We consider the capital of an insurance company that employs reinsurance. The reinsurer is assumed to have infinite sources of capital. The reinsurer covers part of the claims, but in return it receives a certain part of the income from premiums of the insurance company. In addition, the reinsurer receives some of the dividends that are withdrawn when a certain surplus level $b$ is reached.

A special feature of our model is that both the fraction of the premium that goes to the reinsurer and the fraction of the claims covered by the reinsurer are state-dependent. We focus on five performance measures, viz., time to ruin, deficit at ruin, the dividend withdrawn until ruin, and the amount of money transferred to the reinsurer, respectively covered by the reinsurer.

Joint work with Onno Boxma and Esti Frostig