

Chapter 6

Basic Option Strategies



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Chapter 6: Basic Option Strategies

A good trader with a bad model can beat a bad trader with a good model.

William Margrabe

Derivatives Strategy, April, 1998, p. 27



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Important Concepts in Chapter 6

- Profit equations and graphs for buying and selling stock, buying and selling calls, buying and selling puts, covered calls, protective puts and conversions/reversals
- The effect of choosing different exercise prices
- The effect of closing out an option position early versus holding to expiration



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Terminology and Notation (1 of 6)

- Note the following standard symbols
 - C = current call price, P = current put price
 - S_0 = current stock price, S_T = stock price at expiration
 - T = time to expiration
 - X = exercise price
 - Π = profit from strategy
- The number of calls, puts and stock is given as
 - N_C = number of calls
 - N_P = number of puts
 - N_S = number of shares of stock



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Terminology and Notation (2 of 6)

- These symbols imply the following:
 - N_C , N_P , or $N_S > 0$ implies buying (going long)
 - N_C , N_P , or $N_S < 0$ implies selling (going short)
- The Profit Equations
 - Profit equation for calls held to expiration
 - $\Pi = N_C[\text{Max}(0, S_T - X) - C]$
 - ▢ For buyer of one call ($N_C = 1$) this implies $\Pi = \text{Max}(0, S_T - X) - C$
 - ▢ For seller of one call ($N_C = -1$) this implies $\Pi = -\text{Max}(0, S_T - X) + C$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Terminology and Notation (3 of 6)

- The Profit Equations (continued)
 - Profit equation for puts held to expiration
 - $\Pi = N_P[\text{Max}(0, X - S_T) - P]$
 - ▢ For buyer of one put ($N_P = 1$) this implies $\Pi = \text{Max}(0, X - S_T) - P$
 - ▢ For seller of one put ($N_P = -1$) this implies $\Pi = -\text{Max}(0, X - S_T) + P$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Terminology and Notation (4 of 6)

- The Profit Equations (continued)
 - Profit equation for stock
 - $\Pi = N_S[S_T - S_0]$
 - For buyer of one share ($N_S = 1$) this implies $\Pi = S_T - S_0$
 - For short seller of one share ($N_S = -1$) this implies $\Pi = -S_T + S_0$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Terminology and Notation (5 of 6)

- Different Holding Periods
 - Three holding periods: $T_1 < T_2 < T$
 - For a given stock price at the end of the holding period, compute the theoretical value of the option using the Black-Scholes-Merton or other appropriate model.
 - Remaining time to expiration will be either $T - T_1$, $T - T_2$ or $T - T = 0$ (we have already covered the latter)
 - For a position closed out at T_1 , the profit will be

$$\Pi = N_c[C(S_{T_1}, T - T_1, X) - C].$$
 - where the closeout option price is taken from the Black-Scholes-Merton model for a given stock price at T_1 .



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Terminology and Notation (6 of 6)

- Different Holding Periods (continued)
 - Similar calculation done for T_2
 - For T , the profit is determined by the intrinsic value, as already covered
- Assumptions
 - No dividends
 - No taxes or transaction costs
 - We continue with the DCRB options. See [Table 6.1](#) on 26th slide.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Stock Transactions

- Buy Stock
 - Profit equation: $\Pi = N_S[S_T - S_0]$ given that $N_S > 0$
 - See [Figure 6.1](#) on 27th slide, for DCRB, $S_0 = \$125.94$
 - Maximum profit = ∞ , minimum = $-S_0$
- Sell Short Stock
 - Profit equation: $\Pi = N_S[S_T - S_0]$ given that $N_S < 0$
 - See [Figure 6.2](#) on 28th slide, for DCRB, $S_0 = \$125.94$
 - Maximum profit = S_0 , minimum = $-\infty$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Call Option Transactions (1 of 4)

- Buy a Call
 - Profit equation: $\Pi = N_C[\text{Max}(0, S_T - X) - C]$ given that $N_C > 0$. Letting $N_C = 1$,
 - $\Pi = S_T - X - C$ if $S_T > X$
 - $\Pi = -C$ if $S_T \leq X$
 - See [Figure 6.3](#) on 29th slide, for DCRB June 125, $C = \$13.50$
 - Maximum profit = ∞ , minimum = $-C$
 - Breakeven stock price found by setting profit equation to zero and solving: $S_T^* = X + C$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Call Option Transactions (2 of 4)

- Buy a Call (continued)
 - See [Figure 6.4](#) on 30th slide, for different exercise prices. Note differences in maximum loss and breakeven.
 - For different holding periods, compute profit for range of stock prices at T_1 , T_2 , and T using Black-Scholes-Merton model. See [Table 6.2](#) on 31st slide and [Figure 6.5](#) on 32nd slide.
 - Note how time value decay affects profit for given holding period.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Call Option Transactions (3 of 4)

- Write a Call
 - Profit equation: $\Pi = N_C[\text{Max}(0, S_T - X) - C]$ given that $N_C < 0$. Letting $N_C = -1$,
 - $\Pi = -S_T + X + C$ if $S_T > X$
 - $\Pi = C$ if $S_T \leq X$
 - See [Figure 6.6](#) on 33rd slide, for DCRB June 125, $C = \$13.50$
 - Maximum profit = $+C$, minimum = $-\infty$
 - Breakeven stock price same as buying call:
 $S_T^* = X + C$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Call Option Transactions (4 of 4)

- Write a Call (continued)
 - See [Figure 6.7](#) on 34th slide, for different exercise prices. Note differences in maximum loss and breakeven.
 - For different holding periods, compute profit for range of stock prices at T_1 , T_2 , and T using Black-Scholes-Merton model. See [Figure 6.8](#) on 35th slide.
 - Note how time value decay affects profit for given holding period.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Put Option Transactions (1 of 4)

