Stand-alone pension funds and optimal risk sharing

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Network for Studies on Pensions, Aging and Retirement

Continental European countries

- Large PAYG systems are unsustainable
  - Especially vulnerable to lower fertility
- More funding
  - Less investment in human capital calls for more investment in financial capital
  - Better diversification of financial and demographic risks
- How more funding?
  - Focus PAYG on poverty alleviation in old age
    - Higher retirement age and lower benefits for middle- and higher incomes
  - Gradual reforms to protect currently old

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Pensions around the world

	The Nether lands	Germany	France	Italy	Spain	Swits.	UK	US
	% of total							
1st pillar	50	85	79	74	92	42	65	45
2nd pillar	40	5	6	1	4	32	25	13
Other	10	10	15	25	4	26	10	42

Source: Börsch-Supan (2004)

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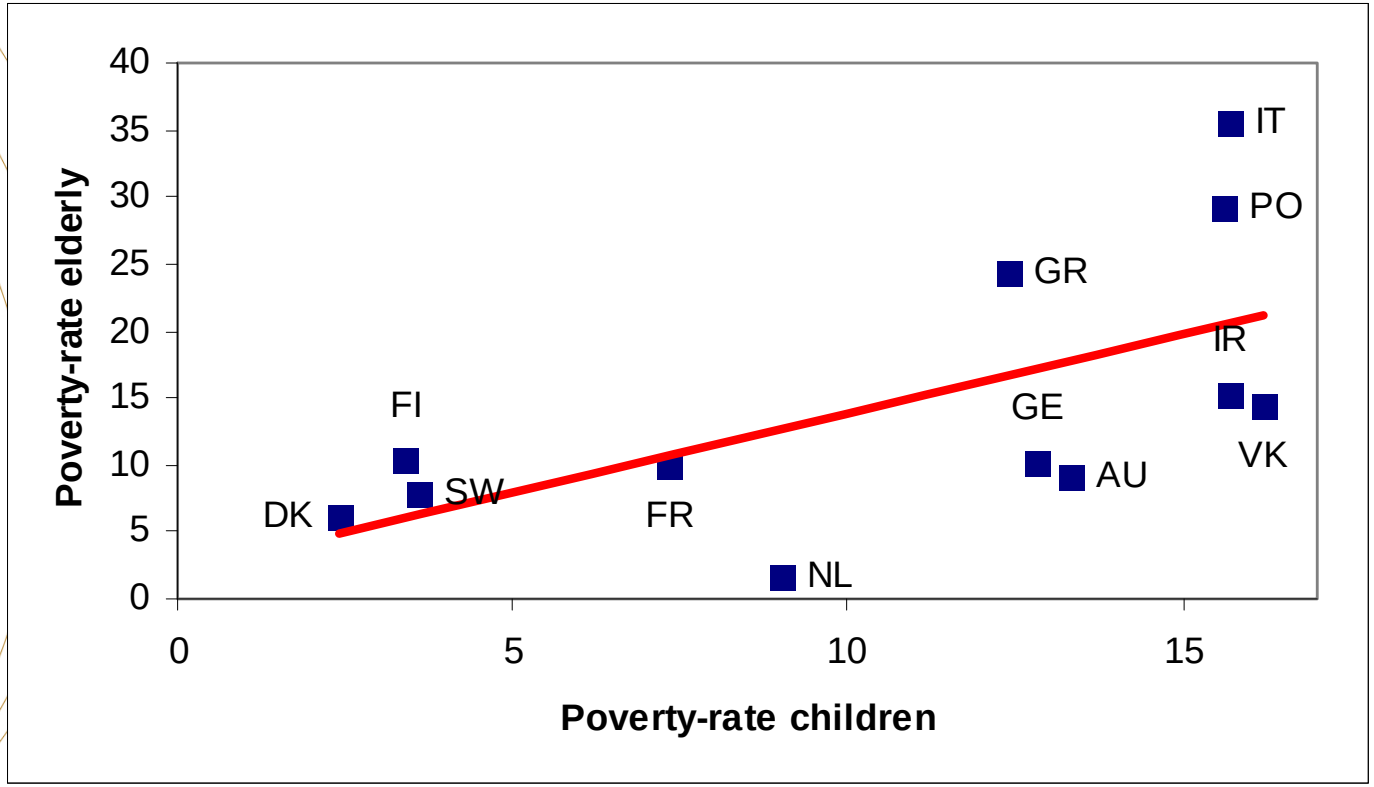
Poverty elderly and poverty children



