Retro Simulation Model for Demand-based Inventory Control

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Abstract. Inventory control has been extensively studied in the academia, but in most business practices, managing inventory is far from systematic ordering. In this paper, we propose a 'retro simulation' model, in which, using a set of shipping and inventory data for the most recent past period, computer program examines various inventory control models, such as reorder point model and periodic order model; and determines the series of resulting 'model inventory' that would have been obtained if the inventory model had been applied during the period of time. Comparing the model inventory data with the actual inventory data, the best inventory control model can be selected. An example demonstrates a significant saving of inventory.

Keywords: Inventory control, Simulation, Ordering policy