- Buy a Put
 - Profit equation: $\Pi = N_p[\text{Max}(0, X - S_T) - P]$ given that $N_p > 0$. Letting $N_p = 1$,
 - $\Pi = X - S_T - P$ if $S_T < X$
 - $\Pi = -P$ if $S_T \geq X$
 - See [Figure 6.9](#) on 36th slide, for DCRB June 125, $P = \$11.50$
 - Maximum profit = $X - P$, minimum = $-P$
 - Breakeven stock price found by setting profit equation to zero and solving: $S_T^* = X - P$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Put Option Transactions (2 of 4)

- Buy a Put (continued)
 - See [Figure 6.10](#) on 37th slide, for different exercise prices. Note differences in maximum loss and breakeven.
 - For different holding periods, compute profit for range of stock prices at T_1 , T_2 , and T using Black-Scholes-Merton model. See [Figure 6.11](#) on 38th slide.
 - Note how time value decay affects profit for given holding period.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Put Option Transactions (3 of 4)

- Write a Put
 - Profit equation: $\Pi = N_p[\text{Max}(0, X - S_T) - P]$ given that $N_p < 0$. Letting $N_p = -1$
 - $\Pi = -X + S_T + P$ if $S_T < X$
 - $\Pi = P$ if $S_T \geq X$
 - See [Figure 6.12](#) on 39th slide, for DCRB June 125, $P = \$11.50$
 - Maximum profit = $+P$, minimum = $-X + P$
 - Breakeven stock price found by setting profit equation to zero and solving: $S_T^* = X - P$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Put Option Transactions (4 of 4)

- Write a Put (continued)
 - See [Figure 6.13](#) on 40th slide, for different exercise prices. Note differences in maximum loss and breakeven.
 - For different holding periods, compute profit for range of stock prices at T_1 , T_2 , and T using Black-Scholes-Merton model. See [Figure 6.14](#) 41st slide.
 - Note how time value decay affects profit for given holding period.
- [Figure 6.15](#) on 42nd slide, summarizes these payoff graphs.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Calls and Stock: the Covered Call (1 of 2)

- One short call for every share owned
- Profit equation: $\Pi = N_S(S_T - S_0) + N_C[\text{Max}(0, S_T - X) - C]$ given $N_S > 0$, $N_C < 0$, $N_S = -N_C$. With $N_S = 1$, $N_C = -1$,
 - $\Pi = S_T - S_0 + C$ if $S_T \leq X$
 - $\Pi = X - S_0 + C$ if $S_T > X$
- See [Figure 6.16](#) on 43rd slide, for DCRB June 125, $S_0 = \$125.94$, $C = \$13.50$
- Maximum profit = $X - S_0 + C$, minimum = $-S_0 + C$
- Breakeven stock price found by setting profit equation to zero and solving: $S_T^* = S_0 - C$



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Calls and Stock: the Covered Call (2 of 2)

- See [Figure 6.17](#) on 44th slide, for different exercise prices. Note differences in maximum loss and breakeven.
- For different holding periods, compute profit for range of stock prices at T_1 , T_2 , and T using Black-Scholes-Merton model. See [Figure 6.18](#) on 45th slide.
- Note the effect of time value decay.
- Some General Considerations for Covered Calls:
 - alleged attractiveness of the strategy
 - misconception about picking up income
 - rolling up to avoid exercise
- Opposite is short stock, buy call



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Puts and Stock: the Protective Put (1 of 2)

- One long put for every share owned
- Profit equation: $\Pi = N_S(S_T - S_0) + N_P[\text{Max}(0, X - S_T) - P]$ given $N_S > 0, N_P > 0, N_S = N_P$. With $N_S = 1, N_P = 1$,
 - $\Pi = S_T - S_0 - P$ if $S_T \geq X$
 - $\Pi = X - S_0 - P$ if $S_T < X$
- See [Figure 6.19](#) on 46th slide, for DCRB June 125, $S_0 = \$125.94$, $P = \$11.50$
- Maximum profit = ∞ , minimum = $X - S_0 - P$
- Breakeven stock price found by setting profit equation to zero and solving:
 $S_T^* = P + S_0$
- Like insurance policy



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Puts and Stock: the Protective Put (2 of 2)

- See [Figure 6.20](#) on 47th slide, for different exercise prices. Note differences in maximum loss and breakeven.
- For different holding periods, compute profit for range of stock prices at T_1, T_2 , and T using Black-Scholes-Merton model. See [Figure 6.21](#) on 48th slide.
- Note how time value decay affects profit for given holding period.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Synthetic Puts and Calls (1 of 2)

- Rearranging put-call parity to isolate put price

$$P = C - S_0 + Xe^{-r_c T}$$

- This implies put = long call, short stock, long risk-free bond with face value X.
- This is a synthetic put.
- In practice most synthetic puts are constructed without risk-free bond, i.e., long call, short stock.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Synthetic Puts and Calls (2 of 2)

- Profit equation: $\Pi = N_C[\text{Max}(0, S_T - X) - C] + N_S(S_T - S_0)$ given that $N_C > 0$, $N_S < 0$, $N_S = N_P$. Letting $N_C = 1$, $N_S = -1$,
 - $\Pi = -C - S_T + S_0$ if $S_T \leq X$
 - $\Pi = S_0 - X - C$ if $S_T > X$
- See [Figure 6.22](#) on 49th slide, for synthetic put versus actual put.
- [Table 6.3](#) on 50th slide, shows payoffs from reverse conversion (long call, short stock, short put), used when actual put is overpriced. Like risk-free borrowing.
- Similar strategy for conversion, used when actual call overpriced.



