

The Impact of Subprime Crisis on the Dependence between the US and the Asian Stock Markets

劉思筠、note

E-mail: 347804@mail.dyu.edu.tw

ABSTRACT

The impact of globalization and liberalization caused flowing of capital to international stock markets which enhanced the international interaction. Bae, Karolyi and Stulz (2003) indicated that correlations between negative returns of international stock markets as risky infection. The US, as a leader of economic heart in the world occurred the subprime mortgage crisis in 2007, cost of USD 100 billion as according to the estimation of Bernanke. Thus, this study discussed the changes produced by the US subprime mortgage crisis to the major Asian stock markets. This article based on bounds Test proposed by Pesaran and Smith (2001) did not consider the stationary variables and samples. When the samples were divided into whole period, the preceding period, the middle period and the later period in the subprime crisis, it came out the six countries and the US had not any cointegration during the whole period. However, Taiwan and China had a one-way cointegration in the preceding period, while Taiwan and Hong Kong had two-way feedback relationship in the later period. According to Granger's (1969) definition of Granger causality test, we found subprime mortgage crisis changed the long term relationship of US with Taiwan, China and Hong Kong. In the meantime, it also enhanced the short term relationship of US with South Korea and Japan, the mutual influences between Taiwan and the US were strengthened, Singapore and Hong Kong kept the same relationship before crisis, while China switched relationship to weakness. Therefore, this study inferred subprime mortgage crisis enhanced the dependence of US stock with Taiwan stock and stronger with Hong Kong stock, while Singapore kept original at short term. China became a very good country to distinguish the risk from investment. South Korea and Japan were deeply influenced by US stock in short term. It seemed to reveal US information was transmitted quicker than ever.

Keywords : Subprime Mortgage Crisis, Bounds Test, Cointegration, Granger Causality Test

Table of Contents

內容目錄	
封面內頁	
簽名頁	
中文摘要	iii
英文摘要	iv
誌謝辭	v
內容目錄	vi
表目錄	viii
圖目錄	ix
第一章 緒論	1
第一節 研究背景與動機	1
第二節 研究目的	4
第三節 研究流程與架構	5
第二章 文獻探討	6
第一節 次級房貸的成因與影響	6
第二節 股市關聯性研究學理基礎	16
第三節 文獻整理	17
第三章 研究方法	23
第一節 單根檢定	23
第二節 邊界共整合檢定	24
第三節 Granger 因果關係檢定	25
第四章 實證結果與分析	27
第一節 資料來源及樣本選取	27

第二節	基本統計特徵	27
第三節	邊界共整合檢定	29
第四節	Granger 因果關係檢定	30
第五節	與過去文獻之比較	34
第五章	結論	36
參考文獻		38

