Review Article

International Portfolio Choice and Corporation Finance: A Synthesis

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First published: June 1983

https://doi.org/10.1111/j.1540-6261.1983.tb02511.x

Citations: 674

International Portfolio Choice and Corporation Finance: A Synthesis

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THE STRUCTURE OF THE theory of international finance largely mirrors that of domestic financial theory. Starting from a micro-theory of individual portfolio choice one obtains, via aggregation and market clearing, equilibrium pricing relationships and risk-return tradeoffs. These provide objectives for value maximizing firms from which decision rules can be computed. This analytical sequence is the same whether there is one or more capital markets. To distinguish between the domestic and international settings, one needs an economic concept of nationhood.

Alternative approaches to international economics differ essentially in their conception of what a nation is. Ricardian theory identifies countries by their technologies and consumption preferences. The Heckscher-Ohlin theory of international trade defines nations as zones within which physical factors of production are confined. In monetary economics, individual economic units holding the same currency in their portfolios as a means of payments are recognized as belonging to the same nation, and currencies are distinguished from each other by the fact that they are issued by different central banks.²

In portfolio theory, two avenues have so far been explored in an attempt to capture the international dimension. Most of the recent literature stemming from Solnik [179] has been devoted to models where nations are defined as zones of a common purchasing power unit or, more precisely, as subsets of investors

* The authors are Professor of Business, Columbia University and Professor, C.E.S.A. (H.E.C., I.S.A., C.F.C.), respectively. The article was begun while Dumas was Visiting Professor at Columbia and completed while he was Visiting Professor at Berkeley. We are grateful to André Saurel, who helped supply part of the data base, and to Jean-Francois Dreyfus, who contributed to the data processing. We received valuable critical comments from Professors Bradford Cornell, Jeffrey Frankel, Bruce Lehmann, David Modest, Patrice Poncet, Richard Roll, Piet Sercu, Bruno Solnik, René Stulz and, especially, Michael Brennan. Errors may remain despite their efforts: they are our responsibility. We apologize to the authors whose work is not quoted. This is no indication of the quality of their work but only of our ignorance or of the limited scope of this survey.

¹ Generalizations of the Heckscher-Ohlin theory to economies with uncertain production and securities trading may be considered as belonging to the field of international finance but they will not be reviewed here. See Helpman and Razin [85, 86, 87], Baron and Forsythe [20], and Dumas [48, 49].

² This approach is germane to portfolio theory and originates from balance-of-payments analysis, especially since the latter took a very strong monetary orientation in the sixties under the influence of Mundell [145], and since the advent of the "portfolio-balance" approach: Branson [28]. The link with portfolio theory is, however, not complete since the latter is only today in the process of introducing money holdings into the portfolios of individual investors (for an early attempt, see Roll [159], Kouri [108], and more recently Fama and Farber [58], Hodrick [90], Poncet [151], and Dumas [49]). The device most commonly employed is the injection of real money balances as a separate argument of the utility functions.

References 1 M. Adler. "The Cost of Capital and Valuation of a Two-Country Firm." Journal of Finance 29 (March 1974), 119-33. Web of Science® Google Scholar 2 M. Adler. "Investor Recognition of Corporate International Diversification: Comment." Journal of Finance 36 (March 1981), 187-91. Web of Science® Google Scholar 3 M. Adler and B. Dumas. "Optimal International Acquisitions." *Journal of Finance* **30** (March 1975), 1–20. Web of Science® Google Scholar 4 M. Adler and B. Dumas. "The Long-Term Financial Decisions of the Multinational Corporation." In E. J. Elton and M. J. Gruber (eds.), International Capital Markets. Amsterdam: North Holland, 1975. **Google Scholar** 5 M. Adler and B. Dumas. "Portfolio Choice and the Demand for Forward Exchange." *The American* Economic Review 66 (May 1976), 332-40. Web of Science® Google Scholar 6 M. Adler and B. Dumas. "Default Risk and the Demand for Forward Exchange." In H. Levy and M. Sarnat (eds.). Financial Decision Making under Uncertainty. New York: Academic Press, 1977. **Google Scholar** 7 M. Adler and B. Dumas. "Foreign Exchange Risk Management." In B. Antl (ed.). Currency Risk and the Corporation. London: Euromoney Publications, 1980: 145–158. **Google Scholar** 8 M. Adler and B. Dumas. "The Exposure of Long-Term Foreign Currency Bonds." Journal of Financial and Quantitative Analysis 15 (November 1980), 973-95. Web of Science® Google Scholar 9 M. Adler and B. Dumas. "Should Exposure Management Depend on Translation Accounting Methods?" Euromoney (June 1981), pp. 132-8.

