LECTURE NOTES CONTENTS

PART I: Exchange Rates

Chapter I: Foreign Exchange Markets

I. Introduction to the Foreign Exchange Market

1.A An Exchange Rate is Just a Price

1.A.1 Equilibrium Exchange Rates and Foreign Exchange Risk

II. Currency Markets

2.A Organization

2.A.1 Settlement of transactions

2.A.2 Activities

2.A.3 Players and Dealing in Foreign Exchange Markets

2.A.3.i Dealers, Market Makers and Brokers

2.B The Products of the Foreign Exchange Market

2.B.1 The Spot Market

- 2.B.1.i Direct and Indirect Quotations
- 2.B.1.ii Cross-rates
- 2.B.2 The Forward Market
 - 2.B.2.i Forward Premium and Forward Discount
- 2.B.3 The Foreign Exchange Swap Market
- 2.B.4 Newspaper quotes
- 2.C Other Instruments to Manage Currency Risk
 - 2.C.1 Currency Futures
 - 2.C.2 Currency Options

III. Looking Ahead

Exercises

Chapter II: The International Monetary System

I. Exchange Rate Systems

- 1.A Flexible Exchange Rate System
- 1.B Fixed Exchange Rate System
- 1.C Other Exchange Rate Systems
- 1.D Different Policy Tools: A Comparison of Fixed and Flexible Exchange Rate Regimes
- 1.E Central Bank Intervention

1.E.1 Central Bank Intervention: Some Issues

II. An Overview of the Modern International Monetary System

- 2.A The Gold Standard
- 2.B Bretton Woods Agreements (1944-1973)
- 2.C Managed floating system and the G-7 Council
- 2.D Europe's Exchange Rate Mechanism and the Euro
- **III. Looking Ahead**

Exercises

Chapter III: Exchange Rates, Interest Rates, Inflation and Expectations

I. Interest Rate Parity Theorem (IRPT)

- 1.A Covered interest arbitrage
- 1.B The Forward Premium and the IRPT
- 1.C IRPT with Bid-Ask Spreads
 - 1.C.1 Bid's Bound: Borrow Domestic Currency
 - 1.C.2 Ask's Bound: Borrow Foreign Currency
- 1.D Synthetic Forward Rates
- 1.E IRPT: Evidence

II. Purchasing Power Parity (PPP)

- 2.A Absolute PPP and the Law of one price
 - 2.A.1 Real v. Nominal Exchange Rates
- 2.B Relative Purchasing Power Parity
- 2.C PPP: Implications
- 2.D PPP: Evidence
- 2.F PPP: Two practical applications

III. International Fisher Effect (IFE)

- 3.A Arbitrage in Perfect Financial Markets
- 3.B PPP and IFE
- 3.C IFE: Implications
- 3.D IFE: Evidence

IV. Expectations Hypothesis of Exchange Rates

- 4.A Expectations Hypothesis: Implications
- 4.B Expectations Hypothesis: Evidence
- 4.C Explanations for the Forward Bias
 - 4.C.1 Risk Premium
 - 4.C.2 Errors in Forming Expectations
 - 4.C.3 The "Peso Problem"

V. Looking Ahead

Exercises

Chapter IV: Structural Models of Exchange Rates Deermination I. Balance of Payments (BOP) Approach

1.A. The BOP

- 1.B The Balance of Trade as a Determinant of Exchange Rates
- 1.C The Absorption Approach to the Balance of Trade
- 1.D The Monetary Approach to the BOP
- 1.E BOP Approach: Implications
- **II.** Asset Approach
 - 2.A Monetary Approach
 - 2.A.1 A Simple Monetary Approach Model
 - 2.A.2 A More Sophisticated Monetary Approach Model
 - 2.A.3 Monetary Approach: Implications

