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The Perfect Exploration and Development Investment Portfolio

Ranking exploration and development investment choices and constructing investment portfolios is often an intuitive process or done with a set of financial models that do not have a unique solution. It is unknown if investments choices and funding are optimal. Constructing the Perfect Portfolio defines the financially optimum project mix regardless of risk tolerance.

Project financial comparisons are modeled at the expected, mean, case. Financial risk is quantified using the variance between the median and high-side cases. The Efficient Set contains possible portfolios that offer the highest return for every level of risk. The Perfect Portfolio is defined at the tangent of the curved Efficient Set and a straight line connecting the return for risk-free investments.

The Perfect Portfolio defines the percent capital used to fund each project regardless of the total number of investment choices available. This contrast to most financial portfolio models that attempt to define optimum working interest of individual projects based on firm risk tolerances, independently of other investment options and are, therefore, non-unique. Managers and firms that desire higher return or lower risk portfolios will maintain the same investment choices and change participation in the Optimum Portfolio by borrowing to investing more or lending by including risk-free investments. They will not seek higher returns or lowering risk by changing the portfolio mix.

Combined use of forward-looking financial projections, measurements of financial return, and the measurement of financial risk are unique. This new model is successfully applied to define The Perfect Exploration and Development Investment Portfolio.