10 M. Adler and B. Lehmann. "Deviations from PPP in the Long Run: A Random Walk?" Working paper, Columbia University, August 1982. **Google Scholar** 11 M. Adler and G. V. G. Stevens. "The Trade Effects of Direct Investment." Journal of Finance 29 (May 1974), 655-76. Web of Science® Google Scholar 12 T. Agmon. "The Relations Among Equity Markets in the United States, United Kingdom, Germany and Japan." Journal of Finance 27 (September 1972), 839-56. Web of Science® Google Scholar 13 T. Agmon and D. R. Lessard. "Investor Recognition of Corporate International Diversification." *Journal of* Finance 32 (September 1977), 1049-56. Web of Science® Google Scholar 14 R. Z. Aliber. "The Interest Rate Parity Theorem: A Reinterpretation." Journal of Political Economy 81 (November-December 1973), 1451-9. Web of Science® Google Scholar 15 R. Z. Aliber. Exchange Risk and Corporate International Finance. London: Macmillan, 1978. **Google Scholar** 16 R. Z. Aliber and C. P. Stickney. "Accounting Measures of Foreign Exchange Exposure: The Long and Short of It." Accounting Review 50 (January 1975), 44-57. Web of Science® Google Scholar 17 M. J. Bailey. "The Welfare Cost of Inflationary Finance." Journal of Political Economy 64 (April 1956), 93-110. Web of Science® Google Scholar 18 B. Balassa. "The Purchasing-Power Parity Doctrine: A Re-appraisal." *Journal of Political Economy* 72 (December 1964), 584-96. Web of Science® Google Scholar 19 D. P. Baron. "Flexible Exchange Rates, Forward Markets and the Level of Trade." American Economic

Review 66 (June 1976), 253-66.

Web of Science® Google Scholar 20 D. P. Baron and R. Forsythe. "Models of the Firm and International Trade under Uncertainty." American Economic Review 69 (September 1979), 565-74. Web of Science® Google Scholar 21 R. Barro. "Inflationary Finance and the Welfare Cost of Inflation. Journal of Political Economy 80 (September 1972), 978-1001. Web of Science® Google Scholar 22 V. S. Bawa, S. J. Brown, and R. W. Klein. Estimation Risk and Optimal Portfolio Choice. Amsterdam and New York: North Holland Publishing Co., 1979. **Google Scholar** 23 F. Black. "Capital Market Equilibrium with Restricted Borrowing." Journal of Business 45 (July 1972), 444-54. PubMed Google Scholar 24 F. Black. "International Capital Market Equilibrium with Investment Barriers." Journal of Financial Economics 1 (December 1974), 337-52. **Google Scholar** 25 M. E. Blume. "On the Assessment of Risk." Journal of Finance 26 (March 1971), 1–10. Web of Science® Google Scholar 26 J. Braga de Macedo. "Portfolio Diversification across Currencies." Working Paper, Princeton University, November 1980. **Google Scholar** 27 W. H. Branson. "The Minimum Covered Interst Differential Needed for International Arbitrage Activity."

Journal of Political Economy 77 (November-December 1969), 1028–35.

Google Scholar

28 W. H. Branson. "Asset Markets and Relative Prices in Exchange Rate Determination." IIES Seminar paper No. 66, Stockholm, December 1976.

29 W. H. Branson, S. I. Katz, and T. D. Willett. "Exchange Rate Systems, Interest Rates, and Capital Flows." *Princeton Essays in International Finance*, No. 78, January 1970. **Google Scholar** 30 D. T. Breeden. "An Intertemporal Asset Pricing Model with Stochastic Consumption and Investment Opportunities." Journal of Financial Economics 7 (September 1979), 265–96. Web of Science® Google Scholar 31 H. L. Brewer. "Investor Benefits from Corporate International Diversification." Journal of Financial and Quantitative Analysis 16 (March 1981), 113-26. Web of Science® Google Scholar 32 E. R. Canterbery. "Foreign Exchange, Capital Flows and Monetary Policy." Princeton Studies in International Finance, Department of Economics, Princeton University, 1965. **Google Scholar** 33 C. Chamley and H. M. Polemarchakis. "Asset Markets, General Equilibrium and the Neutrality of Money." Working paper, Cowles Foundation, September 1981. **Google Scholar** 34 B. Cornell. "Spot Rates, Forward Rates and Exchange Market Efficiency." Journal of Financial Economics **5** (August 1977), 55–66. Web of Science® Google Scholar 35 B. Cornell. "Relative Price Changes and Deviations from Purchasing Power Parity." Journal of Banking and Finance 3 (September 1979), 263-79. **Google Scholar**

36 B. Cornell. "Inflation, Relative Prices and Exchange Risk." *Financial Management* **9** (Autumn 1980), 30–34.

37 J. C. Cox, J. E. Ingersoll Jr., and S. A. Ross. "Theory of the Term Structure of Interest Rates." *Econometrica*,

38 L. Crouhy-Veyrac, M. Crouhy, and Jacques Melitz. "More About the Law of One Price." European

Web of Science® Google Scholar

Google Scholar

Economic Review 18 (July 1982), 325-44.

forthcoming.

