CHAPTER 5

Conclusion

5.1 Conclusion

This study analyzed Bivariate Extreme Value analysis of construction industry stock price and stock exchange in ASEAN. The thesis has 2 objectives; firstly, to study the nature of the construction industry's stock exchange which is analyzed from the balance sheet of the securities. The securities in this study are of Siam Cement Public Company Limited (SCC) and Siam City Cement Public Company Limited (SCCC) from Stock Exchange of Thailand (SET), Gamuda Berhad (GAM) and IJM Corporation Berhad (IJM) from Bursa Malaysia (MYX), Chip Eng Seng Corporation Limited (CES) and Low Keng Huat Limited (LKH) from Singapore Exchange (SGX). This study has chosen 3 of the best market capitalizations from ASEAN exchanges (Singapore, Malaysia, and Thailand). The data in this study was closing stock price of securities from 2nd January 2013 to 31thJanuary 2015 (total 4419 data). First of all, we tested the stationary or unit root test by Augmented Dickey-Fuller test (ADF test) and Phillips-Perron test (PP test). Since the data used in this study was time series data, all securities had stationarity at I[0]. It was done by using the estimation of Bivariate Generalized Extreme Value Distribution (BGEV) and Bivariate Generalized Pareto Distribution (BGPD) to find the Bivariate Extreme values, thus bringing the data to calculate the return of each asset. This thesis can be concluded as follows:

5.1.1 Conclusion of financial statement.

Conclusion of the nature of the construction industry's stock exchanges in ASEAN exchanges, from the analysis financial status of Siam Cement Public Company Limited (SCC) and Siam City Cement Public Company Limited (SCCC), Gamuda Berhad (GAM), IJM Corporation Berhad (IJM), Chip Eng Seng Corporation Limited (CES), and Low Keng Huat Limited (LKH), it was found that the 3 interested companies of the construction group in ASEAN are Siam Cement Public Company Limited (SCC), Gamuda Berhad (GAM), and IJM Corporation Berhad (IJM), respectively. The study was analyzed from the highest market capitalized and good performance operation of each company. Therefore, the study concludes the 3 interested and reasonable companies of the construction group in ASEAN among them are Siam Cement Public Company Limited (SCC), Gamuda Berhad (GAM), and IJM Corporation Berhad (IJM), respectively. However, before making an investment, investors should go through the detail to study and understand the considered investment because investment is always risky.

5.1.2 Conclusion of stationary test or Unit root test.

From the result of stationary test or Unit root test by Augmented Dickey-Fuller test (ADF) and Phillips-Perron test (PP test), the result showed that Siam Cement Public Company Limited (SCC) and Siam City Cement Public Company Limited (SCCC), Gamuda Berhad (GAM), IJM Corporation Berhad (IJM), Chip Eng Seng Corporation Limited (CES), and Low Keng Huat Limited (LKH) have stationary level at the significance level of 0.01.

5.1.3 Conclusion of Bivariate Block Maxima Method and Bivariate Threshold Exceedances.

According to the analysis of Bivariate Extreme Value between Stock Exchange of Thailand (SET) with Siam Cement Public Company Limited (SCC) and Stock Exchange of Thailand (SET) with Siam City Cement Public Company Limited (SCCC), the result indicated that the stock price index of SET with the stock price of SCC had Bivariate Extreme Value relationship in extreme event

