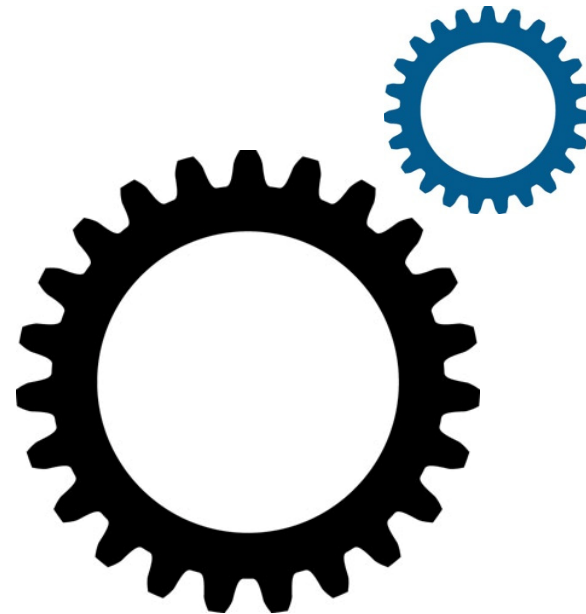


Introduction to Options

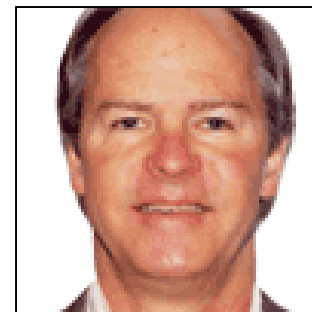


Your Hosts

Dave Whitmore
President, SogoTrade



Joseph F. Burgoyne, III
Director, Options Industry Council



- Essential Concepts and Terminology
- Exercise & Assignment
- Basic Option Strategies
 - Buying Options
 - Buying Calls
 - Buying Puts
 - Selling Options
 - Selling Covered Calls

For the sake of simplicity, the examples that follow do not take into consideration commissions and other transaction fees, tax considerations, or margin requirements, which are factors that may significantly affect the economic consequences of a given strategy. An investor should review transaction costs, margin requirements and tax considerations with a broker and tax advisor before entering into any options strategy.

Options involve risk and are not suitable for everyone. Prior to buying or selling an option, a person must receive a copy of *Characteristics and Risks of Standardized Options*. Copies have been provided for you today and may be obtained from your broker, one of the exchanges or The Options Clearing Corporation, One North Wacker Drive, Suite 500, Chicago, IL 60606 or call 1-888-OPTIONS or visit www.OptionsEducation.org.

Any strategies discussed, including examples using actual securities and price data, are strictly for illustrative and education purposes and are not to be construed as an endorsement, recommendation or solicitation to buy or sell securities.

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Essential Concepts

- What is the opportunity?
- What is the risk?
- If you buy a stock today at \$100 per share, and you sell it in one year for \$100 per share, do you lose money?
- Is there a way to change the risk/reward of buying stocks?

4

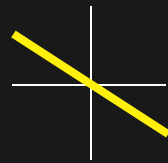
Why Options? Why Bother?

OIC

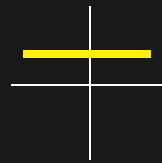
In a world without options, stock investors have limited choices.



Long Stock



Short Stock



Treasury Bill

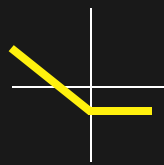
With options, there are other choices:



Long Call



Short Call



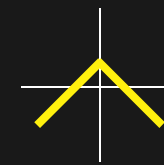
Long Put



Short Put



Long Straddle



Short Straddle



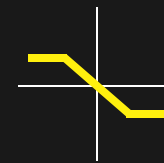
Long Strangle



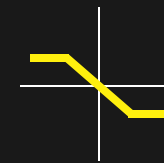
Short Strangle



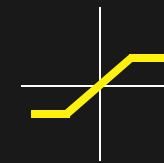
Long Call Spread



Long Put Spread



Short Call Spread



Short Put Spread



Ratio Call Spread



Ratio Put Spread



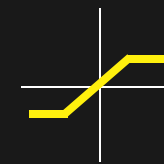
Call Volatility Spread



Put Volatility Spread



Long Split-Strike Synthetic



Collar

Options give you options!