REFERENCES

一、中文部份方文碩, 王冠閔, 董澍琦(2006), 亞洲融危機期間股票市場的蔓延效果, 管理評論, 25 (2), 61-82. 呂友正 (2002) 台灣、美國、日本、香港與中國大陸股市共移性與股價波動外溢效果之研究-Volatility Switching GARCH模型之應用, 國立台北大學合作經濟學研究所未出版之碩士論文。何美玥 (2002, May), 活絡市場、強化經濟體質, 實用月刊, 5, 10-17. 李宗澤 (2009), 美國次級房貸發生對亞洲華人國家股票市場報酬之蔓延效果分析, 嶺東科技大學財務金融研究所未出版之碩士論文。宋詩怡 (2008), 次級房貸事件對美國與台灣股市之衝擊分析, 國立台北大學統計學系研究所未出版之碩士論文。勝宏 (2004), 國際股市關聯性結構之研究-Copula模型之應用, 國?臺灣科技大學資訊管?學系未出版之碩士?文段光齡(2000), 台灣與亞太各國股市間關連性與動態相關係數之研究, 台北大學企業管理學系未出版之碩士論文。柯志昌 (2001), 國際股市連動關係之研究-以台、港、日、美為例, 國立中正大學企業管理研究所未出版之碩士論文。郭丁任 (2008), 美國次級房貸危機前後主要國際股價指數關聯性之實證分析, 朝陽科技大學企業管理系未出版之碩士論文。婁天威 (2009), 世紀初金融海嘯我國與日本股市政策實證分析, 永續發展與管理策略, 1 (2), 1-19. 陳元保 (2007), 殃及全球的美國次級房貸危機—融創新或?融危機? http://news.cier.edu.tw/Tmail/about_3.asp?sno=983. 陳淑惠 (1995), 銀?資產證券化之研析, 彰銀資?, 44 (1), 14-20. 許振明, 陳沛柔 (2008), 次級房貸風?於我國之?思, 財團法人國家政策研究基?會 <http://www.npf.org.tw/particle-3037-3.html>. 張學濤, 季棟偉, 劉延敏 (2010), 我國股票市場與國際股票市場聯動性的實證研究, 商場現代化, 628, 55-56. 黃?澤 (2008), 談次級房貸風?衍生之會計問題, 會計研究月刊, 266, 121. 彭德明, 施燕 (2005), 國際?融變局下亞洲與世界經濟發展之趨勢, 中央銀?季刊, 27 (3), 84-86. 越鵬, 曾劍云 (2008), 香港、台北、紐約股市收益及波動亦出效應的實證研究, 工業技術經濟, 27 (7), 145-149. 葉貴子 (2010) 次貸危機後蔓延效應在國際股市間是否真的存在? 國立高雄第一科技大學風險管理與保險所未出版之碩士論文。董澍琦, 楊聲勇, ?淑鳳 (2005), 股票報酬與經濟成長-亞太新興國家之實證研究, 東海管?評?, 7 (1), 285-304. 趙永? (2008), 美國次級房貸事件對全球經濟與?融體系發展之衝擊與影響, 東亞?壇季刊 (461) 1-27. 趙永祥, 王建民 (2008), 美國次級房貸風暴對兩岸經濟與金融衝擊之探討, 東亞論壇季刊, (460), 17-35. 黎明淵, 林修葳, 郭憲章, 楊聲勇 (2001), 美、日股市巨幅波動下的股市連動效果-美國、日本與亞洲四小龍股市實證結果, 2001年財務金融理論暨實務研討會, 台灣財務學會。廖珮真(1993), 美、日、英、港、台五國股市報酬多元時間數列關聯性之研究, 國立台灣大學商學研究所未出版之碩士論文。蔡明修 (2002), 亞洲股市互動關係與波動影響因素之探討, 國立台灣科技大學企業管理研究所未出版之碩士論文。蔡明輝 (2007), 以次級房貸風暴為對象之股市關聯應用研究, 國立政治大學資訊管理研究所未出版之碩士論文。儀垂林, 張翠玉 (2010), 次貸危機前後中國內地與亞洲主要股票市場聯動性分析, 產業經濟研究, 48 (5) 79-86. 鄭惠英 (2008), 美國次級房貸事件對美國股市與台灣股市關聯性的影響, 屏東科技大學財務金融研究所未出版碩士論文賴彥君 (2007), 美國次級房貸風暴對全球股價走勢的衝擊與影響-以DCC模型分析, 國立政治大學經濟研究所未出版之碩士論文。謝文良 (2002), 價格發現、資訊傳遞與市場整合-台股期貨市場之研究, 財務金融學刊, 10 (3), 1-31. 謝明瑞 (2007), 談次級房貸對台灣?動產與?融產業的影響, 財團法人國家政策研究基?會。 <http://www.npf.org.tw/particle-3083-2.html> 蘆慧蘭 (2009), 美國次貸風暴相關重大事件對台灣股市之影響-事件研究法之應用, 私立台南科技大學商學與管理研究所未出版之碩士論文。龔灝, 張雪芹 (2010), 成熟金融市場與新興金融市場間的傳導性研究, 成都理工大學學報, 18 (4), 1-8.