Occupational defined-benefit systems under pressure

- Guarantees (DB) become more expensive
  - Aging and maturing of pension schemes
    - Pension risks dominate core activities
  - Accounting (IFRS)
  - International competition and creative destruction
    - Companies can offer less security
- Transitional labor market and emancipation of worker
  - Diversify risks in capital and labor markets
- Conflicts of interests: *multi task*
  - Who owns the surplus?

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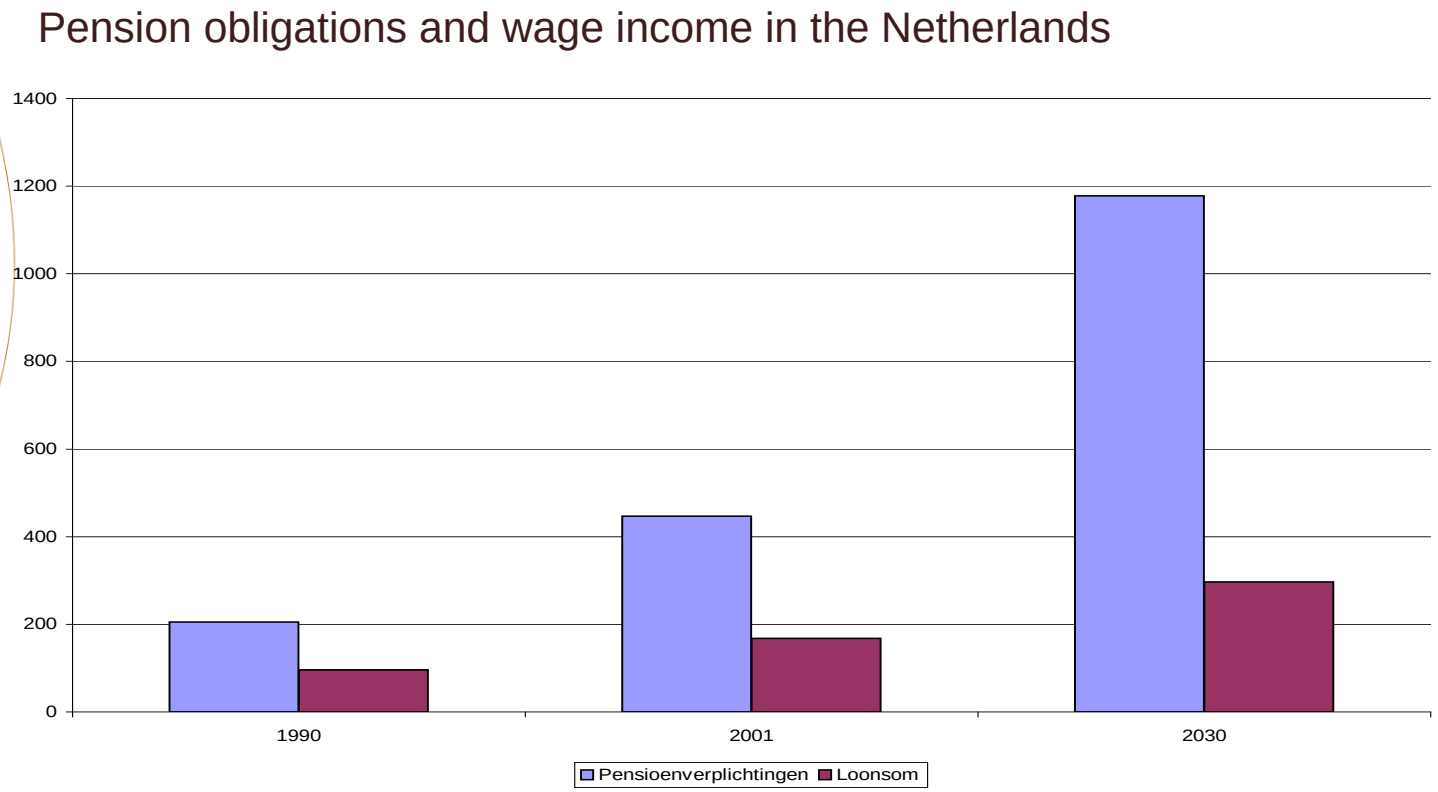
Second pillar and aging: Risk-return trade off worsens



