

Advanced Option Trading Strategies: Lecture 1

Vertical Spreads – The simplest spread consists of buying one option and selling another to reduce the cost of the trade and participate in the directional movement of an underlying security. These trades are considered to be the easiest to implement and monitor.

A vertical spread is intended to offer an improved opportunity to profit with reduced risk to the options trader. A vertical spread may be one of two basic types: (1) a debit vertical spread or (2) a credit vertical spread. Each of these two basic types can be written as either bullish or bearish positions. A debit spread is written when you expect the stock movement to occur over an intermediate or long-term period [60 to 120 days], whereas a credit spread is typically used when you want to take advantage of a short term stock price movement [60 days or less].

VERTICAL SPREADS: Taking Advantage of Intrinsic Option Value

Debit Vertical Spreads

Bull Call Spread

During March, you decide that PFE is going to make a large up move over the next four months going into the Summer. This position is due to your research on the portfolio of drugs now in the pipeline and recent phase 3 trials that are going through FDA approval. PFE is currently trading at \$27.92 [on March 12, 2013] per share, and you believe it will be at least \$30 by June 21st, 2013. The following is the option chain listing on March 12th for PFE.

View By Expiration: [Mar 13](#) | [Apr 13](#) | [May 13](#) | **[Jun 13](#)** | [Sep 13](#) | [Dec 13](#) | [Jan 14](#) | [Jan 15](#)

Call Options		Expire at close Friday, June 21, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
20.00	PFE130622C00020000	7.60	0.00	7.85	8.05	5	148
21.00	PFE130622C00021000	5.45	0.00	6.85	7.15	0	4
22.00	PFE130622C00022000	6.19	0.00	5.90	6.00	1	61
23.00	PFE130622C00023000	4.35	0.00	4.90	5.05	42	62
24.00	PFE130622C00024000	4.30	0.00	3.95	4.00	10	841
25.00	PFE130622C00025000	3.25	↓ 0.11	3.00	3.10	10	7,473
26.00	PFE130622C00026000	2.15	↓ 0.23	2.15	2.18	39	7,328
27.00	PFE130622C00027000	1.37	↓ 0.25	1.37	1.39	324	19,694
28.00	PFE130622C00028000	0.77	↓ 0.19	0.77	0.78	757	7,029
29.00	PFE130622C00029000	0.37	↓ 0.12	0.37	0.38	377	7,063

30.00	PFE130622C00030000	0.17	↓ 0.05	0.15	0.16	13	2,187
31.00	PFE130622C00031000	0.10	0.00	0.06	0.08	15	4,104
32.00	PFE130622C00032000	0.04	0.00	0.02	0.04	2	712
33.00	PFE130622C00033000	0.03	0.00	N/A	0.04	43	176

Put Options		Expire at close Friday, June 21, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
13.00	PFE130622P00013000	0.01	0.00	N/A	0.02	1,000	1,091
14.00	PFE130622P00014000	0.01	0.00	N/A	0.01	70	1,118
15.00	PFE130622P00015000	0.02	0.00	0.01	0.02	32	222
16.00	PFE130622P00016000	0.03	0.00	0.01	0.03	189	204
17.00	PFE130622P00017000	0.11	0.00	0.01	0.03	0	147
18.00	PFE130622P00018000	0.04	0.00	0.01	0.04	263	632
19.00	PFE130622P00019000	0.02	0.00	0.02	0.04	30	105
20.00	PFE130622P00020000	0.03	0.00	0.03	0.04	10	2,449
21.00	PFE130622P00021000	0.07	0.00	0.04	0.06	30	2,612
22.00	PFE130622P00022000	0.07	0.00	0.05	0.07	80	10,222
23.00	PFE130622P00023000	0.09	0.00	0.08	0.10	14	11,464
24.00	PFE130622P00024000	0.15	↑ 0.02	0.14	0.15	88	6,674
25.00	PFE130622P00025000	0.22	↑ 0.02	0.23	0.24	5	20,486
26.00	PFE130622P00026000	0.38	↑ 0.05	0.38	0.39	240	7,212
27.00	PFE130622P00027000	0.58	↑ 0.03	0.63	0.64	89	12,140
28.00	PFE130622P00028000	0.98	↑ 0.07	1.05	1.07	290	837
29.00	PFE130622P00029000	1.69	↑ 0.24	1.67	1.68	368	460
30.00	PFE130622P00030000	2.19	0.00	2.44	2.48	48	290
31.00	PFE130622P00031000	3.00	0.00	3.35	3.40	1	1
32.00	PFE130622P00032000	4.30	↓ 4.35	4.30	4.35	35	15