III. Structural Models: Evidence

IV. The Martingale-Random Walk Model

4.A Efficient Markets

4.B Martingale-Random Walk Model: Implications

4.C Martingale-Random Walk Model: Evidence

4.D Simple Tests of the Martingale-Random Walk Model

V. Looking Ahead

Exercises

Chapter V: Forecasting Exchange Rates

I. Forecasting Exchange Rates

1.A Fundamental Approach

- 1.A.1 Fundamental Approach: Forecasting at Work
- 1.A.2 Fundamental Approach: Evidence
- 1.B Technical Approach
 - 1.B.1 Technical Analysis Models
 - 1.B.2 Technical Approach: Evidence

II. Looking Ahead: Exchange Rate Volatility

2.A J.P. Morgan's RiskMetrics Approach

- 2.B Using Forecasts of the Variance: Value-at-Risk (VAR)
 - 2.B.1 Calculating a VAR

Appendix V: Basic Forecasting Models

A.I Forecasting from Econometric Models

A.II Forecasting from Time Series Models

A.III Forecasting Using a Combination of Methods

A.IV Stationarity and Trends in Macroeconomic and Financial Data Exercises

PART II: Currency Risk Management

Chapter VI: Currency Risk Management: Futures and Forwards

I. Futures and Forward Currency Contracts

1.A Futures and Forwards Contracts in Risk Management

1.A.1 Forward Contracts

- 1.A.2 Futures Contracts
 - 1.A.2.i Margin requirements
 - 1.A.2.ii Newspaper Quotes
- 1.B The Value of a Futures Contract

II. Hedging with Futures Currency Contracts

2.A Choice of Hedge Ratio: Naïve Approach (Equal Opposite Position)

2.A.1 Changes in V_t

2.B Choice of Hedge Ratio: Optimal Hedge Ratio

2.B.1 Basis risk

- 2.B.2 Derivation of the optimal hedge ratio
- 2.B.3 OLS estimation of hedge ratios
- 2.B.4 A different approach: ARCH Models at Work
- 2.C Choice of Futures Contracts

2.C.1 Delta-hedging

2.C.2 Cross-Hedging

III. Looking Ahead: Currency Options Exercises

Chapter VII: Currency Risk Management: Options

I. Currency Options

- 1.A Options: Brief Review
 - 1.A.1 Currency Options
 - 1.A.2 Factors Affecting Currency Option Prices (premium)
- 1.B Trading in Currency Options

1.B.1 Newspaper Quotes

II. Hedging with Currency Options

- 2.A Dynamic Hedging with Options
 - 2.A.1 Using Delta to Measure the Exposure of a Trader 2.A.2 Gamma
 - D. H. J. in a Churcher
- 2.B Hedging Strategies
- 2.C Exotic Options

2.C.1 Barrier Options: Knock-outs/Knock-ins

III. Looking Ahead: Which hedging technique is better?

Appendix VII: Options: Black-Scholes and The Different Instruments

A.VII.1 Binomial Model: Derivation of the Black Scholes formula

A.VII.1.A One-period formulation

A.VII.1.B Two-periods formulation

A.VII.1.C T-period problem

A.VII.2 The Black-Scholes formula

A.VII.3 The Different Instruments

Exercises

Chapter VIII: Currency Risk Management at the Firm Level

I. Transaction Exposure: A Comparison of Hedging Techniques

- 1.A Measuring Transaction Exposure
 - 1.A.1 Range Estimates of Transaction Exposure
- 1.B Managing Transaction Exposure
 - 1.B.1 External Methods: Futures/Forwards, Options, and Money Market Hedges
 - 1.B.1.i Using Options with Different Strike Prices: Case Study: Ruggeri SA
 - 1.B.2 Internal Methods
 - 1.B.2.i Risk Shifting
 - 1.B.2.ii Currency Risk Sharing
 - 1.B.2.iii Risk Shifting
 - 1.B.2.iv Currency Risk Sharing

II. Translation Exposure

2.A Measuring Translation Exposure

- 2.A.1 Current Method
- 2.A.2 Temporal (Monetary/Nonmonetary) Method
- 2.A.3 Current Rate Method
- 2.A.4 Functional and Reporting Currency
- 2.B Managing Translation Exposure

