# **Asset Allocation Models in Discrete Variable**

### Marius Rădulescu

Institute of Mathematical Statistics and Applied Mathematics, Casa Academiei Române, Calea 13 Septembrie nr.13, RO-050711, Bucharest 5, ROMANIA, e-mail: mradulescu@csm.ro

#### Constanța Zoie Rădulescu

National Institute for Research and Development in Informatics, 8-10 Averescu Avenue, 011455, Bucharest 1, ROMANIA, e-mail: radulescu@ici.ro,

## Gheorghiță Zbăganu

Faculty of Mathematics and Computer Science, University of Bucharest, Academiei 14, Bucharest, RO-010014, ROMANIA, email: zbagang@fmi.unibuc.ro

#### Dedicated to the 60th anniversary of Professor Dr. N. Andrei

**Abstract:** In the classical portfolio selection theory the value of the assets is considered infinitely divisible. In the real portfolio selection models one should consider only finitely divisible assets. This is because the investors purchase only a finite number of shares or minimum transaction lots. We present several asset allocation models in discrete variable and we make an analysis of the results. Our models are closer to reality but they are more difficult to be solved.

Keywords: portfolio selection, asset allocation, finitely divisible assets, minimum transaction lots, integer programming model