To play this expected rise in PFE with options, you consider one strategy of buying 10 June 28 calls at \$.78/share. For 10 contracts this would be a cost of \$.78 x 100 x 10 shares or \$780. Suppose that the stock just barely reaches \$30 so that the option price would be equal to its intrinsic value of \$30-\$28 or \$2 per share. This scenario presents a profit of [\$2 - \$.78] = \$1.22 per share which translates to 1,000 shares x \$1.22 = \$1,220 in total gain [i.e., a \$1,220/\$780 = 1.56 or 156% 3-month return or 4 x 156% or

626% return]. On the other hand, if PFE's stock price stays underneath \$28/share then your maximum risk of loss would be: \$780 the amount of the option premiums for the 10 calls.

However, there may be another way to play your stock price sentiment with less risk of loss. Suppose you entered into the following bull call spread, buying 10 June calls at 28 for \$.78 a share, and then selling another 10 June 30 calls at \$.15/share. Your cost of the 10 calls would still be \$780. However, your 10 short calls at 30 would raise \$.15/share x 1,000 or \$150, thereby reducing your overall cost of this trading strategy to \$780 - \$150 or \$630. So, your maximum possible loss would be \$630 from this vertical bull spread. On the other hand, if the stock were to ascend to \$30 per share you would generate a total profit of $(\{ \$30 - \$28 \} \times 1000 - \$780 + \$150)$ or \$1,370 which translates to a rate of return of $\$1370 / \$630 = 2.17$ or 217% on a 3-month basis, $4 \times 217\%$ or 868% on an annual rate basis.

Bear Put Spread

During March, while working out at the gym you've been watching the run up in Krispy Kreme and thinking about the valuation of this donut manufacturer. This causes you to think about sampling the product, but after working out for 45 minutes to burn off about half of donut you decide otherwise. After doing a little financial research [as opposed to sampling donuts!], you decide to use a put strategy to basically short KKD stock. Your view is that KKD stock will descend to \$11 or lower by August 2012. The option chain for August 16th options is as follows:

View By Expiration: [Mar 13](#) | [Apr 13](#) | [May 13](#) | **[Aug 13](#)**

Call Options		Expire at close Friday, August 16, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
5.00	KKD130817C00005000	7.83	0.00	9.40	9.70	15	15
6.00	KKD130817C00006000	7.15	0.00	8.40	8.90	5	9
7.00	KKD130817C00007000	3.92	0.00	7.50	7.80	0	2
8.00	KKD130817C00008000	6.70	0.00	6.50	6.80	3	8
10.00	KKD130817C00010000	4.79	0.00	4.70	5.00	10	639
11.00	KKD130817C00011000	3.90	↓ 0.10	3.90	4.10	5	846
12.00	KKD130817C00012000	3.24	↓ 0.06	3.20	3.30	2	354
13.00	KKD130817C00013000	2.70	0.00	2.45	2.60	5	192
14.00	KKD130817C00014000	1.91	↓ 0.24	1.90	2.00	30	217
15.00	KKD130817C00015000	1.45	↓ 0.14	1.45	1.55	14	825
16.00	KKD130817C00016000	1.05	↓ 0.10	1.00	1.10	12	204
17.00	KKD130817C00017000	0.80	0.00	0.75	0.85	10	156
18.00	KKD130817C00018000	0.75	0.00	0.50	0.60	0	26

19.00 KKD130817C00019000 0.50 0.00 0.35 0.45 5 5

Put Options		Expire at close Friday, August 16, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
7.00	KKD130817P00007000	0.05	0.00	N/A	0.10	15	53
8.00	KKD130817P00008000	0.15	0.00	0.05	0.15	8	59
9.00	KKD130817P00009000	0.50	0.00	0.10	0.20	0	104
10.00	KKD130817P00010000	0.27	0.00	0.20	0.30	2	67
11.00	KKD130817P00011000	0.38	0.00	0.40	0.45	5	578
12.00	KKD130817P00012000	0.60	0.00	0.60	0.65	33	154
13.00	KKD130817P00013000	0.90	0.00	0.90	0.95	24	24
14.00	KKD130817P00014000	1.25	↓ 0.05	1.30	1.40	44	516
15.00	KKD130817P00015000	1.80	0.00	1.80	1.90	1	33
17.00	KKD130817P00017000	3.40	0.00	3.10	3.20	2	34