- Options give you more ways to implement your market research.
- Options make it possible to target a variety of investment objectives:
 - reduce risk
 - increase income
 - unique tradeoffs

Terminology and Mechanics

- Options are contracts that give
 - the buyer the right to buy or sell an underlying asset
 - the seller an obligation to buy or sell an underlying asset
- ...at a specified price, on or before a given date in the future

- There are two “types” of options:
 - calls
 - puts
- For equity options, the underlying asset to be purchased or sold:
 - 100 shares of underlying stock or
 - 100 shares of an ETF (Exchange Traded Fund)

- An equity call buyer:
 - has the right to buy 100 shares of underlying stock
 - is “long” the call contract
- An equity call seller:
 - has the obligation to sell 100 shares of underlying stock
 - is “short” the call contract
 - is also called the “writer”

- An equity put buyer:
 - has the right to sell underlying stock
 - is “long” the put contract
- An equity put seller:
 - has the obligation to buy underlying stock
 - is “short” the put contract
 - is also called the “writer”

- Unlike shares of stock, equity options expire
- Equity option contracts have terms:
 - underlying stock – contract specific
 - unit of trade – usually 100 shares
 - strike or exercise price – contract specific
 - expiration month – contract specific

- The option buyer has the right:
 - to buy (for a call) or sell (for a put)
 - 100 shares of underlying stock
 - at the strike price per share
 - if he/she exercises a long contract
- To exercise, the buyer issues an exercise notice to his/her brokerage firm
- Only option buyers may exercise an option contract

- The option seller has the obligation:
 - to sell (for a call) or buy (for a put)
 - 100 shares of underlying stock
 - at the strike price per share
 - if he/she is assigned an exercise notice
- Assignment notice is received from seller's brokerage firm
- Only option sellers may be assigned on an option contract

- Equity options are American-style contracts
- Buyer may exercise at any time until expiration
 - buyer is in control
- Seller may be assigned at any time before expiration
 - seller is not in control

- Expiration day for expiring standard equity options is the Saturday following the third Friday of the expiration month

June						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X					

Expiration
Friday

Expiration
Day

- Expiration Friday
 - third Friday of month
 - (if Friday is holiday then Thursday)
 - last day expiring equity options trade
 - last day option may be exercised by contract buyer

- An option buyer pays premium (or price)
 - non-refundable
- An option seller receives premium (or price)
 - keeps, whether assigned or not
- Premium quoted on a per share basis
 - total paid/received = quoted price x 100 shares
 - example: \$3.00 quoted x 100 = \$300 total
 - plus commission charges*

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

XYZ January 50 Call at \$4.20

- XYZ = underlying stock
 - 100 XYZ shares change hands if exercised
- January = expiration month
 - expiration day = Saturday following third Friday in January
- 50 = strike (exercise) price
 - price per share if exercised = \$50

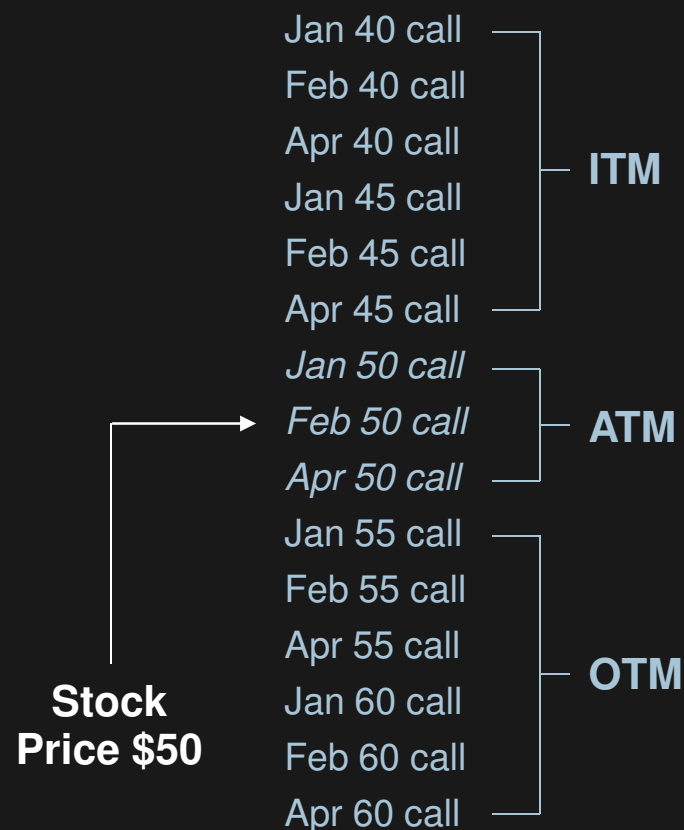
XYZ January 50 Call at \$4.20

- Call = option type
- \$4.20 = quoted premium
 - total premium paid by buyer to seller =
 $\$4.20 \times 100 \text{ shares} = \420
 - plus commission charges*

