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Network for Studies on Pensions, Aging and Retirement

The promise of Defined-Ambition Plans: Lessons for the United States

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Pension innovation: Maintain good DB features in DC

- Employers can no longer supply risk-bearing capital
  - Keep employer involved by unbundling functions
  - Transform pension funds into stand-alone risk managers and mutual insurers with beneficiaries
    - pooling idiosyncratic longevity risk to earn mortality credit
    - taking systematic longevity and investment risk to earn risk premia
  - Transform defined benefit (DB) into defined ambition (DA)
    - Keep consumption frame: annuities and hedge portfolio (LDI)
    - Transform variable into fixed annuities: macro risk cannot be pooled
- Lesson: Unbundle functions to combine best of DC and DB
  - DA as a third way between DC and DB
    - DC: Maintain consumption frame and roles for employer
      - pool mortality risk and engage in intertemporal hedging
      - address behavioral and agency issues
    - DB: transforming pension funds into stand-alone mutual risk managers
      - annuitize only in decummulation phase
        - to enhance transparency and flexibility

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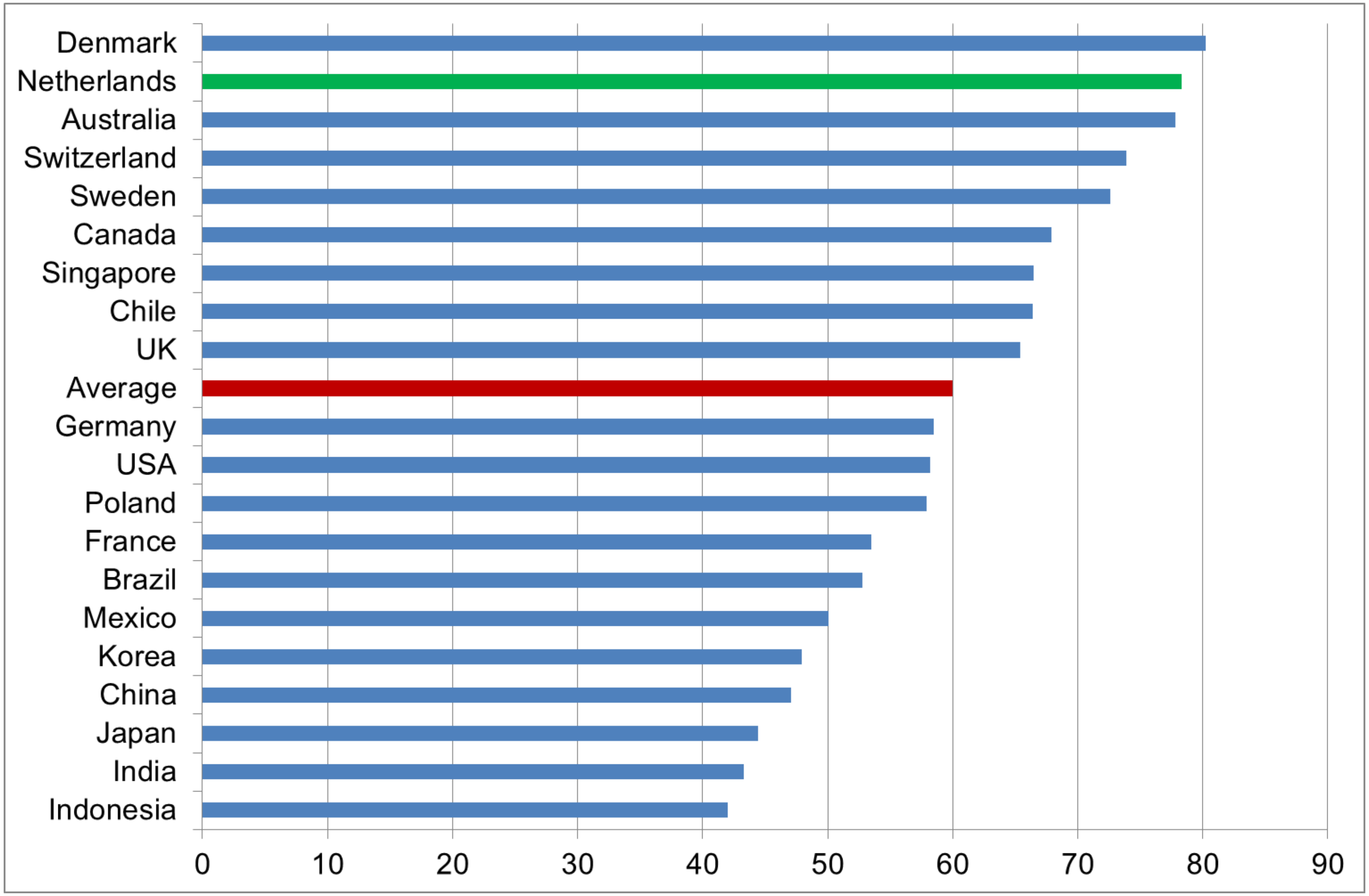
Melbourne Mercer Global Index 2012