You decide to purchase 10 August Puts at 14 for \$1.40 per share or an overall cost of \$1.40 x 1,000 Shares or \$1,400. Suppose that KKD shares do decline to \$11 a share so that the value of the put trades at its intrinsic price. Under such circumstances, your trade will generate [(\$14-\$11) x 1,000 -\$1,400] = \$1,600 in total profit or a 3-month return of \$1,600/\$1,400 = 1.14 or 114% which translates to an annual return of 4 x 114% = 456%. If KKD stays above \$14 a share between now and August 16, 2013 the puts expire out-of-the-money [OTM] and your maximum loss will be \$1,400.

In an effort to reduce you maximum risk of loss, you decide to trade an bear put vertical spread by buying 10 August Puts at 14 for \$1.40/share and then selling 10 August Puts at 11 for \$.40/share. Your cost on the 10 long puts will still be \$1,400. However, the 10 short puts will generate \$.40/share x 1,000 shares or \$400 in income thereby reducing your overall cost of this trade. So, the net cost of this vertical bear put would be \$1,400 - \$400 or \$1,000. If KKD shares descend to \$11, then your spread would produce a profit of [(\$14 - \$11) x 1,000 + \$400 - \$1,400] or \$2,000 thereby generating a 3-month rate of return of [\$2,000/\$1,000] or 200% which translates to a 200% x 4 or 800% annual rate of return. The maximum risk of loss under this trading strategy has been reduced from \$1,400 to \$1,000, and has a higher annual rate of return should the stock perform according to the traders sentiment.

For these debit vertical spreads to pay off, the stock needs to have enough time to move to the targeted level. You want to use options with expiration months that allow enough time for this move to occur. To achieve maximum profit, the stock needs to reach or exceed the strike price of the short option at expiration. The maximum possible profit will always be the difference between the strike prices of the

long and short options less the original cost of the spread. From a practical standpoint, you need to wait until near expiration to get the beset payoff from this spread in order to allow the short option to lose all its time value. If the stock reaches (or exceeds) the target price well before the options expire, then the spread will show a profit generally much less than the maximum.

NOTE: Both of these strategies have some appeal to an investor who has a sizeable equity portfolio that generates significant dividend income. If the trade produced a loss it could be used to offset capital gains or dividend income during the trading year. For this reason it would be a strategy best suited for a regular trading account, as opposed to a tax advantaged account such as a Traditional or Roth IRA where you cannot take trading losses against gains. That said, even with a well-capitalized investor you would want to have an investment guideline that limits the amount of these trades to perhaps no more than 5% of the total value of the portfolio or no more than 25% of dividend income in a given year.

Credit Vertical Spreads

Bull Put Spread

Under this trading strategy you believe that circumstances surrounding a company like APA are likely to drive up its stock price in the near future. APA on March 9th, 2013 is trading at \$75.28, and you feel that it will surpass its recent high of \$84.33 on February 13th 2013 within the next 30 days. So you decide to look at the APA option chain for April 19th, 2013 as follows:

View By Expiration: [Mar 13](#) | **[Apr 13](#)** | [Jul 13](#) | [Oct 13](#) | [Jan 14](#) | [Jan 15](#)

Call Options		Expire at close Friday, April 19, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
50.00	APA130420C00050000	33.90	0.00	25.15	26.00	2	21
55.00	APA130420C00055000	29.37	0.00	20.20	20.65	2	2
60.00	APA130420C00060000	14.90	0.00	15.35	15.45	50	140
65.00	APA130420C00065000	10.85	0.00	10.40	10.55	10	84
67.50	APA130420C00067500	8.45	0.00	8.00	8.15	2	89
70.00	APA130420C00070000	5.50	0.00	5.70	5.85	22	464
72.50	APA130420C00072500	3.75	↓ 0.18	3.70	3.80	68	1,642
75.00	APA130420C00075000	2.14	↓ 0.14	2.11	2.16	544	3,716
77.50	APA130420C00077500	1.04	↓ 0.15	1.02	1.04	221	3,218
80.00	APA130420C00080000	0.44	↓ 0.09	0.45	0.46	2,647	4,311
82.50	APA130420C00082500	0.18	↓ 0.06	0.17	0.19	269	6,303

