



Centraal Planbureau

# Financial planning during the lifecycle

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## Financial planning during the life cycle

- Intense debate in the Netherlands about pension contract
  - In search of contract combining strengths of DB and DC
- Role of pension contract is sometimes overestimated
  - Adequacy depends also on other sources of income
  - Replacement rate depends on contribution rate
  - Stability of 2<sup>nd</sup> pillar pension depends on investment policy
- Pension design requires holistic approach at individual level
  - Ambition 2<sup>nd</sup> pillar, other sources of income
  - Accumulation, contribution rate, retirement age
  - Investment strategy during the life cycle, interest hedge
  - Decumulation, lifelong annuity, lump sum



# Financial planning requires holistic balance sheet

## Assets

- Human capital
  - Public pension (AOW)
  - Private pension
  - Owner occupied housing
  - Financial capital
- 
- Holistic balance sheet provides insight in ambition for 2<sup>nd</sup> pillar pension

## Liabilities

- Consumption during retirement
- Costs of health care
- Intended bequests



## Research questions

1. What is the impact of increasing public pension age on effective retirement age in the Netherlands?
2. What is the optimal investment strategy during the life cycle in individual pension plans?
3. What are sensible defaults and options for choice in pension accumulation and pension decumulation?



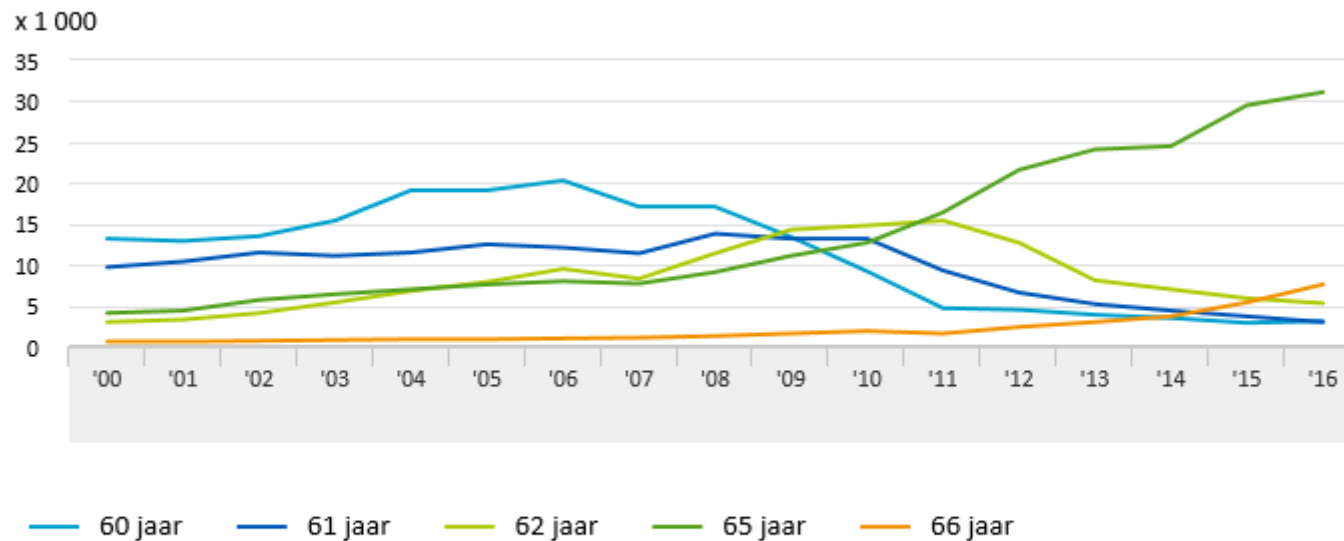
# 1. Impact of public pension age on retirement

- What is the impact of increasing public pension age on effective retirement age in the Netherlands?
- Previous studies: Increase in public pension age with 1 year increases effective retirement age with 0.5 years
  - Mastrobuoni (2009), Euwals et al. (2008), Hanel (2010), De Grip et al. (2013), Vermeer et al. (2014)
- Increase of healthy life expectancy less than increase of life expectancy itself?
  - Wubulihassimu et al. (2015): Impact of disability on employment is weak



# 1. Impact of public pension age on retirement

Werknemers die met pensioen zijn gegaan, naar leeftijd





## 2. Optimal investment strategy during life cycle

- What is optimal investment strategy during the life cycle in individual pension plans?
- Optimal equity allocation during the life cycle is relatively clear
  - Blake et al. (2014)
- Optimal exposure to interest and inflation risk is less clear, while pensions were heavily affected by interest decline
  - Brennan/Xia (2000), Campbell/Viceira (2002), Lever/Loois (2016)
- Individual ALM: optimal investment strategy during the life cycle
  - Owner occupied housing, mortgage interest payments
  - Planned retirement age



