

Financial Mathematics

MATH 5870/6870¹
Fall 2021

Le Chen

lzc0090@auburn.edu

Last updated on
August 15, 2021

Auburn University
Auburn AL

¹Based on Robert L. McDonald's *Derivatives Markets*, 3rd Ed, Pearson, 2013.

Chapter 5. Financial Forwards and Futures

Chapter 5. Financial Forwards and Futures

§ 5.1 Alternative ways to buy a stock

§ 5.2 Prepaid forward contracts on stock

§ 5.3 Forward contracts on stock

§ 5.4 Futures contracts

§ 5.5 Problems

Chapter 5. Financial Forwards and Futures

§ 5.1 Alternative ways to buy a stock

§ 5.2 Prepaid forward contracts on stock

§ 5.3 Forward contracts on stock

§ 5.4 Futures contracts

§ 5.5 Problems

Definition 5.4-1 **Future contracts** are essentially exchange-traded forward contracts.

Typical features of futures contracts include:

- ▶ Standardized, with specified delivery dates, locations, procedures
- ▶ A clearinghouse
 - Matches buy and sell orders
 - Keeps track of members' obligations and payments
 - After matching the trades, becomes counterparty

Definition 5.4-1 **Future contracts** are essentially exchange-traded forward contracts.

Typical features of futures contracts include:

- ▶ Standardized, with specified delivery dates, locations, procedures
- ▶ A clearinghouse

Matches buy and sell orders

Keeps track of members' obligations and payments

After matching the trades, becomes counterparty

Definition 5.4-1 **Future contracts** are essentially exchange-traded forward contracts.

Typical features of futures contracts include:

- ▶ Standardized, with specified delivery dates, locations, procedures
- ▶ A clearinghouse

Matches buy and sell orders

Keeps track of members' obligations and payments

After matching the trades, becomes counterparty

Definition 5.4-1 **Future contracts** are essentially exchange-traded forward contracts.

Typical features of futures contracts include:

- ▶ Standardized, with specified delivery dates, locations, procedures
- ▶ A clearinghouse

Matches buy and sell orders

Keeps track of members' obligations and payments

After matching the trades, becomes counterparty

Definition 5.4-1 **Future contracts** are essentially exchange-traded forward contracts.

Typical features of futures contracts include:

- ▶ Standardized, with specified delivery dates, locations, procedures
- ▶ A clearinghouse

Matches buy and sell orders

Keeps track of members' obligations and payments

After matching the trades, becomes counterparty

Differences from forward contracts

- ▶ Settled daily through the **mark-to-market** process
- ▶ Highly liquid: easier to offset an existing position
- ▶ Highly standardized structure
- ▶ Low credit risk
- ▶ There are typically daily price limits.

Differences from forward contracts

- ▶ Settled daily through the **mark-to-market** process
- ▶ Highly liquid: easier to offset an existing position
- ▶ Highly standardized structure
- ▶ Low credit risk
- ▶ There are typically daily price limits.

Differences from forward contracts

- ▶ Settled daily through the **mark-to-market** process
- ▶ Highly liquid: easier to offset an existing position
- ▶ Highly standardized structure
- ▶ Low credit risk
- ▶ There are typically daily price limits.

Differences from forward contracts

- ▶ Settled daily through the **mark-to-market** process
- ▶ Highly liquid: easier to offset an existing position
- ▶ Highly standardized structure
- ▶ Low credit risk
- ▶ There are typically daily price limits.

Differences from forward contracts

- ▶ Settled daily through the **mark-to-market** process
- ▶ Highly liquid: easier to offset an existing position
- ▶ Highly standardized structure
- ▶ Low credit risk
- ▶ There are typically daily price limits.

We will not go further in this section. Interested students can read the textbook.