements
    - Optimal choice architecture
- Transparency of objectives
  - Consumption smoothing middle class versus poverty alleviation and human-capital insurance
- Transparent information
  - Retirement age and longevity: how to frame?
  - Individual contributions and additional rights
    - Implicit taxes: conflicts with other objectives
  - Individual risk management
    - Projections retirement income and additional savings/work

Netspar

Conclusions

- NDC has strengths but also limitations
  - Leave intragenerational redistribution and tailor-made savings to other programs
    - Labor-market disincentives and transaction costs
  - Neither necessary nor sufficient for reconciling adequacy and sustainability
    - Other pension systems available
    - Labor-market policies: maintain human capital (low skilled)
- Intergenerational sharing of macro risk
    - Optimal balancing mechanism: better rules to avoid discretion
    - Flexible contribution levels
    - Combinations funding and PAYG

Netspar

Performance of Notional Defined Contribution Accounts in Latvia

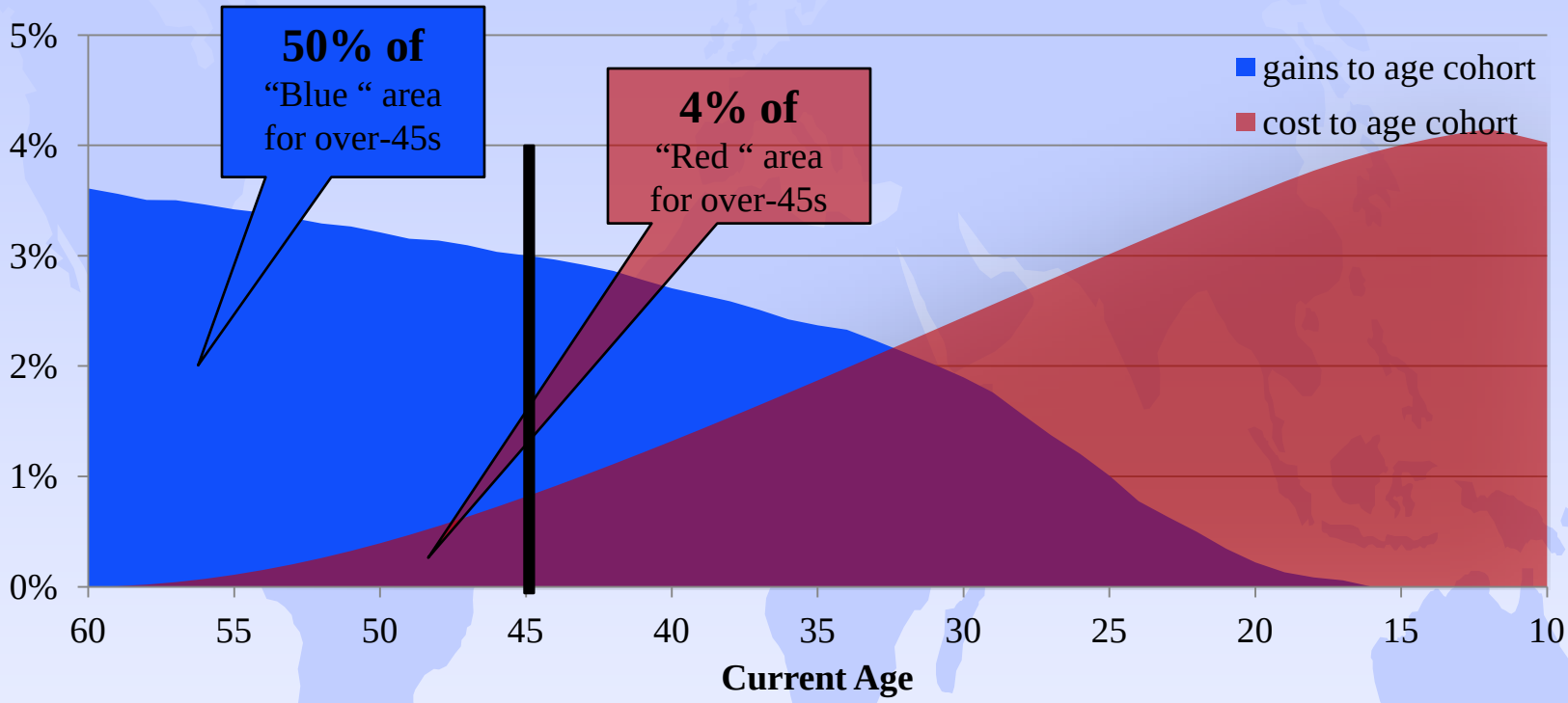
Asta Zviniene
Sr. Social Protection Specialist
Human Development Department
Europe and Central Asia Region
World Bank

January, 2012

How do NDCs absorb shocks?

