

## Financial Futures and Options: Introduction to Stock Option Trading Strategies

### Basic Strategies:

#### Buy a Call: [Long]

Bullish position; Option value increases as the stock increases; Provides the owner the option, not the obligation to buy shares at a specified price; At expiration the owner may exercise if the stock price is above the strike price; The option expires worthless if the stock price is below the strike price.

#### Buy a Put: [Short]

Bearish position; Option value increases as the stock price decreases; Offers the owner the option the right to sell shares of stock at a specified price; At expiration the owner may sell the assigned shares to the writer of the put, when the stock price is below the strike price; At option expires worthless if the stock price is above the strike price.

#### Write a Put: [Long]

Bullish to neutral position; The writer collects the option premium; this option gives the writer premium income, but also sets a price [strike price] on what the writer will pay to acquire the stock for; At expiration the writer will need to purchase the stock if the stock price is below the strike price; If the strike price is above the stock price the option expires worthless and the writer keeps the option premium.

Write a Call: [Short]

Bearish to neutral position; The writer collects the option premium; The option allows the writer to earn the premium while holding the underlying shares, with provision for sale based on an increase in the stock price; At expiration the writer sells shares if the stock price is above the strike price; the option expires worthless if the strike price is above the stock price.

**Strategy 1: The Covered Call [Selling a Call/writing a call]**

Advantages: Easy to implement; generates income while waiting for the stock to increase in value; can be used as a strategy to pre-sell a stock position that you want to pare.

Disadvantages: May leave you holding onto a stock that you wish you had sold as the stock moves down; places a cap on the upside of the underlying stock over the period of the option; this strategy requires that you hold the stock which means you tie up capital during the option period.

This strategy is geared to investors who research their stock purchases in detail and are long term holders of a stock [core stock holding]. These investors will identify their stock entry and exit points. You will need level 1 option level trading authorization on your account, when writing the call on your stock holding you will execute a “sell to open” on this type of trade. If later you decide to close out your position you will execute a “buy to close” type of trade.

The following option chain table provides information on GE options as of March 2, 2012 when GE stock was trading at \$18.97.

GE stock Price: \$18.97

View By Expiration: [Mar 12](#) | [Apr 12](#) | **[May 12](#)** | [Jun 12](#) | [Sep 12](#) | [Dec 12](#) | [Jan 13](#) | [Jan 14](#)

Call Options		Expire at close Friday, May 18, 2012					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
<b>11.00</b>	<b>GE120519C00011000</b>	<b>5.00</b>	<b>0.00</b>	<b>7.95</b>	<b>8.05</b>	<b>1</b>	<b>1</b>
<b>16.00</b>	<b>GE120519C00016000</b>	<b>3.20</b>	<b>0.00</b>	<b>3.05</b>	<b>3.15</b>	<b>3</b>	<b>77</b>
<b>17.00</b>	<b>GE120519C00017000</b>	<b>2.36</b>	<b>0.00</b>	<b>2.18</b>	<b>2.22</b>	<b>2</b>	<b>767</b>
<b>18.00</b>	<b>GE120519C00018000</b>	<b>1.33</b>	<b>↓0.15</b>	<b>1.36</b>	<b>1.39</b>	<b>13</b>	<b>4,466</b>
19.00	GE120519C00019000	0.72	↓0.06	0.71	0.72	1,629	8,042
20.00	GE120519C00020000	0.28	↓0.03	0.27	0.28	220	11,184
21.00	GE120519C00021000	0.08	↓0.03	0.07	0.08	32	3,335
22.00	GE120519C00022000	0.03	0.00	0.01	0.02	40	7,318
23.00	GE120519C00023000	0.02	0.00	N/A	0.02	140	591
25.00	GE120519C00025000	0.03	0.00	N/A	0.02	1	8

Put Options		Expire at close Friday, May 18, 2012					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
11.00	GE120519P00011000	0.03	0.00	N/A	0.03	40	121
13.00	GE120519P00013000	0.06	0.00	0.03	0.06	2	113
14.00	GE120519P00014000	0.05	0.00	0.06	0.08	30	92
15.00	GE120519P00015000	0.08	↓0.04	0.08	0.10	10	1,991
16.00	GE120519P00016000	0.13	↓0.01	0.13	0.14	40	845
17.00	GE120519P00017000	0.23	↑0.02	0.22	0.23	6	6,671
18.00	GE120519P00018000	0.41	↑0.03	0.39	0.41	207	8,671
<b>19.00</b>	<b>GE120519P00019000</b>	<b>0.72</b>	<b>↑0.02</b>	<b>0.72</b>	<b>0.74</b>	<b>83</b>	<b>7,996</b>
<b>20.00</b>	<b>GE120519P00020000</b>	<b>1.34</b>	<b>↑0.15</b>	<b>1.29</b>	<b>1.31</b>	<b>12</b>	<b>2,633</b>
<b>21.00</b>	<b>GE120519P00021000</b>	<b>2.09</b>	<b>↑0.20</b>	<b>2.09</b>	<b>2.12</b>	<b>9</b>	<b>641</b>
<b>22.00</b>	<b>GE120519P00022000</b>	<b>2.99</b>	<b>↑0.04</b>	<b>3.00</b>	<b>3.10</b>	<b>40</b>	<b>30</b>
<b>23.00</b>	<b>GE120519P00023000</b>	<b>4.00</b>	<b>↑0.15</b>	<b>4.00</b>	<b>4.10</b>	<b>2</b>	<b>5</b>



