Paper No: SE-07 **Systems Engineering**

A Model to Optimize the Sales and Purchases Invoice Payments of Working Capital in the Fast-Moving Consumer Goods Industry

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Abstract **- Working capital optimization is critical in real business scenarios since it changes dynamically along with complex physical cash flows. In previous literature, working capital payment optimization mainly focused on the cash conversion cycle and cash on hand. In those studies, the objectives were to maximize the profit, maximize on hand cash flow or minimize the cost during the predefined period. However, in most cash maximization models, the time value of the money concept was not addressed. Further, in real-world scenarios, the time value of the money concept mainly affects theworking capital and cash flow performances. In the proposed model, the time value of money concept was considered to get actual available cash at present. The objective of this proposed model is to maximize the current value of the money on hand while minimizing the cost within the considered time frame. Themodel was tested using Python along with CPLEX libraries. This study will be helpful to researchers, academics, and those working in the finance sector of the manufacturing industry to make better decisions on working capital invoice payments.**

Keywords - FMCG Industry, optimization, supply chain finance, working capital