

# Risk-Adjusted Underwriting Performance Measurement

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## **Abstract**

To measure economic profits generated by an insurance policy during its lifetime, we compare the terminal assets of the policy account with certain break-even values. Policies with multi-year loss payments and income tax payments are studied. The break-even value of terminal assets is given in closed form, and shown to be an increasing function of the claims risk and the asset investment risk. Profits from underwriting and from capital investment are measured separately. Simple equations are found that link the cost of the capital to the risk-adjusted loss discount rate. Methods developed in the paper are also useful for fair premium calculations.

**Keywords:** Risk-adjusted performance measure, risk-adjusted discount rate, policy-year profit, cost of capital, EVA, fair premium.