

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: The Microstructure of Foreign Exchange Markets

Volume Author/Editor: Jeffrey A. Frankel, Giampaolo Galli, Alberto Giovannini, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-26000-3

Volume URL: <http://www.nber.org/books/fran96-1>

Conference Date: July 1-2, 1994

Publication Date: January 1996

Chapter Title: Front matter, table of contents, preface

Chapter Author: Jeffrey A. Frankel, Giampaolo Galli, Alberto Giovannini

Chapter URL: <http://www.nber.org/chapters/c11359>

Chapter pages in book: (p. -11 - 0)

Frankel,
Galli, and
Giovannini



National
Bureau of
Economic
Research

The Microstructure of Foreign Exchange Markets

The Microstructure of
Foreign Exchange Markets



National
Bureau of
Economic
Research

Chicago

Edited by
Jeffrey A. Frankel,
Giampaolo Galli,
and Alberto Giovannini

The Microstructure of Foreign Exchange Markets

Edited by

JEFFREY A. FRANKEL, GIAMPAOLO GALLI,
and ALBERTO GIOVANNINI

The foreign exchange market is the largest, fastest-growing financial market in the world, featuring approximately \$1.3 trillion worth of transactions every day. Yet conventional macroeconomic approaches do not even attempt to explain why people trade foreign exchange. At the same time, they fail at the task that they do set for themselves, accounting for the short-run determinants of the exchange rate.

These nine innovative essays use a microstructure approach to analyze the workings of the foreign exchange market, with special emphasis on institutional aspects and the actual behavior of market participants. They examine the volume of transactions, heterogeneity of traders, the time of day and location of trading, the bid-ask spread, and the high level of exchange rate volatility that has puzzled many observers. They also consider the structure of the market, including such issues as nontransparency, asymmetric information, liquidity trading, the use of automated brokers, the relationship between spot and derivative markets, and the importance of systemic risk in the market.

This timely volume will be essential reading for anyone interested in international finance.

The Microstructure of Foreign Exchange Markets



A National Bureau
of Economic Research
Conference Report



BANCA D'ITALIA



Centre for
Economic
Policy
Research

The Microstructure of Foreign Exchange Markets

Edited by
**Jeffrey A. Frankel,
Giampaolo Galli, and
Alberto Giovannini**



The University of Chicago Press

Chicago and London

JEFFREY A. FRANKEL is a research associate of the National Bureau of Economic Research, where he is also director for International Finance and Macroeconomics. He is also professor of economics at the University of California, Berkeley, and senior fellow at the Institute for International Economics. GIAMPAOLO GALLI is chief economist of the Confederation of Italian Industry in Rome. When this book was written, he was head of the International Section of the Research Department of the Banca d'Italia. ALBERTO GIOVANNINI is a research associate of the National Bureau of Economic Research, a research fellow of the Centre for Economic Policy Research, and senior adviser of Long Term Capital Management, L. P.

The University of Chicago Press, Chicago 60637
The University of Chicago Press, Ltd., London
© 1996 by the National Bureau of Economic Research
All rights reserved. Published 1996
Printed in the United States of America
05 04 03 02 01 00 99 98 97 96 1 2 3 4 5
ISBN: 0-226-26000-3 (cloth)

Library of Congress Cataloging-in-Publication Data

The Microstructure of foreign exchange markets / edited by Jeffrey A. Frankel, Giampaolo Galli, and Alberto Giovannini.

p. cm.—(A National Bureau of Economic Research conference report)

Papers from a conference sponsored by the Bank of Italy, the National Bureau of Economic Research of Cambridge, USA, and the Centre for Economic Policy Research of London, UK, and held at S.A.DI.BA., the Banca d'Italia's conference center in Perugia, Italy, on July 1-2, 1994.

Includes bibliographical references and index.

I. Foreign exchange—Congresses. I. Frankel, Jeffrey A. II. Galli, G. III. Giovannini, Alberto. IV. Series: Conference report (National Bureau of Economic Research)

HG205.M53 1996

332.4'5—dc20

95-43757

CIP

© The paper used in this publication meets the minimum requirements of the American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

National Bureau of Economic Research

Officers

Paul W. McCracken, *chairman*
John H. Biggs, *vice-chairman*
Martin Feldstein, *president and chief
executive officer*

Geoffrey Carliner, *executive director*
Gerald A. Polansky, *treasurer*
Sam Parker, *director of finance and
administration*

Directors at Large

Peter C. Aldrich
Elizabeth E. Bailey
John H. Biggs
Andrew Brimmer
Carl F. Christ
Don R. Conlan
Kathleen B. Cooper
Jean A. Crocken

George C. Eads
Martin Feldstein
George Hatsopoulos
Karen N. Horn
Lawrence R. Klein
Leo Melamed
Merton H. Miller
Michael H. Moskow

Robert T. Parry
Peter G. Peterson
Richard N. Rosett
Bert Seidman
Kathleen P. Ugoff
Donald S. Wasserman
Marina v. N. Whisman
John O. Wilson

Directors by University Appointment

Jagdish Bhagwati, *Columbia*
William C. Brainard, *Yale*
Glen G. Cain, *Wisconsin*
Franklin Fisher, *Massachusetts Institute of
Technology*
Saul H. Hymans, *Michigan*
Marjorie B. McElroy, *Duke*
Joel Mokyr, *Northwestern*

James L. Pierce, *California, Berkeley*
Andrew Postlewaite, *Pennsylvania*
Naham Rosenberg, *Stanford*
Harold T. Shapiro, *Princeton*
Craig Swan, *Minnesota*
Michael Yoshino, *Harvard*
Arnold Zellner, *Chicago*