Web of Science® | Google Scholar 39 R. E. Cumby and M. Obstfeld. "A Note of Exchange Rate Expectations and Nominal Interest Differentials: A Test of the Fisher Hypothesis." Journal of Finance 36 (June 1981), 697–704. Web of Science® Google Scholar 40 M. P. Dooley. "A Model of Arbitrage and short-term Capital Flows." International Finance Discussion Papers, No. 40 (January 1974), Division of International Finance, Board of Governors of the Federal Reserve System. **Google Scholar** 41 M. P. Dooley and P. Isard. "Capital Controls, Political Risks, and Deviations from interest-Rate Parity." Journal of Political Economy 88 (April 1980), 370-84. Web of Science® Google Scholar 42 M. P. Dooley and J. R. Shafer. "Analysis of short-Run Exchange Rate Behavior." Board of Governors of the Federal Reserve System, International Finance Discussion Papers, No. 76, February 1976. **Google Scholar** 43 R. Dornbusch. "Exchange Risk and the Macroeconomics of Exchange Rate Determination." In R. Hawkins et al., editors. The Internationalization of Financial Markets and National Economic Policy. Greenwich, CT: IAI Press, 1982. **Google Scholar** 44 G. Dufey and I. Giddy. "The Random Behavior of Flexible Exchange Rates: Implications for Forecasting." Journal of International Business Studies (Spring 1975), 1–32. **Google Scholar** 45 B. Dumas. "Discussion." Journal of Finance (May 1977), 512–15. **Google Scholar** 46 B. Dumas. "The Theory of the Trading Firm Revisited." Journal of Finance 33 (June 1978), 1019–29. Web of Science® Google Scholar 47 B. Dumas. "The Theorems of International Trade under Generalized Uncertainty." Journal of International Economics 10 (November 1980), 481–98. Web of Science® Google Scholar

48 B. Dum 1980.	as. "Trade Theorems with Less than Perfectly Correlated Disturbances." CERESSEC Working Paper,
	Google Scholar
	as. "Trading Rules and Equilibrium in a Monetary Economy." In M. Sarnat (ed.). <i>Capital Markets n</i> . Cambridge, MA: Ballinger, 1982.
	Google Scholar
	as and P. Poncet. "La Demande de Dollars des Personnes ne resident pas aux Etats-Unis." Working <i>Archives de l'I.S.E.A.</i> , forthcoming.
	Google Scholar
51 M. R. Ea 26.	ker. "The Numeraire Problem and Foreign Exchange Risk." <i>Journal of Finance</i> 36 (May 1981), 419–
	Web of Science® Google Scholar
52 P. A. Ein	zig. A Dynamic Theory of Forward Exchange. New York: Macmillan, 1961.
	Google Scholar
	and R. Wilson. "On the theory of the Firm in an Economy with Incomplete Markets." <i>Bell Journal</i> cs and Management Science 5 (Spring 1974), 171–80.
	Web of Science® Google Scholar
	unza and L. W. Senbet. "The Effects of International Operations on the Market Value of the Firm: Evidence." <i>Journal of Finance</i> 36 (May 1981), 401–18.
	Web of Science® Google Scholar
55 E. F. Far	na. "The Behavior of Stock Market Prices." <i>Journal of Business</i> 38 (January 1965), 34–105.
	Web of Science® Google Scholar
56 E. F. Far	na. <i>Foundations of Finance</i> . New York: Basic Books, 1976.
	Google Scholar
	na. "Stock Returns, Real Activity, Inflation and Money." <i>American Economic Review</i> 71 1981), 545–65.
	Web of Science® Google Scholar

58 E. F. Fama and A. Farber. "Money, Bonds and Foreign Exchange." *American Economic Review* **69** (September 1979), 639–49.

Web of Science® Google Scholar

59 E. F. Fama and R. Roll. "Some Properties of Symmetric Stable Distributions." *Journal of the American Statistical Association* **63** (September 1968), 817–36.

Web of Science® Google Scholar

60 E. F. Fama and G. W. Schwert. "Asset Returns and Inflation." *Journal of Financial Economics* **5** (November 1977), 115–46.

Web of Science® Google Scholar

61 A. Farber, R. Roll and B. Solnik. "An Empirical Study of Risk Under Fixed and Flexible Exchange Rates." In K. Brunner and A. H. Meltzer (eds.). *Stabilization of the Domestic and International Economy*. Amsterdam: North Holland, 1977: 235–75.

Web of Science® Google Scholar

62 S. Fischer. "The Demand for Index Bonds." Journal of Political Economy 83 (June 1975), 529-34.

Google Scholar

63 S. Fischer. "Capital Accumulation on the Transition Path in a Monetary Optimizing Economy." *Econometrica* **47** (November 1979), 1433–9.

Web of Science® Google Scholar

64 J. Frankel. "The Diversifiability of Exchange Risk." *Journal of International Economics* **9** (August 1979), 379–94.

Web of Science® Google Scholar

55 J. Frankel. "A Test of Perfect Substitutability in the Foreign Exchange Market." *Southern Economic Journal* **48** (October 1982), 406–16.

Web of Science® Google Scholar

66 J. Frankel. "In Search of the Exchange-Risk Premium: A Six-Currency Test Assuming Mean-Variance Optimization." *Journal of International Money and Finance* (December 1982), forthcoming.

67 J. A. Frenkel. "Elasticities and the Interest Parity Theory." *Journal of Political Economy* **81** (May/June 1973), 741–7.

Web of Science® Google Scholar

J. A. Frenkel. "Flexible Exchange Rates, Prices and the Role of News: Lessons from the 1970's." *Journal of Political Economy* **89** (August 1981), 665–705.

