# A Noncooperative Foundation of the Nash Rationing Solution[*]

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(preliminary and incomplete)

## Abstract

We study a noncooperative infinite-horizon bargaining model for a claim problem where its Markov perfect equilibrium outcomes converge the Nash rationing solutions of Mariotti and Villar (2005). The bargaining model is an $n$-person non-cooperative game of perfect information. In each period, one player makes a proposal from the set of feasible alternatives of the associated claim problem, and the other players choose to whether accept the proposal on how to share their losses. If the proposal is not accepted unanimously, the game may end probabilistically, in which case the proposing player will be awarded with the residual value after all the other players are awarded with their full claims. Even with only two players, there are generally multiple Markov perfect equilibrium outcomes. We show that as the probability of exogenous bargaining breakdown goes to zero, the limit of any convergent sequence of Markov perfect equilibrium outcomes is one of the Nash rationing solutions of the underlining claim problem. However, not every Nash rationing solution can be the limit of Markov perfect equilibrium outcomes. We identify the set of Nash rationing solutions that can be supported by Markov perfect equilibrium outcomes.

*JEL Classification:* C71; C72, C73; C78

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