

**2<sup>nd</sup> PBSS Colloquium**  
**21-23 May 2007**  
**Helsinki, Finland**

**Topic B. Longevity and annuitisation, risk sharing in pension design**

**A balance sheet for pay-as-you-go finance: Solvency indicators for Spain**

*María Del Carmen Boado-Penas*

*Salvador Valdés-Prieto*

*Carlos Vidal-Meliá*

The solvency and sustainability of pension systems financed by the pay-as-you-go method can be measured with indicators derived from the actuarial balance sheet. Calculating the actuarial balance annually and making the outcome transparent to the public can provide incentives to improve the financial management of pay-as-you-go pensions and reduce the traditional divergence between the policymakers' planning horizon and that of the pension system itself. This paper provides the first estimate of the actuarial balance of the Spanish contributory pension system for the old age contingency, based on official data. The main accounting entries are developed from the principles of double-entry bookkeeping. The novel entry in the balance sheet, named "Contribution Asset" or "Hidden Asset", is explained in detail. A comparison between the official balance sheet for the Swedish notional account system and our balance sheet for the Spanish contributory pension system is also provided. The main finding is that the Spanish pension system has an insolvency rate of 36.2 %. The policy implication is that unless current legislation is reformed, Spanish taxpayers (the plan sponsor) should count on making transfers to the pension system with a present discounted value of 36.2 % of current liabilities, for all golden-rule steady states. Moreover, a comparison of the consecutive balance sheets for 2001-05 shows that the degree of insolvency is growing over time, even though the cash flow outcome has improved over the same period. Taking steps to reverse this trend and restore solvency is in the Spanish taxpayers' interest, and possibly also in the interest of those in the European Union who recognize that there is a chance that they may have to support the Spanish budget in the future. (JEL: H55, J26, M49).

**Keywords:** Retirement, Pay-as-you-go system, Accountancy, Pensions, Spain.