

An Application of Modern Social Sciences Techniques to  
Reverse Stress Testing at the U.K. Pension Protection Fund

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Presented at the:  
2013 Enterprise Risk Management Symposium  
April 22-24, 2013

## **Abstract**

The UK Pension Protection Fund (PPF) was established in April 2005 to protect the pensions of members of UK private sector defined benefit pension schemes which have insufficient assets and whose corporate sponsor fails. The Fund takes over the pension scheme assets and assumes responsibility for the payment of compensation to the former members of the scheme. The PPF is funded by a levy on the population of eligible schemes. To improve its ERM framework, the PPF has undertaken a reverse stress testing exercise. This analysis provided the organisation with new insights into its risk profile, the scenarios leading to the PPF's potential "failure" and interactions between these scenarios. In this paper we will first discuss the principles and objectives of reverse stress testing in the special case of the PPF and then illustrate the application of complex system science techniques for the purpose of reverse stress testing.