

Table IV.3. Arbitrage Opportunities in Multiple Listed Stocks

Study	Sample	Findings
Ben Zion <i>et al.</i> (1996) ^a	5 Israeli firm stocks dually listed on the Tel Aviv SE and on the US OTC market	<ul style="list-style-type: none"> • Arbitrage opportunities are generally not available. (See endnote).
Domowitz <i>et al.</i> (1995) ^b	4 Mexican firm stocks listed also as US ADRs (various levels)	<ul style="list-style-type: none"> • The average return in both markets are very similar, suggesting that there is efficient arbitrage across markets.
Froot and Dabora (1995) ^c	3 Siamese twin stocks, multiple listed, <i>inter alia</i> , on the NYSE and LSE	<ul style="list-style-type: none"> • Each company's stock obeys the law of one price, indicating the existence of cross-border arbitrage.
Hauser and Tanchuma (1995) ^d	5 Israeli firm stocks dually listed on the Tel Aviv SE and on the US OTC market	<ul style="list-style-type: none"> • The average returns are not significantly different between the two markets.
Jorion and Schwartz (1986) ^e	98 Canadian stocks multiple listed on various US markets	<ul style="list-style-type: none"> • Finding few arbitrage opportunities.
Kato <i>et al.</i> (1991) ^f	23 stocks listed in England, Japan, and Australia and also as US ADRs	<ul style="list-style-type: none"> • Finding no arbitrage opportunities.
Murphy and Sabov (1995) ^g	7 Hungarian firm stocks dually listed on the Budapest and Vienna SEs.	<ul style="list-style-type: none"> • Arbitrage opportunities are found at the black market foreign exchange rate. • Arbitrage opportunities are found even at the official exchange rate and after adjusting for high transaction costs, presumably due to low volume and bureaucratic delays. These discrepancies were found to be falling over time.
Pagano and Roell (1991)	14 Italian blue chip stocks dually listed on the Milan SE and LSE	<ul style="list-style-type: none"> • Milan prices were generally -- but not always -- within London quotes (spread).
Pagano and Roell (1993) ^h	16 stocks dually listed on London's SEAQ-I and the Paris Bourse	<ul style="list-style-type: none"> • The markets are perfectly arbitrated: in a sample of 380 perfectly time-matched observations, not a single unexploited arbitrage opportunity was found.

Sources: *See* endnotes.

Abbreviations

LSE - London Stock Exchange

NYSE - New York Stock Exchange

SE - Stock Exchange

^a Uri Ben-Zion, Shmuel Hauser, and Offer Lieberman, *A Characterization of Price Behavior of International Dual Stocks: An Error Correction Approach*, Working Paper No. 104, Center for Economic Studies, University of Munich (1996). The findings here may be a repetition of the findings in Hauser and Tanchuma (1995).

^b Ian Domowitz, Jack Glenn, and Ananth Madhavan, *Market Segmentation and Stock Prices: Evidence from an Emerging Market*, working paper, University of Southern California (1995).

^c Kenneth A. Froot and Emil Dabora, *How Are Stock Prices Affected by the Location of Trade?* paper presented in the NYSE Conference on the Internationalization of Stock Markets, December 8, 1995 (1995).

^d Shmuel Hauser and Yael Tanchuma, *Transfer of Pricing Information between Internationally Dually Listed Stocks*, Working Paper, Israel Securities Authority (1995).

^e Philippe Jorion and Eduardo Schwartz, *Integration vs. Segmentation in the Canadian Stock Market*, 41 J. Fin. 601 (1986).

^f Kiyoshi Kato, Scott Linn, and James Schallheim, *Are There Arbitrage Opportunities in the Market for American Depository Receipts?* 1 J. Int'l Fin. Markets, Institutions & Money 73 (1991).

^g Austin Murphy and Zoltan Sabov, *An Analysis of Intermarket Pricing in an Embryonic Environment*, 5 J. Int'l Fin. Markets, Institutions & Money, 57 (1995).

^h Marco Pagano and Ailsa Roell, *Shifting Gears: An Economic Evaluation of the Reform of the Paris Bourse*, in V. CONTI AND R. HAMAUI, EDS., FINANCIAL MARKET LIBERALIZATION AND THE ROLE OF BANKS 52 (1993).