Highlighted options are in-the-money.

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Currency in USD.

This particular set of options are set to expire on May 18, 2012 some 77 days out [3/2/2012 to 5/18/2012]. Let's look at the following scenario, you bought 1,000 shares of GE stock in June of 2010. You now would like to pare the position in half, believe that GE will continue to languish for the next several months as the overall economy struggles out of the recession, and are willing to retain the 500 shares you're going to option if the GE stock should decline. You are also willing to accept a sale of GE stock at the strike price plus option premium if the stock rises in price. The main issue is your selection of an appropriate strike price. Your strategy will be to identify a strike price that is high enough to have you retain the shares should GE's stock price go up, but also be sufficient to compensate you if it does go beyond your selected strike.

Possible out of the money strike prices for GE calls would be: 19,20,21. The potential option premiums and income from writing 5 calls are as follows:

Strike Price	Option Premium [Ask]	Potential Income from 5 Calls
19	\$.72	\$360
20	\$.28	\$140
21	\$.08	\$40

The two strike prices that hold the greatest value from this strategy would be the 19 or 20 strike. To some extent the determination of one over the other will rest on an assessment of what you project is likely to be the GE stock price on May 18<sup>th</sup> if the stock rises. A strike of 19 is very close to being in the money with GE at \$18.97. On the other hand, this stock has recently declined from \$19.25 to its present price. GE stock trades fairly close to the general economy so to some extent deploying the strategy may be considered a surrogate for the position that the economy will slowly recover and it may not move much in the next 77 days. However, after analyzing GE stock you decide that there may be further room for the price to go up in the next 77 days due to better earnings [earnings will be announced in March], then you could select the 20 strike price some \$1.03 away GE's current price.

Let's say you go with the 19 strike price, here are some scenarios to consider:

Scenario 1: GE stock goes up to \$20 after the earnings announcement in March, the option price goes up to \$.80. At this point you could buy the option for \$.90 per share x 500 = \$450 which generates a \$450 - \$360 = \$90 short term loss. Alternatively, you could wait and see whether GE's stock price will go down below \$19.72 before expiration.

Scenario 2: GE stock stays between \$20 and \$18 throughout the contract expiring when the stock is at \$19.50. Under the circumstances you will pick up the \$360 option premium and be able to write another covered call going forward.

Scenario 3: GE stock initial stays just below \$19.50, but after the earnings announcement in March, the stock goes down to \$18 and continues to decline to \$16 at the time the option expires on May 18, 2012. Under the circumstances you would get to keep the option premium of \$360, and write a new option. However, by holding the stock you have incurred an opportunity cost of 500 shrs. X  $(\$18.97 - \$16) = \$1,485$  by night selling the stock at \$18.97 instead of writing a covered call.

When writing a covered call you should seek to identify those stocks in your portfolio that are likely to move gradually over time and not be subject to much volatility which might produce the results of scenario 3. In addition, some investors may use a strategy of identifying slow moving stocks, buying them and then immediately writing a covered call. This technique may involve a greater degree of risk because you are writing the covered call at a time when you have no capital appreciation, so under these circumstances if scenario 3 plays out you will create a loss, from this strategy that will have to make up from either a recovery in GE stock or closing out the GE stock position and investing elsewhere.

Another high risk strategy, that should be rarely used, is to sell “naked” calls. Under this technique, the investor will write calls on stock they do not own. This can be dangerous because if the stock rises sharply, the writer will have the obligation of producing the stock when the option buyer exercises. In this case the investor will be buying the high priced stock in return for receiving a small option premium, not a winning proposition. However, a writer of “naked” calls could minimize some of this risk by buying a call option to close before expiration to reduce the loss as the underlying stock price rises. Unwinding the position may be the best strategy in this situation, but its effectiveness may depend upon how quickly the writer gets out of the position.

