

摘要

本研究探討長期投資人之最適資產配置問題，並著重於通貨膨脹風險之分析。第一部份討論確定提撥退休金制度下，機構投資人或高所得自然人如何擬定投資策略規避通貨膨脹風險，達到極大化期末財富效用期望值。此研究擴展 Battocchio 與 Menoncin (2004) 所建構資產模型，不僅探討市場風險，亦考量通貨膨脹不確定性與基金費用誘因、下方風險保護兩機制，研究對資產配置行為之影響，並依動態規劃方法求得投資策略公式解。第二部份則強調下方風險之重要性，檢視在最低保證收益下，長期投資人跨期資產配置之財富管理議題，並回顧 Deelstra et al.(2003) 之模型架構，依平賭方法求得投資策略公式解，研究結果顯示基金投資策略可表示為最適 CRRA(γ, T) 型態共同基金與最低收益避險之組合。另一方面，如何估計通貨膨脹風險亦為本文強調之重點。Campbell 和 Viceira (2001) 首次納入通貨膨脹風險並探討跨期投資議題，結論市場缺乏通貨膨脹連動投資標的時，投資人將減碼長期債持有比例。Brennan 和 Xia (2002) 假設通貨膨脹率服從 Ornstein-Uhlenbeck 過程，結論投資人之避險需求隨持有債券到期日與投資期限改變。但以上結論未將通貨膨脹學習機制納入模型，因此，在第三部份提出依學習機制修正之投資策略可顯著增加財富效用，並分析在不同參數設定下，學習機制對於期末財富效用之影響。

關鍵字：資產配置策略、長期投資人、通貨膨脹風險、確定提撥退休金制度、收益保證、學習機制

Abstract

In this study, we study three essays of asset allocation problem for long term investors, which means that in this discourse we emphasis the importance of inflation risk. In the first topic, we derive the dynamic optimal investment strategy of the defined contribution pension schemes which include two mechanisms of partial floor protection and incentive fees and their benchmarks. We find investors should hold high proportion of stock index fund to hedge the inflation risk; moreover, the ratio of incentive fees to the setting of benchmark will change the optimal investment trend of underlying assets. In the second topic, we introduce the optimal investment portfolio with minimum guarantees and show that the fund manager should adjust the optimal weights of underlying assets with the ratio of the guarantee fund's value to the value of fund. Finally, this work focuses on how to precisely predict the dynamics of inflation rate. We apply learning method to adjust the prediction of inflation process and we use numerical analysis to study the effect of learning mechanism under different parameter setting.

Keywords: Asset Allocation Problem; Long Term Investors; Inflation Risk; Defined Contribution Pension Schemes; Minimum Guarantees; Learning Process