Three pillar systems

	The Netherlands	Germany	France	Italy	Spain	Swiss	UK	US
	% of current pension income							
public	50	85	79	74	92	42	65	45
occupa-tional	40	5	6	1	4	32	25	13
personal	10	10	15	25	4	26	10	42

Dutch pension system

- Government focuses on poverty alleviation
  - Non-contributory (flat) rather than earnings related benefit
    - Related to poverty line (=welfare benefits)

- Private occupational pensions for middle class
  - Multi-employer funds as self-annuitizing mutual insurers
    - *No* public guarantees (no PBGC)
  - Private annuities in DB tradition
    - 90 % of workforce covered

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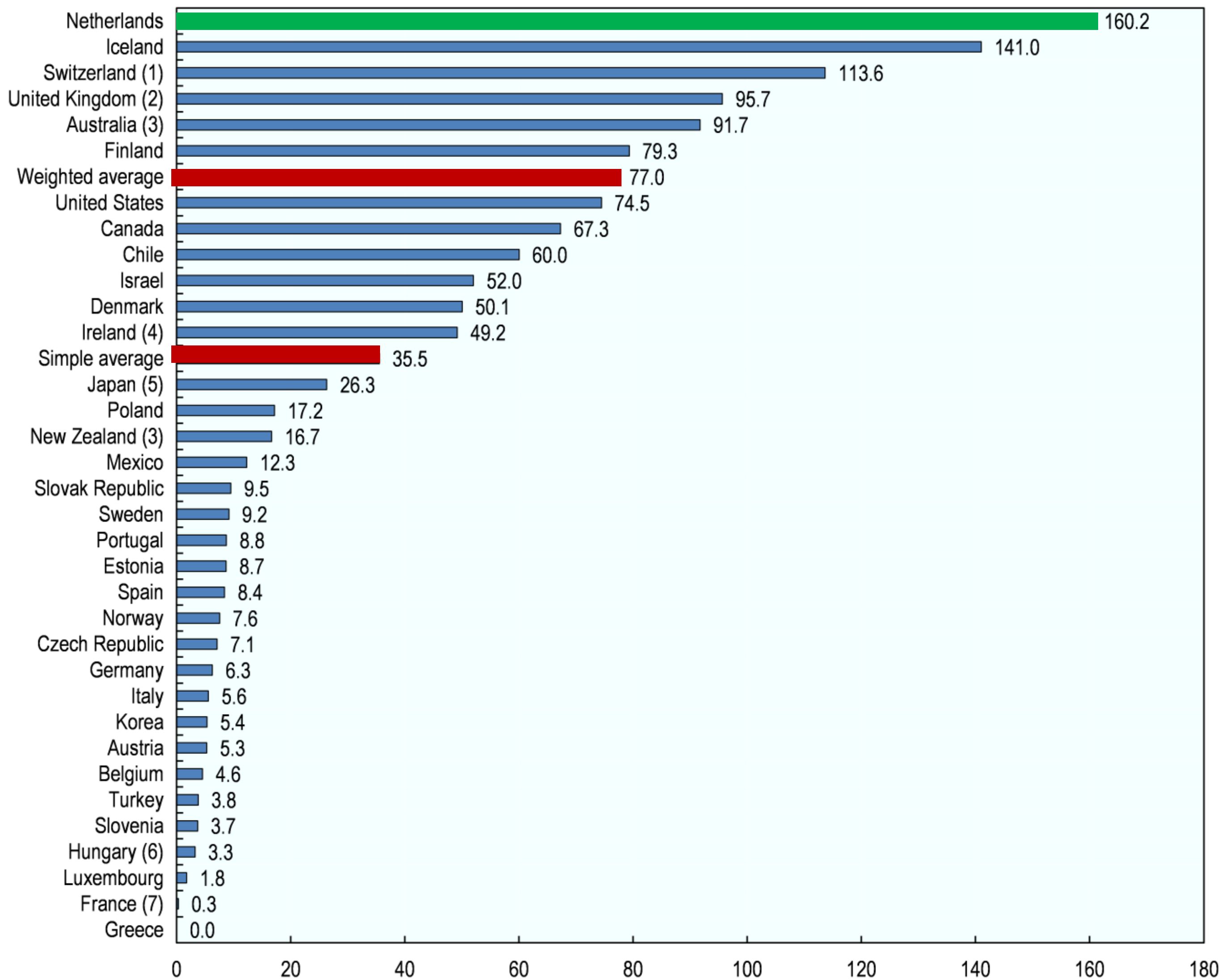
Pension fund assets as % of GDP (2012)