Web of Science® Google Scholar

69 J. A. Frenkel and R. M. Levich. "Covered Interest Arbitrage: Unexploited Profits?" *Journal of Political Economy* (April 1975).

Web of Science® Google Scholar

70 I. Friend, Y. Landskroner, and E. Losq. "The Demand for Risky Assets under Uncertain Inflation." *Journal of Finance* **31** (December 1976), 1287–98.

Web of Science® Google Scholar

71 I. Friend and E. Losq. "Advantages and Limitations of International Portfolio Diversification." In M. Sarnat and G. P. Szego (eds.). *International Finance and Trade*. Cambridge, MA: Ballinger, 1979: 3–16.

Google Scholar

72 H. J. Gailliot. "Purchasing Power Parity as an Explanation of Long Term Changes in Exchange Rates." *Journal of Money, Credit and Banking* **2** (August 1970), 348–57.

Google Scholar

H. Genberg. "Purchasing Power Parity under Fixed and Flexible Exchange Rates." *Journal of International Economics* **9** (May 1978), 247–76.

Web of Science® Google Scholar

74 J. Geweke and E. Feige. "Some Joint Tests of the Efficiency of the Markets for Forward Foreign Exchange." *Review of Economics and Statistics* **61** (August 1979), 334–41.

Web of Science® Google Scholar

75 L. Girton and D. Henderson. "Central Bank Operations in Foreign and Domestic Assets under Fixed and Flexible Exchange Rates." In P. Clark, D. Logue, and R. Sweeney (eds.). *The Effects of Exchange Rate Adjustments*. Washington: U.S. Government Printing Office, 1976: 151–79.

76 L. Girton and D. Henderson. "Financial Capital Movements and Central Bank Behavior in a Two-Country, short-run Portfolio Balance Model." *Journal of Monetary Economics* **2** (January 1976), 33–61.

Web of Science® Google Scholar

77 C. W. J. Granger and O. Morgenstern. *Predictability of Stock Market Prices*. Lexington, MA: Heath-Lexington, 1970.

Google Scholar

78 C. W. J. Granger. "A Survey of Empirical Studies on Capital Markets." In E. J. Elton and M. J. Gruber (eds.). *International Capital Markets*. Amsterdam: North Holland, 1975: 3–36.

Google Scholar

79 F. L. A. Grauer, R. H. Litzenberger, and R. Stehle. "Sharing Rules and Equilibrium in an International Capital Market under Uncertainty." *Journal of Financial Economics* **3** (June 1976), 233–56.

Web of Science® Google Scholar

80 H. G. Grubel. "Internationally Diversified Portfolios: Welfare Gains and Capital Flows." *American Economic Review* **58** (December 1968), 1299–1314.

Web of Science® Google Scholar

81 H. G. Grubel. *Forward Exchange, Speculation and the International Flow of Capital*. Stanford: Stanford University Press, 1966.

Google Scholar

82 N. H. Hakansson. "On the Relevance of Price-Level Accounting." *Journal of Accounting Research* **7** (Spring 1969), 22–31.

Web of Science® Google Scholar

83 L. P. Hansen and R. J. Hodrick. "Foward Exchange Rates as Optimal Predictors of Future Spot Rates: An Econometric Analysis." *Journal of Political Economy* **88** (October 1980), 828–53.

Web of Science® Google Scholar

D. Heckerman. "On the Effects of Exchange Risks." *Journal of International Economics* **3** (November 1973), 379–88.

85 E. Helpman and A. Razin. "Uncertainty and International Trade in the Presence of Stock Markets." *Review of Economics Studies* **45** (June 1978), 239–50.

Web of Science® Google Scholar

86 E. Helpman and A. Razin. "Welfare Aspects of International Trade in Goods and Securities." *Quarterly Journal of Economics* **92** (August 1978), 489–508.

Web of Science® Google Scholar

87 E. Helpman and A. Razin. *A Theory of International Trade under Uncertainty*. New York: Academic Press. 1980.

Google Scholar

88 E. Helpman and A. Razin. "Comparative Dynamics of Monetary Policy in a Floating Exchange Rate Regime." Working paper, Tel-Aviv University, 1981.

Google Scholar

89 R. J. Herring and R. C. Marston. "The Forward Market and Interest Rates in the Eurocurrency and National Money Markets." In Carl H. Stein, John H. Makin, and Dennis E. Logue (eds.). *Eurocurrencies and the International Monetary System*. Washington: American Enterprise Institute, 1976.

Web of Science® Google Scholar

90 R. Hodrick. "International Asset Pricing with Time-varying Risk Premia." *Journal of International Economics* **11** (November 1981), 573–7.

Web of Science® Google Scholar

91 D. Hsu, R. B. Miller, and D. W. Wichern. "On the Stable Paretian Behavior of Stock Market Prices." *Journal of the American Statistical Association* **69** (March 1974), 108–13.

Web of Science® Google Scholar

92 G. C. Hufbauer. *Synthetic Materials and the Theory of International Trade*. Cambridge, MA: Harvard University Press, 1966.