85.00	APA130420C00085000	0.07	↓ 0.05	0.06	0.07	342	6,302
87.50	APA130420C00087500	0.05	↓ 0.01	0.02	0.05	1	2,922
90.00	APA130420C00090000	0.05	↓ 0.01	0.03	0.05	3	3,290
92.50	APA130420C00092500	0.03	↓ 0.01	N/A	0.04	6	1,852
95.00	APA130420C00095000	0.02	0.00	N/A	0.03	10	2,574
97.50	APA130420C00097500	0.03	0.00	N/A	0.04	4	1,422
100.00	APA130420C00100000	0.02	0.00	N/A	0.03	25	816
105.00	APA130420C00105000	0.03	0.00	N/A	0.03	35	909
110.00	APA130420C00110000	0.03	0.00	N/A	0.03	20	1,928
115.00	APA130420C00115000	0.04	0.00	N/A	0.03	274	2,291
120.00	APA130420C00120000	0.04	0.00	N/A	0.03	9	3,519
125.00	APA130420C00125000	0.03	0.00	N/A	0.03	285	645
130.00	APA130420C00130000	0.10	0.00	N/A	0.03	0	12

Put Options		Expire at close Friday, April 19, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
40.00	APA130420P00040000	0.02	0.00	N/A	0.03	5	73
42.50	APA130420P00042500	0.03	0.00	N/A	0.03	113	159
45.00	APA130420P00045000	0.05	0.00	N/A	0.03	95	280
47.50	APA130420P00047500	0.05	0.00	0.01	0.03	251	294
50.00	APA130420P00050000	0.06	0.00	0.01	0.03	5	146
55.00	APA130420P00055000	0.04	0.00	0.03	0.05	10	372
60.00	APA130420P00060000	0.07	0.00	0.06	0.08	261	874
65.00	APA130420P00065000	0.15	↓ 0.04	0.14	0.16	194	1,136
67.50	APA130420P00067500	0.31	0.00	0.26	0.27	34	4,496
70.00	APA130420P00070000	0.48	↓ 0.09	0.49	0.52	595	4,068
72.50	APA130420P00072500	0.97	↓ 0.06	0.98	1.01	751	5,321
75.00	APA130420P00075000	1.88	↓ 0.12	1.90	1.93	564	7,178
77.50	APA130420P00077500	3.30	↓ 0.23	3.30	3.40	40	2,861
80.00	APA130420P00080000	5.30	↓ 0.03	5.30	5.35	30	2,449
82.50	APA130420P00082500	7.46	↓ 0.04	7.45	7.60	13	1,200
85.00	APA130420P00085000	10.30	0.00	9.85	10.00	2	1,120
87.50	APA130420P00087500	14.81	0.00	12.35	12.45	40	512

90.00	APA130420P00090000	16.80	0.00	14.80	14.95	31	265
92.50	APA130420P00092500	18.66	0.00	16.70	17.55	20	406
95.00	APA130420P00095000	18.13	0.00	19.10	20.40	55	254
97.50	APA130420P00097500	25.10	0.00	20.65	23.90	30	145
100.00	APA130420P00100000	18.82	0.00	23.20	24.95	0	55
105.00	APA130420P00105000	23.55	0.00	28.10	29.90	0	38
110.00	APA130420P00110000	26.05	0.00	33.25	34.95	17	53
115.00	APA130420P00115000	33.58	0.00	38.25	39.95	0	44
120.00	APA130420P00120000	37.30	0.00	43.10	46.25	30	7
130.00	APA130420P00130000	45.75	0.00	53.25	54.95	10	10

This scenario can be played with a vertical put spread by (1) purchasing 10 April 75 puts at \$1.93/share for a total cost of \$1.93 x 1,000 shares or \$1,930; and then (2) selling 10 April 80 puts at \$5.30 which creates a credit of \$5.30 x \$1,000 or \$5,300. Your trading account will be immediately credited for the net amount of this trade which is \$5,300 - \$1,930 or \$3,370.

Now suppose the stock goes up to \$83 by April 19th. Under such circumstances both the long and short calls are out-of-the money which means you will pick up the \$3,370 credit. The maximum possible loss on this trade will be if APA should end below \$75 in which case the intrinsic loss will be $[(\$75 - \$80) \times 1,000 \text{ shares}]$ or (\$5,000). In the case of credit trades, the return is calculated based on comparing the profit achieved to the maximum risk which in this example would be \$3,370/\$5,000 or .67 or 67% on a one-month basis or $67\% \times 12 = 804\%$ on an annual basis.

