CHAPTER 11

DERIVATIVES MARKETS

The Purpose of Futures and Forward Markets

The purpose is to eliminate the price risk inherent in transactions that call for future delivery

- of money,
- a security,
- or a commodity.

Forward Exchange Markets

- Buying/selling of a specified amount, price, and future delivery date of foreign currency.
- Direct relationship between buyer and seller.
- Foreign exchange dealers earn revenues on the spread between buying and selling.
- Seller delivers at the specified date.

Futures Markets

- Buying/selling of standardized contracts specifying the amount, price, and future delivery date of a currency, security, or commodity.
- Buyers/sellers deal with the futures exchange, not with each other.
- A specific trade (buy/sell) involves a hedger and a speculator.
- Delivery seldom made -- buyer/seller offsets previous position before maturity.
- Futures contracts expire on specific dates.

Spot versus Futures Market

- Trading for immediate or very-near-term delivery is called the spot market.
- Trading for future delivery -- futures market.

A Position in the Futures Market

- Long -- an agreement to buy (purchase) in the future.
- Short -- an agreement to sell (deliver) in the future.

Margin Requirements

- **Initial margin** -- small percentage deposit required to trade a futures contract.
- **Daily settlements** -- reflect gains/losses daily and cash payments.
- **Maintenance margin** -- minimum deposit requirements on futures contracts.

Futures Exchanges

- Competition between exchanges is keen.
- Contract innovation is common.
- Exchanges advertise and promote heavily.
- Exchange specifies terms of a contract.
  - Dates.
  - Denomination.
  - Specific items that can be delivered.
  - Method of delivery.
  - Minimum daily price variance.
  - Rules for trading.

Futures Markets Participants

- Hedgers attempt to reduce or eliminate price risk.
- Speculators accept the price risk in turn for expected return.
- Traders speculate on very-short-term changes in future contract prices.

Risks in the Futures Markets

- **Basis risk** -- risk of an imperfect hedge because the value of item being hedged may not always keep the same price relationship to the futures contracts.
- **Cross-hedges** -- using the futures market to hedge a dissimilar commodity or security.
- **Related-contract risk** -- risk of failure due to a unanticipated change in the business activity being hedged, such as a loan default or prepayment.

Risks in the Futures Markets (concluded)

- **Manipulation risk** -- risk of price losses due to a person or group trading (buying or selling) to affect price.

- **Margin risk** -- the liquidity risk that added maintenance margin calls will be made by the exchange.

Swaps Compared to Forwards and Futures

- Swaps are like forward contracts in that they guarantee the exchange of two items in the future, but a swap only transfers the net amount.
- Swaps do not pre-specify the terms of trade as do forward contracts. Prices are conditional on changes in a indexed interest rate such as T-bills.
- Swaps are used to hedge interest rate risk as are financial futures. Credit risk differences between the parties provide the economic incentive to swap future interest flows.

Swaps Compared to Forwards and Futures, cont.

