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Chapter 10

Trading Strategies involving Options

Math 5730/Econ 5337, Fall 2025

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Definition 10.1

Positions in **an option and the underlying**:

- Writing a **covered call** (long stock, short call)
- Reverse of writing a covered call (short stock, long call)
- **Protective put** strategy (long stock, long put)
- Reverse of protective put strategy (short stock, short put)

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Example 10.2

Recall: The relevant profit functions are:

- $S_T - S_0 e^{rT}$ **LONG STOCK**
- $(S_T - K)^+ - ce^{rT}$ **LONG CALL**
- $(K - S_T)^+ - pe^{rT}$ **LONG PUT**
- $S_0 e^{rT} - S_T$ **SHORT STOCK**
- $ce^{rT} - (S_T - K)^+$ **SHORT CALL**
- $pe^{rT} - (K - S_T)^+$ **SHORT PUT**

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Definition 10.3

A **spread** is a position in two or more options of the same type.

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Example 10.4

We discuss the following spreads:

- **bull spread**
- **bear spread**
- **box spread**
- **butterfly spread**
- **calendar spread**
- **diagonal spread**

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Definition 10.5

A **combination** is a position in both calls and puts on the same stock.

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Example 10.6

We discuss the following combinations:

- straddle
- strip
- strap
- strangle

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