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Individual DC plans as alternative

- Imperfect people
  - Financial illiteracy, myopic loss aversion, procrastination
- Imperfect markets
  - Adverse selection, lack of financial instruments (longevity, standard-of-living risk), borrowing constraints
- Imperfect governance
  - Agency issues

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Institutional innovation demanded

- Public and corporate are withdrawing as risk sponsors
  - *Derisking* their balance sheets
- Individuals, markets and institutions fail
- Collective, funded pension schemes as the third (hybrid) way?
  - *Collective:* compulsory participation to combat selection, individual foibles, and transaction costs
  - *Stand alone:* trade risk on capital markets, among participants and with insurance companies
  - *Single purpose:* participants are owners
  - *Division of labor and scale economies in funding*: Delegation to professionals

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Recent developments in Dutch pension deals

- More complete contracts
  - Policy ladders
- Limit fluctuations in recovery premia
  - Premium based on market value of aggregate new pension rights
- Less guarantees for active participants
  - Conditional indexation in career-average system
    - Only nominal rights guaranteed, also for active members: hybrid DC/DB system
  - More risks with participants in terms of pension rights
    - Evolution to *stand-alone* pension funds
    - Participants rather than payers premia risk bearer

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More complete contracts: rules rather than discretion

- Clarify ownership ‘buffers’= indexation reserve
  - What happens if funding rate falls below 105% or above 140%?

- Clarify role risk sharing non-overlapping generations
  - In theory welfare gains if we can commit future generations
    - But these generations can vote with feet and voice
    - Discontinuity principle preferred: all capital is owned by current participants.
    - Intergenerational risk sharing through public debt policy

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More advanced risk sharing

- Now *nominal* guarantees for *everyone*
  - Wrong guarantees for the wrong people
- Less guarantees for workers with ample human capital and long recovery horizon
  - Active (=working) participants rely more on human capital and less on pension rights
    - Take advantage of risk premia
  - Active participants absorb risks in pension rights rather than collective recovery premia
  - Hybrid DB(hard, bonds, annuities)/DC(soft, equity)
- Redesign liabilities of DB schemes
  - Duration of fixed-income liabilities declines
  - Young, active participants owners

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Risk taking requires flexibility to absorb risks

- Young exploit long recovery horizon: flexible premium
  - Integrate pensions with financial planning
    - More tailor-made defaults
    - Integrate individual and collective products
  - Competition issues addressed by digital infrastructure to exchange information
- Flexible labor market: work effort as buffer
  - One year more work provides 8% more income during rest of life
  - Flexibility to move between jobs (less fear of falling)
    - Portability pension rights and human capital imply better diversification in competitive environment
    - More flexible, transitionary labor market for elderly

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Welfare effects of various pension schemes

	First best	*DC*	*DB*	*No risk taking*
Welfare loss w.r.t. first best	0%	6.1%	5.2%	9.1%
Average percentage of assets invested in stocks	*45%*	*25%*	*29%*	0%
Average contribution level	*7%*	19%	*6%*	21%
Average benefit level	*109%*	*106%*	72%	79%

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Demographic crisis or opportunity?

