Asset Pricing and Risk Sharing Implications of Alternative Pension Plan Systems

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Abstract

We show that incorporating defined benefit pension funds in an incomplete markets asset pricing model improves its ability to match the historical equity premium and riskless rate and has important risk sharing implications. We document the importance of the pension fund's size and asset demands, and a new risk channel arising from fluctuations in the fund's returns. We use our calibrated model to study the implications of a shift to an economy with defined contribution plans. The new steady-state is characterized by a higher riskless rate and a lower equity premium. Consumption volatility increases for retirees but decreases for workers.

JEL Classification: E21, E44, G11, G12, G50.

Key Words: Equity Premium, Pension Funds, Defined Contribution and Defined Benefit Pension Plans, Intermediary-Based Asset Pricing, Incomplete Risk Sharing.

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