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

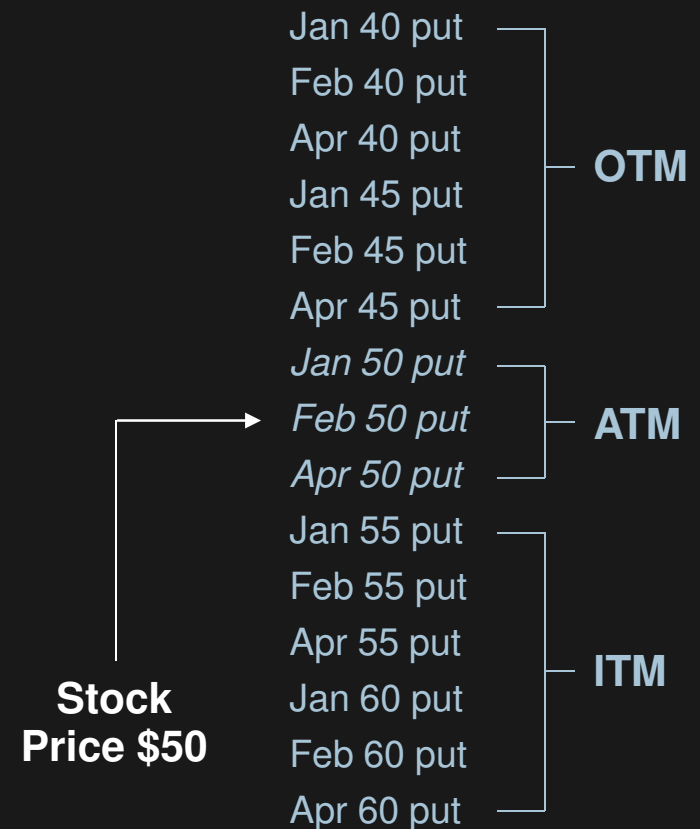
Calls: In-the-money, At-the-money, Out-of-the-money

- Call is in-the-money (ITM)
 - stock price above strike price
- Call is at-the-money (ATM)
 - stock price same as strike price
- Call is out-of-the-money (OTM)
 - stock price below strike price



Puts: In-the-money, At-the-money, Out-of-the-money

- Put is in-the-money (ITM)
 - stock price below strike price
- Put is at-the-money (ATM)
 - stock price same as strike price
- Put is out-of-the-money (OTM)
 - stock price above strike price



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The Ins and Outs Quiz

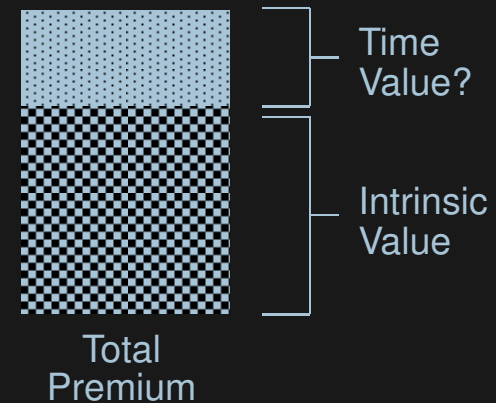
OIC

Stock Price	Option	In, At, Out
\$55.00	60 Call	Out
\$77.00	75 Call	In
\$63.00	65 Put	In
\$51.00	50 Put	Out
\$22.55	22.50 Call	In

