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21251. *Modeling Portfolios using Big Data: Histories and Weight Presentation.*

Every investment has a risk associated with it. Depositing money at the bank has a lower risk than hiding cash under a mattress. However, a FDIC (Federal Deposit Insurance Corporation) insured bank account generally offer a lower return than any other investment such as equities (stocks), debt (bonds) or commodities (corn, oil, etc.). This paper addresses the optimization of a market risk management given an exposure by modeling asset portfolios. The asset portfolio modeling will consist of using Markowitz Frontiers, Efficient Frontiers and Long Frontiers. A frontier is a group of optimal portfolios offering the highest return for a well-defined level of risk or the lowest risk for a certain level of expected return. This paper will use real asset data, including big data, to compute the long frontier and observe how it evolves within a defined time period. Furthermore, with the consideration of a group of assets, we will examine how adding more asset data influences the frontier curve. Furthermore, we will explore how some analytical factors can influence the choice of the risk aversion coefficient. (Received September 20, 2016)