- Longevity: return on human capital increases but funded/PAYG pensions more expensive
  - Working longer natural way to insure longevity risk
    - Funded schemes: Prevent decline in return on financial capital
    - PAYG schemes: Fight concentration work effort in child-bearing years
      - ✓ Protect fertility
    - Funded/PAYG schemes: Issue longevity bonds
  - Human capital and labor market in focus
    - Higher effective retirement age and better maintainance (and accumulation of) human capital are mutually dependent
    - Key role flexible, transitional labor market for elderly

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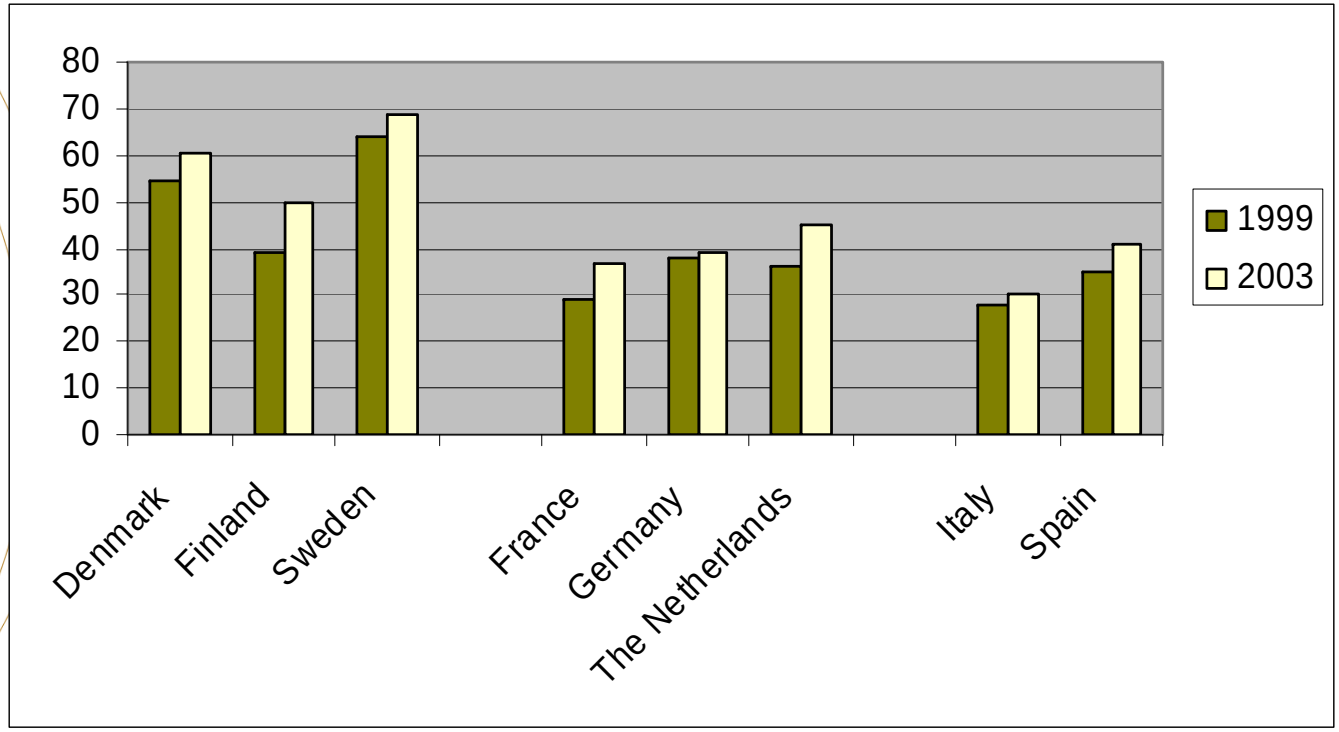
Labor-force participation of elderly



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Mark-to-market (=fair) premium at cohort level

- Recovery premia less important
  - Less risk sharing non-overlapping generations
  - Do we still need these premia to address no-short-sell constraint and employ human capital as collateral?
    - Labor-market mobility and political risk
    - Use derivatives to get more exposure
- Address back-loading of benefits
  - Is worsened in career-average system
  - Why important?
    - More portability
    - Less political risk (PAYG component)
    - Less unemployment risk