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

Summary



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

TABLE 6.1: DCRB OPTION DATA, MAY 14

EXERCISE PRICE	CALLS ON MAY	CALLS ON JUNE	CALLS ON JULY	PUTS MAY	PUTS JUNE	PUTS JULY
120	8.75	15.40	20.90	2.75	9.25	13.65
125	5.75	13.50	18.60	4.60	11.50	16.60
130	3.60	11.35	16.40	7.35	14.25	19.65

Current stock price: 125.94

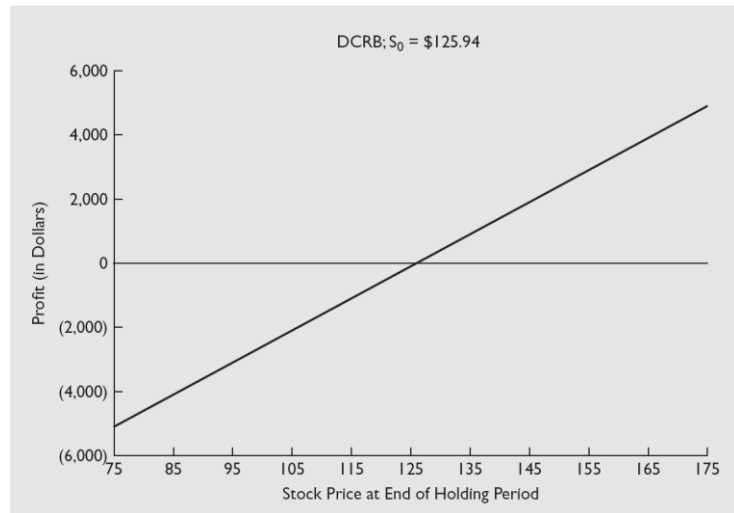
Expirations: May 21, June 18, July 16

Risk-free rates (continuously compounded): 0.0447 (May); 0.0446 (June); 0.0453 (July)

[\(Return to text slide\)](#)



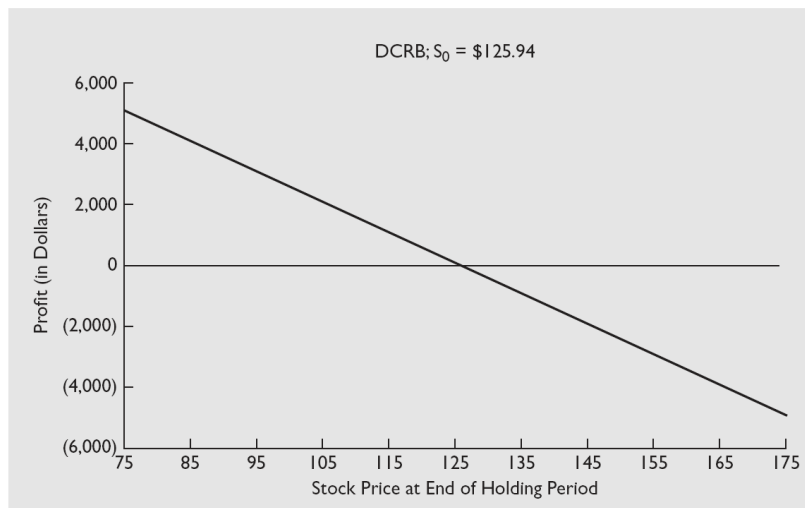
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.1: Buy Stock

[\(Return to text slide\)](#)



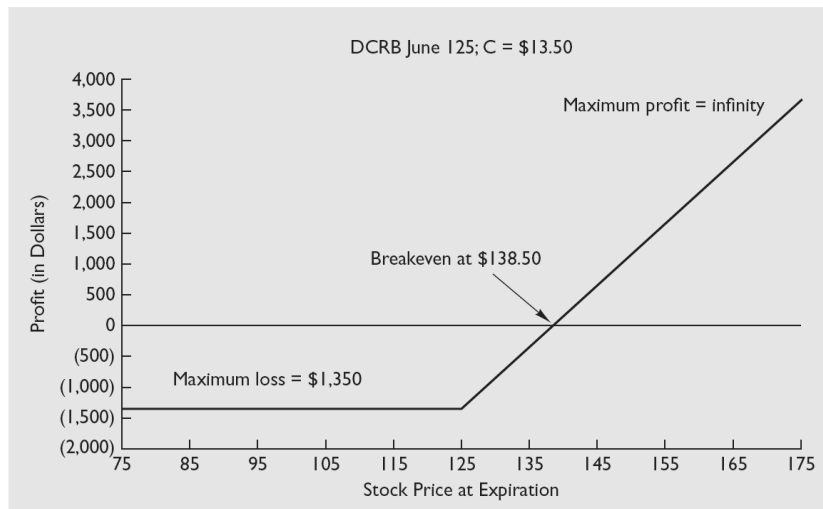
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.2: Sell Short Stock

[\(Return to text slide\)](#)



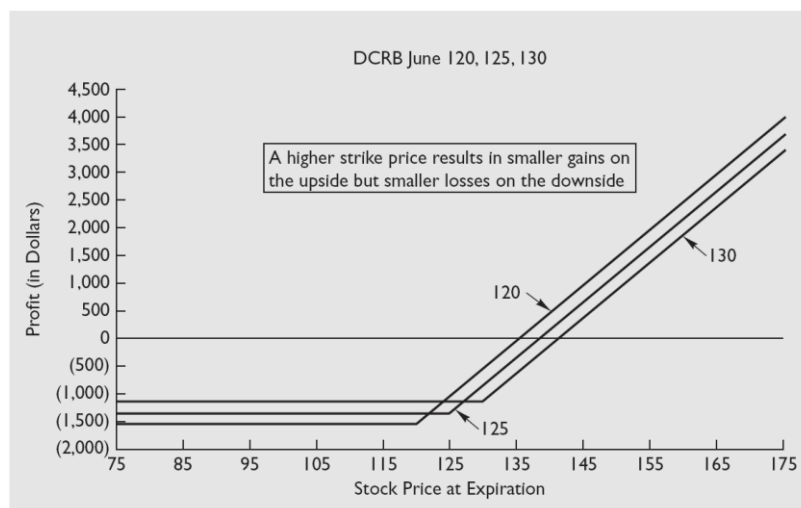
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.3: Buy Call

