Chapter 1

Introduction

Chapter 1: Introduction

What's good about finance is that it lubricates the machinery of capitalism.

John Bogle,

Journal of Indexes, Fourth Quarter, 2003, p. 41

Important Concepts in Chapter 1 (1 of 2)

- Different types of derivatives
- Presuppositions for financial markets, risk preferences, risk-return tradeoff, and market efficiency
- Theoretical fair value
- Arbitrage, storage, and delivery
- The role of derivative markets
- Criticisms of derivatives
- Ethics

Important Concepts in Chapter 1 (2 of 2)

- Business risk versus financial risk
- Derivatives
  - *A derivative is a financial contract whose returns are derived from those of an underlying factor*.
- Size of the derivatives market at year-end 2013
  - $710 trillion notional principal
  - U.S. Fourth Quarter GDP was only $17 trillion
  - See Figure 1.1 on 19th slide for OTC notional
  - See Figure 1.2 on 20th slide for exchange-traded volume
- Real versus financial assets

Derivative Markets and Instruments (1 of 5)

- Derivative Markets
  - Instrument – generic term describing either asset or liability upon which the derivative contract is based
  - Contract – an enforceable legal agreement
  - Security – a tradable instrument representing a claim on a group of assets
  - Cash market (or spot market) – market where underlying is delivered immediately or shortly thereafter

Derivative Markets and Instruments (2 of 5)

- Options
  - Definition: *a contract between two parties that gives one party, the buyer, the right to buy or sell something from or to the other party, the seller, at a later date at a price agreed upon today*
  - Option terminology
    - price/premium
    - call/put
    - right, not an obligation

Derivative Markets and Instruments (3 of 5)

- Forward Contracts
  - Definition: *a contract between two parties for one party to buy something from the other at a later date at a price agreed upon today*
  - Exclusively over-the-counter

Derivative Markets and Instruments (4 of 5)

- Futures Contracts
  - Definition: *a contract between two parties for one party to buy something from the other at a later date at a price agreed upon today; subject to a daily settlement of gains and losses and guaranteed against the risk that either party might default*
  - Exclusively traded on a derivatives exchanges
  - Subject to daily settlement

Derivative Markets and Instruments (5 of 5)

- Swaps and Other Derivatives
  - Definition of a swap: *a contract in which two parties agree to exchange a series of cash flows*
  - Exclusively over-the-counter
  - Viewed as a combination of forward contracts
  - Swaptions are special type of option on a swap

Underlying Asset

- The Underlying Asset
  - Called the *underlying*
  - A derivative *derives* its value from the underlying
  - Can be almost anything, such as weather measurements

Important Concepts in Financial and Derivative Markets (1 of 2)

- Presuppositions – rule of law, property rights, culture of trust
- Risk Preference
  - Risk aversion versus risk neutrality
  - Risk premium
- Short Selling
- Repurchase agreements (repos)
- Return and Risk
  - Risk defined
  - The risk-return tradeoff (see Figure 1.3 on 21st slide)

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Important Concepts in Financial and Derivative Markets (2 of 2)

- Market Efficiency and Theoretical Fair Value
  - Efficient market defined: *A market in which the price of an asset equals its true economic value.*
  - An efficient market is a consequence of rational and knowledgeable investor behavior
  - The concept of theoretical fair value
    - The true economic value

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Fundamental Linkages Between Spot and Derivative Markets

- Arbitrage and the Law of One Price
  - Arbitrage defined: *A type of profit-seeking transaction where the same good trades at two prices.*
  - Example: See Figure 1.4 on 22nd slide
    - The concept of states of the world
  - The Law of One Price
- The Storage Mechanism: Spreading Consumption across Time
- Delivery and Settlement

The Role of Derivative Markets

- Risk Management
  - Hedging versus speculation
  - Setting risk to an acceptable level
  - Example: Southwest Airlines
- Price Discovery
- Operational Advantages
  - Transaction costs
  - Liquidity
  - Ease of short selling
- Market Efficiency

Criticisms of Derivative Markets

- Speculation
- Comparison to gambling

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Misuses of Derivatives

- High leverage
- Inappropriate use

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Derivatives and Ethics

- Codes of ethics and standards of professional conduct are vital components of the derivatives profession
- Examples
  - CFA Institute
  - Professional Risk Managers International Association
  - Global Association of Risk Professionals