- Assume a shock:
  - coverage rate increases for one year
  - Additional current revenue is not saved
- Effect:
  - Notional interest rate temporarily increases
  - Future pensions increase (more for older workers)
  - Future mismatch between revenues and expenditures increases – financed from general budget by additional tax on future workers
- What are intergenerational outcomes?

Intergenerational outcomes of a positive shock



Contributor cohorts over age 45 accrue:

- 50% of additional future pension spending
- 4% of additional future tax burden

Do shocks matter?

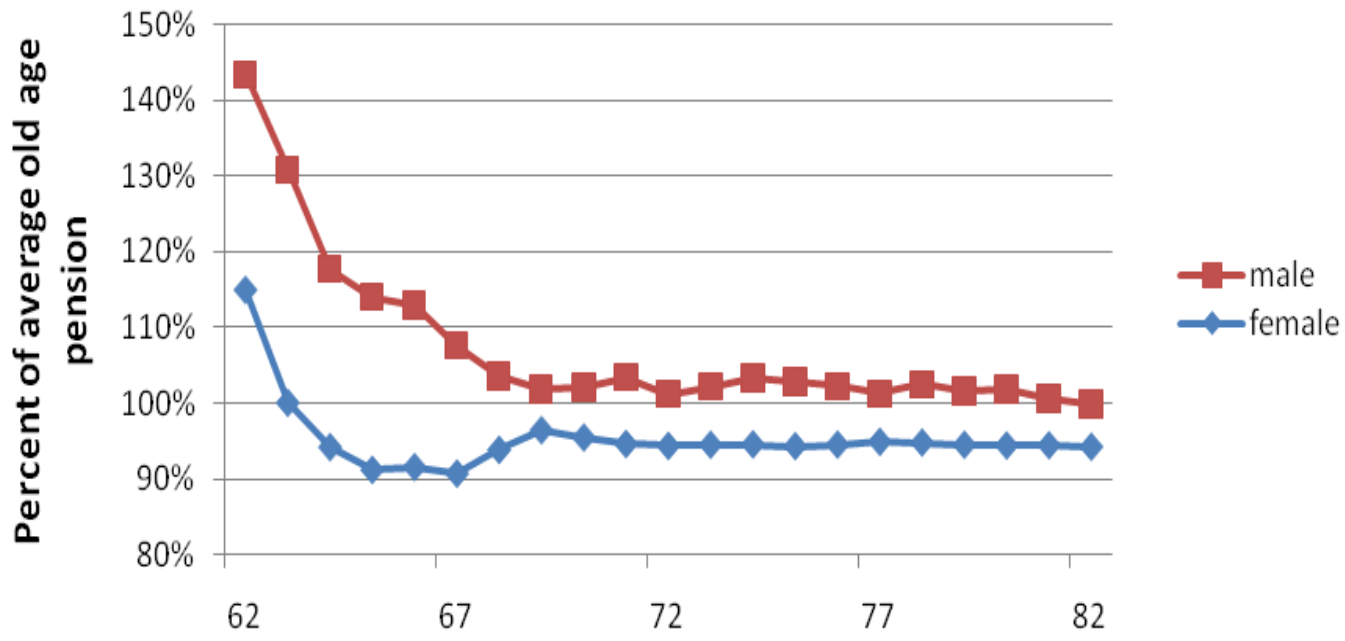
- **No**, if shocks are (as assumed in most models):
  - Low magnitude
  - Short duration
  - Positive shocks are as frequent as negative ones
- **Yes**, if you are in Latvia:
  - During 1997-2007 coverage increased 30%, dropped by 8% by 2009
  - Real wage growth stood at 23% in 2007; -14% in 2009
  - Cohort of 18-year olds in 2016 will be 47% the size of 18-year old cohort in 2006
  - Fertility shock of early 90s has so far persisted for 2 decades – no steady state (stable population size) in sight
  - Emigration: 15% of 20-40-year-olds born in Latvia are no longer living there

