

# **Java application for using hedging futures**

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## **Abstract**

**Financial Problem:** In modern society, more and more financial products are established and most of the investors will be confused for property of these fresh financial products. It is difficult to understand new products positioning. It leads to many financial products out of service. For example, hedging using futures is a financial way to limit and control risk and returns. However, hedge need complex calculate and correct calculation steps. If investors are desire to make a profit by hedge, they should realize what is a hedging and have accurate and fast computing ability. For these problems, to provide a software system that will replace understanding and calculation process to achieve hedge aim.

**Technology Problem:** This software will choose spot market and futures market past data. There is a burst in data. So, select an appropriate time interval is the most important job. On the other hand, the data preprocessing is difficulty as well. Huge data located in the websites. Screen data and change data format and type to keep data are the heart of the matter. The solution is to use different kind of file to hold various stages of the data and use java software to display the final data.

**Objectives:** To create software that will manage and calculate data to replace hedge theory and manual calculation. Then hand a best investment advice to investors.

**Methodology:** The system will use excel to hold data of spot and futures markets on the internet, filter the useless data and change the data format. Excel file export data to the txt file. Java system will edit, add, delete and store the txt file. The final stage is calculation. Java system will calculate standard deviation of spot and futures price and correlation between spot and futures. Then calculate the optimal hedge ratio.

**Achievements:** The built system is similar with data management software and financial calculator. Investors are able to search the spot and futures data from the website and store it in specific file. Then system will output the investment advice.