[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.4: Buy Call: Different Exercise Prices

[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

TABLE 6.2: ESTIMATION OF BLACK-SCHOLES-MERTON PRICES AND PROFITS FOR DCRB JULY 125 CALL

POSITION CLOSED AT: TIME TO EXPIRATION: STOCK PRICE AT END OF HOLDING PERIOD	JUNE 4, 0.1151: BLACK-SCHOLES-MERTON CALL PRICE	JUNE 4, 0.1151: PROFIT PER CONTRACT	JUNE 25, 0.0575: BLACK-SCHOLES-MERTON CALL PRICE	JUNE 25, 0.0575: PROFIT PER CONTRACT
105	\$ 5.39	-\$1,321	\$ 2.44	-\$1,616
110	\$ 7.16	-\$1,144	\$ 3.74	-\$1,486
115	\$ 9.23	-\$ 937	\$ 5.43	-\$1,317
120	\$ 11.61	-\$ 699	\$ 7.54	-\$1,106
125	\$ 14.29	-\$ 431	\$10.06	-\$ 854
130	\$ 17.24	-\$ 136	\$12.98	-\$ 562
135	\$ 20.45	\$ 185	\$16.27	-\$ 233
140	\$ 23.90	\$ 530	\$19.88	\$ 128
145	\$ 27.57	\$ 897	\$23.77	\$ 517
150	\$ 31.43	\$1,283	\$27.91	\$ 931
155	\$ 35.47	\$1,687	\$32.24	\$1,364

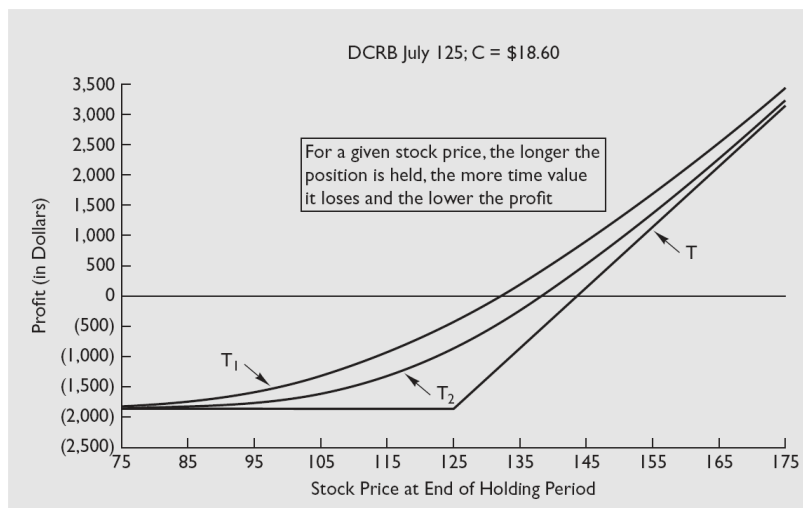
Note: Calculations were done on a spreadsheet, so they may differ slightly from calculations done by hand.

[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

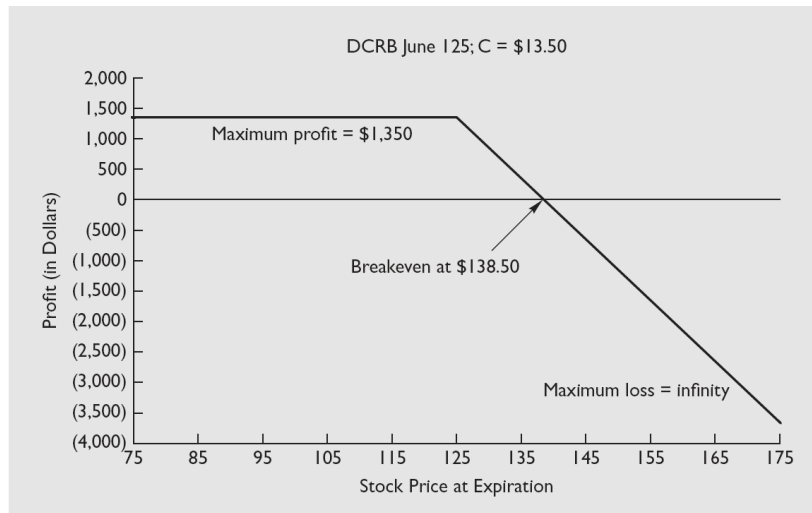
FIGURE 6.5: Buy Call: Different Holding Periods



[\(Return to text slide\)](#)



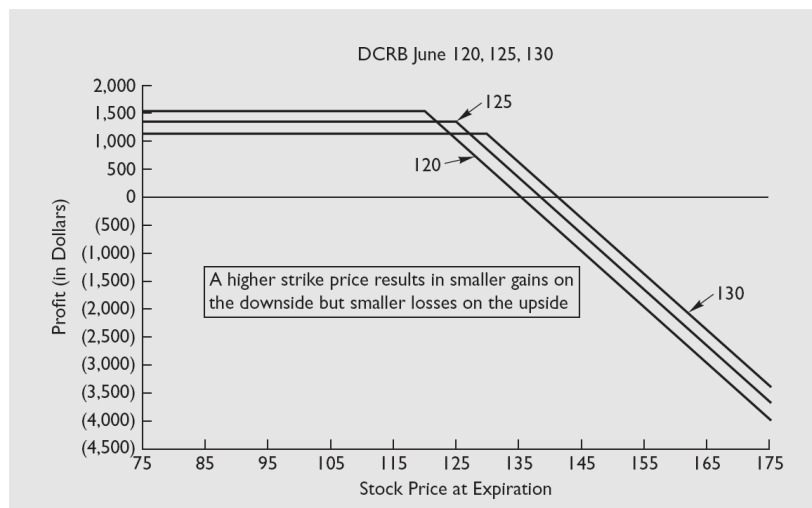
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.6: Write Call