cases but the relationship was not strong in Bivariate Block Maxima Method, whereas the stock price index of SET with stock price of SCCC had the same result. The model between the stock price index of SET and the stock price of SCC was the Logistic Model (log). The stock price index of SET with stock price of SCCC was Asymmetric Logistic Model (alog). Next, Bursa Malaysia (MYX) with Gamuda Berhad (GAM) and IJM Corporation Berhad (IJM) found that that the stock price index of MYX with stock price of GAM had Bivariate Extreme Value relationship in extreme event cases but the relationship was not strong for Bivariate Block Maxima Method. Moreover, the stock price index of MYX with stock price of IJM had the same result. The model between the stock price index of MYX and stock price of GAM was the Logistic Model (log). The stock price index of MYX with stock price of IJM was the Asymmetric Logistic Model (alog). Lastly, Singapore Exchange (SGX) with Chip Eng Seng Corporation Limited (CES) and Low Keng Huat Limited (LKH) had the stock price index of SGX while the stock price of CES has Bivariate Extreme Value relationship but the relationship was not strong for Bivariate Block Maxima Method. However, the stock price index of SGX with the stock price of LKH had the same result. The model between the stock price index of SGX and stock price of CES was the Asymmetric Mixed Model (amix). Additionally, the stock price index of SGX with stock price of LKH was Asymmetric Mixed Model (amix).

According to the results of Bivariate Threshold Exceedances between SET with SCC and SET with SCCC, the result indicated that the stock price index of SET with the stock price of SCC had Bivariate Extreme Value relationship in extreme events cases but the relationship was not strong in Bivariate Threshold Exceedances, whereas the stock price index of SET with the stock price of SCCC had the same result. The model between the stock price index of SET and stock price of SCC was the Husler – Reiss's Model (hr). The stock price index of SET with stock price of SCCC was the Coles-Town's Model (et). Next, MYX with GAM and IJM found that that the stock price index of MYX with the stock price of GAM had Bivariate Extreme Value relationship in extreme event cases but the relationship was not strong for Bivariate Threshold Exceedances. Moreover, the stock price index of MYX with the stock price of IJM had the same result. The

model between the stock price index of MYX and stock price of GAM was the Husler – Reiss's Model (hr). The stock price index of MYX with stock price of IJM was the Bivariate Negative Logistic Model (neglog). Lastly, SGX with CES and LKH had the stock price index of SGX with stock price of CES has Bivariate Extreme Value relationship but the relationship was not strong for Bivariate Threshold Exceedances. However, the stock price index of SGX with stock price of LKH had the same result. The model between the stock price index of SGX and stock price of CES was the Coles-Town's Model (et). Additionally, the stock price index of SGX with stock price of LKH was the Bilogistic Model (bilog).

According to the results of Bivariate Extreme Value, which benefitted from the investors who made the decision for investment, this study found that all assets were dependent or Bivariate Extreme Value relationship but the relationship was not strong. It means that during the expected period of each, the stock market was likely to rise, or at high peak, all assets might increase. Therefore, if the stock price index of SET is likely to rise then it may not affect much on the stock price of SCC and SCCC. That result has the same effect for MYX with GAM and IJM, SGX with CES and LKH. As a result, all assets are attractive to investors.

5.2 Suggestions

5.2.1 This study has found Bivariate Extreme Value of the construction industry's stock exchanges in ASEAN exchanges, in case of only Maximum Return. Accordingly, the result will show just return of the construction industry's stock exchanges in ASEAN exchanges or show in an uptrend situation of the exchange market. The study do not consider about the downtrend situation of the exchange market. Thus, if the investors consider the maximum loss, it will help them see more situations at exchange market and help them make decision to invest.

5.2.2 In this analyzed Bivariate Extreme Value of the construction industry's stock exchanges in ASEAN exchanges, it has several limitations because this study has just analyzed 2 companies from 3 exchange markets in ASEAN. This may result in the insufficient data for the investors who should study more assets to help them make decision to invest.

5.2.3 In this analyzed Bivariate Extreme Value of the construction industry's stock exchanges in ASEAN exchanges, private sectors could be use this result to invest in construction industry. But the private sectors should be known the situation in each country of ASEAN before invest. It will help them see more information.

5.2.4 In this analyzed Bivariate Extreme Value of the construction industry's stock exchanges in ASEAN exchanges, government sector should support the growth of construction industry in their countries. Because of this business main factor for develop their countries.