**Option Premium:
Intrinsic Value (if any) + Time Value**

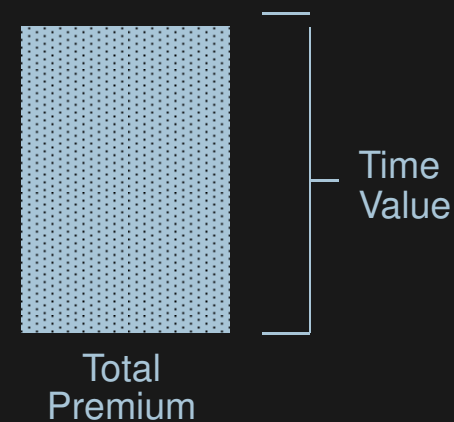
- Intrinsic value
 - in-the-money amount
- Time value
 - any premium in excess of intrinsic value
 - decays with time as expiration approaches (“time decay”)
- At expiration option worth only intrinsic value
 - no time remaining

- In-the-money calls and puts
 - have intrinsic value
 - may have time value



At-the-money calls and puts

- no intrinsic value
- all time value
- Out-of-the-money calls and puts
 - no intrinsic value
 - all time value

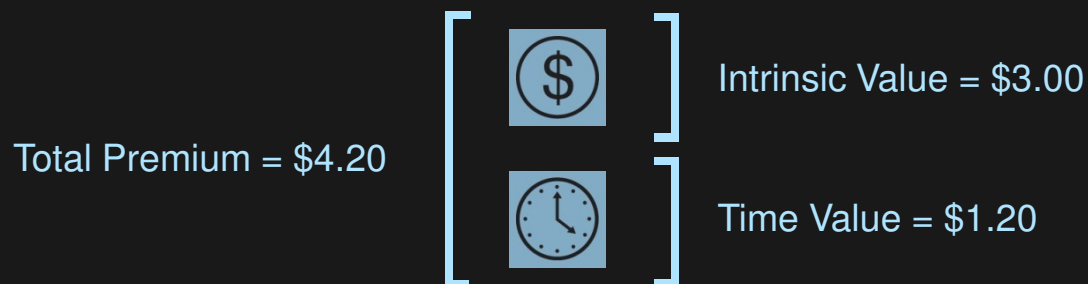


XYZ at \$53 per share

XYZ January 50 call at \$4.20

Call is in-the-money by \$3.00

(stock price \$53.00 – strike price \$50.00)



Time Value = Total Premium – Intrinsic Value

For a 60 call at \$2.10:

What is the intrinsic value? **\$0**

What is the time value? **\$2.10**

25

Premium Value Quiz

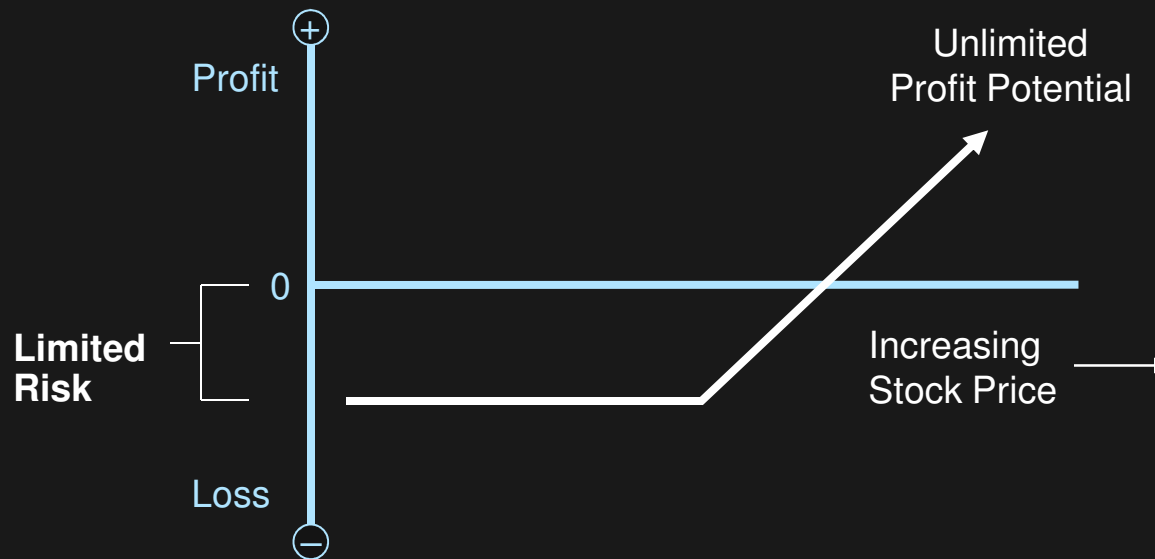
OIC

Stock Price	Option	Option Price	In, At and Out	Intrinsic Value	Time Value
\$78.00	70 Call	\$10.50	In-the-money	\$8.00	\$2.50
\$58.50	60 Put	\$3.75	In-the-money	\$1.50	\$2.25
\$84.00	85 Call	\$2.25	Out-of-the-money	0	\$2.25
\$22.50	22.50 Call	\$1.50	At-the-money	0	\$1.50

