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# Dynamic Linkages Between the Greater China Economic Area Stock Markets—Mainland China, Hong Kong, and Taiwan

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## Abstract

This research examines the linkages among three Greater China Economic Area (GCEA) stock markets, including Mainland China, Hong Kong, and Taiwan, and two developed markets, Japan and the United States. We find that: (1) a random walk model is outpredicted by an autoregressive GARCH model and an ARIMA model in all three GCEA markets; (2) the three GCEA markets are not cointegrated with either U.S. or Japan but there exists weak nonlinear relationships between these markets; and (3) result from the innovation accounting analysis reveals that the U.S. market has larger influence on the GCEA

markets than the Japanese market. Additionally, Hong Kong is the most influential among the three GCEA markets.

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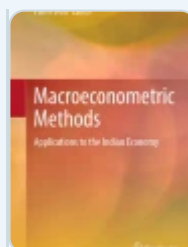
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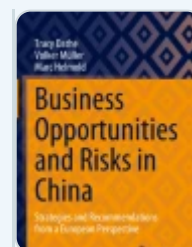
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## References

Allen, M., and G. MacDonald, "The Long-Run Gains from International Equity Diversification: Australian Evidence from Cointegration Tests." *Applied Financial Economics* 5, 33-42 (1995).

[Google Scholar](#)

Aggarwal, R. C. Inclan and R. Leal, "Volatility in Emerging Stock Markets." *Journal of Financial and Quantitative Analysis* 34, 33-55 (1999).

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Aggarwal, R, M. Mougoue, "Cointegration Among Asian Currencies: Evidence of the Increasing Influence of the Japanese Yen." *Japan and the World Economy* 8, 291-308 (1996).

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Aggarwal, R, A. Montanes, and M. Ponz, "Evidence of Long-Run Purchasing Power Parity: Analysis of Real Asian Exchange Rates in Terms of the Japanese

Yen.” *Japan and the World Economy* 12, 351–361 (2000).

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Azman-Saini, W., M. Azali, M. S. Habibullah, and K. G. Matthews, “Financial Integration and the ASEAN-5 Equity Markets.” *Applied Economics* 34, 2283–2288 (2002).

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Campbell, J. Y., and Y. Hamao, “Predictable Stock Returns in the United States and Japan: A Study of Long-Term Capital Market Integration.” *Journal of Finance* 47, 43–70 (1992).

[Google Scholar](#)

Chan, K. C., B. Gup, and M. Pan, “An Empirical Analysis of Stock Prices in Major Asian Markets and the United States.” *Financial Review* 27, 289–307 (1992).

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Cheung, Y., and L. K. Ng, “A Causality-in-Variance Test and Its Application to Financial Market Prices.” *Journal of Econometrics* 72, 33–48 (1996).

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Chowdhury, A. R., “Stock Market Interdependencies: Evidence from the Asian NIEs.” *Journal of Macroeconomics* 16, 629–651 (1994).

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Corhay, A., A. T. Rad, and J. Urbain, “Long Run Behavior of Pacific-Basin Stock Prices.” *Applied Financial Economics* 5, 11–18 (1995).

[Google Scholar](#)

Darrat, A., and M. Zhong, "On Testing the Random-Walk Hypothesis: A Model Comparison Approach." *Financial Review* 35, 105-124 (2000).

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Darrat, A., and M. Zhong, "Permanent and Transitory Driving Forces in the Asian-Pacific Stock Markets." *Financial Review* 37, 35-52 (2002).

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Engle, R. F., and C. W. J. Granger, "Co-integration and Error Correction: Representation, Estimation, and Testing." *Econometrica* 55, 251-276 (1987).

[Google Scholar](#)

Fama, E. F., and K. R. French, 1989. "Business Conditions and Expected Returns on Stocks and Bonds." *Journal of Financial Economics* 25, 23-49 (1989).

[Article](#) [Google Scholar](#)

Geweke, J., "Measure of Nonlinear Dependence and Feedback Between Multiple Time Series." *Journal of the American Statistical Association* 77, 304-313 (1982).