Web of Science® Google Scholar

93 G. C. Hufbauer. "The Impact of National Characteristics and Technology on the Commodity Composition of Trade in Manufactured Goods." In R. Vernon (ed.). *The Technology Factor in International Trade*. New York: Columbia University Press, 1970: 145–232.

94 G. C. Hufbauer. "The Multinational Corporation and Direct Investment." In P. B. Kenen (ed.). *International Trade and Finance: Frontiers for Research*. New York: Cambridge University Press, 1975: 253–320.

Google Scholar

95 G. Hufbauer, and M. Adler. *Overseas Manufacturing Investment and the Balance of Payments*. Washington, D.C.: Government Printing Office, 1968.

Web of Science® Google Scholar

96 P. Isard. "How Far Can We Push the Law of One Price?" *American Economic Review* **67** (December 1977), 942–8.

Web of Science® Google Scholar

97 B. Jacquillat and B. Solnik. "Multinationals are Poor Tools for Diversification." *Journal of Portfolio Management* (Winter 1978).

Google Scholar

98 D. M. Jaffee. Comment on R. Z. Aliber: "The Firm under Pegged and Floating Exchange Rates." *Scandinvaian Journal of Economics* **78**: 2 (1976), 323–6.

Web of Science® Google Scholar

99 H. G. Johnson. "The Efficiency and Welfare Implications of the International Corporation." In Kindleberger (ed.). *The International Corporation*. Cambridge, MA: MIT Press, **19**: 35–36.

Google Scholar

100 J. Johnston. *Econometric Methods*. New York: McGraw Hill, 1972.

Google Scholar

101 L. Katseli-Papaefstratiou. "The Reemergence of the Purchasing Power Parity Doctrine in 1970's." *Special Paper in International Economics* No. 13 (December 1979), Princeton.

Google Scholar

102 P. B. Kenen. "Trade, Speculation and the Forward Exchange Rates." In R. E. Baldwin *et al.* (eds.). *Trade, Growth and the Balance of Payments*. Chicago: Rand MacNally, 1965.

Google Scholar

103 B. F. King. "Market and Industry Factors in Stock Price Behavior." *Journal of Business* **39** (January 1966), 139–90.

Web of Science® Google Scholar

104 S. W. Kohlhagen. "The Forward Rate as an Unbiased Predictor of the Future Spot Rate." University of California, Berkeley, 1976.

Google Scholar

105 S. W. Kohlhagen. "Rational and Endogenous Exchange Rate Expectations and Speculative Capital Flows in Germany." *Weltwirtschaftsliches Archiv* **113** (December 1977), 624–44.

Web of Science® Google Scholar

106 S. W. Kohlhagen. The Behavior of Foreign Exchange Markets" A Critical Survey of the Literature. NYU Monograph Series, 1973.

Google Scholar

107 P. Kouri. "The Determinants of the Forward Premium." IIES Seminar Paper 62, University of Stockholm, August 1976.

Google Scholar

108 P. Kouri. "International Investment and Interest Rate Linkages under Flexible Exchange Rates." In R. Aliber (ed.). *The Political Economy of Monetary Reform*. London: Macmillan & Co., 1977.

Google Scholar

109 P. Kouri. "The Exchange Rate and the Balance of Payments in the Short Run and in the Long Run: A Monetary Approach." *Scandinavian Journal of Economics* **78**: 2 (1976), 280–304.

Web of Science® Google Scholar

110 P. Kouri and J. Braga de Macedo. "Exchange Rates and the International Adjustment Process. *Brookings Papers* (1: 1978), 111–150.

Google Scholar

111 I. B. Kravis, Z. Kenessey, A. W. Heston, and R. Summers. *A System of International Comparisons of Gross Product and Purchasing Power*. Baltimore: Johns Hopkins University Press, 1975.

Google Scholar

112 I. B. Kravis and R. E. Lipsey. "Price Behavior in the Light of Balance of Payments Theory." *Journal of International Economics* **8** (May 1978), 193–246.

P. Krugman. "Consumption Preferences, Assets Demands, and Distribution Effects in International Financial Markets." Working Paper No. 651, National Bureau of Economic Research, March 1981.

Google Scholar

114 Y. Landskroner and M. Liviatan. "Risk Premia and the Sources of Inflation." Journal of Money, Credit and Banking 13 (May 1981), 205–14.

Web of Science® Google Scholar

115 S. Laursen and L. Metzler. "Flexible Exchange Rates and the Theory of Employment." *Review of Economics and Statistics* **32** (November 1950), 281–99.

Web of Science® Google Scholar

116 W. Y. Lee and K. S. Sachdeva. "The Role of the Multinational Firm in the Integration of Segmented Capital Markets." *Journal of Finance* **32** (May 1977), 479–92.

Web of Science® Google Scholar

117 D. R. Lessard. "World, National and Industry Factors in Equity Returns. *Journal of Finance* **29** (May 1974), 379–91.

Web of Science® Google Scholar

118 D. R. Lessard. "World, Country and Industry Relationships in Equity Returns: Implications for Risk Reduction through International Diversification." *Financial Analysts Journal* (January/February 1976), 2–8.

Google Scholar

119 D. R. Lessard. "Evaluating Foreign Projects: An Adjusted Present Value Approach." In D. R. Lessard (ed.). *International Financial Management*. Boston, MA: Warren, Gorham & Lamont, 1979: 577–92.

