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## 儲備制國民年金財務準備之探討\*

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## 摘 要

本文計算儲備制國民年金的費率水準與準備金的變化情況，若以全體工作人口的基本所得為財務來源，給付對象為65歲以上的老年公民，以30%的基本所得替代率為給付水準，在中推計的人口結構與實質利率等於經濟成長率的假設條件下，儲備制的各年輪別費率均在14%左右。儲備制雖有較為穩定的費率，準備金累積的速度卻相當快，若實質利率等於經濟成長率，準備金於2020年左右達GDP的50%，2030年達100%，2070年以後第一個參與年金制度的年輪人口幾乎完全退出生命歷程，準備金數額達到GDP的2.7倍並逐漸趨於穩定。

儲備制國民年金財務健全的關鍵因素在於基金投資的表現，投資報酬率小幅度的變動所對應的都是相當龐大的利得或損失，我們以實質利率等於經濟成長率的條件為比較的基礎，指出若經濟成長率 $g=0.05$ ，實質利率 $r=0.04$ ，則在開始請領給付當年，一個年輪準備不足的額度為GDP的59%，而如果 $g=0.05$ 且 $r=0.03$ ，則準備不足的額度為GDP的130%，勢需投入一般稅收以為支應。此一結論顯示儲備制年金是較為不穩定的制度，創設之初所設立的獲利條件一旦不能滿足，則此一制度將因收支不能平衡而轉化為賦稅制年金。

# **The Financial Condition of a Fully Funded National Pension Program in Taiwan**

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## **Abstract**

Due to a sustained decline of fertility since 1951, the population transition in Taiwan is nearing the final phase, and the population aging will phenomenally peak during the first quarter of the next century. Given the expected upsurge in the aging of the population, and the consequent depletion of family support resources for the elderly, it appears only appropriate that Taiwan is seeking to build a social security system that includes national pension and health insurance programs. This paper explores the characteristics of a fully funded national pension program and evaluates the effects of real interest and economic growth rates on the fiscal balance. While the premium rate remains roughly constant among the cohorts, and not affected by the population changes. Given a benefit fixed at 30% of the average basic income, should the population stabilize at a constant age structure in the long run, and the real interest rate equal the economic growth rate, the funded program will result in a quick

accumulation of the reserved fund. It is demonstrated that the premium rate directly reflects the difference between the real interest rate and the economics growth rate, the more the economic growth rate exceeds the real interest rate, the higher the premium rate must be to balance the account. The result indicates that a fully funded pension program can be very unstable and gradually turned into a pay-as-you-go program at a time when the real interest rate cannot catch up with the economic growth.