Buying Calls

Call Buyer:

- Has the right to buy underlying stock
 - 100 shares
 - at the strike price
 - at any time until expiration
- For this right the call buyer pays premium



- Risk vs. reward for long call
 - profit potential is unlimited
 - risk is limited to premium paid for option

- Stock XYZ is trading at \$60
 - you are bullish on the stock
 - you want limited downside risk
- You buy a three-month, 60 strike call at \$3.00
 - total premium paid = $\$3.00 \times 100 \text{ shares} = \300
- Plus commission charges*

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

Buy 60 strike call at \$3.00

Stock price at expiration	Call value at expiration	Cost of call*	Proceeds if sold at exp. value*	Net gain or loss
\$70	\$10	\$305.65	\$994.34	\$688.69
\$65	\$5	\$305.65	\$494.34	\$188.69
\$63	\$3	\$305.65	\$294.34	(\$11.31)
\$60	0	\$305.65	0	(\$305.65)
\$55	0	\$305.65	0	(\$305.65)

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

In the case of sales an SEC charge of 127 cents for every \$1,000 principal value of the trade would apply.

Call Buying Example

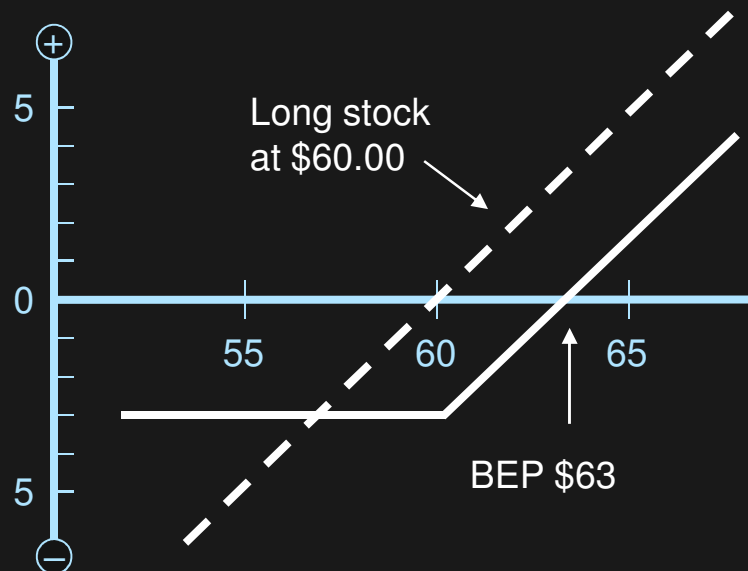
Leverage

Buy 60 strike call at \$3.00
VS.
Buy 100 shares at \$60.00

Stock Price at Expiration	Long Call Option		Long Stock	
	\$ Gain/Loss	% Gain/Loss	\$ Gain/Loss	% Gain/Loss
\$70	\$688.69	+125%	\$993.99	+17%
\$65	\$188.69	+62%	\$493.99	+8%
\$63	(\$11.31)	-4%	(\$6.01)	-0.1%
\$60	(\$305.65)	-100%	(\$506.07)	-8%
\$55	(\$305.65)	-100%	(\$1006.07)	-17%

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example includes a stock leg, the commission on the stock trade would be \$3 in addition to the applicable option commission(s). In the case of sales an SEC charge of 127 cents for every \$1,000 principal value of the trade would apply. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

Buy 60 strike call at \$3.00



Break-even at Expiration:
 Strike Price + Call Premium Paid
 $\$60.00 + \$3.00 = \$63.00$

Maximum Loss:
 $\$3.00$ Call Premium Paid, plus
 commission for $\$305.65$ total*

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

- XYZ stock is trading at \$60
- Ryan has \$6,000
- Ryan buys 1 XYZ 60 call at \$3.00 (\$305.65 total) and deposits \$5,694 in money market
- What is Ryan's goal? Risk?
 - goal: to buy stock at \$60 with limited risk
 - risk: \$305.65 premium paid (5% of capital)

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$305.65.