[\(Return to text slide\)](#)



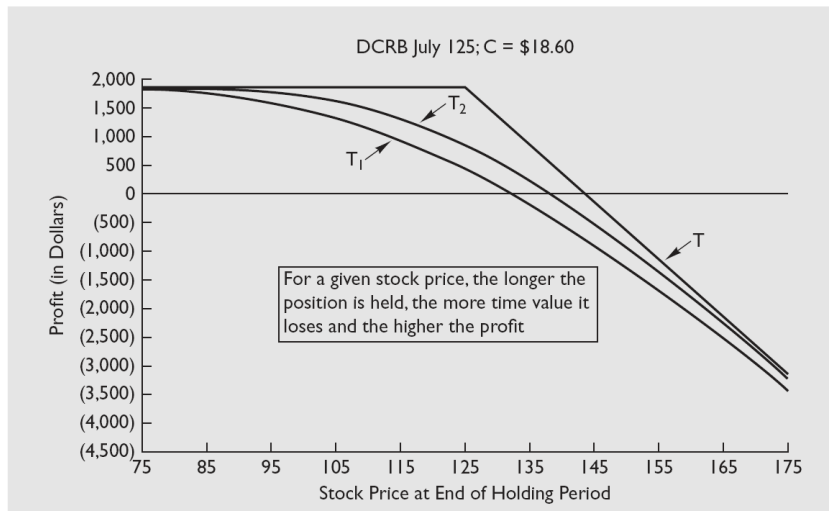
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.7: Write Call: Different Exercise Prices

[\(Return to text slide\)](#)



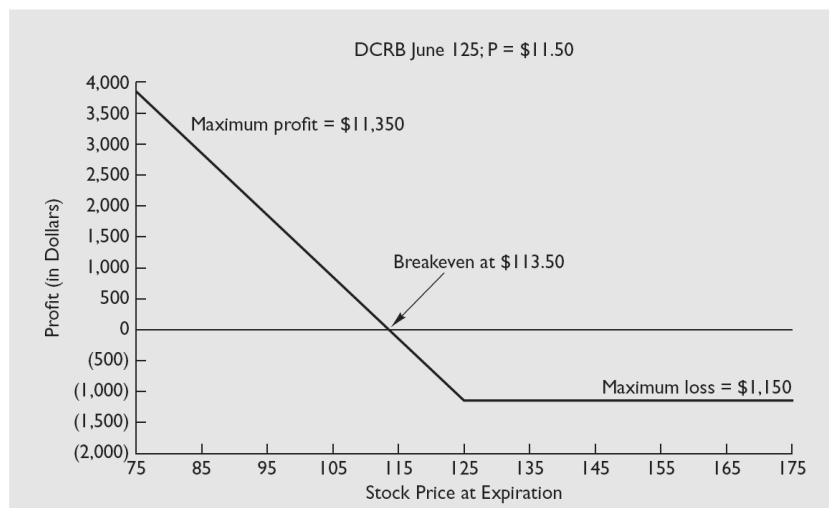
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.8: Write Call: Different Holding Periods

[\(Return to text slide\)](#)



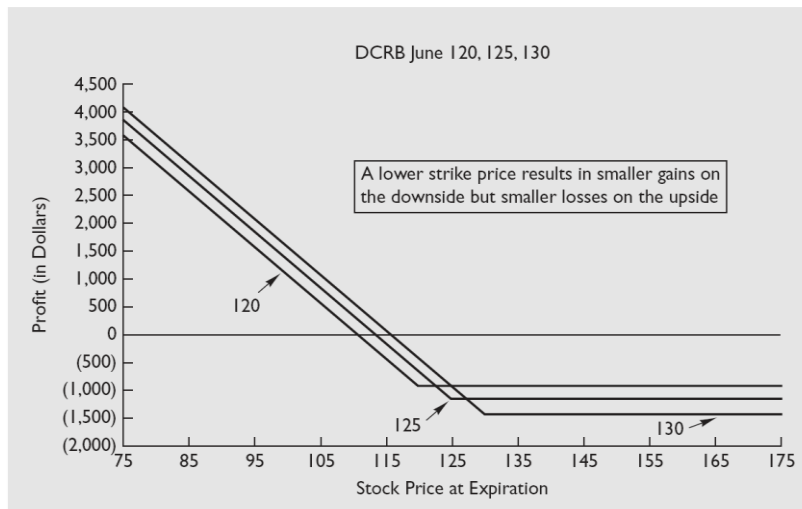
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.9: Buy Put

[\(Return to text slide\)](#)