Bear Call Spread

Due to some weakening of the economy [e.g., those in Congress continue to take a vacation and leave sequestration in place for the next 6 months], you foresee a dramatic fall in the price of BA from its current price on March 10th of \$84.16. With Boeing current at \$84.16 you believe that the stock price will fall back to its recent low of \$75.03 on February 25, 2013 within the next month. So you pull up the following option chain on BA for April 19th, 2013:

View By Expiration: [Mar 13](#) | [Apr 13](#) | [May 13](#) | [Aug 13](#) | [Jan 14](#) | [Jan 15](#)

Call Options		Expire at close Friday, April 19, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
60.00	BA130420C00060000	21.80	0.00	24.15	24.30	2	16
65.00	BA130420C00065000	18.90	↑ 2.40	19.20	19.30	12	46

67.50	BA130420C00067500	11.66	0.00	16.70	16.80	1	304
70.00	BA130420C00070000	12.00	0.00	14.25	14.35	1	441
72.50	BA130420C00072500	11.58	↑ 2.40	11.75	11.90	10	508
75.00	BA130420C00075000	9.35	↑ 1.25	9.35	9.45	168	2,114
77.50	BA130420C00077500	6.96	↑ 1.21	7.00	7.10	203	4,207
80.00	BA130420C00080000	4.85	↑ 1.04	4.80	4.90	760	4,613
82.50	BA130420C00082500	2.94	↑ 0.76	2.95	3.00	1,002	7,536
85.00	BA130420C00085000	1.53	↑ 0.53	1.54	1.57	1,871	3,955
87.50	BA130420C00087500	0.64	↑ 0.27	0.66	0.68	556	920
90.00	BA130420C00090000	0.24	↑ 0.12	0.23	0.25	503	1,133
95.00	BA130420C00095000	0.04	↑ 0.02	0.03	0.04	394	14

Put Options		Expire at close Friday, April 19, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
37.50	BA130420P00037500	0.02	0.00	N/A	0.03	10	10
40.00	BA130420P00040000	0.02	0.00	N/A	0.03	2	20
42.50	BA130420P00042500	0.02	0.00	N/A	0.03	10	46
45.00	BA130420P00045000	0.02	0.00	N/A	0.01	16	134
47.50	BA130420P00047500	0.01	0.00	N/A	0.01	2	545
50.00	BA130420P00050000	0.01	0.00	N/A	0.01	5	542
55.00	BA130420P00055000	0.01	↓ 0.01	N/A	0.02	25	1,034
60.00	BA130420P00060000	0.03	0.00	0.01	0.03	125	643
65.00	BA130420P00065000	0.05	↓ 0.01	0.04	0.05	364	647
67.50	BA130420P00067500	0.07	↓ 0.02	0.06	0.07	330	2,226
70.00	BA130420P00070000	0.09	↓ 0.03	0.07	0.09	671	1,682
72.50	BA130420P00072500	0.13	↓ 0.05	0.12	0.13	104	2,118
75.00	BA130420P00075000	0.19	↓ 0.11	0.18	0.20	37	2,458
77.50	BA130420P00077500	0.34	↓ 0.15	0.32	0.34	499	1,138
80.00	BA130420P00080000	0.65	↓ 0.25	0.63	0.65	931	2,013
82.50	BA130420P00082500	1.28	↓ 0.43	1.24	1.27	407	791
85.00	BA130420P00085000	2.33	↓ 0.82	2.31	2.35	399	225
87.50	BA130420P00087500	4.00	↓ 2.05	3.90	4.00	40	35
90.00	BA130420P00090000	6.45	↓ 0.75	6.00	6.10	30	71

In order to play this scenario you decide to implement a bear call spread by (1) buying 10 April 82.50 calls at \$3/share for a cost of \$3 /share x 1,000 shares or \$3,000 and then (2) selling 10 April 75 calls at \$9.35 generating a credit of \$9.35/share x 1,000 shares or \$9,350 which produces a net credit to your account of \$9,350 - \$3,000 or \$6,350.

If BA stock falls and remains below \$75 at expiration both options will expire out-of-the money and you will pick up the credit of \$6,350. On the other hand should the stock expire above \$82.50 in which case your loss will be $(\$82.50 - \$75) \times 1,000 \text{ shares} = \$7,500$.