Derivatives and Your Career

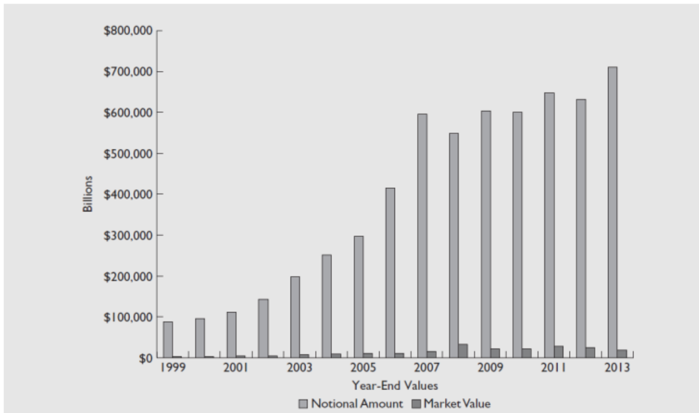
- Financial management in a business
- Small businesses ownership
- Investment management
- Public service

Source of Information on Derivatives

www.cengage.com/finance/chance/derivatives/10e

Summary

FIGURE 1.1: Notional Amount and Market Value of Over-the-Counter Derivatives



Source: http://www.bis.org/statistics/derstats.htm (various issues of their *Regular OTC Derivatives Market*).

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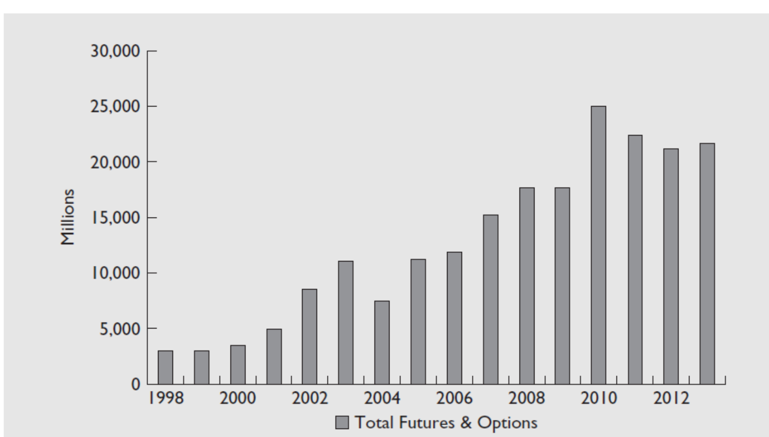
FIGURE 1.2: Trading Volume in Exchange-Listed Derivatives



Source: http://www.futuresindustry.org/bibliography.asp (various issues of their annual volume survey).

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FIGURE 1.3: Risk–Return Trade-Off

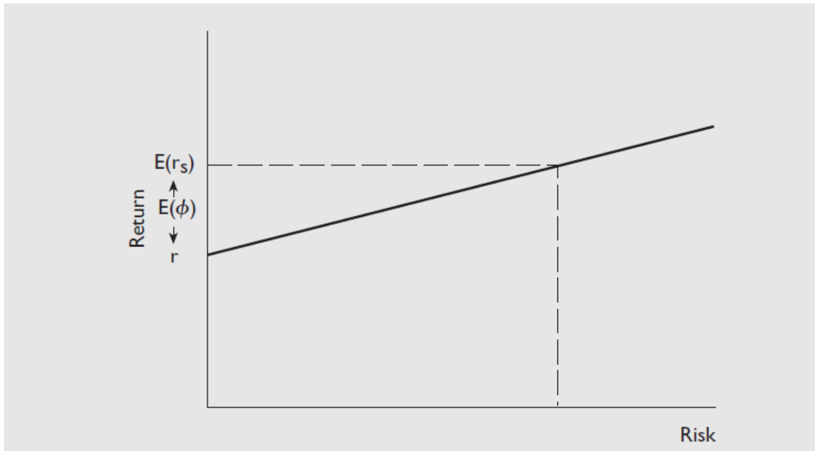

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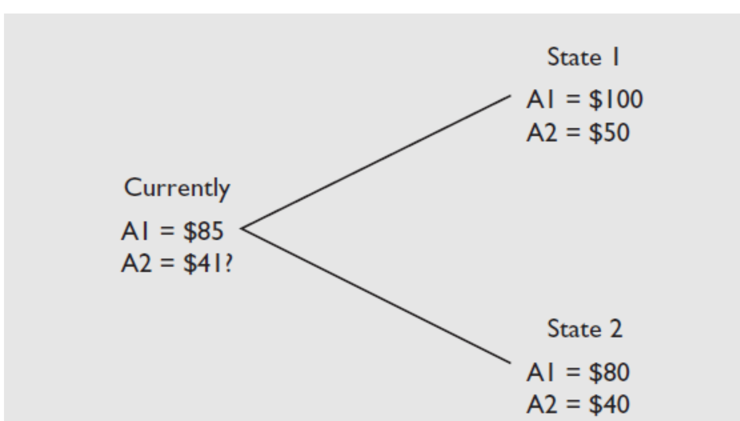
FIGURE 1.4: Arbitrage with Two Assets and Two States of the World



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