SPRINGER NATURE Link

Log in

Cross-hedging foreign currency risk: Empirical evidence from an error correction model

Published: May 1996

Volume 6, pages 223–231 (1996) Cite this article

Review of Quantitative Finance and Accounting

Asim Ghosh[1]

160 Accesses 3 Citations 3 Altmetric Explore all metrics →

Abstract

In this article, the traditional price change hedge ratio estimation method is extended by applying the theory of cointegration in the case of cross-hedging of spot exchange risk of the Belgian franc (BF), the Italian lira (IL), and the Dutch guilder (NG) with U.S. Dollar Index futures contracts. Previous studies ignore the last period's equilibrium error and short-run deviations. The findings of this study indicate that the hedge ratio estimated by the error correction method is superior to that obtained from the traditional method, as evidenced by the likelihood ratio test and out-of-sample forecasts. Hedgers will be able to control the risk of their portfolios more effectively at a lower cost.

This is a preview of subscription content, log in via an institution to check access.

Access this article

Log in via an institution →

Subscribe and save

Springer+ from €37.37 /Month

- Starting from 10 chapters or articles per month
- Access and download chapters and articles from more than 300k books and 2,500 journals
- Cancel anytime

View plans →

Buy Now

Buy article PDF 39,95 €

Price includes VAT (Poland)

Instant access to the full article PDF.

Institutional subscriptions →

Explore related subjects

Discover the latest articles, books and news in related subjects, suggested using machine learning.

Financial Econometrics | Financial Engineering | International Finance | Quantitative Finance | Risk Theory | Econometrics

References

Akaike, H., "A New Look at Statistical Model Identification." *IEEE Trans. Auto. Control* 19, 716–723, (1974).

Baillie, R. and T.Bollerslev, "Common Stochastic Trends in a System of Exchange Rates." *Journal of Finance* 44, 167–181, (1989).

Baillie, R. and T.Bollerslev, “Cointegration, Fractional Cointegration, and Exchange Rate Dynamics.” *Journal of Finance* 49, 737–745, (1994).

Benet, B., “Commodity Futures Cross-Hedging of Foreign Exchange Exposure.” *Journal of Futures Markets* 10, 287–306, (1990).

Benet, B., “Hedge period Length and Ex-Ante Futures hedging Effectiveness: The Case of Foreign Exchange Risk Cross Hedges.” *Journal of Futures markets* 12, 163–175, (1992).

Braga, F., L.Martin, and K.Meilke, “Cross-Hedging the Italian Lira/U.S. Dollar Exchange Rate with Deutsch Mark Futures.” *Journal of Futures Markets* 9, 87–100, (1989).

Brown, S., “A Reformulation of the Portfolio model of Hedging.” *American Journal of Agricultural Economics* 67, 508–572, (1985).

Davidson, R. and J.MacKinnon, *Estimation and Inference in Econometrics*. New york: Oxford University Press, 1993.

Dickey, D. and W.Fullter, “The Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root.” *Econometrica* 49, 1057–1072, (1981).

Diebold, F., J.Gardeazabel, and K.Yilenarz. “On Cointegration and Exchange Rate Dynamics.” *Journal of Finance* 49, 727–735, (1994).

Eaker, M. and D. Grant, “Cross-Hedging Foreign Currency Risk.” *Journal of International Money and Finance*, 85–105, (1987).

Ederington, L., “The Hedging Performance of the New Futures Markets.” *Journal of Finance* 34, 157–170, (1979).

Engle, R. and C.Granger, “Cointegration and error Correction Representation, Estimation, and Testing.” *Econometrica* 55, 251–276, (1987).

Ghosh, A., “The Hedging Effectiveness of Foreign Currency Futures: Empirical Evidence from an Error Correction Model.” *The Journal of Multinational Financial Management* 5, 53–63, (1995).

Granger, C., “Some Properties of Time Series Data in Econometric Model Specification.” *Journal of Econometrics* 16, 121–130, (1981).

Granger, C. and P. Newbold, “Spurious Regressions in Econometrics.” *Journal of Econometrics*, 111–120, (1974).

Hill, J. and T.Schneeweis, “The Hedging Effectiveness of Foreign Currency Futures.” *Journal of Financial Reearch* 5, 95–104, (1982).

Johnson, L., “The Theory of Hedging and Speculation in Commodity Futures.” *Review of Economic Studies* 27, 139–151, (1960).

MacKinnon, J., “Critical Values for Cointegration Tests.” In R. Engle and C. Granger, eds., *Long-Run Economic Relationships Readings in Cointegration*. New York: Oxford University Press.

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

Stein, J., “The Simultaneous Determination of Spot and Futures Prices.” *American*

Economic Review 51, 1012–1025, (1961).

Wilson, William W., “Hedging Effectiveness of U.S. Wheat Futures Markets.” *Review of Research in Futures Markets* 3, 64–67, (1983).

Witt, H., T.Schroeder, and M.Hayenga, “Comparison of Analytical Approaches for Estimating Hedge Ratios for Agricultural Commodities.” *Journal of Futures Markers* 7, 135–146, (1987).

Working, H., ‘Futures Trading and Hedging.” *American Economic Review* 43, 314–343, (1953).

Working, H., “New Concepts Concerning Futures Markets and Prices.” *American Economic Review* 52, 432–459, (1962).

Author information

Authors and Affiliations

Department of Finance, Saint Joseph's University, 19131, Philadelphia, PA, USA

Asim Ghosh

Rights and permissions

Reprints and permissions

About this article

Cite this article

Ghosh, A. Cross-hedging foreign currency risk: Empirical evidence from an error correction model. *Rev Quant Finan Acc* **6**, 223–231 (1996). https://doi.org/10.1007/BF00245181

Issue date
May 1996
DOI
https://doi.org/10.1007/BF00245181

Key words

cross-hedging | exchange rate risk | optional hedge ratio

Search

Search by keyword or author

Navigation

Find a journal

Publish with us

Track your research