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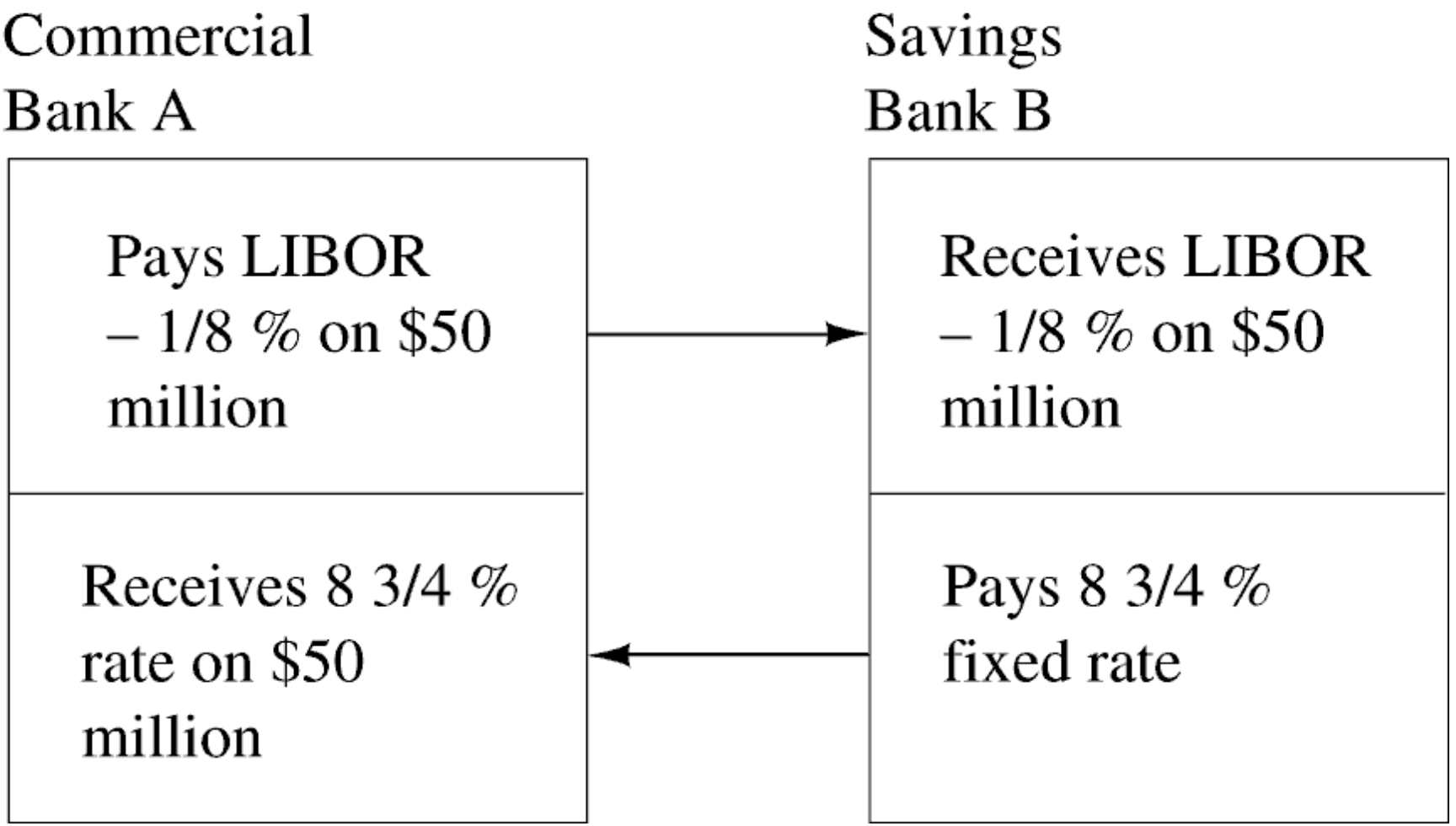
Swap Dealers

- Serve as Counter-parties to both Sides of Swap Transactions
- Dealers negotiate a deal with one party, then seek out other parties with opposite interests and write a separate contract with them.
- The two contracts hedge each other and the dealer earns a fee for serving both parties.

Swaps Have Limited Regulation

- Bank regulators require risk-based capital support for swap-risk exposure.
- Other swap competitors, investment banks and life insurance companies have no regulatory capital costs.

Example of a Swap



Options

- Right to buy or sell
  - an item
  - at a predetermined price (strike price)
  - until some future date.

Options versus Futures Contracts

- The option at the strike price exists over the period of time, not at a given date.
- The buyer of an option pays the seller (writer) a premium which the writer keeps regardless of whether or not the option is ever exercised.

Options versus Futures Contracts, cont.

