ศึกษาการเปลี่ยนแปลงของเงินสดสุทธิของเลขานุการและปัจจัยที่ส่งผลต่อ

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Abstract

The variation in currency exchange rate of the Japanese yen, the British pound sterling, and the German deutschemark, in terms of the US dollar, is investigated, and a methodology for modelling their stochastic volatility is developed. The currency exchange rate data was collected from 3rd January 1986 to 12th April 1994, comprising 2,158 successive trading days. Time series analysis and stochastic volatility models are used in the data analysis. The exchange rate returns between the pound, the yen and the deutsche mark relative to the US dollar were highly positively associated with each other. There is highest correlation between the pound sterling and the deutsche mark. Furthermore, the pound sterling and the deutsche mark have the highest correlation in their standard deviations (volatility), the skewnesses and the kurtoses for exchange rate returns. The correlation of all four currency exchange rate returns was assessed by taking each currency in turn as the referent currency. The highest correlation of the exchange rate returns was observed between the pound and the deutsche mark. The correlation coefficients of these correlations were similar for the four currency exchange rates, except for those between the yen and the pound with the dollar and deutsche mark as the reference exchange rate, respectively (0.617 and 0.252 respectively). For the three currencies relative to the US dollar, the volatility for each currency tended to follow the same pattern. Based on a simulation study, the estimated standard deviations and kurtosis coefficients of the exchange rate returns are close to those for the data, while the estimated skewness coefficients are less than those of the data. However, their volatility series look like those based on the data. The time series analysis of the volatility of the data and simulated data, show that the volatility of the exchange rate returns is not constant, with unpredictable currency exchange rate returns. General statistical tests are needed to test for constant volatility, skewness, and kurtosis.