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嵌入战略因子的VaR模型改进研究

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Improved VaR Model by Embedding Strategic Factor

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摘要 传统VaR模型是一种衡量短期投资风险的常用工具,但其衡量长期风险的有效性仍然有所欠缺。并且,传统VaR方法基于历史数据对未来风险进行估算的基础性假定已引起诸多学者的质疑。据此本文提出基于战略考虑的VaR模型改进问题。首先提出战略因子这一综合评价企业战略的概念,然后利用德尔菲法和模糊层次分析法求出其具体表达式,最后基于实证数据的拟合将其嵌入到原有VaR模型中,得到改进后的战略在险值(Strategic Value-at-Risk, SVaR)模型。实证检验的结果表明,改进后得到的SVaR模型预测的长期风险值要比原VaR模型更加准确。

关键词 : **战略因子**　**长期投资风险**　**SVaR模型**

Abstract : Traditional VaR model is a commonly used tool for measuring risk of short-term investment, but it is not effective in measuring risk in the long run. In addition, some scholars have doubted the basic assumption of traditional VaR method which estimates future risk by historical data. Accordingly, this paper intends to improve VaR model by taking strategy into account. First, a concept of strategic factor, which can comprehen-sively evaluate corporate strategy, was proposed. By using Delphi method, questionnaires are distributed to the 15 selected experts in the related area, and screened out 23 pivotal strategic elements. Afterwards, the formula of strategic factor was obtained by Fuzzy Analytic Hierarchy Process (FAHP). Based on the g-hVaR model, strategic factor is embeded into the g-h VaR model and the SVaR (Strategic Value-at-Risk) model is built. Daily closing price data of 52 Shanghai-listed companies in the pharmaceutical industry from January 2, 2007 to December 31, 2012 were collected for empirical analysis. The data of 50 companies were used for modeling, and the rest 2 were used for model verification. The results of likelihood-ratio testing and empirical testing reveal that the SVaR model is more accurate than the original VaR model in predicting the future risk of stock investment. Our research may enrich and optimize VaR theory and shed light on the research of financial risk.

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
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