Under such circumstances this scenario produces a maximum risk of loss of \$7,500 and so the potential return from this trading strategy would be $\$6,350/\$7,500 = .856$ or 85% for 1 month which translates to $85\% \times 12$ or 1,020%.

These credit vertical spreads generate money into your account which may become profit should the stock price reach or exceed the targeted level at expiration. These trades are short term seeking to capture the credit as soon as reasonably possible. It should also be noted that with these trades you can run up losses for being wrong quite rapidly. As in the case of vertical debit spreads, the maximum profit generally comes at the time the options expire. The maximum profit is the amount of the original credit. The maximum loss is represented by the difference in the stock price versus the strike [e.g. intrinsic value] times the number of shares you control.

NOTE: Credit spreads enjoy an advantage over debit spreads in that, when their target is reached, no action is required at expiration, because the options expire worthless.

HORIZONTAL SPREADS: Taking of the Time Value Tied Up in Option Value

Calendar Spreads

These trades work best on stocks whose price movements occur within a reasonably narrow price range. Stocks with high volatility, where the prices may move up or down 15% or more within a 30 or 60 day option trading cycle are not good candidates for calendar spreads.

A calendar spread involves buying a distant month option and then selling a closer month option with the same strike price. Generally the strike is set at the price nearest to what the stock is trading at when the options are purchased. When things work out in a calendar spread, the short option expires worthless and the stock price remains virtually unchanged. Under this circumstance, the long option will be at a reduced price which allows the trader to either sell it at a profit or use the unexpired long option to further trading.

Calendar spreads can be created using either puts or calls. To illustrate we will use calls to create a calendar spread. Suppose that CSCO has traded in a relatively narrow price range [\$19.50 to \$21.50] over the last few months and you are expecting it to continue that trend. In early March, CSCO is trading at \$21.50, which makes the \$22 strike a good choice for a calendar spread. Here is the option chain for July 2013:

View By Expiration: [Mar 13](#) | [Apr 13](#) | [May 13](#) | [Jun 13](#) | **[Jul 13](#)** | [Oct 13](#) | [Jan 14](#) | [Jan 15](#)

Call Options								Expire at close Friday, July 19, 2013
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int	
9.00	CSCO130720C00009000	11.84	0.00	12.65	12.75	0	5	
10.00	CSCO130720C00010000	11.15	0.00	11.65	11.75	5	30	
11.00	CSCO130720C00011000	10.00	0.00	10.65	10.75	0	2	
13.00	CSCO130720C00013000	8.80	0.00	8.60	8.65	45	92	
14.00	CSCO130720C00014000	6.90	0.00	7.60	7.70	7	11	
15.00	CSCO130720C00015000	6.60	0.00	6.65	6.75	2	281	
16.00	CSCO130720C00016000	5.88	0.00	5.60	5.65	3	275	
17.00	CSCO130720C00017000	4.75	0.00	4.60	4.70	44	730	
18.00	CSCO130720C00018000	3.89	0.00	3.65	3.70	1	1,413	
19.00	CSCO130720C00019000	2.66	↓ 0.10	2.81	2.88	45	5,782	
20.00	CSCO130720C00020000	1.94	0.00	1.97	1.99	6	20,839	
21.00	CSCO130720C00021000	1.37	↑ 0.03	1.29	1.31	95	13,277	
22.00	CSCO130720C00022000	0.81	0.00	0.80	0.82	66	22,385	
23.00	CSCO130720C00023000	0.44	↓ 0.01	0.43	0.45	15	11,712	
24.00	CSCO130720C00024000	0.23	0.00	0.23	0.25	67	47,862	
25.00	CSCO130720C00025000	0.11	0.00	0.11	0.12	10	8,933	
26.00	CSCO130720C00026000	0.07	0.00	0.05	0.07	230	2,350	
27.00	CSCO130720C00027000	0.09	0.00	0.02	0.04	0	4,019	
28.00	CSCO130720C00028000	0.05	0.00	N/A	0.03	0	124	

Put Options								Expire at close Friday, July 19, 2013
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int	
9.00	CSCO130720P00009000	0.01	0.00	N/A	0.01	11	49	
10.00	CSCO130720P00010000	0.01	0.00	N/A	0.02	40	218	
11.00	CSCO130720P00011000	0.04	0.00	0.01	0.02	0	511	