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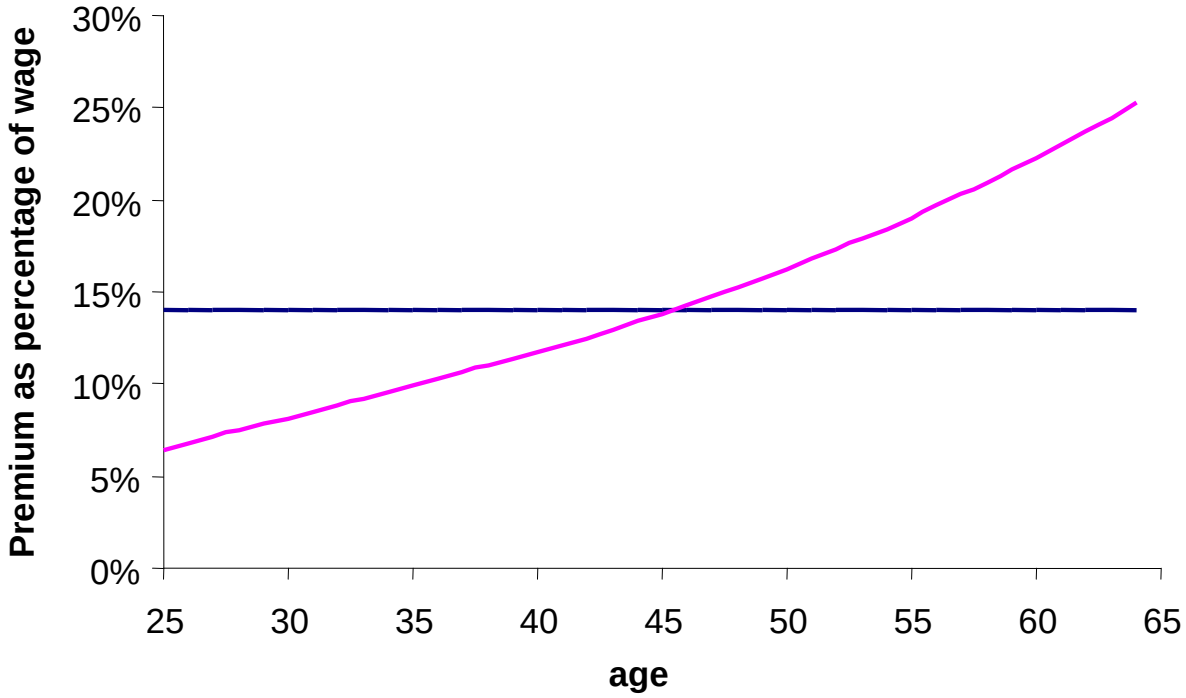
Actuarially neutral premia with fixed accumulations of pension rights



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Pension governance

- Less discretionary power for employer(s) and employees
  - More complete contracts *ex ante*
  - Participants (with pension rights) are owners rather than employer(s) and employees
    - Risk is absorbed in pension rights rather than collective recovery premia
      - ✓ *Stand-alone*: pension fund should act in the interests of participants at *arms length* of employer(s) and employees
      - ✓ Supervisory board appointed by meeting of participants
  - Full-time professionals in executive board
    - Supervisory board of part timers
      - ✓ Two-tier structure (one tier in transition)

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Conclusions

- Collective, funded pension schemes as the third (hybrid) way between individual, funded DC plans and collective PAYG schemes
- Dutch occupational plans are developing in direction *stand-alone* pension funds without sponsors
- Further innovations
  - More complete contracts: clarify property rights
  - More advanced risk sharing: restructure liabilities
  - Flexibility individual premia, jobs and retirement age
  - Mark-to-market premia at cohort level
  - Professional governance in interests of risk-bearers
- New security (instead of corporations and governments)
  - Portable human capital (‘employability’) and portable property rights on (pension rights funded by) diversified financial assets

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