## 2. Optimal investment strategy during life cycle

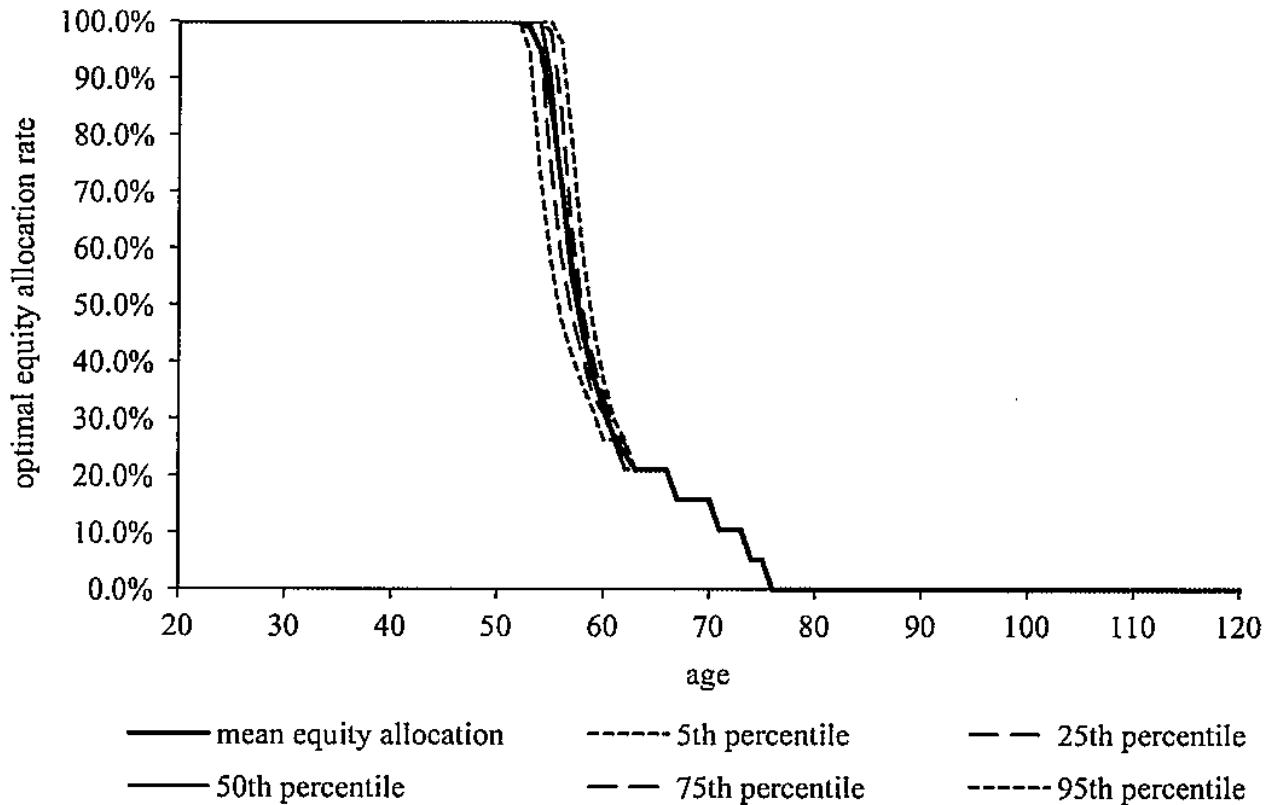
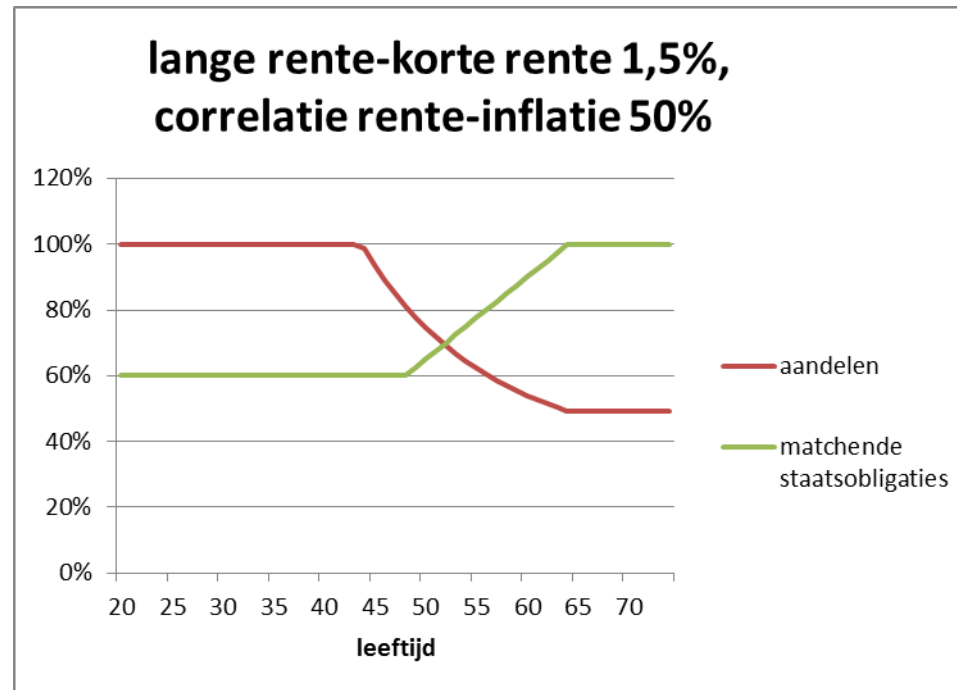


Fig. 5. Optimal equity allocation.





## 2. Optimal interest hedge during the life cycle





### 3. Defaults and options for choice in pensions

#### Pension accumulation

- Default: replacement rate of 75% mean wage in 40 years is adequate?
- Choice
  - Lower accrual for home owners
  - Lower accrual rate for workers with a long career
- What are sensible defaults and options for choice?

#### Pension decumulation

- Default: lifelong annuity
  - How much variability is acceptable?
  - How important is indexation?
- Choice
  - Fixed nominal annuity
  - Lumpsum