### **Strategy 2: The Long Call [Buying a Call]**

Used as either a speculative strategy or an ownership strategy; the call increases in value with the stock price; options that are in-the-money can either be exercised or sold to increase investment return; calls offer the buyer an opportunity to control shares of stock they believe will go up during the option period.

Advantages: Relatively easy strategy to implement; requires small amount of capital; no margin requirements, unlimited upside potential; you also have the flexibility of selling options that are in-the-money before expiration so that you don't have to buy shares; risk is easy to calculate and limited to the price of the option premium.

Disadvantages: directional move of the underlying stock needs to be correctly predicted; there must be sufficient funds to actually purchase the underlying stock at the strike price if the option is held through expiration; options can expire worthless if the stock price < strike price.

To execute this strategy you would buy to open on the stock where you wished to purchase a call option. Investors can use calls to reach a number of different objectives: (1) pure speculation – to take advantage of a situation where the stock is likely to go up significantly in a short period of time (2) pre-purchase of stock when funds may be available in the future – you want to lock in the price of a stock for purchase later (3) buy deep in-the-money calls – allowing you to own the options as a proxy for the underlying stock [stocks that have a  $\Delta = 1$  (i.e., correlation between the option price and stock price)].

An investor using this type of strategy will gravitate towards those stocks that are more volatile than others.


As example, consider the following listing for Alcoa Aluminum [AA] on March 2, 2012.

## Alcoa Inc. Common Stock (AA)

-NYSE

**10.24** ↓0.03(0.29%) Mar 2, 4:00PM EST|After Hours: **10.23** ↓0.01 (0.10%) Mar 2, 7:46PM EST

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Prev Close:	<b>10.27</b>	Day's Range:	<b>10.18 - 10.32</b>
Open:	<b>10.25</b>	52wk Range:	<b>8.45 - 18.47</b>
Bid:	<b>10.15 x 500</b>	Volume:	<b>22,443,670</b>
Ask:	<b>10.44 x 200</b>	Avg Vol (3m):	<b>27,345,600</b>
1y Target Est:	<b>11.61</b>	Market Cap:	<b>10.92B</b>
Beta:	<b>2.06</b>		
Next Earnings Date:	<b>10-Apr-12</b> 		

P/E (ttm): 18.62

EPS (ttm): 0.55

Div & Yield 0.12 (1.20%)

AA's 52 week range is \$8.45 to \$18.47, and is currently trading in the bottom 1/3 of this trading range. This stock carries a very high beta of 2.06 indicating a great deal of volatility in its stock price relative to the market. A small improvement in the overall economy may provide the impetus for large, positive

increases in share price. Consequently, this stock might be an ideal candidate to purchase a call on. The following is an AA option chain listing for July 20, 2012:

AA Stock Price March 2, 2012: \$10.27

View By Expiration: [Mar 12](#) | [Apr 12](#) | **[Jul 12](#)** | [Oct 12](#) | [Jan 13](#) | [Jan 14](#)

Call Options		Expire at close Friday, July 20, 2012					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
<b>3.00</b>	AA120721C00003000	<b>7.65</b>	<b>0.00</b>	7.15	7.35	46	46
<b>5.00</b>	AA120721C00005000	<b>5.40</b>	<b>0.00</b>	5.20	5.30	3	70
<b>6.00</b>	AA120721C00006000	<b>4.36</b>	<b>0.00</b>	4.20	4.35	6	171
<b>7.00</b>	AA120721C00007000	<b>3.35</b>	<b>0.00</b>	3.25	3.35	50	285
<b>8.00</b>	AA120721C00008000	<b>2.42</b>	<b>0.00</b>	2.39	2.43	2	1,222
<b>9.00</b>	AA120721C00009000	<b>1.60</b>	<b>↓0.04</b>	1.60	1.64	15	5,491
<b>10.00</b>	AA120721C00010000	<b>0.98</b>	<b>↓0.02</b>	0.97	0.99	578	16,897
<b>11.00</b>	AA120721C00011000	<b>0.52</b>	<b>↓0.02</b>	0.52	0.54	720	45,867
<b>12.00</b>	AA120721C00012000	<b>0.25</b>	<b>↓0.01</b>	0.25	0.27	147	12,661
<b>13.00</b>	AA120721C00013000	<b>0.13</b>	<b>0.00</b>	0.11	0.13	40	8,567
<b>14.00</b>	AA120721C00014000	<b>0.05</b>	<b>0.00</b>	0.05	0.06	7	2,397
<b>15.00</b>	AA120721C00015000	<b>0.03</b>	<b>0.00</b>	0.02	0.04	13	689
<b>16.00</b>	AA120721C00016000	<b>0.04</b>	<b>0.00</b>	N/A	0.02	8	144
<b>17.00</b>	AA120721C00017000	<b>0.08</b>	<b>0.00</b>	N/A	0.02	2	2
<b>18.00</b>	AA120721C00018000	<b>0.02</b>	<b>0.00</b>	N/A	0.02	170	628

