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Research Article

Price discovery in the hang seng index markets: Index, futures, and the tracker fund

Raymond W. So, Yiuman Tse

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PDF

Abstract

In this paper, price discovery among the Hang Seng Index markets is investigated using the Hasbrouck and Gonzalo and Granger common-factor models and the multivariate generalized autoregressive conditional heteroskedasticity (M-GARCH) model. Minute-by-minute data from the Hang Seng Index, Hang Seng Index futures, and the tracker fund show that the movements of the three markets are interrelated. The futures markets contain the most information, followed by the spot market. The tracker fund does not contribute to the price discovery process. The three markets exhibit spillover effects, indicating that their second moments are linked, even though the flow of information from the tracker fund to the other markets is minimal. Overall results suggest that the three markets have different degrees of information processing abilities, although they are governed by the same set of macroeconomic fundamentals. © 2004 Wiley Periodicals, Inc. Jrl Fut Mark 24:887–907, 2004

BIBLIOGRAPHY

Baillie, R. T., Booth, G. G., Tse, Y., & Zabotina, T. (2002). Price discovery and common factor models. *Journal of Financial Markets*, 5, 309–321

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Google Scholar

Booth, G. G., Chowdhury, M., Martikainen, T., & Tse, Y. (1997). Intraday volatility in international stock index futures markets: Meteor showers or heat waves? *Management Science*, **43**, 1564–1576.

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Booth, G. G., Lin, J.-C., Martikainen, T., & Tse, Y. (2002). Trading and pricing in upstairs and downstairs stock markets. *Review of Financial Studies*, **15**, 1111–1135.

Web of Science® Google Scholar

Booth, G. G., So, R. W., & Tse, Y. (1999). Price discovery in the German equity index derivatives markets. *Journal of Futures Markets*, **19**, 619–643.

Web of Science® Google Scholar

Chan, K. (1992). A further analysis of the lead-lag relationship between the cash market and stock index futures market. *Review of Financial Studies*, **5**, 123–152.

Web of Science® Google Scholar

Chan, K., Chan, K. C., & Karolyi, G. A. (1991). Intraday volatility in the stock index and stock index futures markets. *Review of Financial Studies*, **4**, 657–684.

Web of Science® Google Scholar

Cheng, L. T. W., Fung, J. K. W., & Chan, K. C. (2000). Pricing dynamics of index options and index futures in Hong Kong before and during the Asian financial crisis. *Journal of Futures Markets*, **20**, 145–166.

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De Jong, F. (2002). Measures of contribution to price discovery: A comparison. *Journal of Financial Markets*, **5**, 323–327.

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Ding, D. K., Harris, F. H. deB., Lau, S. T., & McInish, T. H. (1999). An investigation of price discovery in informationally-linked markets: Equity trading in Malaysia and Singapore. *Journal of Multinational Financial Management*, **9**, 317–329.

Google Scholar

Dwyer, G. P. J., Locke, P., & Yu, W. (1994). Index arbitrage and non-linear dynamics between the S&P 500 futures and cash. *Review of Financial Studies*, **9**, 301–332.

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Engle, R. F. (1982). Autoregressive conditional heteroskedasticity with estimates of the variance of U.K. inflation. *Econometrica*, **50**, 987–1008.

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Engle, R. F., & Granger, C. W. J. (1987). Co-integration and error correction: Representation, estimation and testing. *Econometrica*, **55**, 251–276.

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Eun, C. S., & Sabherwal, S. (2003). Cross-border listings and price discovery: Evidence from U.S.-listed Canadian stocks. *Journal of Finance*, **58**, 549–575.

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Eun, C. S., & Shim, S. (1989). International transmission of stock market movements. *Journal of Financial and Quantitative Analysis*, **24**, 241–256.

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Fleming, J., Ostdiek, B., & Whaley, R. E. (1996). Trading costs and the relative rates of price discovery in stock, futures, and option markets. *Journal of Futures Markets*, **16**, 353–387.

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French, K. R., & Roll, R. (1986). Stock return variances: The arrival of information and the reaction of traders. *Journal of Financial Economics*, **17**, 5–26.

Web of Science® | Google Scholar

Frino, A., Harris, F. H. deB., McInish, T. H., & Tomas, M. J. (2004). Price discovery in the pits: The role of market makers on the CBOT and the Sydney Futures Exchange. *Journal of Futures Markets*, **24**, 785–804.

Web of Science® | Google Scholar

Fung, J. K. W., Cheng, L. T. W., & Chan, K. C. (1997). The intraday pricing efficiency of Hong Kong Hang Seng Index Options and Futures Markets. *Journal of Futures Markets*, **17**, 797–815.

Web of Science® | Google Scholar

Fung, J. K. W., & Draper, P. (1999). Mispricing of index futures contracts and short sales constraints. *Journal of Futures Markets*, **19**, 695–715.

Web of Science® | Google Scholar

Gonzalo, J., & Granger, C. W. J. (1995). Estimation of common long-memory components in cointegrated systems. *Journal of Business & Economic Statistics*, **13**, 27–35.