Three months later:

- What should Ryan do if XYZ is above \$60?
 - exercise the call and buy the stock*
 - re-evaluate – possibly sell call
- What should Ryan do if XYZ is below \$60?
 - call expires out-of-the-money with no value
 - re-evaluate
 - maybe buy stock at lower price
 - maybe look for another investment

*Exercises and the assignment of exercise notices are charged \$15 at Sogotrade

- XYZ stock is trading at \$60
- Peter has \$6,000
- Peter buys 20 XYZ 60 calls at \$3.00 each (\$6,000 total)
- What is Peter's goal? Risk?
 - goal: profit
 - risk: \$6,000 total paid for the options (plus commission)
- What else should Peter consider?
 - profit target, time frame and point to take loss

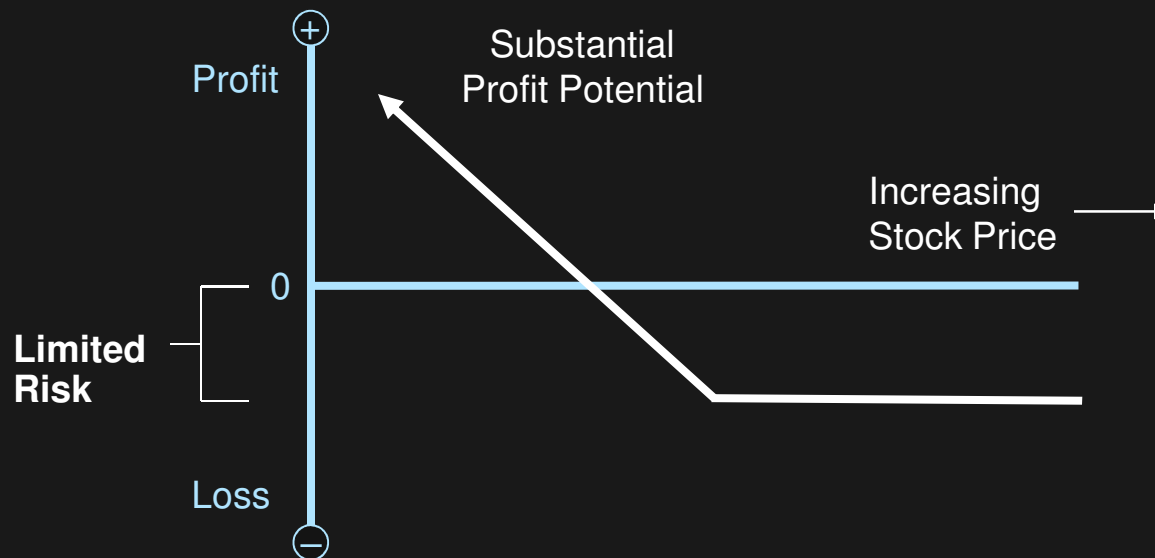
*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$6,018.00.

- Investor:
 - bullish on a particular stock
 - small cash outlay with limited risk
 - expects to exercise and buy stock
 - focus on number of contracts
- Trader:
 - leveraged profits with risk capital
 - no expectation to exercise
 - focus on total premium paid and be willing to lose it

Buying Puts

Put Buyer:

- Has the right to sell underlying stock
 - 100 shares
 - at the strike price
 - at any time until expiration
- For this right the put buyer pays premium



- Risk vs. reward for long put
 - profit potential is substantial
 - risk is limited to premium paid for option

- Stock XYZ is trading at \$36.00
 - you are bearish on the stock
 - you want limited upside risk
- You buy a three-month, 35 strike put at \$2.25
 - total premium paid = $\$2.25 \times 100 \text{ shares} = \225.00
- Plus commission

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$230.65.