III. Economic Exposure

- 3.A Measuring Economic Exposure
- 3.B Managing Economic Exposure

IV. Other Hedging Techniques Used by Firms

- 4.A Leading and Lagging
- 4.B Funds Adjustments

IV. Should a Firm Hedge?

- 4.A Hedging is Irrelevant: The Modigliani-Miller Theorem
- 4.B Hedging Adds Value
 - 4.B.1 Investors might not be able to replicate an optimal hedge
 - 4.B.2 Hedging as a tool to reduce the risk of bankruptcy
 - 4.B.3 Hedging as a tool to reduce investment uncertainty

Exercises

PART III: International Equity Markets

Chapter IX: International Equity Markets

I. General Overview and Differences

1.A Liquidity

- 1.A.1 Measures of Size
 - 1.A.1.i Capitalization/GDP
 - 1.A.1.ii Transaction volume
 - 1.A.1.iii Degree of concentration found in the major markets
- 1.A.2 The bid-ask spread

1.B Taxes

- 1.B.1 Tax Neutrality
- 1.C Stock Market Benchmarks
 - 1.C.1 International Stock Indexes
 - 1.C.2 Domestic Indexes
- 1.D Stock Index Futures and Options: Hedging Market Risk
 - 1.D.1 Stock Index Futures
 - 1.D.1.i Changing Beta
 - 1.D.2 Stock Index Options

II. Market Microstructure

- 2.A Basic Organization
- 2.B Differences in Trading Procedures
 - 2.B.1 Cash versus futures markets
 - 2.B.2 Fixed versus continuous quotation
 - 2.B.3 Computerization
- 2.C Internationalization

III. Practical Aspects

3.A Dual-Listing

3.A.1 American Depositary Receipts (ADRs)

- 3.A.1.i The mechanics of ADRs
- 3.A.1.ii Types of ADRs
- 3.B Financial Analysis and Valuation

3.B.1 The information problem

- 3.B.1.i Quality of information
- 3.B.1.ii Comparative analysis
- 3.B.2 Stock market valuation
 - 3.B.2.i Company valuation

IV. Looking Ahead

Exercises

Chapter X: International Equity Markets: Factors, Interrelations and Integration I. Why Do Investors Care about International Equity Markets?

- 1.A Lower risk
- 1.B Expected Returns are Unaffected
- 1.C Staying at Home: The Home Bias
- 1.D Problems with International Diversification

II. International Capital Market Integration

2.A Evidence from Closed-end Country Funds

III. Reducing the Complexity of International Investing I: Country Analysis

3.A Country Risk Analysis

- 3.A.1 Risk Rating Method
- 3.A.2 The Prince Model
 - 3.A.2.i Political Risk Factors
 - 3.A.2.ii Background Data
 - 3.A.2.iii The Prince Political Forecasting System

IV. Reducing the Complexity of International Investing II: International Factors and Linkages

4.A Domestic versus International Factors

- 4.A.1 Currency Factor and Hedging
- 4.B Linkages between Stock Markets
 - 4.B.1 The Crash of October 1987
 - 4.B.2 Interrelations
 - 4.B.2.i Leads and Lags
 - 4.B.2.ii High Volatility, Correlations and Portfolio Choice

V. Looking Ahead

Exercises

Chapter XI: Emerging Stock Markets

I. Global Investing and Emerging Markets

II. The Re-Emergence of "Emerging Markets"

2.A Diversification of Risk and Potential Growth

2.A.1 Low correlations with Developed Markets
2.A.2 High returns and high volatility
2.B Forces behind the Growth of Emerging Markets
2.C Openness and Costs
III. Country Funds and ADRs
IV. Integration of Emerging Markets
V. Another Characterization of Emerging Markets
VI. Contagion
Exercises

