The Impact of Interval Effect on The Estimation of Beta:An Empirical Study of Companies Listed on American Stock Exchang

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ABSTRACT

The estimation of beta (β) coefficient is an important issue in the risk management of asset portfolio. The empirical study results from foreign and domestic scholars showed that the return interval to the estimation of β coefficient would have the so called "interval effect." Hawawini ’ s (1983) model has been used the intertemporal and contemporaneous correlation coefficient of the individual stock and total market return interval to explain the interval effect. In this study, the research objects were those companies listed in the three major U.S. stock exchanges. Top 30 each from 5 industries were chosen as research sample. Data periods covered from 1997 to 2006. At first, this study tries to examine if the interval effect exists in the U.S. stock market, and then to test if Hawawini ’ s (1983) model can be applied to different industries. This study also attempts to examine if it is possible to estimate the β coefficient through the return of different interval. The results showed that the interval effects existed in the U.S. market, but only few industries support the Hawawini ’ s (1983) theory. Finally, the results also confirmed that β coefficient can be estimated by Hawawini ’ s (1983) model using dif-ferent interval return.

Keywords : estimation of Beta coefficient ; interval effect ; intertemporal correlation cofficient ; contemporaneous correlation cofficient

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