Buy 35 strike put at \$2.25

Stock Price at Expiration	Long 35 Put Value at Expiration	Long 35 Put Initial Cost	Total Profit/(Loss)
\$40.00	0	(\$2.25)	(\$2.25)
\$35.00	0	(\$2.25)	(\$2.25)
\$32.75	\$2.25	(\$2.25)	0
\$30.00	\$5.00	(\$2.25)	\$2.75
\$25.00	\$10.00	(\$2.25)	\$7.75

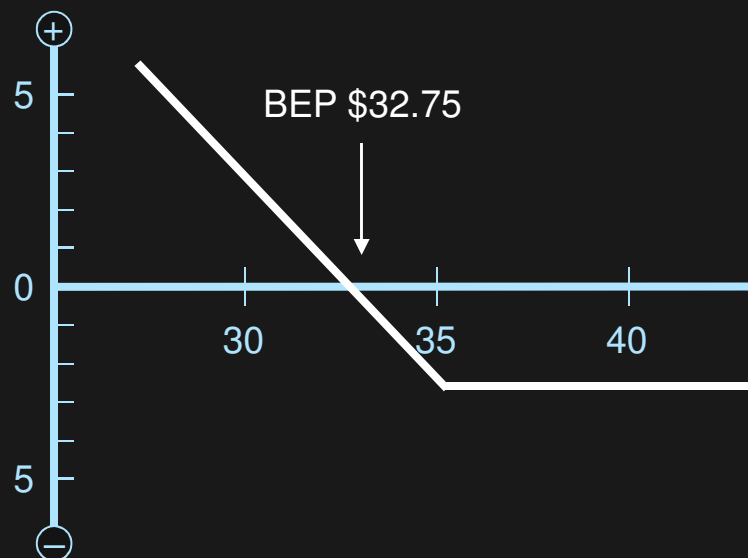
*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$230.65. Sale proceeds would be charged an SEC fee of 1.27 cents per \$1000 principal and a commission at the same rate.

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Put Buying Example

OIC

Buy 35 strike put at \$2.25



Break-even at Expiration:
Strike Price – Put Premium Paid
 $\$35.00 - \$2.25 = \$32.75$

Maximum Loss:
\$2.25 Put Premium Paid
\$230.65 Total

*At SogoTrade option commissions are \$5 plus \$0.65 per contract. If the example above was executed at SogoTrade the total cost with commission would be \$230.65.

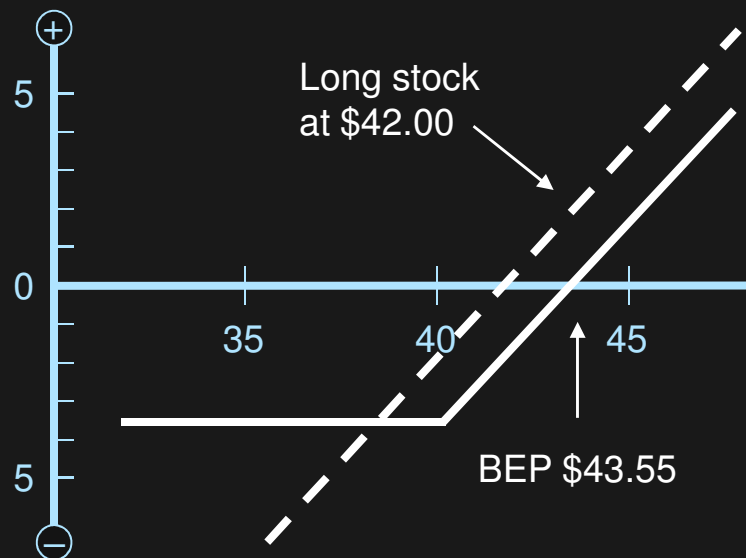
- Bearish on the underlying stock
- Profit from a decline in stock price
- Safe alternative to selling stock short
 - small cash outlay
 - leveraged profits
 - limited upside risk
 - no short stock margin

- You own 100 shares of ABC stock at \$42.00
 - concerned about the downside, you purchase protection
 - buy puts on a share-for-share basis (long contracts)
- Protective put: buy 1 ABC 40 strike put
 - right to sell the shares at \$40.00
 - at any time before expiration
- Are you bullish or bearish?

