

## Abstract

The subject of this bachelors thesis is nonrationality of betting. The first part of thesis is discussing different instruments of risk evaluation. The second part is about Petersburg paradox. This thesis tries to find alternative solution to Petersburg paradox using two methods, the first method is based on repeating high amount of petersburg games. The second method is maximizing the probability of economic survival, which is based on wealth of the player and on bound of economic survival. In the third part of this thesis, Sportka (Czech lottery) is compared with special tournament of poker. The goal of this part is to compare the expected return of investment on playing Sportka and on playing poker without even basic notion about rules and the game strategy. For the estimation of the expected value of poker tournament, different game scenarios are considered, probability of scenarios are based on players behavior according to the Nash equilibrium.

**Keywords:** Betting, expected value, Petersburg paradox, lottery, poker, Nash equilibrium