Social insurance revenue growth

Steady increase in retirement age was partially responsible for growth in the number of contributors

Notional real interest rate and its effect on new pensions

	2005	2006	2007	2008	2009
Notional real interest rate applied to new retirees	11%	11%	13%	21%	28%
Average newly assigned old age pension adjusted to 2009 prices, LVL	127	146	161	180	215
Growth of newly assigned pension in real terms	100%	115%	127%	142%	169%



Imagine you are a politician:

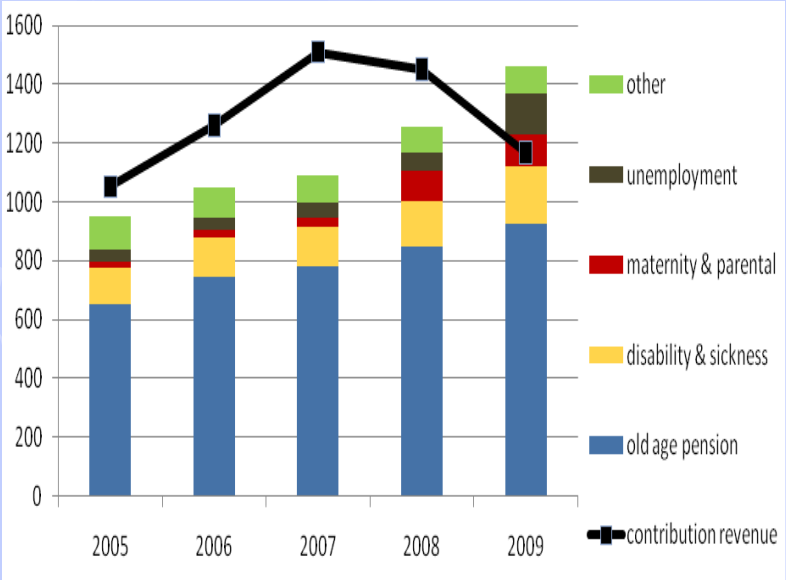
- Average pensions for two cohorts 4 years apart differ by 69%
- Real wages grow by 28% in the same 4 year period

- Original law says pensions are indexed to inflation
- Initial pensions are calculated as if they will be indexed to inflation

- Can you continue indexing to inflation in this environment?
- Do you allow -10% notional interest after a bust? (expected for 2011)
- What will you do in 2050 when average replacement rate decreases to 15% of average wage?

Actual policy responses

Boom year revenue was spent:
(pension buffer fund insignificant):
- Partial wage indexation introduced
- Additional pension benefits introduced (initially income tested; designed to benefit older pensioners more)
-Other SI benefits increased (from the same revenue pot)



After the bust:
- Pensions not indexed to deflation
- Observed life expectancy increases not applied to pension formula (would have decreased new pensions)

All of these break the supposedly tight **self-correcting NDC mechanism:**
- Deficit projected until 2060

Other assumptions about NDCs tested

- Incentives to contribute more and retire later:
  - Notional interest is applied with 18 month lag, so known in advance
  - In 2009 real interest rate was 28%
  - Overwhelming majority of people still retired at minimum retirement age
- Transparency:
  - “pension contribution rate” stands at 20%. De facto proportion of social insurance contribution rate allocated to pension spending depends on relative needs of other SI programs. Actual contribution rate allocated to pensions fluctuated around 22%
  - Pension statements stopped to be sent in 2009 due to the “lack of funds”, just before notional interest rate was due to turn negative
- Fairness:
  - Intra-generational fairness increased, although discrepancies between genders rose
  - Inter-generational differences increased sharply

Lessons learned from Latvia

- Apply NDCs with caution in potentially volatile macroeconomic and demographic environments
- Smooth business cycle fluctuations by calculating notional interest as a moving average
- Forecast at least some components of future revenue growth rather than use observable statistics
  - E.g: notional interest rate should not increase due to temporary demographic expansion if deep and prolonged demographic contraction is forecasted for the future
- Index retirement age to life expectancy – people will not retire later voluntarily