Trading Strategies Involving Options

Chapter 10
Types of Strategies

- Take a position in the option and the underlying
- Take a position in 2 or more options of the same type (A spread)
- Combination: Take a position in a mixture of calls & puts (A combination)
Positions in an Option & the Underlying (Figure 10.1, page 224)
Bull Spread Using Calls
(Figure 10.2, page 225)
Bull Spread Using Puts

Figure 10.3, page 226

The graph shows the profit from a bull spread using puts. The profit increases as the stock price $S_T$ moves between the strike prices $K_1$ and $K_2$. The profit is flat below $K_1$ and above $K_2$. The profit is defined as $\text{Profit} = \max(K_2 - S_T, 0)$ for $S_T > K_2$ and $\text{Profit} = \max(S_T - K_1, 0)$ for $S_T < K_1$. The line $K_1$ represents the short put strike price, and the line $K_2$ represents the long put strike price.
Bear Spread Using Puts
Figure 10.4, page 227

Profit

$K_1$ $K_2$ $S_T$
Bear Spread Using Calls
Figure 10.5, page 229

Profit

$K_1$  $K_2$  $S_T$
Box Spread

- A combination of a bull call spread and a bear put spread
- If all options are European a box spread is worth the present value of the difference between the strike prices
- If they are American this is not necessarily so. (See Business Snapshot 10.1)
Butterfly Spread Using Calls
Figure 10.6, page 231

Profit

$K_1, K_2, K_3$
Butterfly Spread Using Puts

Figure 10.7, page 232
Calendar Spread Using Calls
Figure 10.8, page 232
Calendar Spread Using Puts
Figure 10.9, page 233
A Straddle Combination
Figure 10.10, page 234
Strip & Strap
Figure 10.11, page 235

Profit

Strip

Profit

Strap

$K$, $S_T$
A Strangle Combination

Figure 10.12, page 236