

On a capital management problem for a central branch with subsidiaries

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We consider an extension of a network risk model proposed by Badescu and Rabeahasaina. It concerns a company which must separate a "central manager branch" (CB) from other "subsidiary branches" necessary for coping with different types of catastrophes/claims, which must all be kept above 0.

The initial total capital u and income rate c must be split between the branches, in an optimal way.

We show that some problems concerning this model admit exact answers, like for example the ruin probability with one subsidiary, while others don't, forcing one to appeal to approximations.