Web of Science® | Google Scholar

Hamao, Y., Masulis, R. W., & Ng, V. K. (1990). Correlation in price changes and volatility across international stock markets. *Review of Financial Studies*, **3**, 281–307.

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Harris, F. H. deB., McInish, T. H., & Wood, R. A. (1996, working paper). Common long-memory components of stock prices: A measure of price discovery. The University of Memphis, Memphis, TN.

Google Scholar

Harris, F. H. deB., McInish, T. H., & Wood, R. A. (2002a). The dynamics of price adjustment across exchanges: An investigation of price discovery for Dow stocks. *Journal of Financial Markets*, **5**, 277–308.

Web of Science® Google Scholar

Harris, F. H. deB., McInish, T. H., & Wood, R. A. (2002b). Common factor components versus information shares: A reply. *Journal of Financial Markets*, **5**, 341–348.

Web of Science® Google Scholar

Hasbrouck, J. (1993). Assessing the quality of a security market: A new approach to transaction cost measurement. *Review of Financial Studies*, **6**, 191–212.

Web of Science® Google Scholar

Hasbrouck, J. (1995), One security, many markets: Determining the contributions to price discovery. *Journal of Finance*, **50**, 1175–1199.

Web of Science® Google Scholar

Hasbrouck, J. (2002). Stalking the "efficient price" in market microstructure specifications: An overview. *Journal of Financial Markets*, **5**, 329–339.

Web of Science® Google Scholar

Hasbrouck, J. (2003). Intraday price formation in U.S. equity index markets. *Journal of Finance*, **58**, 2375–2400.

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International Finance Corporation. (1997). *Emerging stock markets factbook 1997*. Washington, DC: International Finance Corporation.

Google Scholar

Johansen, S. (1991). Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. *Econometrica*, **59**, 1551–1580.

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Karolyi, G. A. (1995). A multivariate GARCH model of international transmissions of stock returns and volatility: The case of the United States and Canada. *Journal of Business and Economic Statistics*, **13**, 11–25.

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Kavajecz, K. A., & Odders-White, E. R. (2001). Volatility and market structure. *Journal of Financial Markets*, **4**, 359–384.

Google Scholar

Kawaller, I. G., Koch, P. D., & Koch, T. W. (1990). Intraday relationships between volatility in S&P 500 futures prices and volatility in the S&P 500 index. *Journal of Banking and Finance*, **14**, 373–397.

Web of Science® Google Scholar

Koutmos, G., & Booth, G. G. (1995). Asymmetric volatility transmission in international stock markets. *Journal of International Money and Finance*, **14**, 747–762.

Web of Science® Google Scholar

Koutmos, G., & Tucker, M. (1996). Temporal relationships and dynamic interactions between spot and futures stock markets. *Journal of Futures Markets*, **16**, 55–69.

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Lin, W.-L., Engle, R. F., & Ito, T. (1994). Do bulls and bears move across borders? *International transmission of stock returns and volatility. Review of Financial Studies*, **7**, 507–538.

Web of Science® Google Scholar

Martens, M. (1998). Price discovery in high and low volatility periods: Open outcry versus electronic trading. *Journal of International Financial Markets*, Institutions and Money, 8, 243–260.

Web of Science® Google Scholar

Nelson, D. B. (1991). Conditional heteroskedasticity in asset returns: A new approach. *Econometrica*, **59**, 347–370.

Web of Science® Google Scholar

Neoh, A. (1998). Regulating Hong Kong securities markets: A culture of service in an era of change. *Financial Practice and Education*, **8**, 7–12.

Google Scholar

Osterwald-Lenum, M. (1992). A note with fractiles of asymptotic distribution of the maximum likelihood cointegration rank test statistics: Four cases. *Oxford Bulletin of Economics and Statistics*, **54**, 461–472.

Web of Science® Google Scholar

Ross, S. (1989). Information and volatility: The no-arbitrage martingale approach to timing and resolution irrelevancy. *Journal of Finance*, **44**, 1–17.

Web of Science® Google Scholar

Sin, C.-Y., & Ling, S. (2002). Estimation and testing for partially nonstationary vector autoregressive models with GARCH. Discussion Paper, Hong Kong Baptist University and Hong Kong University of Science and Technology.

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Stoll, H. R., & Whaley, R. E. (1990). The dynamics of stock index and stock index futures returns. *Journal of Financial and Quantitative Analysis*, **25**, 441–468.

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Susmel, R., & Engle, R. F. (1994). Hourly volatility spillovers between international equity markets. *Journal of International Money and Finance*, **13**, 3–25.

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Tse, Y. (1999). Market microstructure of FT-SE 100 index futures: An intraday empirical analysis. *Journal of Futures Markets*, **19**, 31–58.

Web of Science® | Google Scholar

Tse, Y., & Erenburg, G. (2003). Competition for order flow, market quality, and price discovery in the Nasdaq-100 index tracking stock. *Journal of Financial Research*, **26**, 301–318.

Google Scholar

L. S. F. Young, & R. C. P. Chiang (Eds). (1997). *The Hong Kong Securities Industry* (3rd ed.). Hong Kong: The Stock Exchange of Hong Kong Limited.

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