Abstract

Capital Asset Pricing Model (CAPM) is an equilibrium model to test relationship between expected return and market risk (Sharpe, 1964). The model research on pricing and return when the securities market reaches equilibrium and investors are rational and investing by diversification based on Markovitz portfolio theory (Markovitz, 1952). Fama and MacBeth (1973) proposed a cross-sectional testing methodology on CAPM and this regression method has been widely used in testing CAPM in developed markets since then. While CAPM is hard to explain more and more market anomalies (excessive return in smaller market value company) in cross section regression, Fama and French (1992) added two more factors (SMB and HML) and proposed three factor model. The empirical results show that three factor model is superior to CAPM in developed markets. Relevant studies have been conducted by Manjuunatha (2006) and Trimech et al. (2015) but show different results. This dissertation will use Fama-MacBeth cross section approach to test CAPM and Fama-French's three factor model in Chinese and Polish stock market respectively. Following Fama and MacBeth (1972) and Shweta and Anil (2015), three sub periods of Polish and Chinese stock market returns ranging from 2007 to 2018 are examined. The empirical results in this thesis covering different time periods aim to support CAPM and three factor model by providing emerging markets evidence but the empirical results in Chinese and Polish stock markets do not unambiguiously support Capital Asset Pricing model and Fama-French's conclusion. The thesis also refers to GARCH model and Maximum Likelihood estimation to test volatility in Chinese and Polish stock market. As supplement of volatility test, this thesis follows Phillips, Wu and Yu (2011) and Deng (2013) to run newly-proposed supADF and supKSS, namely bubble tests. The results show that over-volatility and bubbles exist in both Chinese and Polish stock markets, especially during crisis period.

Key words: Capital Asset Pricing Model; portfolio theory; Fama-French Three-factor model; Fama-MacBeth cross-sectional approach; GARCH model; supADF; over-volatility