- ABC stock at \$42.00
- Buy 1 60-day ABC 40 put at \$1.55
 - total premium paid = \$155.00
- What is your risk?
 - stock price – break-even point for put
 - $\$42.00 - (\$40.00 - \$1.55) = \3.55
- Potential upside gain = unlimited

*The example would incur a commission of \$3 on the stock purchase and \$5.65 on the put purchase

Buy 100 shares ABC at \$42.00
Buy 1 60-day ABC 40 put at \$1.55



Break-even at Expiration:
 Stock Price Paid + Put Premium Paid
 $\$42.00 + \$1.55 = \$43.55$

Maximum Loss:
 Stock Price – Break-even for Put
 $\$42.00 - (\$40.00 - \$1.55) = \3.55
 $\$355.00$ Total

*The example would incur a commission of \$3 on the stock purchase and \$5.65 on the put purchase

Selling Covered Calls

- Covered call:
 - own underlying stock
 - sell calls on a share-for-share basis (short contracts)
- You own 100 XYZ shares trading at \$52.00
 - neutral to moderately bullish over next few months
 - want to generate income in a stable market
 - you have target sale price for stock
- Sell 1 90-day XYZ 55 call at \$1.75
 - total premium received = \$175.00

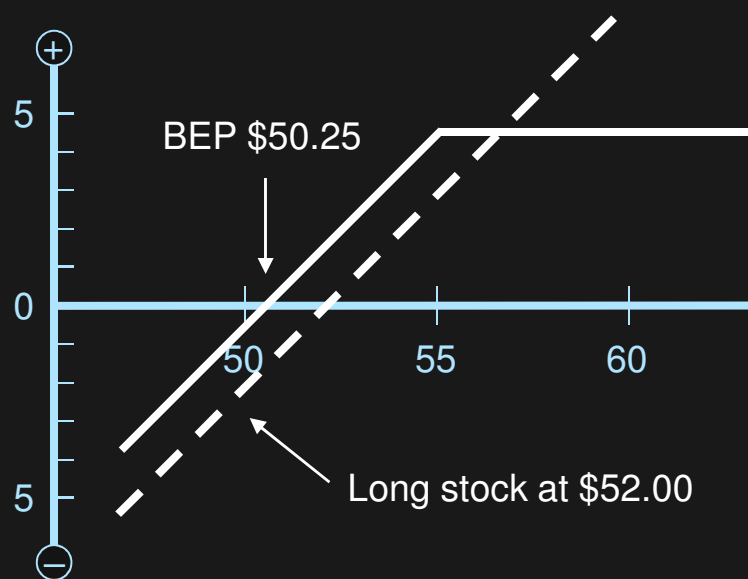
*The example would incur a commission of \$3 on the stock purchase and \$5.65 on the sale of the call

Own 100 shares XYZ at \$52.00
Sell 1 XYZ 55 call at \$1.75

Stock Price at Expiration	Long Stock Profit/(Loss) at Expiration	Short Call Profit/(Loss) at Expiration	Net Profit/(Loss)
\$60.00	\$8.00	(\$3.25)	\$4.75
\$55.00	\$3.00	\$1.75	\$4.75
\$52.00	0	\$1.75	\$1.75
\$50.00	(\$2.00)	\$1.75	(\$0.25)
\$45.00	(\$7.00)	\$1.75	(\$5.25)

*The example would incur a commission of \$3 on the stock purchase and \$5.65 on the sale of the call

Own 100 shares XYZ at \$52.00
Sell 1 XYZ 55 call at \$1.75



Break-even at Expiration:

$$\begin{aligned} &\text{Stock Price Paid} - \\ &\text{Call Premium Received} \\ &\$52.00 - \$1.75 = \$50.25 \end{aligned}$$

Maximum Profit if Assigned:

$$\begin{aligned} &\text{Effective Stock Sale Price} - \\ &\text{Stock Price Paid} \\ &(\$55.00 + \$1.75) - \$52.00 = \$4.75 \\ &\$475.00 \text{ Total} \end{aligned}$$

*The example would incur a commission of \$3 on the stock purchase and \$5.65 on the sale of the call

- Stock price rises above expectation?
 - be prepared to sell stock (obligation if assigned)
 - buy back short call to avoid assignment
- Stock price declines below expectation?
 - risk is in the stock owned
 - premium received = limited downside protection
 - after expiration sell another call (or sell shares)

- Strategy is appropriate for a neutral to moderately bullish stock outlook
- You are looking to increase income in a stable market
- Profits are limited when the stock price rises above the strike price of the call
- Losses occur in the stock price if the stock falls below the break-even point
- You are obligated to deliver shares until the option expires or you close the position

- Read disclosures
- Review trade confirmations
- Review monthly statements
- Understand your brokerage firm's rules and requirements
- Know your broker
- Let your broker know you

Thank You for Attending!

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