Reinventing pension provision

- Contributors withdraw as risk bearers of pension funds
  - ➢ Beneficiaries (rather than contributors) bear investment and systematic longevity risks
  - ➢ Pension funds become mutual insurers and risk managers
- Social partners continue to help workers with
  - ➢ Behavioral issues: choice architecture
    - Automatic enrolment and savings
  - ➢ Agency issues in asset management
    - Special purpose vehicles for risk management and pay-out choice
    - Procurement and economies of scale in asset management
  - ➢ Market imperfections insurance
    - Create pools to combat selection in annuity provision
    - Create mutual insurers

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Weakness: Ownership macro risks is unclear

- Who supplies risk bearing capital in mutual?
  - Balance sheet risks are large
    - Market valuation nominal liabilities and volatile interest rates
      - Financial crisis and euro crisis
    - Pension contracts and risk management
      - Pension funds do not do what they say

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Mismatch promises and investments

Assets	Liabilities
Nominal riskfree investments	Nominal liabilities (fixed annuities)
Risk-bearing assets	Buffer = indexation reserve
Premium option	

Mismatch (risky) assets and (risk-free) liabilities (‘promises’)

- Disappointed expectations
  - ‘Risk-free’ debt turns out to be (risk-bearing) equity
    - Pensions in payments were cut in 2012 and 2013

- Intergenerational conflicts in mutual insurer
  - Rules for distributing shocks are often changed
    - Recovery periods
  - Private pensions become politicized

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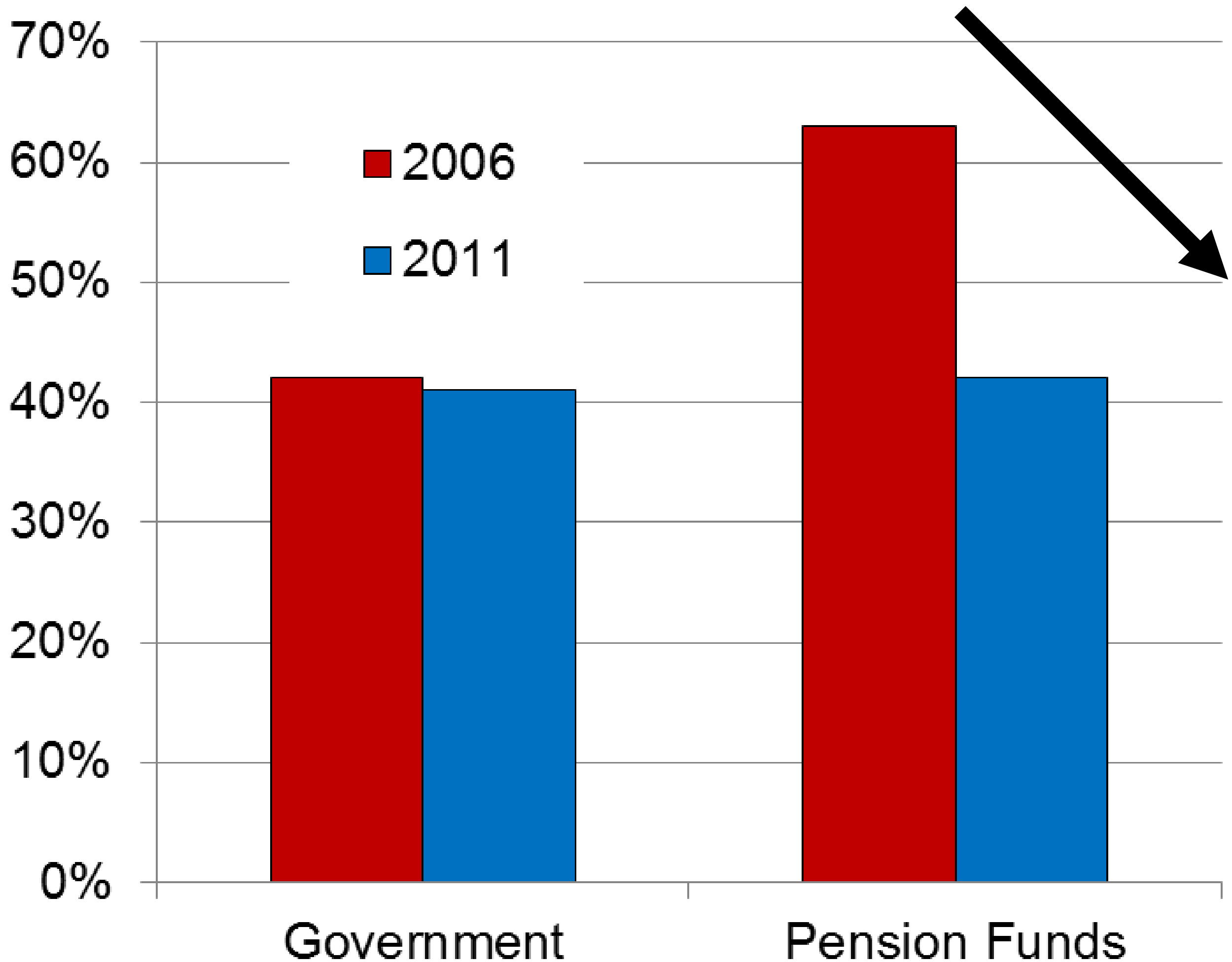
Trust in pension funds has been eroded



