1059-91-131

Bogdan Grechuk (bgrechuk@stevens.edu), **Anton Molyboha*** (amolyboh@stevens.edu) and **Michael Zabarankin** (mzabaran@stevens.edu). *Cooperative games of investors with general deviation measures.*

Cooperative games with players using different law-invariant deviation measures as numerical representations for their attitudes towards risk in investing to a stock market have been formulated and investigated. As a central result, it has been shown that players (investors) form a coalition (cooperative portfolio) that behaves similar to a single player (investor) with a certain deviation measure. An explicit formula for that deviation measure has been obtained. An approach to optimal risk sharing among investors has been developed, and a "fair" division of the cooperative portfolio's expected gain, belonging to the core of a corresponding cooperative game, has been suggested. (Received February 21, 2010)