PART IV: International Bond Markets

Chapter XII: International Bond Markets

I. Introduction to International Bond Markets

- 1.A Euromarkets
 - 1.A.1 Origins of Euromarkets
 - 1.A.2 Eurocurrency Markets
- 1.B Eurobonds: Some Descriptive Statistics
 - 1.B.1 Borrowers
 - 1.B.2 Size and Instruments
- 1.C Type of Bond Instruments

II. Eurobond Markets

- 2.A Historical development of the Eurobond Market
- 2.B Characteristics of Eurobonds
 - 2.B.1 Issue Procedures in the Eurobond Market
 - 2.B.1.i Organization of a Traditional Eurobond Syndicate
 - 2.B.1.ii Selecting a Lead Manager
 - 2.B.1.iii Fee Structure for new Eurobond Issues
 - 2.B.1.iv Traditional Time Schedule for a New Offering
 - 2.B.1.v Gray Market
 - 2.B.1.vi Stabilization
 - 2.B.1.viiVariations on Issuing Procedure
 - 2.B.2 U.S. Legal Aspects of Eurodollar Bond Issues
 - 2.B.3 Eurobond secondary market
 - 2.B.4 The Global Bond

III. Foreign Bond Markets

- 3.A Yankee Bonds
- 3.B DEM Eurobonds and DEM Foreign Bonds
- 3.C Samurai Bonds and JPY Eurobonds
- 3.D Swiss Franc International Bonds

IV. Differences Among Bond Markets

- 4.A Issuing Techniques
- 4.B Dealing
- 4.C Quotations
- 4.D Yields
- 4.E Legal Aspects
- V. Bonds Indexes

VI. Why Do Investors Care About International Bonds?

6.A Benefits from International Diversification

6.B The Impact of Currency Hedging

VII. Looking Ahead

Appendix XII: Review of Bond Techniques and Related Concepts A.XII.1 Bond Prices and Yields

A.XII.1.i	Yield-to-maturity
A.XII.1.ii	Yield curves
A.XII.1.iii	Forward interest rates.
A.XII.iv	Valuing a bond with coupons
A.XII.1.v	Sinking Fund
A.XII.1.vi	Duration
A.XII.1.vii	Accrued Interest
A.XII.1.viii	Convertible Bonds and the Global Premium
A.XII.1.ix	Call Options

A.XII.1.x Quality Spreads

A.XII.2 Specific International Techniques

- A.XII.2.i International yield comparisons
- A.XII.2.ii Implied forward exchange rates
- A.XII.2.iii Implied Forward Exchange Rate on a Par-Yield Curve
- A.XII.2.iv Implied Forward Exchange Rate: Applications

Exercises

Chapter XIII: International Bond Markets: Pricing and Hedging

I. Pricing and Selection of a New Eurobond Issue

1.A Information

- 1.A.1 Borrowing Requirements
- 1.A.2 Preliminary Analysis of the Issue
- 1.A.3 Market Conditions
- 1.A.4 Perception of the Issuer
- 1.B Evaluation
- 1.C Case Studies
 - 1.C.1 Pricing a New Straight Bond: Merotex
 - 1.C.1.i Evaluation
 - 1.C.1.ii Expenses
 - 1.C.1.iii Pro Forma of the Issue
 - 1.C.1.iv Cost of Funds
 - 1.C.1.iv.1 Exclusive of Commissions and Expenses
 - 1.C.1.iv.2 Inclusive of Commissions and Expenses
 - 1.C.2 Pricing a New Eurobond with Equity Warrants: VOMF
 - 1.C.2.i Eurobond with Equity Warrants: General Consideratios
 - 1.C.2.ii Voeller Oel und Mineral Forschung
 - 1.C.2.ii.1 Information
 - 1.C.2.ii.2 Evaluation
 - 1.C.2.ii.3 The Pro forma of VOMF's New Issue
- 1.D Choosing a Particular Type of Bond for a New Issue