In this particular case you would be looking at near, out-of-the money stock options with strike prices just above the current price of \$10.27. Those with a strike price of 11,12,13, or possibly 14 are candidates. Note that the 12 strike is half as much as the 11 strike and the 13 is half of what the 12 strike is. Under such circumstances you might choose the 12 strike and buy 5 calls [buy 5 calls to open]. Your cost would be:

500 shares x \$.27 = \$135.

You are looking for AA stock to go up sometime during the next 140 days [March 2<sup>nd</sup> to July 20<sup>th</sup> 2012], which is a bullish position.

Scenario 1: AA's stock price stays below \$12 a share all the way up until expiration so you lose \$135 on this transaction

Scenario 2: AA's stock price goes up to \$14 in June and the option price goes from \$.27 to \$1.75. You decide to close out this position executing a sell 5 option contracts to close order. Your profit from this trade will be:

$$(\$1.75 - \$.27) \times 500 = \$740.$$

Scenario 3: AA's stock price stays below \$12.50 up until late June and then rises to \$13.50 just before expiration. You decide that you wish to own AA shares so on July 15<sup>th</sup> you tell your broker to take

500 x \$12 = \$6,000 from your account and deliver 500 shares of AA. After this transaction the value of your AA position will be 500 X \$13.50 = \$6,750.

The breakeven price point for AA stock would be \$12 + \$.27 = \$12.27. In most cases where you are selecting an option that runs for 3 months or longer, you are planning to exit the position at least a month before expiration to avoid the reduction in the option premium due to time decay.

An alternative strategy would be to select an in-the-money AA call set to expire within a month or two which might allow one to profit from a smaller, short term move in the stock. If you have more capital and are looking to own the stock in the next month or two, then buying near term, in-the-money calls [with higher option premiums] might make sense. Here is the April 20, 2012 call option chain found on March 2, 2012.

AA Stock Price: \$10.27

View By Expiration: [Mar 12](#) | [Apr 12](#) | [Jul 12](#) | [Oct 12](#) | [Jan 13](#) | [Jan 14](#)

Call Options		Expire at close Friday, April 20, 2012					
Strike	Symbol	Last	Chg	Bid	Ask	Vol	Open Int
5.00	AA120421C00005000	5.20	0.00	5.20	5.30	14	515
6.00	AA120421C00006000	4.25	0.00	4.20	4.30	58	144
7.00	AA120421C00007000	3.25	0.00	3.20	3.30	2	1,138
8.00	AA120421C00008000	2.29	↑0.01	2.26	2.29	63	5,732



<b>9.00</b>	AA120421C00009000	<b>1.35</b>	<b>↓0.02</b>	1.35	1.36	113	44,448
<b>10.00</b>	AA120421C00010000	<b>0.61</b>	<b>↓0.02</b>	0.61	0.62	479	44,574
<b>11.00</b>	AA120421C00011000	<b>0.20</b>	<b>↓0.04</b>	0.20	0.22	805	37,679
<b>12.00</b>	AA120421C00012000	<b>0.07</b>	<b>0.00</b>	0.06	0.07	34	44,033
<b>13.00</b>	AA120421C00013000	<b>0.02</b>	<b>0.00</b>	0.01	0.02	52	15,028
<b>14.00</b>	AA120421C00014000	<b>0.01</b>	<b>↓0.01</b>	N/A	0.01	1	4,170
<b>15.00</b>	AA120421C00015000	<b>0.02</b>	<b>0.00</b>	N/A	0.01	11	2,372
<b>16.00</b>	AA120421C00016000	<b>0.02</b>	<b>0.00</b>	N/A	0.01	10	979
<b>17.00</b>	AA120421C00017000	<b>0.01</b>	<b>0.00</b>	N/A	0.01	12	861
<b>18.00</b>	AA120421C00018000	<b>0.01</b>	<b>0.00</b>	N/A	0.01	41	159

Looking at this listing you would concentrate on those call options with strike prices less than 10. The deepest contract with the \$5 strike price has an Ask option premium of \$5.30. The \$9 strike call carries a \$1.36 option premium. With the \$5 strike you are effectively buying AA at  $\$5 + \$5.30 = \$10.30$  which is only \$.03 away from the current price of AA shares[\$10.27]. With the \$9 strike you are buying AA shares at  $\$9 + \$1.36 = \$10.36$