E-workbook: Introductory Derivatives Edition 3

The purpose of this e-workbook is to introduce students to the function and implementation of financial markets instruments including forwards, futures, FRAs, options and swaps from hedging, speculating and arbitrage frames of reference. Australian students will appreciate the perspective this resource has taken, with detailed coverage of the Australian Securities Exchange.

Introduction to derivatives

- Identifying financial risk
- Hedging approaches
- New risks caused by using derivatives
- Trading derivatives, marking-to-market
- The Australian Securities Exchange
- The functions of a clearing house

Forward Rate Agreements (FRAs)

- Introduction to FRAs
- Spot rates
- Forward rates and forward ratios
- Applications to arbitrage
- Characteristics of FRAs
- Trading FRAs
- Creating an effective borrowing hedge

Forwards and futures

- Introduction to forwards and futures
- Short and long positions in futures contracts
- Creating payoff diagrams
- Trading futures
- Speculators, arbitragers and hedgers
- The process of delivering a futures contract
- Margin accounts and calculating margin calls
- Factors determining futures prices
- Identifying arbitrage opportunities
- Pricing using the no-arbitrage principle
- Foreign exchange forward rates

Using futures

- SPI futures
- BAB futures
- Treasury bond futures
- Currency futures
- Commodity futures

Options

- Introduction to options
- Calls and puts
- American and European options
- Risk and return profile of counterparties
- Trading options
- Creation and uses of caps, floors and collars
- Spreads, straddles and strangles
- Synthetic shares and synthetic options

Pricing options

- Intrinsic and time value of options
- Put-call parity
- Black-Scholes model and limitations
- Binomial model and limitations
- Delta, theta and gamma
- Using delta to establish an effective hedge

Swaps

- Introduction to swaps
- The theory of comparative advantage
- Trading swaps
- How swaps can help hedge interest rate risk
- Valuation of interest rate swaps
- Valuation of currency swaps

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