二、英文部分Bae, K. H., Karolyi, G. A., & Stulz, R. M. (2003). A New Approach to Measuring Financial Contagion. *The Review of Financial Studies*, 16, 717-763. Cheng, H., & Glascock, J. L. (2006), Stock market linkage before and after the Asian financial crisis: Evidence from three greater China economic area stock markets and the US. *Review of Pacific Basin Financial Market and Policies*, 2, 297-315. Cheung, Y. L., Cheung, Y. W., & Ng, C. C. (2007). East Asian equity markets, financial crises, and the Japanese currency. *Journal of Japanese International Economies*, 21, 138 – 152. Cheung, Y. L., & Mak, S. C. (1992). The international transmission of stock market fluctuation between the developed and the Asia-Pacific market. *Applied Financial Economics*, 2, 43-47. Chinoloy, P. & Macdonald, N. (2005). Subprime Lenders and Mortgage Market Completion. *The Journal of Real Estate Finance and Economics*, 30 (2), 153-165. Chowdhury, A. R. (1994). Stock Market Interdependencies: Evidence from the Asian NIEs. *Journal of Macroeconomics*, 16, 629-651. Demircuc-Kunt, A., & Maksimovic, V. (1996). Stock market development and financing choices of Firms. *The World Bank Economic Review*, May, 10(2): 70-341. Dickey, D. A. & Fuller W. A. (1979). Distribution of the Estimators for Autoregressive Time Series with a Unit Root, *Journal of the American Statistical Association*, 74, 427-431. Dooley, M., & Hutchison, M. (2009). Transmission of the U.S. subprime crisis to emerging markets: Evidence on the decoupling-recoupling hypothesis. *Journal of International Money and Finance*, 28, 1331-1349. Duffie, D. (2008). Innovations in credit transfer: implications for financial Stability. Monetary and Economic Department. Bank for International Settlements, BIS Working Paper, 7, 255. Engle, R. F. & Granger, C. W. J. (1987). Co-integration and Error Correction Representation Estimation and Testing. *Econometrica*, 55, 251-276. Eun, C., & Shim, S. (1989). International Transmission of Stock Market Movements. *Journal of Financial Quantitative Analysis*, 24, 241 - 256. Fama,

E. F. (1970) . Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance*, 25, 383-420 .Fisher, K. P., & Palasvirta, A. P. (1990). High Road to a Global Marketplace:the Inter National Transmission of Stock Market Fluctuation. *The Financial Review*, 25, 371-394.Forbes, K. J., & Rigobon R. (1998). No contagion, only interdependence:Measuring stock market co-movement. *Journal of Finance*, 57, 2223-2261.Forbes, K., & Rigobon, R. (2002). No Contagion, Only Interdependence: Measuring Stock Market Co-movements. *The Journal of Finance*, 5, 2223-2261.Garrett, I., & Spyrou, S. (1999). Common Stochastic trends in emerging equity markets, *Manchester School*, 67, 649-660.Granger, C. W. J. (1969). Investigating Causal Relations by Econometric Models and Cross-Spectral. *Econometrica*, 37, 424-438.Granger, C. W. J. & Newbold P. (1974) . Spurious regressions in econometrics. *Journal of Economics*, 2, 111-20Johansen, S. (1991). Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models, *Econometrica*, 59, 1551-1580.Kasa, K. (1992). Common stochastic trends in international stock markets, *Journal of Monetary Economics*, 29, 95-124.Lin, W., Engle, R. F., & Ito, T. (1994) . Do bull and bears move across borders ? International transmission of stock return and volatility. *Review of Financial Studies*, 7, 507-538.Madura, J. (1998) . International financial management. Ohio: South-Western College Publish, 25-37.Onaran, Y. (2008) . Banks' Subprime Losses Top \$500 Billion on Writedowns. <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a8sW0n1Cs1tY&refer=home>Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds Testing Approaches to the Analysis of Level Relationship. *Journal of Applied Econometrics*, 16, 289-326.Ramchand, L., & Susmel, R. (1998) . Volatility and cross correlation across major stock markets. *Journal of Empirical Finance*, 5, pp.397-416.Reinhart, C. M., & Rogoff, K. S. (2008) . Is the 2007 U.S. sub-prime financial crisis so different? An international historical comparison. Unpublished manuscript.Sandler, A. (2008) . The subprime crisis and its role in the financial crisis. *Journal of Housing Economics*, 17 (4) , 254-261.Sheng, H. C., & Tu, A. H. (2000). A study of cointegration and variance decomposition among equity indices before and during the period of the Asian financial crisis. *Journal of Multinational Financial Management*, 10, 345-365.Shiller, R. J. (2008) . The Subprime Solution: How Today ' s Globe Financial Crisis Happened and What to Do about It. Princeton University, Press pp. 208.Toby, D. (2009) . What motivates a subprime borrower to default? *Journal of Banking and Finance*, 33 (4) , 681-693.