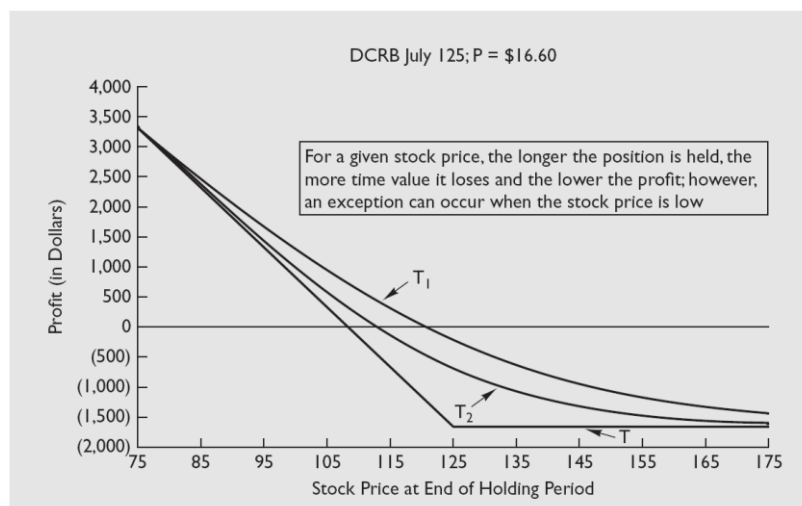
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.10: Buy Put: Different Exercise Prices

[\(Return to text slide\)](#)



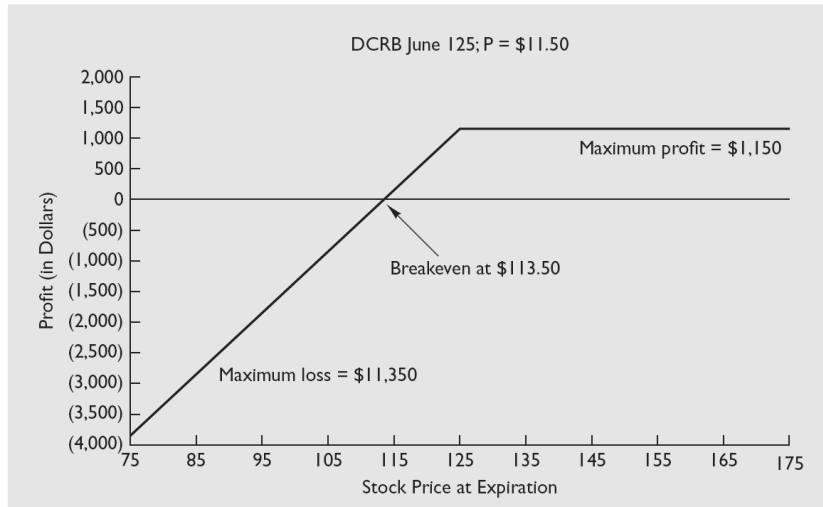
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.11: Buy Put: Different Holding Periods

[\(Return to text slide\)](#)



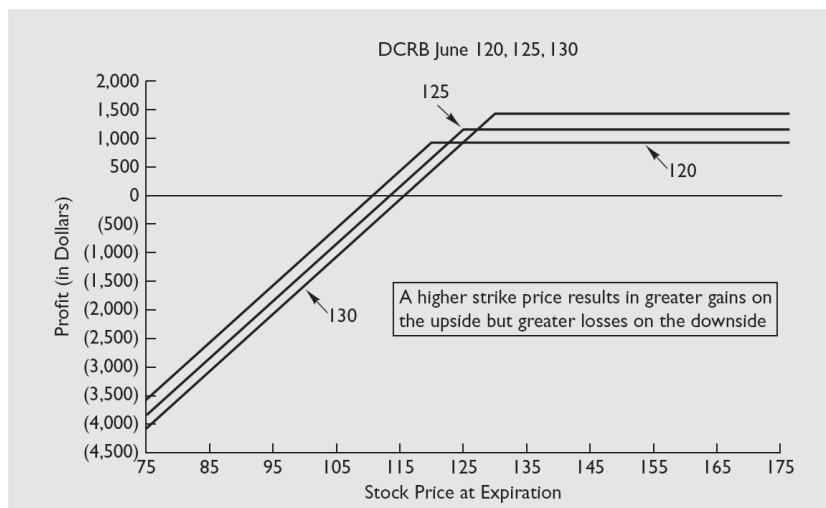
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.12: Write Put

[\(Return to text slide\)](#)



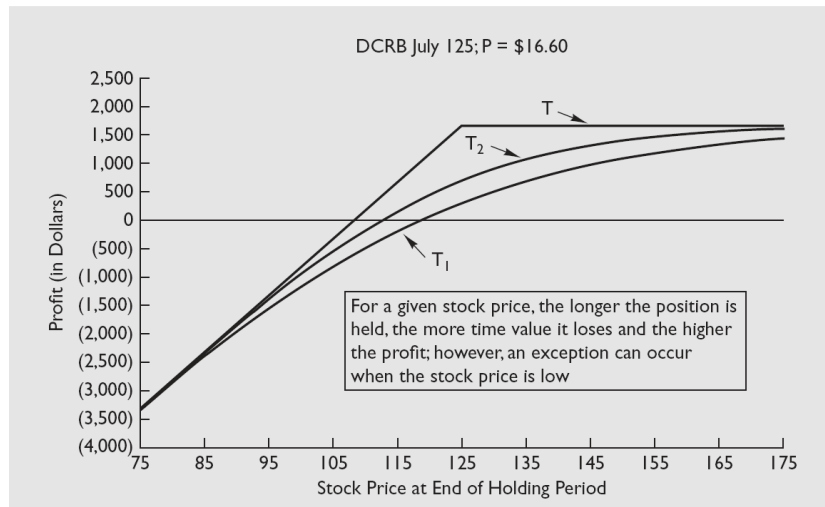
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.13: Write Put: Different Exercise Prices

[\(Return to text slide\)](#)



