Original Article

Optimizing Working Capital Management via Intelligent Systems for the Pharmaceutical Companies Listed on the Tehran Stock Exchange

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Abstract

Introduction: Optimizing working capital management has a significant role in increasing the effectiveness and reducing costs as a low-cost fund. The purpose of this research is to optimize working capital management in the pharmaceutical industry by using intelligent systems.

Method: The method of this research is analytical-mathematical, and in terms of purpose, it is an applied research. The sample of the research includes 24 pharmaceutical companies listed on the Tehran Stock Exchange during 2009-2014. The behavior of dependent and independent variables was modelized with Radial Basis Function Neural Network and then the optimal values of independent variables were reached through Advance Source Searching within a top-level domain.

Results: The results of the research indicate that in the pharmaceutical industry, the minimum optimal receivable turnover period is 10 days and the maximum is 45 days. The optimal payable period is between 40 to 54 days, and the optimal inventory turnover period per optimal profitability is between 252 and 273 days.

Conclusion: The optimal values of receivable period indicate that in order to receive the best profitability in the pharmaceutical industry, credit sale must be received in short terms (maximum 45 day), and credit sale is a suitable way for attracting customers. Raw materials should be purchased from suppliers on credit in order to avoid the early exit of sources, but the payment period should not to be more than 54 days. Long payment period might make suppliers avoid working with company. Also, inventory should circulate on average between minimum 252 and maximum 273 days. Therefore, it is suggested to managers that in managing working capital and budgeting, consider the optimal values obtained in this research.

Keywords: Advance Source Searching, Working Capital, Operating Profit and Loss, Radial Basis Function Neural Network.

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