

Managing Financial Risks in Indebted Developing Countries

By Donald J. Mathieson, David Folkerts-Landau,
Timothy Lane, and Iqbal Zaidi



International Monetary Fund
Washington, D.C.
June 1989



Contents

	<i>Page</i>
Preface	v
I. Introduction	1
II. Financial and Commodity Price Risks Confronting Indebted Developing Countries	2
Interest Rate Variability	
Exchange Rate Variability	
Commodity Price Variability	
Adjustment Policies and Financial and Commodity Price Risks Responses to External Risks	
III. Market-Based Interest Rate Hedging	8
Development of Market-Based Hedging Instruments	
Use of Market-Based Interest Rate Hedging Instruments by Indebted Developing Countries	
Short-Term Hedging Operations Using the Eurodollar Futures Contract	
Characteristics of Eurodollar Futures Contract	
Design of a Short-Term Eurodollar Interest Rate Hedge	
Medium-Term Hedging Operation Using Interest Rate Caps	
Some Factors Limiting Use of Interest Rate Hedging by Indebted Developing Countries	
Market-Based Hedging Strategies and Adjustment Programs	
IV. Summary	19
Appendices	
I. Futures and Forward Markets	20
II. Options Markets	28
III. Commodity Hedging: Examples	32
IV. Glossary	39
Bibliography	46
TABLES	
Section	
III. 1. Trading Volume and Open Interest in Eurodollar Futures and Futures Options Contracts, 1981–87	10

	<i>Page</i>
2. Eurodollar Futures Contract Specification	12
3. Margin Requirements	13
4. Illustration of Eurodollar Futures Hedge	14
5. Premiums for Interest Rate Caps on Three-Month LIBOR as of July 1988	16
6. Illustration of Interest Rate Cap Hedge	16
 Appendix	
I.	
A1. Some Commodity Futures Markets Relevant to Developing Countries	20
A2. An Example of Specifications for a Futures Contract	21
A3. Some Commodity Futures Markets: Recent Size	21
A4. Some Foreign Exchange Futures Markets	22
A5. Some Interest Rate Futures Contracts	22
A6. Example of a Financial Futures Contract	23
A7. Some Examples of Futures Prices	27
 II.	
A8. Some Commodity Futures Options Markets	28
A9. Some Foreign Exchange Options and Futures Options	29
A10. Some Interest Rate Options	29
A11. Some Examples of Futures Option Premiums	31
 III.	
A12. Sugar Producer's Revenues	32
A13. Effects of Sugar Futures Hedge	33
A14. Effects of Sugar Future Options Hedge	33
A15. Revenues Associated with Output Uncertainty	35
A16. Effects of Sugar Futures or Options Hedges with Output Uncertainty	36
A17. Effects of Wheat Futures or Options Hedges	37
 CHARTS	
Section	
II.	
1. Nominal and Real International Interest Rates, 1965–88	2
2. Indices of Exchange Rate Volatility, 1960–88	4
3. Indices of Commodity Price Volatility, 1960–88	5

The following symbols have been used throughout this paper:

- ... to indicate that data are not available;
 - to indicate that the figure is zero or less than half the final digit shown, or that the item does not exist;
 - between years or months (e.g., 1984–85 or January–June) to indicate the years or months covered, including the beginning and ending years or months;
 - / between years (e.g., 1985/86) to indicate a crop or fiscal (financial) year.
- “Billion” means a thousand million.

Minor discrepancies between constituent figures and totals are due to rounding.