ful at insulating these countries from high world real interest rates, nor has it improved their growth and investment performance relative to non-EMS countries. Other papers include an analysis of the optimal exchange rate regime for the Netherlands by H. Jager and a description of the role of the International Monetary Fund in world monetary markets by Tom de Vries.

Part III contains four papers on lessons to be drawn from recent experience and implications for the future formulation of monetary policy. This is the first place that debate seemed to emerge. Nicholas Kaldor's paper stressed problems associated with the endogeneity of the stock of money and strongly attacked monetarism. Kaldor considers British and American monetary policy from 1979 to 1982 and concludes that the "monetarist experiment" was a "terrible failure" (p. 260). This section also includes papers by P. Korteweg and G. A. Kessler pertaining to Dutch experience and prospects for the future. The final paper by Emil van Lennep is a broad cross-country assessment of the proper monetary conditions for economic recovery which concludes that monetary policies cannot solve all the world's problems but can continue to contribute to price stability.

In general, this volume does not make major empirical or theoretical breakthroughs. However, it does provide a summary of a remarkable range of economic issues surrounding monetary policy in recent years, to which this review cannot do full justice. It makes a significant contribution in many areas and is likely to be of interest to economists and policy makers interested in theoretical and practical aspects of international monetary policy.

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The economic function of futures markets. By JEFFREY WILLIAMS. Cambridge, New York and Sydney: Cambridge University Press, 1986. Pp. viii, 260. ISBN 0-521-26591-6.
JEL 86-1095

In *The Economic Function of Futures Markets* Jeffrey Williams seeks to reverse the prevailing view that futures markets exist primarily as a response to the need to shift risk (or to hedge). This view is widely held, among both academics and practitioners. For example, the ability to eliminate price risk through hedging is commonly cited as the chief economic benefit of futures markets. Moreover, the commodity Futures Trading Commission, as a condition for approving new contract (futures) markets, requires proof of a significant hedging demand.

In attempting to replace this theory with his own, Williams has undertaken an ambitious academic project. His book, therefore, will be of interest only to readers who already possess a good deal of knowledge about futures markets, and who have some understanding of the scholarly literature in this area.

The paradigm put forward to replace the prevailing theory is that futures markets exist to serve as implicit loan markets for commodities. Hedgers, rather than attempting to eliminate the risks associated with commodity price fluctuations, really use futures markets to borrow and lend commodities. A short hedger, for example, who makes a spot purchase of a commodity and simultaneously sells a futures contract on that commodity is, in Williams' eyes, simply borrowing the commodity for a fixed period of time (while simultaneously lending money). The hedger's motivation is not a desire to eliminate price risk but to adjust his inventory stock.

A central aspect of Williams' theory is that firms hold inventories for the same reason that individuals hold cash: to minimize transaction costs. Further, this "transaction demand" (for commodity stocks) has nothing to do with price risk, or with volatile commodity prices. Thus, firms that enter into futures transactions to adjust their stocks (by lending and borrowing commodities) have as their economic motivation inventory management, and not risk management.

Williams' primary motivation for writing this book is his belief that futures markets exhibit characteristics that cannot be explained by prevailing theories. He contends, first, that empirical studies have demonstrated that futures prices do not exhibit any risk premia; and, second, that spread (price) relationships are highly variable. Without arguing whether he is correct about what empirical studies actually show, it is not true that the portfolio theory of hedging cannot explain these phenomena. In particular, futures prices will exhibit no risk premia when there is a balance between short and long hedgers. Similarly, the volatility of spreads can be explained by shifts in the balance between long and short hedgers, or by changing risk preferences.

In summary, it is not clear that this book addresses any major deficiency in the prevailing theories of futures markets, or that it provides us with a superior paradigm for understanding their economic role. After finishing the book the reader is still left to ferret out for himself the importance of Williams' analysis. Does adopting the view that futures markets function as implicit loan markets change our understanding of why they exist and how they function to an important degree? Are there, for example, implications about price relationships that cannot be obtained from the prevailing theories? Are there implications about trading volume and open interest, or the volatility of prices, or about which commodities develop successful futures markets? Are there important public policy implications, such as how hedging should be defined and regulated, or what criteria should be used by regulators when deciding on new contract applications? Despite Williams' attempt to draw out some of these implications and to examine them in the context of the competing theories of futures markets (pp. 232–36), it is doubtful that any reader will draw the same conclusion: ". . . [that] the evidence supports one and only one theory" (p. 236).

Although the book fails to achieve its primary (and, indeed, very ambitious) goal of providing a new theory of futures markets, it may still be of interest to readers who wish to improve their understanding of "spread trading" in futures contracts. The author provides a careful analysis of such trading, as well as of the economic motivations for it. Another attractive feature of the book is Williams' impressive grasp of the historical evolution of futures markets. Finally, the book encourages the reader to rethink some of the fundamental theories and principles of futures markets.

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320 FISCAL THEORY AND POLICY; PUBLIC FINANCE

Untangling the income tax. By DAVID F. BRADFORD. Cambridge, MA and London: Harvard University Press, Committee for Economic Development, 1986. Pp. x, 386. $29.95. ISBN 0–674–93040–1. *JEL 86–0763*

David Bradford's *Untangling the Income Tax* is a truly first rate description and analysis of current and recent U.S. tax policy. It is also an excellent introduction to many of the major topics in modern public finance and, as such, will make an excellent supplementary text for courses in public finance. The book is about general issues in tax policy, and, while drawing on recent U.S. tax law changes for purposes of illustration, its contribution for tax analysis is separate from its insights into recent policy choices.

The book is highly readable; Bradford has accomplished the difficult task of writing on taxation in a way that will interest newcomers as well as old hands. Bradford blends together theoretical topics with a range of illustrations and examples. Many of these illustrations and examples will be new even to lawyers and accountants skilled in tax arbitrage.

Another reason the book will be of broad interest is that it examines U.S. federal taxation from two perspectives, that of a pure income tax and that of a pure consumption tax. The first perspective is familiar, the second is not. Since the U.S. tax structure represents a messy mix of income and consumption taxation, it can not be evaluated simply from the standpoint of income taxation. From that standpoint, for example, some features of the U.S. tax code, such as IRAs, may appear as unjustifiable aberrations, while from the perspective of a pure consumption tax they follow naturally. To my knowledge, this is the first book really to clarify the true nature of the U.S. tax structure and to compare the advantages of moving closer to a pure income tax with those of moving closer to a pure consumption tax.

The book begins by clarifying the differences between income and consumption taxation. It