Google Scholar

120 R. M. Levich. "Tests of Forecasting Models and Market Efficiency in the International Money Market." In J. A. Frenkel and H. G. Johnson (eds.). *The Economics of Exchange Rates*. Reading, MA: Addison-Wesley, 1978.

Web of Science® Google Scholar

121 J. H. Levin. *Forward Exchange and Internal-External Equilibrium*. Ann Arbor: Michigan International Business Series, No. 12, 1970.

122 H. Levy and M. Sarnat. "International Diversification of Investment Portfolios." American Economic Review 60 (September 1970), 668-75. Web of Science® Google Scholar 123 B. A. Lietaer, Financial Management of Foreign Exchange: An Operational Technique to Reduce Risk. Cambridge, MA: M.I.T. Press, 1971. **Google Scholar** 124 J. Lintner. "The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets." Review of Economics and Statistics 47 (February 1965), 13-37. Web of Science® Google Scholar 125 J. Lintner. "Inflation and Security Returns." Journal of Finance 30 (May 1975), 259–80. Web of Science® Google Scholar 126 J. Lintner. "Bankruptcy Risk, Market Segmentation and Optimal Capital Structures." In I. Friend and J. Bicksler (eds.). Risk and Return in Finance, Vol. 11. Cambridge, MA: Ballinger Publishing Co., 1977: 1–128. **Google Scholar** 127 E. Losg. "Commodity Price Uncertainty and Capital Market Equilibrium." McGill University, mimeo, 1977. **Google Scholar** 128 R. E. Lucas. "Some International Evidence on Output-Inflation Trade-offs." *American Economic Review* 63 (June 1973), 326-34. Web of Science® | Google Scholar 129 R. E. Lucas. "Asset Prices in an Exchange Economy." *Econometrica* 46 (November 1978), 1429–46. Web of Science® Google Scholar 130 R. E. Lucas. "Equilibrium in a Pure Currency Economy." *Economic Inquiry* **18** (April 1980), 203–20.

131 R. E. Lucas. "Interest Rates and Currency Prices in a Two-country World." Working paper, University

Google Scholar

of Chicago, July 1981.

132 S. Magee. "Multinational Corporation, the Industry Technology Cycle and the Transfer of Technology to Developing Countries." *Journal of World Trade Law*, 1978.

Google Scholar

133 J. H. Makin. "Portfolio Theory and the Problem of Foreign Exchange Risk." *Journal of Finance* **33** (May 1978), 517–34.

Web of Science® Google Scholar

134 J. Mayshar. "Transaction Costs and the Pricing of Assets." Journal of Finance 36 (June 1981), 583–98.

Web of Science® Google Scholar

135 J. W. McFarland, R. R. Pettit, and S. K. Sung. "The Distribution of Foreign Exchange Price Changes: Trading Day Effects and Risk Measurement." *Journal of Finance* **37** (June 1982), 693–716.

Web of Science® Google Scholar

136 R. I. McKinnon. "The Exchange Rate and Macroeconomic Policy: Changing Postwar Perceptions." *Journal of Economic Literature* **29** (June 1981), 531–57.

Google Scholar

137 R. Mehra. "On the Financing and Investment Decisions of Multinational Firms in the Presence of Exchange Risk." *Journal of Financial and Quantitative Analysis* **13** (June 1978), 227–44.

Web of Science® Google Scholar

138 R. C. Merton. "Lifetime Portfolio Selection under Uncertainty: The Continuous-Time Case." *Review of Economics and Statistics* **51** (August 1969), 247–57.

Web of Science® Google Scholar

139 R. C. Merton. "Optimum Consumption and Portfolio Rules in a Continuous-Time Model." *Journal of Economic Theory* **3** (December 1971), 373–413.

Web of Science® Google Scholar

140 R. C. Merton. "An Intertemporal Capital Asset Pricing Model." *Econometrica* **41** (September 1973), 867–87.

Web of Science® Google Scholar

141 E. Modigliani and M. H. Miller "The Cost of Capital, Corporation Finance and the Theory of Investment." *American Economic Review* **48** (April 1958), 261–97.

Web of Science® Google Scholar 142 Moon Ho Lee. Purchasing Power Party. New York: Marcel Dekker, Inc., 1976. **Google Scholar** 143 J. Mossin. "Equilibrium in a Capital Asset Market." *Econometrica* **34** (October 1966), 768–83. Web of Science® Google Scholar 144 J. Mossin. The Economic Efficiency of Financial Markets. Lexington, MA: D. C. Health, 1977. **Google Scholar** 145 R. A. Mundell. *International Economics*. New York: Macmillan, 1968. **Google Scholar** 146 R. A. Mundell. *Monetary Theory: Inflation, Interest and Growth in the World Economy*. New York: Goodyear Publishing Company, 1971. **Google Scholar** 147 M. Obstfeld. "Macroeconomic Policy and World Welfare under Flexible Exchange Rates." Working paper, Columbia University, March 1980. **Google Scholar** 148 L. H. Officer. "The Purchasing Power Theory of Exchange Rates: A Review Article." I.M.F. Staff Papers 23 (March 1976), 1-60. Web of Science® Google Scholar 149 F. Papadia. "Forward Exchange Rates as Predictors of Future Spot Rates and the Efficiency of the Foreign Exchange Market." Journal of Banking and Finance 5 (June 1981), 217-40. Web of Science® Google Scholar

151 P. Poncet. "Optimum Consumption and Portfolio Rules with Money as an Asset." Working paper, ESSEC, Department of Finance, November 1979.