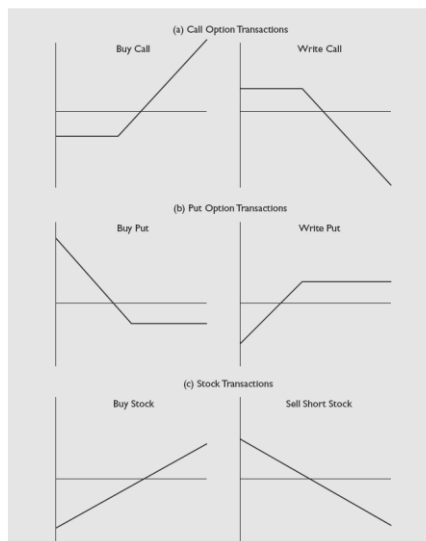
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.14: Write Put: Different Holding Periods

[\(Return to text slide\)](#)



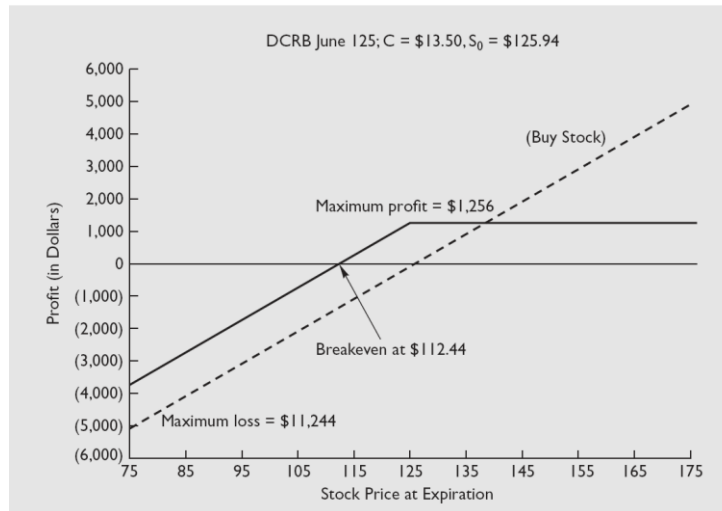
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.15: Summary of Profit Graphs for Positions Held to Expiration

[\(Return to text slide\)](#)



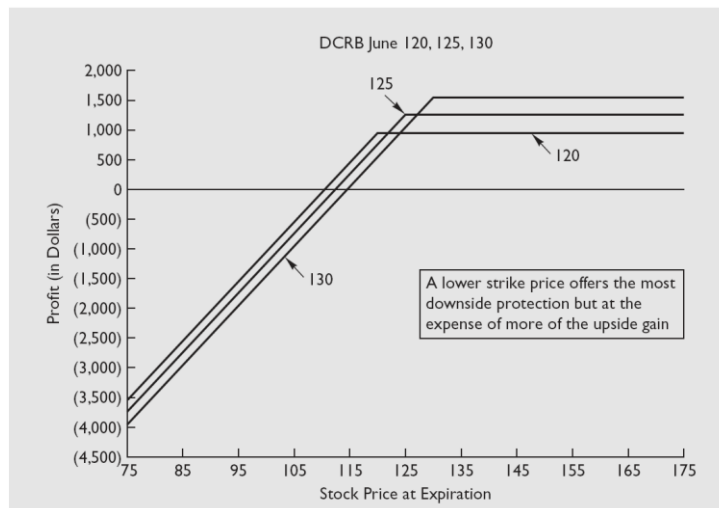
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.16: Covered Call

[\(Return to text slide\)](#)



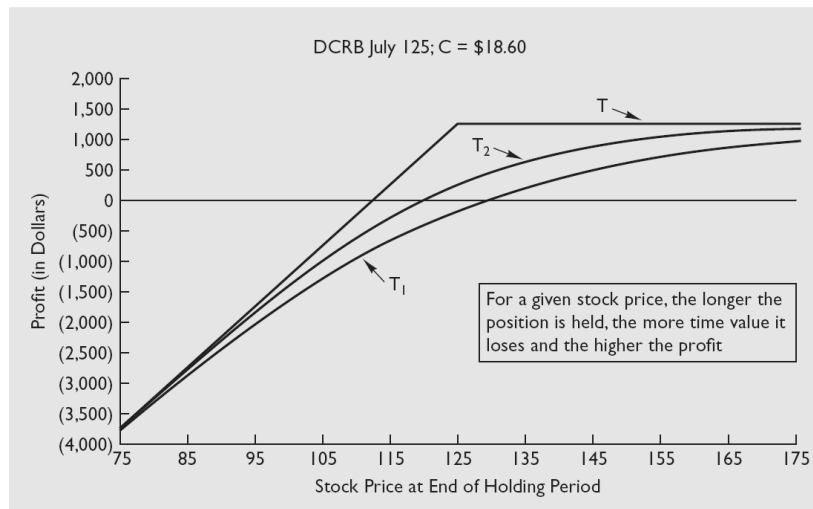
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.17: Covered Call: Different Exercise Prices

[\(Return to text slide\)](#)



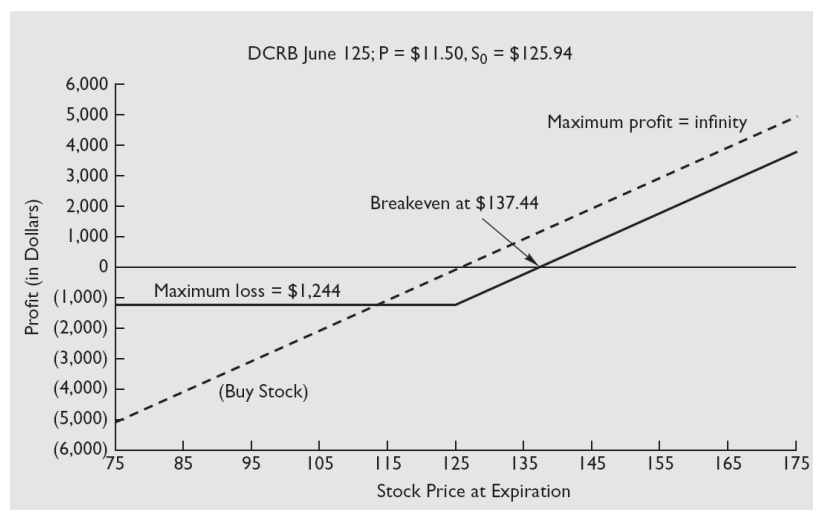
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.18: Covered Call: Different Holding Periods