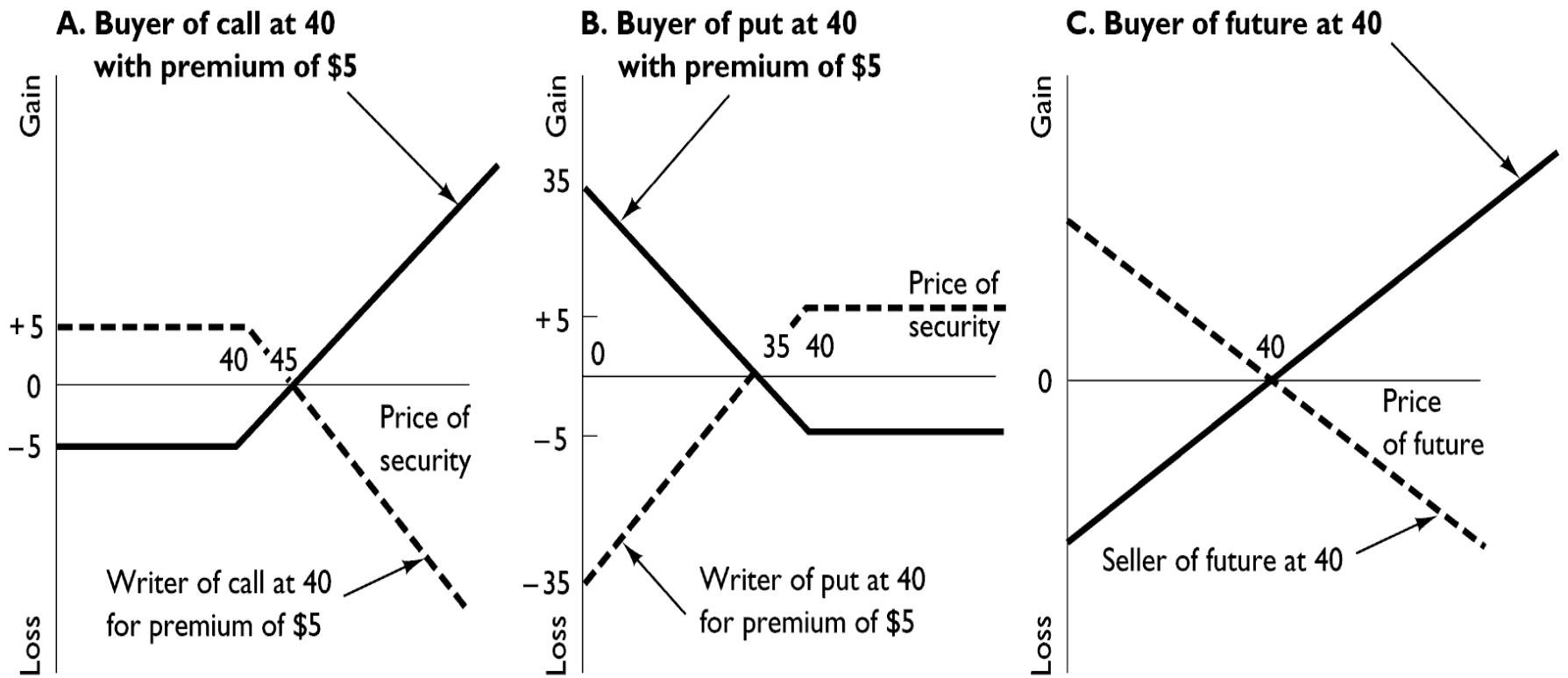
- The option does not have to be exercised by the buyer;
- The option can be sold if it has a market value, before the expiration date.
- Gains and losses are unlimited with futures contracts; with options the buyer can lose only the premium and the commission paid.

Calls and Puts

- **Call option** -- buyer has the option to buy an item at the strike price.
- **Put option** -- buyer has the option to sell an item at the strike price.

Covered and Naked Options

- **Covered option** -- writer either owns the security involved in the contract or has limited his or her risk with other contracts.

- **Naked option** -- writer does not have or has not made provision to limit the extent of risk.

Gains and Losses on Options and Futures Contracts