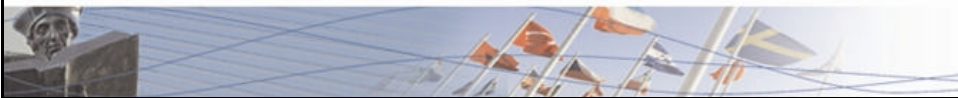


Pension Guarantees, Capital Adequacy and International Risk Sharing

Discussion

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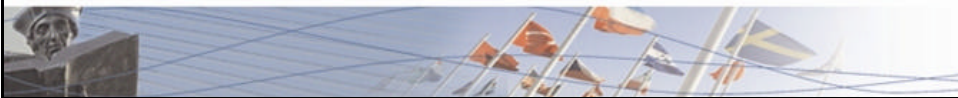
Summary of the Bodie paper

- Pension guarantees are crucial in the pension business
- Guarantees should protect the pension beneficiaries and help the sustainability of pension systems



Pension Guarantees

- Necessary as we know that most people are not able to make rational decisions regarding their retirement wealth
 - Behavioral finance literature:
 - Thaler and Cronquist (AER 2004), Mitchell and Utkus (2004)
- BUT, prudence is needed as guarantees may lead to a loss of market discipline on managing pension wealth

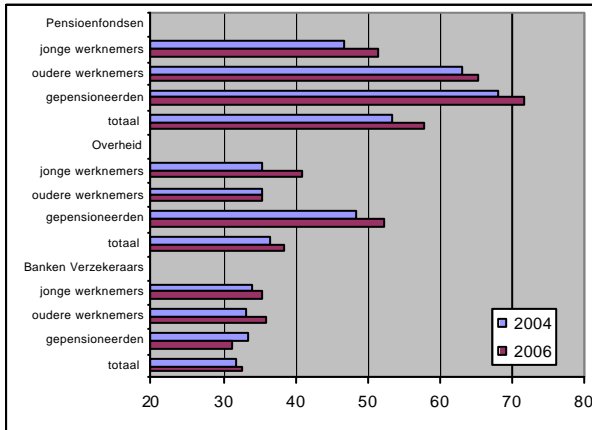


Sustainability of pension systems

- Pension products are “experience goods”: impact of choices can only be evaluated after a (long) period of time
- Reputation of pension funds is crucial in maintaining their position in a changing pension landscape
 - Increased competition among pension product providers
 - Nationally
 - Internationally (EU)
 - (Partial) abolishment of mandatory participation



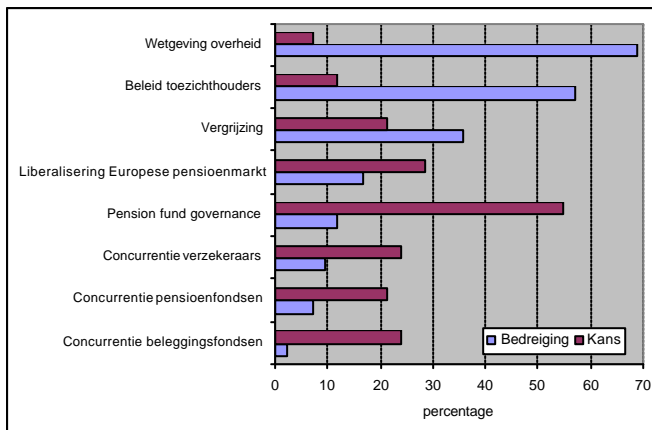
Consumer confidence in pension stakeholders



Source: Van Dalen en Henkens (2006)



Opportunities and threats according to pension managers



Source: RSM, pensioenonderzoek, 2006



Bodie framework: Necessary conditions for pension systems

- Funding restrictions
 - Standards for full funding and limit losses
- Matching restrictions
 - Used for hedging the liabilities with the assets (ALM)
- Transparency towards guarantor
 - Allows shortfall risks to be identified
- Pricing → Option framework
 - Used for calculating the premium to the guarantor



Comments on Bodie paper

- Important issue is to insure that pension beneficiaries obtain **indexation** of pension rights
 - Option framework in the paper needs to be adjusted as the strike price becomes stochastic?
- More importantly, indexation as such could be seen as an option (e.g. in the case of conditional indexation)
- Next to nominal liabilities we are interested in real liabilities
- In general, real pension liabilities are difficult to replicate with traded instruments → incomplete markets → implications for Black Scholes and pricing



Comments on Bodie paper

- The impact of being a guarantor on the **creditworthiness** also needs to be considered
 - Implementation of liability-driven investments (LDI) could be done through swap contracts → creditworthiness of counterparties plays a crucial role! What are the implications?
- In order to put the role of the guarantor in a broader perspective the corporate finance implications should be taken into account also
 - Jin, Merton and Bodie (JFE 2006)



Conclusions

- In this paper the right points are addressed on some relevant issues regarding the sustainability of pension systems
- The policy recommendations are well-pointed and require a close look by regulators
- But the implementation of guarantee structures is incomplete:
 - How to deal with indexation (in the option valuation)?
 - How to deal with credit risk when using swap contracts?
 - How to deal with nominal and real liabilities?

