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| Testo di partenza  \*non tradurre il testo evidenziato in giallo | Testo tradotto dal candidato | Spazio a disposizione del correttore | Penalità |
| **Federal Reserve Board, Washington, D.C.**  **Reach for Yield by U.S. Public Pension Funds** Theoretical Model |  |  |  |
| To guide our thinking about the determinants of risk-taking by public pension plans, and to provide some intuition for how to interpret the findings from our econometric analysis, here we present a very simple “benchmark” two-period model of risky portfolio choice for a state or municipal pension plan. We refer to the plan sponsor as the state throughout. |  |  |  |
| For our modeling, we assume there is no conflict of interest between the state and the manager of its pension investments, and that therefore the pension plan is managed in accordance with the wishes of plan sponsors. |  |  |  |
| Therefore, we model the state as controlling the amount of assets managed by the pension fund, and how those assets are invested. Multi-period treatments of the pension fund’s portfolio choice problem are contained in Pennacchi and Rahstad (2011) and D’Arcy et al (1999); following their approach, the state is assumed to choose the pension assets to maximize a utility function that is based on the preferences of its citizens, denoted as the representative citizen RC, hereafter. |  |  |  |
| We interpret the representative citizen as the median voter  within the state or municipality associated with a pension plan, but we acknowledge the utility function could have richer interpretations. |  |  |  |
| In particular, it may embed preferences on how the plans’ and sponsors’ actions affect conflicting special interests such as plan beneficiaries, state taxpayers, and the holders of state debt. |  |  |  |
| Because of these potential conflicts and other potential imperfections, we don’t interpret maximization of the utility function as maximization of social welfare, but we regard it as a useful modeling device for our positive analysis. |  |  |  |
| In our modeling  below, we rely primarily on a median voter interpretation, but we allow for the possibility that the interests of the median voter and state debt holders may be in conflict. |  |  |  |
| There are two dates in the model. Date 0, which represents today, and date *t*, a date *t* years in the future. The RC is endowed with income Y0 and Yt. |  |  |  |
| The income Yt is assumed to be net of all tax payments other than those that may need to be made to support pension beneficiaries, or to pay off state debt. |  |  |  |
| To simplify the analysis, Yt and Y0 are assumed to be known at date 0. In addition, the state has zero coupon debt with face value Dt that must paid at date *t* and it has a pension liability of Lt that must be paid to its workers at date *t*. |  |  |  |
| We model the debt in two different cases. In the first the debt is risk-free and the state will pay it out of state income Y0. In the second the state can choose to default on its debt and will do so if the taxes needed to support its pension plan and state debt are too high. |  |  |  |
| We first focus on the risk-free debt case and later turn to the case with risky debt. At date 0, the state pension plan has assets *AO* to invest on behalf of its pension beneficiaries. |  |  |  |
| At date *t*, the portfolio grows to value *AORp,t*, where *Rp,t* is the gross return on the portfolio, then the portfolio is liquidated and the full proceeds from liquidation are turned over to workers. |  |  |  |