12.00	CSCO130720P00012000	0.03	0.00	0.01	0.02	60	2,714
13.00	CSCO130720P00013000	0.02	0.00	0.01	0.03	100	646
14.00	CSCO130720P00014000	0.06	0.00	0.02	0.05	39	1,257
15.00	CSCO130720P00015000	0.03	0.00	0.03	0.05	51	16,649
16.00	CSCO130720P00016000	0.07	0.00	0.06	0.08	2	9,031
17.00	CSCO130720P00017000	0.11	0.00	0.11	0.12	15	4,702
18.00	CSCO130720P00018000	0.19	0.00	0.17	0.19	2	2,352
19.00	CSCO130720P00019000	0.31	0.00	0.31	0.32	61	8,244
20.00	CSCO130720P00020000	0.51	↓ 0.01	0.51	0.52	40	5,424
21.00	CSCO130720P00021000	0.90	0.00	0.88	0.90	36	10,204
22.00	CSCO130720P00022000	1.36	0.00	1.38	1.39	274	1,973
23.00	CSCO130720P00023000	2.05	0.00	2.00	2.03	12	1,886
24.00	CSCO130720P00024000	2.72	0.00	2.84	2.86	4	121
25.00	CSCO130720P00025000	3.51	0.00	3.70	3.75	25	171
27.00	CSCO130720P00027000	5.80	0.00	5.60	5.70	10	10

For this longer term option chain you are going to concentrate on the strike closest to the money, selecting the 22 strike for purchase at \$.82/share. You then look at the option chain for the near term option with expiration on April 19th, 2013.

View By Expiration: [Mar 13](#) | **[Apr 13](#)** | [May 13](#) | [Jun 13](#) | [Jul 13](#) | [Oct 13](#) | [Jan 14](#) | [Jan 15](#)

Call Options		Expire at close Friday, April 19, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
10.00	CSCO130420C00010000	10.71	0.00	11.55	11.65	2	24
11.00	CSCO130420C00011000	10.80	0.00	10.60	10.65	2	15
12.00	CSCO130420C00012000	8.20	0.00	9.55	9.65	0	5
13.00	CSCO130420C00013000	7.50	0.00	8.55	8.65	10	50
14.00	CSCO130420C00014000	6.84	0.00	7.55	7.65	10	252
15.00	CSCO130420C00015000	6.83	0.00	6.60	6.65	2	439
16.00	CSCO130420C00016000	5.79	0.00	5.60	5.65	1	1,486
17.00	CSCO130420C00017000	4.59	0.00	4.60	4.65	2	2,307
18.00	CSCO130420C00018000	3.80	↑ 0.10	3.60	3.65	174	15,866
19.00	CSCO130420C00019000	2.68	↑ 0.09	2.56	2.59	158	10,358

20.00	CSCO130420C00020000	1.75	↑ 0.15	1.63	1.65	242	18,515
21.00	CSCO130420C00021000	0.79	↓ 0.06	0.76	0.77	376	32,984
22.00	CSCO130420C00022000	0.25	↓ 0.01	0.24	0.25	2,607	70,958
23.00	CSCO130420C00023000	0.05	0.00	0.05	0.06	47	28,258
24.00	CSCO130420C00024000	0.01	0.00	N/A	0.01	50	4,617
25.00	CSCO130420C00025000	0.01	0.00	N/A	0.01	3	2,070
26.00	CSCO130420C00026000	0.04	0.00	N/A	0.01	0	54
27.00	CSCO130420C00027000	0.02	0.00	N/A	0.01	10	10

Put Options		Expire at close Friday, April 19, 2013					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
9.00	CSCO130420P00009000	0.03	0.00	N/A	0.01	0	512
10.00	CSCO130420P00010000	0.05	0.00	N/A	0.01	0	329
11.00	CSCO130420P00011000	0.01	0.00	N/A	0.01	0	737
12.00	CSCO130420P00012000	0.01	0.00	N/A	0.01	2	1,315
13.00	CSCO130420P00013000	0.02	0.00	N/A	0.01	100	3,670
14.00	CSCO130420P00014000	0.01	0.00	N/A	0.01	20	6,542
15.00	CSCO130420P00015000	0.01	0.00	N/A	0.01	6	9,282
16.00	CSCO130420P00016000	0.01	0.00	N/A	0.01	10	7,674
17.00	CSCO130420P00017000	0.01	0.00	N/A	0.01	10	14,345
18.00	CSCO130420P00018000	0.02	0.00	N/A	0.02	63	15,769
19.00	CSCO130420P00019000	0.04	0.00	0.03	0.04	815	28,236
20.00	CSCO130420P00020000	0.07	↓ 0.01	0.08	0.09	2	16,910
21.00	CSCO130420P00021000	0.25	0.00	0.27	0.28	292	13,622
22.00	CSCO130420P00022000	0.67	↓ 0.03	0.74	0.75	29	4,624
23.00	CSCO130420P00023000	1.51	↑ 0.05	1.57	1.61	77	1,634
24.00	<u>CSCO130420P00024000</u>	2.42	↓ 0.06	2.51	2.54	41	526
25.00	CSCO130420P00025000	3.50	0.00	3.50	3.55	1	410
26.00	CSCO130420P00026000	5.20	0.00	4.50	4.55	0	10
27.00	CSCO130420P00027000	8.05	0.00	5.50	5.55	0	26

