

STOCHASTIC OPTIMIZATION OF AN OIL SECTOR'S PROJECT PORTFOLIO

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ABSTRACT

This paper presents a methodological propose in order to apply classical portfolio theory into a potential assets portfolio, to achieve a proper exposure a study case is shown. The study case considers an upstream enterprise in Bolivia with a twelve projects portfolio and capital and physical execution capacity constraints.

A review of the regulatory framework and technical characteristics of each project is performed by adding the factor of the volatility of input variables to the model. Therefore the value generation of project portfolio is analyzed thru three objective functions. Finally, results with stochastic optimization and portfolio of projects selected are presented

Keywords: Portfolio Theory, Project Portfolio, Hydrocarbons Sector.