CRITICAL LINE ALGORITHM IN PORTFOLIO ANALYSIS

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Depending on the restrictions and circumstances, various models and methods are used in portfolio selection theory; for instance in the capital market of Iran the short sale is not allowed while in the US market this kind of trade is permitted. The portfolio theory as it stands now was revolutionized by the work of Harry Markowitz, where he argued for the explicit recognition of risk and its quantification in terms of variance. in his work of 1952 Markowitz introduced the notion of a mean-variance efficient portfolio as one that:
1) Provides minimum variance for a given expected return, and
2) Provides maximum expected return for a given variance.
Since then, studies have evolved and new ideas have been brought into this theory. One of these methodologies is based on the critical line algorithm (CLA). The critical line algorithm provides a practical way of reaching the efficient portfolios. This paper is going to study this methodology and the works done related to it, along which we introduce the complete treatment of the general portfolio selection model and apply these models to the portfolios of the insurance companies. The main objective of this paper is to find and introduce a complete treatment of the most general possible portfolio selection model, algorithms on finding efficient portfolios and characteristics of possible solutions in insurance market.

Literature.
1. Dousti N. Critical Line Algorithm in portfolio Analysis. Tehran, 2007.