You will sell the June call at 22 receiving a credit of \$.24. So this calendar spread involves the following trades:

(1) Buy 10 July CSCO calls at 22 for \$.82/share at a cost of $$.82 \times 1,000 = \820 .

(2) Sell 10 April CSCO calls at 22 for \$.24/share which produces income of $$.24 \times 1,000 = \240

The cost of this spread will be $\$240 - \$820 = \$580$. This figure also represents the maximum risk to this calendar spread.

Suppose that 4 weeks later CSCO remains at \$21.50. In this case the April call expires OTM and so you will pick up the \$240. Since one month has expired with little change in the underlying stock price, the calls have lost some time value. In this case you use an options calculator to determine on the basis of DELTA and THETA, how much the option premium decays over 31 days. Let's say on the basis of your model the projected price of this call is \$.75 on April 19th. At this point, you can now offset your long call by selling 10 July CSCO calls at \$.75/share receiving $$.75 \times 1,000 \text{ shares} = \750 .

So, for this horizontal calendar Spread:

(1) You make \$240 on the short 10 calls

(2) You lose $\$820 - \$750 = \$70$ on the long 10 calls

Giving you a net gain of $\$240 - \$70 = \$170$.

You maximum risk of loss will be \$580 the cost of the spread. The maximum gain is \$170 which provides a maximum monthly return of $\$170/\$580 = .293$ or 29% which translates into a $29\% \times 12$ or 351% annual rate of return.

To understand how this profit may be earned, let's look at the details of this trade. The April 22 calls were sold for \$.24/share, which consisted mostly of time value. Because the price of CSCO ended in April under \$22 at expiration, these short calls ended worthless and all that time value was gained by you as an investor. The other leg of this spread, the long July calls lost time value due to the decay in the option premium as the stock remained under \$22 and one month elapsed. This loss in time value turned out to be \$70 which was less than what was earned in the short calls. Your profit is due to the fact that the July long call options were less sensitive to the loss of time value than the short calls due to expire in one month. This difference in time value resulted in a profit of $$.24 - $.07$ or $$.17/\text{share}$ [i.e. a total profit of $$.17 \times 1,000 \text{ shares} = \170].

As an alternative to closing out the long call position in April at \$.75/share, you may want to consider rolling over this calendar spread into the next month. This enhancement to a calendar spread strategy illustrates on the benefits of this horizontal spread --- the ability to continue selling front-month options to reduce the cost basis of the longer-term option. Here is how such a revised strategy might work:

Following the expiration of the April calls, you are holding 10 July calls with an effective cost basis of \$580. You would now look at the option chain for May Calls and proceed to sell 10 May Calls at a strike of 22. At this point the bid price on the near calls might be priced at say around \$.20/Share. So being short 10 May calls at 22 would give you $$.20 \times 1,000 \text{ Shares} = \200 .

This would lower your cost of the trade to: $\$580 - \$200 = \$380$.

Now if CSCO continues to trade at or below \$22 you would pick up the \$200 from the short calls. Since the July calls would be one month closer to expiration, their price might be \$.70. So, under such circumstances you could close out the options by selling 10 July Calls at 22 for \$.70/share. Your loss from the long portion of this spread would be: $$.70 \times 1,000 \text{ shares} = \700 . So the loss from the long over the two month period would be $\$700 - 820$ or $(\$120)$. Against, the total gain from your short options of $\$240 + \$200 = \$440$ [April and May trades]. Net gain would be $\$440 - \120 or $\$320$ against a new cost of \$580 giving a 2 month return of $\$320/\$580 = .55$ which translates to $6 \times 55\%$ or a 330% annualized return.