Directors by Appointment of Other Organizations

Marcel Boyer, *Canadian Economics
Association*
Mark Drabenscott, *American Agricultural
Economics Association*
Richard A. Easterlin, *Economic History
Association*
Gail D. Fosler, *The Conference Board*
A. Ronald Gallani, *American Statistical
Association*
Robert S. Hamada, *American Finance
Association*

Charles Lave, *American Economic
Association*
Rudolph A. Oswald, *American Federation of
Labor and Congress of Industrial
Organizations*
Gerald A. Polansky, *American Institute of
Certified Public Accountants*
James F. Smith, *National Association of
Business Economists*
Josh S. Weston, *Committee for Economic
Development*

Directors Emeriti

Moses Abramovitz
George T. Conklin, Jr.
Thomas D. Flynn

Franklin A. Lindsay
Paul W. McCracken
Geoffrey H. Moore
James J. O'Leary

George B. Roberts
Eli Shapiro
William S. Vickrey

Since this volume is a record of conference proceedings, it has been exempted from the rules governing critical review of manuscripts by the Board of Directors of the National Bureau (resolution adopted 8 June 1948, as revised 21 November 1949 and 20 April 1968).

Contents

Preface	ix
Introduction	1
Jeffrey A. Frankel, Giampaolo Galli, and Alberto Giovannini	

I. TRADING VOLUME, ASYMMETRIC INFORMATION, THE BID, AND THE ASK

1. Risk and Turnover in the Foreign Exchange Market	19
Philippe Jorion <i>Comment: Bernard Dumas</i>	
2. Bid-Ask Spreads in Foreign Exchange Markets: Implications for Models of Asymmetric Information	41
David A. Hsieh and Allan W. Kleidon <i>Comment: Zhaohui Chen</i> <i>Comment: Antti Suvanto</i>	
3. Interdealer Trade and Information Flows in a Decentralized Foreign Exchange Market	73
William Perraudin and Paolo Vitale <i>Comment: Silverio Foresi</i> <i>Comment: Alan Kirman</i>	
4. One Day in June 1993: A Study of the Working of the Reuters 2000-2 Electronic Foreign Exchange Trading System	107
Charles Goodhart, Takatoshi Ito, and Richard Payne <i>Comment: Richard K. Lyons</i>	

- 5. Foreign Exchange Volume: Sound and Fury Signifying Nothing?** 183
Richard K. Lyons
Comment: Mark D. Flood
Comment: António Mello

II. SPECULATION, EXCHANGE RATE CRISES, AND MACROECONOMIC FUNDAMENTALS

- 6. Dynamic Hedging and the Interest Rate Defense** 209
Peter M. Garber and Michael G. Spencer
Comment: Richard K. Lyons
- 7. Heterogeneous Behavior in Exchange Rate Crises** 229
Fabio C. Bagliano, Andrea Beltratti, and Giuseppe Bertola
Comment: Lorenzo Bini-Smaghi
Comment: Richard K. Lyons
- 8. Exchange Rate Economics: What's Wrong with the Conventional Macro Approach?** 261
Robert P. Flood and Mark P. Taylor
Comment: Andrew K. Rose
Comment: Lars E. O. Svensson
- 9. Is There a Safe Passage to EMU? Evidence on Capital Controls and a Proposal** 303
Barry Eichengreen, Andrew K. Rose, and Charles Wyplosz
Comment: José Viñals
- Contributors 333
Author Index 337
Subject Index 341

Preface

The project that produced this volume was originally inspired by recent turbulence in the foreign exchange markets, including large movements in the value of the dollar and, especially, the collapse of the European exchange rate mechanism in the crises of 1992–93. Standard macroeconomic models seemed able at best to explain only some of these major movements and able to explain even fewer of the many lesser short-term movements in exchange rates. An alternative approach, based on the microstructure of the foreign exchange market, seemed worth exploring.

The project had three sponsors—the Bank of Italy, the National Bureau of Economic Research, and the Centre for Economic Policy Research—corresponding to the three coeditors of this volume. The conference itself was held at S.A.DI.BA., the Bank of Italy's conference center in Perugia, on 1–2 July 1994. It managed to draw together, either as paper authors or as discussants, many of the economists throughout Europe and the United States who have worked on microstructure-relevant aspects of foreign exchange markets. The conference concluded with a panel discussion chaired by Antonio Fazio, Governor of the Bank of Italy, and featuring Andrew Crockett of the Bank for International Settlements, David Mulford of Credit Suisse First Boston, Ian Plenderleith of the Bank of England, and Fabrizio Saccomanni of the Bank of Italy.

From the beginning, the organizers were determined that the volume *not* be just another collection of the usual macroeconomic sort of papers. A focus on such features as the heterogeneity of participants in the foreign exchange market, trading volume, bid-ask spreads, and intradaily movements—all factors that are usually neglected in the standard approach—was considered essential. This is near-virgin territory for academic research, which alone makes it worth exploring.

That the microstructure approach is already well advanced in the case of equity markets shows that the task can be done. It calls for something more

than applying existing models to a new market, however. The structure of the foreign exchange market is inherently different from that of equity or commodity markets. It lacks their centralization and transparency, as many of the contributions here explain.

We must acknowledge from the outset of the book that the microstructure approach is a long way from being able to explain major movements in exchange rates. For the time being, we can hope only to have made progress in understanding the microstructure of the foreign exchange market for its own sake. Further aspirations, that the knowledge gained might provide building blocks for models of exchange rate determination, pertain to the future.

The editors would like to thank Antonio Fazio, Martin Feldstein, and Richard Portes, of the three sponsoring institutions, for their support, and in particular to thank the Bank of Italy for its hospitality.