The Cost of Financing Insurance—Version 1.0

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This paper provides an illustrative analysis of how to use DFA to determine profitability targets for the various underwriting divisions of an insurance company.

The ABC Insurance Company is a sizeable commercial lines insurance company. Its goal is to obtain an above-average return on equity by setting profitability targets for each of its underwriting divisions that reflect the cost of capital needed to support each division's contribution to the overall underwriting risk.

While ABC's management recognizes the important role played by regulators and rating agencies in determining an insurer's capital, it feels that controlling the insurer's risk, as measured by its statistical distribution of outcomes, provides a meaningful yardstick that can be used to set profitability targets.

In addition, ABC's management wants to take the following considerations as input into its decisions.

- How long must capital be held?
- How much investment income is generated by the insurance operation?
- How closely correlated are the losses in the various lines of insurance?
- What is the effect of reinsurance?
- What is the effect of hedging losses with options on an insurance index?

The cost of financing an insurance company is defined to be the combined cost of capital, reinsurance and options on a catastrophe index. The ABC Insurance Company wants to allocate its cost of financing back to its individual underwriting divisions. The results will be expressed as a target combined ratio for each underwriting division.

Author's Note

This “paper” is not a physical paper. It is a web which is intended to be read on a browser. (I used Internet Explorer when designing this web, but it should be readable on other browsers.) To view the web, point your browser to:

http://www.casact.org/pubs/forum/00sforum/meyers/index.htm

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