Optimal Inflation Risk Sharing among Pension Fund Participants

"Internal risk sharing within pension funds can improve inflation protection when markets fall short, provided that the compensation for that protection aligns with participants' preferences"

Nicole Branger (Finance Center, Universität Münster), Paulo Rodrigues (Maastricht University), Peter Schotman (Maastricht University)

What is the focus of the paper?

The paper studies how inflation risk can be optimally shared within a pension fund. Inflation erodes the purchasing power of pensions, while markets for inflation-linked bonds are thin and expensive. Younger participants have a natural protection against inflation through their earned income, which is often tied to inflation, whereas older participants are particularly vulnerable. The authors examine whether internal risk sharing between young and old participants can increase welfare, and under which conditions this holds. They develop a theoretical model with heterogeneous investors facing different inflation exposures. The model is calibrated using long historical series of inflation, interest rates and equity returns, and is placed in the context of the Dutch pension system and the new pension law.

What are the key findings?

The paper shows that both younger and older people can be better off through internal risk-sharing of inflation risk within a pension fund. Younger participants can insure older participants against inflation in exchange for a premium. The optimal internal price of inflation protection generally differs from the market price of inflation-linked bonds. Market prices reflect financial market conditions rather than the preferences and composition of pension fund participants. Using market prices for internal risk transfers may therefore reduce welfare for some participants. An internal equilibrium price can exist at which all participants benefit.

What are the implications?

- Internal inflation risk sharing can add value when external markets provide insufficient hedging.
- Applying market prices to internal risk transfers is not always welfare-enhancing.
- Pension regulation may consider allowing internal pricing aligned with participant preferences.
- Careful design is required to ensure balanced outcomes and participant support.

Want to know more? Read the paper:

Optimal Inflation Risk Sharing among Pension Fund Participants