150 J. E. Pippenger. "Spot Rates, Forward Rates, and Interest Rate Differentials." Journal of Money, Credit

and Banking 4 (May 1972), 375-83.

152 W. Poole. "Speculative Prices as Random Walks: An Analysis of Ten Time Series of Flexible Exchange Rates." Southern Economic Journal 83 (1966).

Google Scholar

153 M. F. Prachowny. "A Note on Interest Parity and the Supply of Arbitrage Funds." Journal of Political Economy 78 (May/June 1970), 540–5.

154 G. Ragazzi. "Theories of the Determinants of Direct Foreign Investment." *I.M.F. Staff Papers* **20** (July 1973), 471–98.

Web of Science® Google Scholar

Web of Science® Google Scholar

155 S. F. Richard and M. Sundaresan. "A Continuous Time Equilibrium Model of Forward Prices and Future Prices in a Multigood Economy." *Journal of Financial Economics* **9** (December 1981), 347–72.

Web of Science® Google Scholar

156 J. D. Richardson. "Some Empirical Evidence on Commodity Arbitrage and the Law of One Price." *Journal of International Economics* **8** (May 1978), 341–52.

Web of Science® Google Scholar

157 R. M. Rodriguez. *Foreign-Exchange Management in U.S. Multinationals*. Lexington, MA: D.C. Heath, 1980.

Google Scholar

158 R. Rogalski and J. D. Vinso. "Price Level Variations as Predictors of Flexible Exchange Rates." *Journal of International Business Studies* (Spring/Summer 1977), 71–81.

Web of Science® | Google Scholar

159 R. Roll. "Interest Rates on Monetary Assets and Commodity Price Index Changes." *Journal of Finance* **27** (May 1972), 251–77.

Web of Science® Google Scholar

160 R. Roll. "A Critique of the Asset Pricing Theory's Test; Part I: On Past and Potential Testability of the Theory." *Journal of Financial Economics* **4** (March 1977), 129–76.

161 R. Roll. "Violations of Purchasing Power Parity and their Implications for Efficient International Commodity Markets." In M. Sarnat and G. P. Szego (eds.). *International Finance and Trade*. Cambridge, MA: Ballinger Publishing Co., 1979.

Google Scholar

162 R. Roll and S. Ross. "An Empirical Investigation of the Arbitrage Pricing Theory. *Journal of Finance* **35** (December 1980), 1073–1103.

Web of Science® Google Scholar

163 R. Roll and B. Solnik. "A Pure Foreign Exchange Asset Pricing Model." *Journal of International Economics* **7** (May 1977), 161–80.

Web of Science® Google Scholar

164 B. Rosenberg, and J. Ohlson. "The Stationary Distribution of Returns and Portfolio Separation in Capital Markets: A Fundamental Contradiction." *Journal of Financial and Quantitative Analysiss* **11** (September 1976), 393–402.

Web of Science® Google Scholar

165 M. Rubinstein. "An Aggregation Theorem for Securities Markets." *Journal of Financial Economics* **1** (September 1974), 225–44.

Google Scholar

166 M. Rubinstein. "Corporate Financial Policy in Segmented Securities Markets." *Journal of Financial and Quantitative Analysis* 8 (December 1973), 749–62.

Web of Science® Google Scholar

167 P. A. Samuelson. "The Fundamental Approximation Theorem of Portfolio Analysis in Terms of Means, Variances and Higher Moments." *Review of Economic Studies* **37** (October 1970), 537–42.

Web of Science® Google Scholar

168 P. A. Samuelson and S. Swamy. "Invariant Economic Index Numbers and Canonical Duality: Survey and Synthesis." *American Economic Review* **64** (September 1974), 566–93.

Web of Science® Google Scholar

169 A. Santomero and J. Seater. "The Inflation-Unemployment Trade-off: A Critique of the Literature." *Journal of Economic Literature* **16** (January 1978), 499–544.

170 T. Sargent and N. Wallace. "Rational Expectations, the Optimal Monetary Instrument and the Optimal Policy Rule." Journal of Policitcal Economy 83 (April 1975), 241–54. Web of Science® Google Scholar 171 L. Selden. "An OCE Analysis of the Effect of Uncertainty on Saving under Risk Preference Independence." Review of Economic Studies 46 (January 1979), 73-82. Web of Science® Google Scholar 172 L. W. Senbet. "International Capital Market Equilibrium and the Multinational Firm Financing and Investment Policies." Journal of Financial and Quantitative Analysis 14 (September 1979), 455-80. Web of Science® Google Scholar 173 A. J. Senschak and W. L. Beedles. "Is Indirect International Diversification Desirable?" *Journal of Portfolio* Management 6 (Winter 1980), 49-57. **Google Scholar** 174 P. Sercu. "A Generalization of the International Asset Pricing Model." Revue de l'Association Française de Finance 1 (June 1980), 91-135. **Google Scholar** 175 W. F. Sharpe. "A Simplified Model for Portfolio Analysis." Management Science 9 (January 1963), 277-93. Web of Science® Google Scholar 176 W. F. Sharpe. "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk." *Journal of* Finance 19 (September 1964), 425-42. Web of Science® Google Scholar 177 J. J. Siegel. "Risk, Interest and Forward Exchange." *Quarterly Journal of Econoics* **86** (May 1972), 303–9. Web of Science® Google Scholar 178 E. Sohmen. Flexible Exchange Rates. Chicago: University of Chicago Press, 1969.