1.D.1 Eurobonds with Currency Options Attached

1.D.2 Case Study: Bioneth Engineering

II. Forward Price of a Coupon Bond

III. Bond Futures

- 3.A Notional Bond Futures
 - 3.A.1 The U.S. Treasury Bond Contract
 - 3.A.2 The 10-year Japanese Government Bond Futures
 - 3.A.3 The Bund Futures
 - 3.A.4 The French Government Bond Futures
- 3.B Cheapest-to-Deliver Bond (CDB) Futures
 - 3.B.1 Equilibrium Price for a Deliverable Government Bond Futures
 - 3.B.2 The Components of Basis
 - 3.B.3 Identification of the CDB
- 3.C Index-Based Futures

IV. Hedging With Bond Futures

- 4.A Duration-Based Hedging Strategies
 - 4.A.1 Application: Asset Allocation

V. Looking Ahead

Exercises

PART V: Other Interest Rate Instruments in International Markets

Chapter XIV: Swaps

I. Introduction to Swaps

1.A Economic motives for swaps

- 1.A.1 Risk Sharing
- 1.A.2 Arbitrage
- 1.A.3 Market completion
- 1.B How is the market organized?

II. Interest Rate Swaps

- 2.A Valuation of an Interest Rate Swap
- 2.B Market Valuation of an Interest Rate Swap
- 2.C Euromarkets and interest rate swaps
 - 2.C.1 Case Study: Merotex (continuation)

III. Currency Swaps

- 3.A Types of Currency Swaps
 - 3.A.1 Back-to-Back and Parallel Loans
 - 3.A.2 Long Term Forward Contracts
 - 3.A.3 Straight Currency Swap
 - 3.A.4 Swap of Debt Payments
 - 3.A.5 Case Study: IBM and The World Bank
- 3.B Valuation of Currency Swaps
 - 3.B.1 Decomposition into Forward Contracts
- 3.CEurobonds and currency swaps
- 3.D Other currency swaps

3.E Credit Risk

IV. Extensions

4.A Commodity Swaps

4.B Synthetic Instruments and Equity Swaps

V. Looking Ahead

Exercises

Chapter XV: Eurocurrency Futures and Options

I. Eurocurrency Futures

- 1.A Some Terminology
- 1.B The Eurostrip Yield Curve and the CME Swap
- 1.B.1 Pricing Short-Dated Swaps
- 1.C Gap Risk Management

II. Forward Rate Agreements (FRA)

III. Hedging with Eurocurrencies and FRAs

IV. Interest Rate, Eurocurrency Futures Options and Other Derivatives

- 4.A Valuation of futures options
- 4.B Caps, Floors, and Collars
 - 4.B.1 Valuation of a Cap
 - 4.B.1.i Cap Packaging
- 4.C LIBOR Options and FRAs

Exercises

PART VI: Miscelaneous Topics

Chapter XVI: Gold and Gold Investments

I. Introduction

- 1.A The Gold Market
- 1.B The Motivation for Investment in Gold

II. Gold Price Determinants

- 2.A The Valuation of Index-Linked Securities
 - 2.A.1 Valuation of Gold Bonds
- 2.B Gold Mining Equity

Exercises

Chapter XVII: Asset Allocation and Portfolio Management I. Introduction to Asset Allocation

- 1.A Passive approach
- 1.B Active approach
- 1.C Evidence

II. Evaluation of the Asset Allocation Process

- 2.A A Note on Optimal Asset Allocation
- 2.B Performance Analysis in International Markets
 - 2.B.1 Calculating a rate of return

2.B.2 IPA: Breaking Down Performance

- 2.B.2.i Security Selection
- 2.B.2.ii Asset Allocation
- 2.B.2.iii Market Timing

III. Risk-Adjustment Performance of Portfolios

3.A Simple ratios

3.A.1 Formation of Optimal Portfolio

- 3.B Bankers Trust's risk adjustment method
- 3.C The Jensen measure

Exercises