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Network for Studies on Pensions, Aging and Retirement

Discussion of "Do pension plans manipulate pension liabilities ?" by Michael Kisser, John Kiff and Maurico Soto

Theo Nijman
Tilburg University and Netspar
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Background

- Lots of discussion in many countries about manipulation of *valuation of* pension liabilities

- Value of liability: minimum wealth to do what was promised
- Straightforward in text books …
  - Risk free nominal discounting if pension income risk free nominal guarantee
  - Risk free real discounting if pension income risk free real guarantee
  - Corporate term structure if credit risk to be incorporated
  - Discount against expected portfolio return if pension income is risky and shocks not smoothed
  - Use risk neutral valuation argument in more general cases
    - E.g. non-linear link between investment returns and pension income (Netherlands).

Why room for discussion ?

- Contract is opaque;
  - Who pays / receives what, especially in bad scenarios
- Valuation used for different purposes
  - Value to participant (someone takes residual risk)
  - Can pension provider meet its liabilities ?
  - Value of firm (with credit risk)
- Should future accruals be incorporated
  - How to incorporate labor market risk individual ?
  - How to incorporate discontinuity of sponsor / collective ?
- Heterogeneity in participants
  - E.g. group specific survival probabilities (UK/NL)
- Input parameters unknown (expected returns on asset classes, expected inflation; wage growth)
- Model risk; DGP unknown (full risk neutral valuation)

Beyond manipulation of the valuation …

- Paper: *"Giving more freedom to choose actuarial assumptions involves a difficult trade-off. When a temporary funding relief for underfunded pension plans may help to restore the long term viability of plan sponsors it may go against the interests of employees and retirees"*
  - Better motivation than intransparency required ?

- Why would sponsors of funds be given degrees of freedom in the valuation ? Better information on
  - Investment strategy (i.e. expected portfolio returns) ?
  - Survival probabilities for this population ?
  - Wage profiles for workers ?
  - Continuity of firm ?
  - … ?
  - *At least clear transparency on choice and adequate supervisory framework needed …*

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Beyond manipulation of the valuation …

- Key problem: those who set “details” of valuation formula might have strong incentives ….
  - NL: retirees want to avoid benefit cuts and stimulate inflation compensation; young participants want to protect their rights
  - The results in the paper might show that sponsor sets valuation: in case of underfunded plans in the US sponsor typically mandated to make additional contributions
  - Also in US MAP legislation 2012 more mandatory contributions if more underfunded…

- Innovation (Bovenberg/Nijman): Personal Pensions with Risk sharing (PPR). Life long income with straightforward valuation. Combine strengths DB and DC. This afternoon, 13.45 - 14.30….

This paper

- One of few empirical studies of the phenomenon

- Corporate DB plans in US had choice option in their valuation
- Underfunded plans use higher discount rates to report less underfunding
- Less impact of choice in longevity assumptions

- Also in US issues still quite relevant: In 2012 pension contributions dropped by more than 30% for funds that adopted MAP-12 in 2012; increased by more than 30% for the others
- MAP corridor for discount rates based on 25 years of history?? Even worse than Dutch 10 year average *in setting pension contributions only*

Questions

- Nature of contract
  - Presented to participants as (nominal) guarantee ?
  - I.e. no options to cut benefits after poor investment returns ?
- Goal of valuation ? What are incentives for whom to underestimate or overestimate ?
  - Value of liabilities of firm ?
  - Or solvency goal: how much wealth needed to meet promises ?
  - Or value transfer: how much money transferred in case of change of employer ?
  - Or impact on contribution level or compensation for inflation ?

  - *We test whether credit risk of the sponsor helps to explain the findings..*

Questions

- Underfunded plans use higher discount rates to report less underfunding
  - More risky investing ? Allowed by regulators ?
- Longevity assumptions less impact
  - Can underfunded funds have different participants with other life expectancies ?
  - Regulatory mechanism to motivate choices made ?

More technical points

- Why not focus on explaining differences in assumed discount rates and mortality assumptions from funding status ?
  - Rather than on explaining differences in accrued and current liability values from funding status, difference in discount rates and in mortality assumptions ?
  - Accrued liability impact really different if sponsor in trouble ?

- Interest and mortality assumptions explain only 26% of changes in valuation ? What else ?
- Use precise impact of other actuarial assumption on B(i,t), rather than approximation through common duration and change in life expectancy

Conclusion

- Very interesting and relevant paper
- Could be linked to broader issues
  - Goal of valuation
  - Full freedom in choices or supervisory rules / publicity ?
- Explain also differences in discount rates and mortaliity assumptions directly

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