179 B. H. Solnik. "An Equilibrium Model of the International Capital Market." *Journal of Economic Theory* 8 (August 1974), 500–24.

180 B. H. Solnik. "The International Pricing of Risk: An Empirical Investigation of the World Capital Market Structure." Journal of Finance 29 (May 1974), 48–54.

| Web of Science® | Google Scholar |

181 B. H. Solnik. "Why Not Diversify Internationally Rather than Domestically?" Financial Analysts Journal 30 (July/August 1974), 48–54.

| Google Scholar |

182 B. H. Solnik. "Testing International Asset Pricing: Some Pessimistic Views." *Journal of Finance* **32** (May 1977), 503–11.

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183 R. C. Stapleton and M. G. Subrahmanyam. "Market Imperfections, Capital Asset Equilibrium and Corporation Finance. *Journal of Finance* **32** (May 1977), 307–21.

Web of Science® Google Scholar

184 R. C. Stapleton and M. G. Subrahmanyam. "Uncertain Inflation, Exchange Rates and Bond Yields." *Journal of Banking and Finance* **5** (March 1981), 93–107.

Web of Science® Google Scholar

185 R. Stehle. "An Empirical Test of the Alternate Hypotheses of National and International Pricing and Risky Assets." *Journal of Finance* **32** (May 1977), 493–502.

Web of Science® Google Scholar

186 G. V. G. Stevens. "Two Problems in Portfolio Analysis: Conditional and Multiplicative Random Variables." *Journal of Financial and Quantitative Analysis* **6** (December 1971), 1235–50.

Web of Science® Google Scholar

187 A. C. Stockman. "Risk, Information and Forward Exchange Rates." In J. A. Frankel and H. F. Johnson (eds.). *The Economics of Exchange Rates*. Reading, MA: Addison-Wesley, 1978.

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188 A. C. Stockman. "A Theory of Exchange Rate Determination." *Journal of Political Economy* **88** (August 1980), 673–98.

189 H. R. Stoll. "Causes of Deviations from Interest Rate Parity." *Journal of Money, Credit and Banking* **4** (February 1972), 113–17.

Google Scholar

190 R. M. Stulz. "On the Effects of Barriers to International Investment." *Journal of Finance* **36** (September 1981), 923–34.

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191 R. M. Stulz. "A Model of International Asset Pricing." *Journal of Financial Economics* **9** (December 1981), 383–406.

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192 R. M. Stulz. "The Forward Exchange Rate and Macroeconomics." *Journal of International Economics* **12** (May 1982), 285–99.

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193 M. G. Subrahmanyam. "On the Optimality of International Capital Market Integration." *Journal of Financial Economics* **2** (August 1975), 3–28.

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194 J. Tobin. "A General Equilibrium Approach to Monetary Theory." *Journal of Money, Credit and Banking* 1 (February 1969), 15–29.

Google Scholar

195 J. Tobin and W. R. Brainard. "Asset Markets and the Cost of Capital." In B. Balassa and R. Nelson (eds.). *Economic Progress, Private Values and Public Policy: Essays in Honor of William Fellner*. Amsterdam: North-Holland Publishing Co., 1977.

Google Scholar

196 S. C. Tsiang. "The Theory of Forward Exchange and the Effects of Government Intervention in the Forward Exchange Market." *I.M.F. Staff Papers* **7** (April 1959), 75–106.

Google Scholar

197 R. B. Upson. "Random Walk and Forward Exchange Rates: A Spectral Analysis." *Journal of Financial and Quantitative Analysis* **7** (September 1972), 1897–1906.

Web of Science® Google Scholar

198 H. R. Varian. *Microeconomic Analysis*. New York: Norton, 1978.

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199 R. Vernon. "International Investment and International Trade in the Product Cycle." *Quarterly Journal of Economics* **80** (May 1966), 190–207.

Web of Science® Google Scholar

200 N. Wallace. "A Modigliani-Miller Theorem for Open-Market Operations." *American Economic Review* **71** (June 1981), 267–74.

Web of Science® Google Scholar

201 L. Weiss. "The Role for Active Monetary Policy in a Rational Expectations Model." *Journal of Political Economy* **88** (April 1980), 221–33.

Web of Science® Google Scholar

202 J. M. Westerfield. "An Examination of Foreign Exchange Risk under Fixed and Floating Rate Regimes." *Journal of International Economics* **7** (May 1977), 181–200.

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