Abstract

In this paper, we focus on designing a real-time risk management system. The system will be using CME SPAN and will consist of a multithreaded daemon process to evaluate portfolios using SPAN calculation engines and programs to determine parameters fed to SPAN. SPAN parameters can be estimated by several methods using historical data. One of the goals is to
Designing a System to Analyze Portfolio Risks and to Determine Optimum Margin Requirements

determine the best method for each parameter for every asset class. The other goal is to
develop a responsive system to analyze portfolios and orders in real-time and to update the
portfolio risks accordingly. Ultimately when these two parts are combined, we'll be constructing
a real-time system to evaluate portfolio risks and to determine optimum margin requirements.

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Index Terms

Computer Science
Applications

Key words

Financial risk management
Derivatives
Portfolio analysis

Estimation methods
SPAN