[\(Return to text slide\)](#)



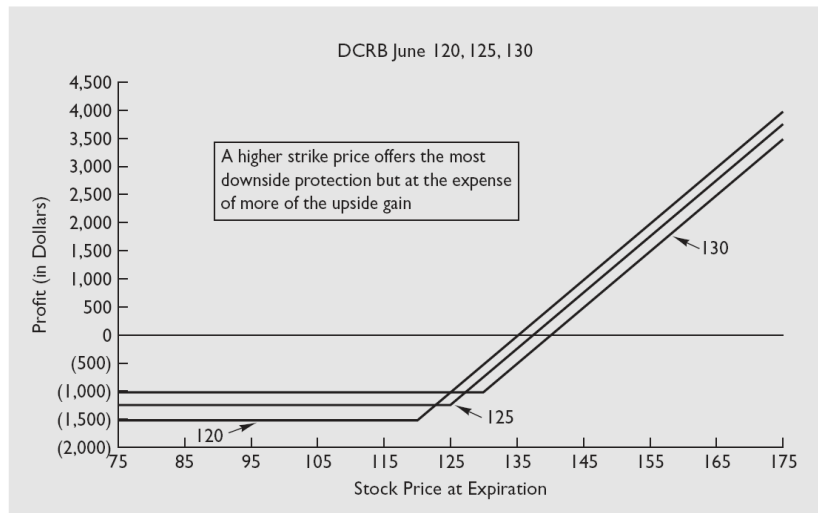
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.19: Protective Put

[\(Return to text slide\)](#)



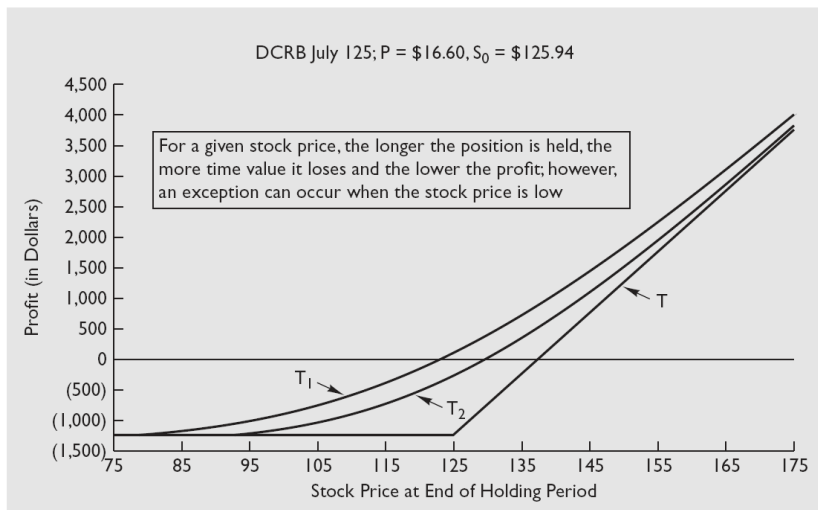
Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.20: Protective Put: Different Exercise Prices

[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

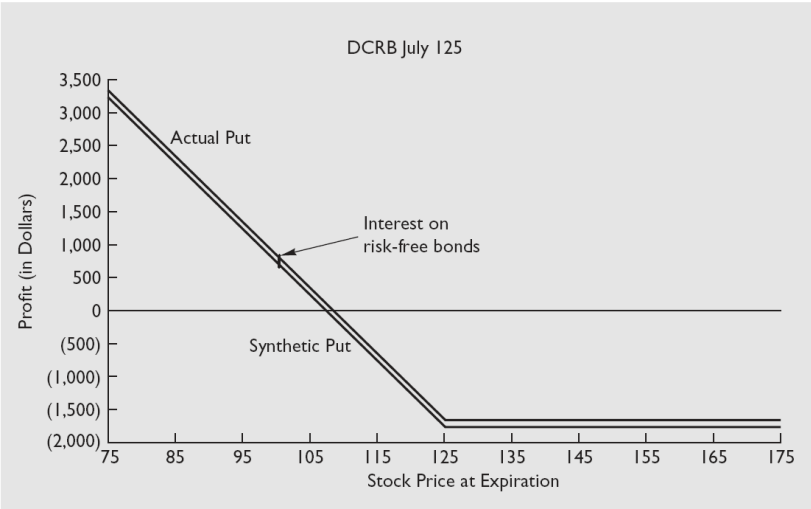
FIGURE 6.21: Protective Put: Different Holding Periods

[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

FIGURE 6.22: Synthetic and Actual Put



[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.

TABLE 6.3: PAYOFFS FROM REVERSE CONVERSION

POSITION	PAYOFFS FROM PORTFOLIO GIVEN STOCK PRICE AT EXPIRATION	
	$S_T \leq X$	$S_T > X$
Long call	0	$S_T - X$
Short stock	$-S_T$	$-S_T$
Short put	$-X + S_T$	0
Net	$-X$	$-X$

[\(Return to text slide\)](#)



Chance/Brooks, An Introduction to Derivatives and Risk Management, 10th Edition. © 2016 Cengage. All Rights Reserved. May not be scanned, copied or duplicated, or posted to a publicly accessible website, in whole or in part.