[Google Scholar](#)

Ghosh, A., R. Saidi, and K. H. Johnson, "Who Moves the Asia-Pacific Stock Markets - Japan or US? Empirical Evidence Based on the Theory of Cointegration." *Financial Review* 34, 159-170 (1999).

[Article](#) [Google Scholar](#)

Goetzmann, W. N., and P. Jorion, "Re-Emerging Markets." *Journal of Financial and Quantitative Analysis* 34, 1-33 (1999).

[Google Scholar](#)

Granger, C. W. J., "Development in the Study of Cointegrated Economic Variables." *Oxford Bulletin of Economics and Statistics* 48, 213-228 (1986).

[Google Scholar](#)

Hung, B. and Y. L. Cheung, "Interdependence of Asian Emerging Equity Markets." *Journal of Business Finance & Accounting* 22, 281-288 (1995).

[Google Scholar](#)

International Finance Corporation. 2000. *Emerging Markets Fact Book*. Washington D.C.: IFC.

[Google Scholar](#)

Johansen, S., "Statistical Analysis of Cointegrating Vectors." *Journal of Economic Dynamics and Control* 12, 231-254 (1988).

[Article](#) [Google Scholar](#)

Johansen, S., "Estimation and Hypothesis Testing of Cointegrating Vectors in Gaussian Vector Autoregressive Models." *Econometrica* 59, 1551-1580 (1991).

[Google Scholar](#)

Johansen, S. and K. Juselius, "Maximum Likelihood Estimation and Inference on Cointegration with Application to the Demand for Money." *Oxford Bulletin of Economics and Economics and Statistics* 52, 169-210 (1990).

[Google Scholar](#)

Johnson, R. and L. Soenen, "Asian Economic Integration and Stock Market Comovement." *Journal of Financial Research* 25, 141-157 (2002).

[Article](#) [Google Scholar](#)

Kwok, R. H., "Market Integration in the Four Newly Industrialized Economies of Asia." in T. Bos and T. A. Fetherston, ed., *Advances in Pacific Basin Financial Markets*, Jai Press, Connecticut, 199-209, 1995.

[Google Scholar](#)

Marcus, A. J., "An Equilibrium Theory of Excess Volatility and Mean Reversion in Stock Market Prices." National Bureau of Economic Research Working Paper no. 3106, 1989.

Markowitz, H., "Portfolio Selection." *Journal of Finance* 7, 77-91 (1952).

[Google Scholar](#)

Masih, A. M. and R. Masih, "A Comparative Analysis of the Propagation of Stock Market Fluctuations on Alternative Models of Dynamic Causal Linkage." *Applied Financial Economics* 7, 59-74 (1997).

[Article](#) [Google Scholar](#)

Okunev, J., and J. Wilson, "Using Nonlinear Tests to Examine Integration between Real Estate and Stock Markets." *Real Estate Economics* 25, 487-503 (1997).

[Article](#) [Google Scholar](#)

Phillips, P., and P. Perron, "Testing for a Unit Root in Time Series Regression." *Biometrika* 75, 335-346 (1988).

[Google Scholar](#)

Reimers, H. E., "Comparisons of Tests for Multivariate Cointegration." *Statistical Papers* 33, 335-359.

Sharma, S. and P. Wongbangpo, "Long-Term Trends and Cycles in ASEAN Stock

Markets.” *Review of Financial Economics* 11, 299–315 (2002).

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Siegel,. J., *Stocks for the Long Run*. New York: McGraw-Hill, 1998.

[Google Scholar](#)

Taylor, M. and I. Tonks, “The Internationalization of Stock Markets and the Abolition of U.K. Exchange Control.” *Review of Economics and Statistics* 71, 332–336 (1989).

[Google Scholar](#)

Wheatley, S., “Some Tests of International Equity Market Integration.” *Journal of Financial Economics* 21, 177–212 (1988).

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