

The volatility effect in the Hong Kong stock market

Ji Wu

Lincoln University, New Zealand

ji.wu@lincolnuni.ac.nz

fax: 64-3-325-3847

phone: 64-3-669-0686

Gilbert V. Nartea

Lincoln University, New Zealand

Gilbert.nartea@lincoln.ac.nz

fax: 64-3-325-3847

phone: 64-3-325-3627 extn 8368

Christopher Gan

Lincoln University, New Zealand

Christopher.gan@lincoln.ac.nz

fax: 64-3-325-3847

phone: 64-3-325-3627 extn 8155

Abstract

We investigate the time series behavior of both total volatility (TV) and idiosyncratic volatility (IV) and its role in asset pricing in the Hong Kong stock market. We measure a stock's idiosyncratic risk by its idiosyncratic volatility which is defined as the standard deviation of residuals from the Fama-French (1993) model, and a stock's total volatility which is defined as the standard deviation of past daily returns. We then follow the portfolio-sorting approach of Ang et al. (2006) but sort stocks based on idiosyncratic volatility (total volatility) into three portfolios instead of five due to the smaller size of the Hong Kong stock market compared with the U.S. market. We relate 1-month lagged idiosyncratic volatility (total volatility) to the current month's portfolio return. We find that average idiosyncratic volatility (total volatility) of Hong Kong stocks has increased over our study period but market volatility has declined. The average equal- and value-weighted firm-level idiosyncratic volatility (total volatility) cannot predict one-month ahead excess market returns. We also find a positive relation between IV (TV) and abnormal returns, similar to the findings of Malkiel & Xu (2006) and Fu's (2009) findings in the U.S. stock markets, and Brockman et al's (2010) findings in the Hong Kong stock market. More importantly, we also found that investors could generate higher portfolio returns by using IV to sort portfolios than by using TV. Moreover, by using weekly stock return data to re-estimate IV, the positive relationship between IV and expected stock returns still exists in the Hong Kong stock market. The results imply 1) the correlation of among stocks in the Hong Kong market have declined over time, which means an increase in the benefits from diversification, and 2) firm-level measures of idiosyncratic volatility cannot be used to predict market returns and 3) that investors in the Hong Kong stock market can systematically increase their portfolio returns by going long stocks with high and short stocks with low idiosyncratic volatility.

Key words: idiosyncratic volatility, total volatility, Asset pricing model, Hong Kong stock market