Linkage between stock volatility and corporate bond yield spread in Thailand

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Abstract: This paper studies the relationship between stock volatility and corporate bond yield spread in Thai market by using Campbell and Taksler (2003) panel data regression approach. The results show that the equity volatility's variables, such as firm's idiosyncratic risk, market risk, individual stock return and market return, are matter to explain the corporate bond yield spread. Surprisingly, these variables could explain the spread better than credit rating variables. Furthermore, during bear market period, only corporate bond yield spreads in financial firms are increasing significantly. Some of the deterministic yield spread parameters such as level and slope of interest rate also alter from bull market period.

Key words: stock volatility; corporate bond yield spread; idiosyncratic risk; market risk

1. Introduction

Thailand is a developing country in South East Asia and the capital market had just emerged since April 1975. The financial system of the country is a bank-based system. However, after financial crisis in 1997, many public firms had financed their fund by either issuing corporate bond or issuing equity in stock market instead since most banks faced with tight liquidity problem, and the need to reduce the credit line or put more strictly covenants to customers. Therefore, both stock and bond markets were growing as shown in Fig. 1.

From Fig. 1, after the country was recovered from economic crisis in 2002, the size of stock market has expanded almost doubled in 2003, while the bond market and bank loans were slightly increasing. However, both debt instrument markets were less volatile when comparing to the equity market during the past years. Recently, Thai market is going to economic recession again during 2007-2008 due to sub-prime crisis in U.S. market and political uncertainty in the country.

As we know, both debt and equity instruments rely on the firm's performance and are also driven by the same firms' specific information and risk in the business. Hence, both instruments will have some linkages. One linkage that will be observed in this study was the linkage between stock volatility and corporate bond yield spread.

Basically, the volatility is an instrument that measures the risk during a specific period, whereas the credit spread is the difference in yield between corporate bond and government bond. This spread reflects the probability of default of the firm along with the risk premium that bondholder required from investing in corporate bond. Generally, when new information arrived, value of firms may change. Good news will raise the value, while bad

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