

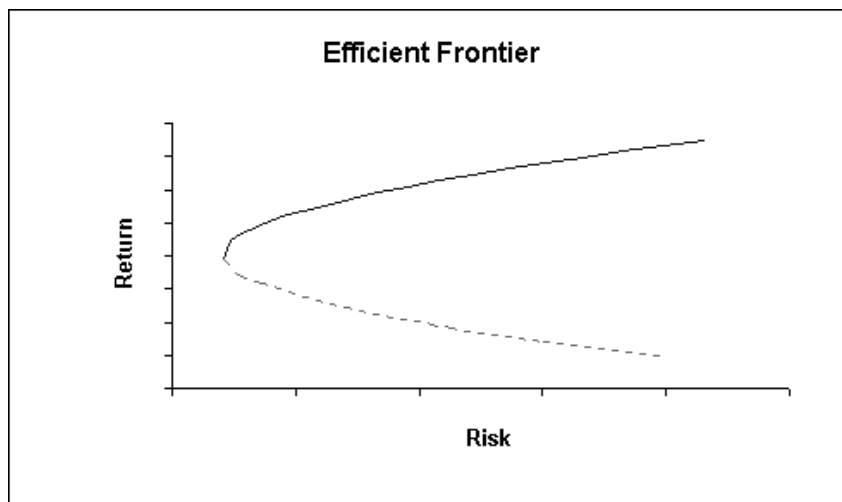
Risky Buisness: Portfolio Optimisation

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Almost everyone owns a portfolio of assets. This portfolio is likely to contain real assets such as a car or a house, as well as financial assets such as stocks and bonds. The composition of the portfolio may be a result of guess work or deliberate planning. An investor is faced with a choice from an enormous number of assets. When one considers the number of possible assets and the various possible proportions in which each can be held, the decision process seems overwhelming. Portfolio analysis provides a way of simplifying the decision process. It is concerned with finding the most desirable group of securities to hold given the properties of the individual securities. One particular way of approaching portfolio analysis is to apply *Mean Variance Portfolio Theory*. This involves a) determining the properties of combinations of risky assets (portfolios) given the behaviour of the individual assets, b) delineating the characteristics of the portfolios that make them preferable to others, and c) determining the composition of the preferred portfolios. The set of preferred portfolios have an interesting geometric structure that may be represented in risk-return space by the Efficient Frontier.



This presentation will illustrate and discuss the optimisation of portfolios, and the construction and interpretation of the Efficient Frontier using real financial data.