How to address mismatch?

- Option 1: Reduce risk bearing assets (fixed annuities)
  - Expected return goes down: contributions increase
  - *Nominal* guarantees: more exposure to inflation risk
    - Pensions do not keep up with wages

- Option 2: Restructure liabilities (DA=variable annuities)
  - Make promises explicitly conditional on state of the world
    - Complete contracts: participants supply risk-bearing capital
  - Distribute and communicate mismatch risks to stakeholders
    - Smooth shocks (adjust annuity units gradually) to protect retirees

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Challenges in transition from DB to DA

- What do to with old rights?
  - Can we change the contract retrospectively?
  - What was the old contract?

- Nature risk-sharing contracts and risk management
  - Who should absorb which risk?
  - Which risks should investment policy take?

- Avoid internal conflicts by clarifying property rights
  - Market valuation of (deferred) variable annuities to
    - reward providers risk capital
      - allow boards to change risk profiles without redistribution
    - protect existing rights if new accruals are purchased
    - allow contracts to be changed without divisive redistribution

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Lessons for the United States

- DC
  - ➢ Keep employer involved
    - employer withdraws as risk bearer but can still help address
      - ❖ behavioral, agency and market imperfections
        - ✓ through choice structure, procurement, pooling idiosyncratic risk
  - ➢ Adopt consumption rather than wealth frame
    - Communication and risk management (hedge portfolio)
      - ❖ Special purpose vehicles for risk management (asset management and insurance)
    - Pool idiosyncratic longevity risks to earn end-of life mortality credits
      - ❖ create homogeneous insurance pools to address selection

- Public DB plans providing deferred annuities
  - ➢ Cut fiscal burden by transforming fixed annuities into variable annuities
    - Transform pension funds into mutual risk managers and insurers
      - ❖ Value annuities properly to avoid internal conflicts

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Lessons for pension innovation

- Unbundle functions to optimally and transparently combine strengths individual and collective schemes
  - FDC (capital units) during accumulation phase
    - Transparent individual property rights
    - Scope for flexible discretion boards and individuals
    - Employers and fiduciaries: choice architecture and risk management
  - NDC (annuity units) during pay-out phase
    - Earn mortality credits through longevity insurance
      - Pool idiosyncratic longevity risk to prevent selection
        - ✓ Mutual insurers as self-annuitizing vehicles
        - ✓ Inflexibility and intransparency raises internal governance issues

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