Trading Strategies Involving European Options

Option Trading Strategies

- By combining positions, investors can generate a variety of payoff functions (profit/losses profiles with many different shapes)
- The chosen strategy (and thus payoff profile) reflects views (bets) on the evolution of the underlying, either directionally, or on volatility

Three Types of Options Trading Strategies

- Take a position in the option and the underlying
- Take a position in 2 or more options of the same type, all calls or all puts (spread)
- Take a position in a mixture of calls & puts (combination)

Type	Strategy
Covered Call	Writer: long stock, short call Buyer: short stock and long call
Protective Put	Long stock, long put
Reverse Protective Put	Short stock, short put
Bull Spread	1. Long low K call, short high K call 2. Long low K put, short high K put
Bear Spread	1. Long high K call, short low K call 2. Long high K put, short high K put
Box Spread	Combination of bull call spread and bear put spread with same high and low strikes
Butterfly Spread	Long low & high strike calls (puts), short 2 middle strike calls (puts)
Calendar Spreads	Long longer-maturity options, short shorter- maturity option
Straddle	Bottom: long call, long put (same K & T) Top: short call, short put (same K & T)
Strip	Long one call, long more puts (same K & T)
Strap	Long one put, long more calls (same K & T)
Strangle	Long low strike put, long high strike call (same T)

Spreads

- Bets on movement of prices in a given direction
  - Limited upside potential and downside risk
  - Lower cost strategy

Box Spreads

- Constant payoff (value) = $K_2 – K_1$

Butterfly Spreads

- Appropriate for investors who feel that large price moves are unlikely
- Strike of middle calls typically close to current spot

Calendar Spreads

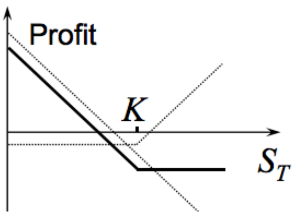
- The longer the maturity of an option, the more expensive it usually is (debit spread)
- Typically sell longer option when shorter option expires
- Both have same intrinsic value (same K)
  - Profitability is determined solely by the difference in time values
  - This does not mean that you should always purchase the longer-term option and short the shorter-term option (depends on investors outlook for stock)
- Profits are highest for longs if low volatility
  - If volatility expectations are high, then use a reverse calendar spread
    - Small profit if stock price well above or below strike price, but significant loss if stock price close to strike price.

Types of Calendar Spreads:

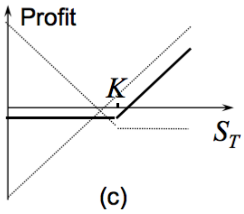
- Neutral Calendar Spread: strike price close to current stock price chosen
- Bullish Calendar Spread: higher strike price
- Bearish Calendar Spread: lower strike price
- Reverse Calendar Spread: investor long shorter-maturity option and sells longer

Graphs (Long Position)

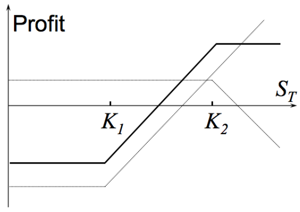
Covered Calls



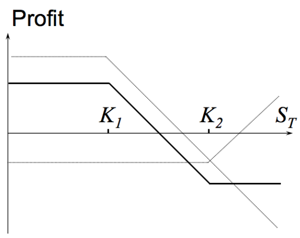
Protective Put



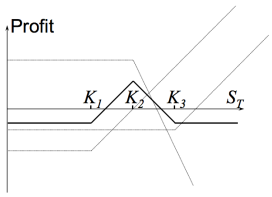
Bull Spread



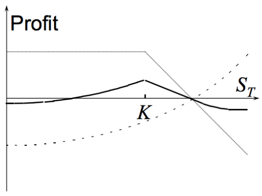
Bear Spread



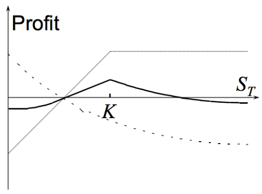
Butterfly Spread



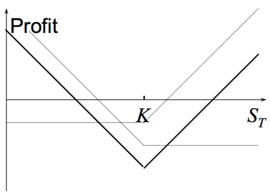
Calendar Spread (c)



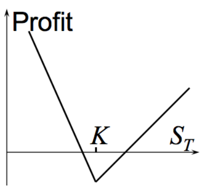
Calendar Spread (p)



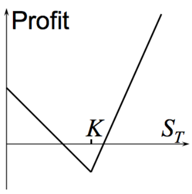
Straddle



Strip



Strap



Strangle