

Optimal Asset Allocation in Surplus Approach of Pension Fund

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Abstract

When we consider pension fund management, asset only approach is traditionally used for optimal asset allocation. Recently, optimal asset allocation based on surplus framework is noteworthy. So, we investigate the feature of optimal asset allocation under the consideration of both asset and liability in pension fund. This approach is often called as a balance sheet type ALM. Thus, we apply this idea for Japanese Government Pension Fund. The plan yield is given as 3.2 percent by Japanese Government. Then, we execute the simulations by changing the volatility of liability and notice the difference of efficient frontier in both surplus and asset only approaches. Namely, as we increase the funded ratio of the target, the asset allocation of risk assets will increase and also increase the surplus risk simultaneously.

Key Words : Pension Fund, Surplus Approach, ALM, Asset Allocation

JEL Classification : G11, G23

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