OIC The Options Industry Council

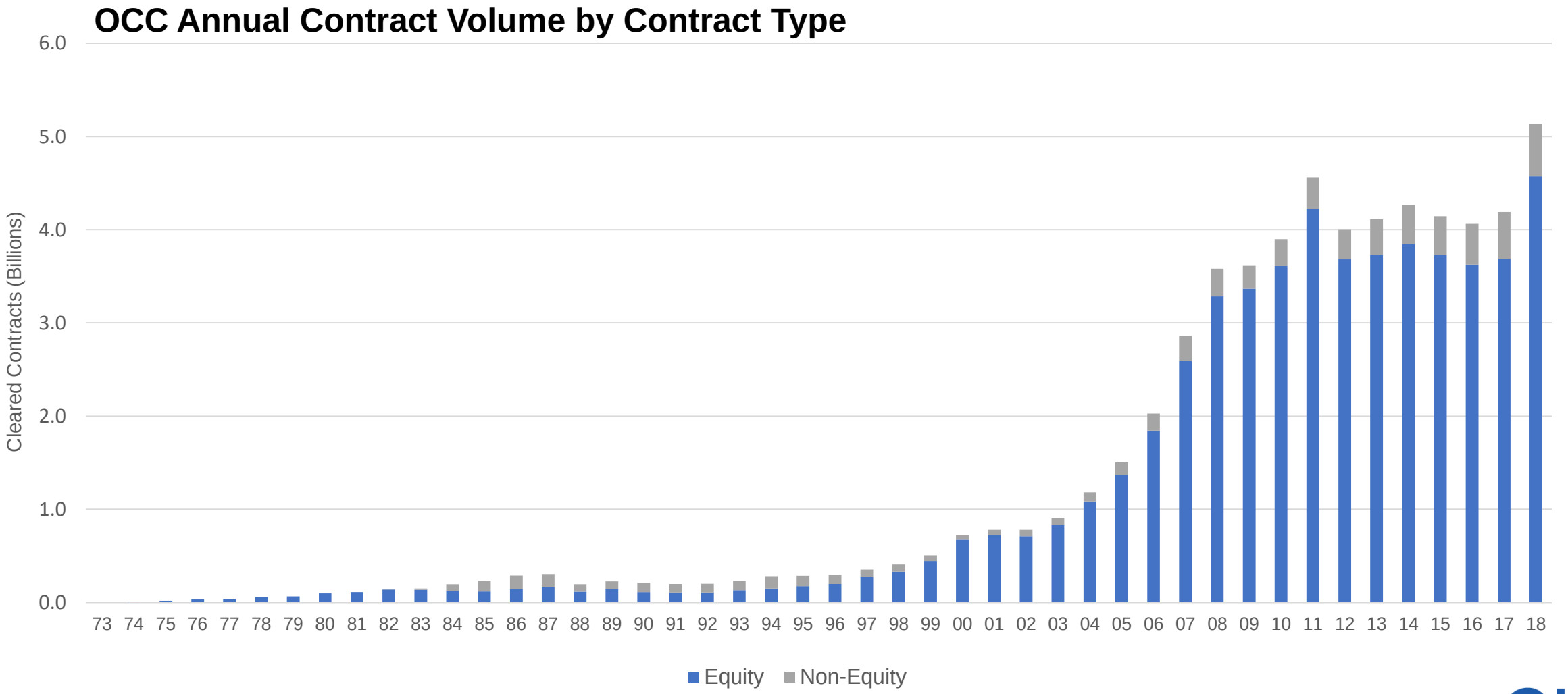
Options Basics: What you Need to Know

June 20, 2019

Joe Burgoyne
Director-Options Industry Council



Annual Options Volume 1973-2018



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U.S. Listed Options Exchanges



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Presentation Outline

- Options Defined
- Call & Puts
- Monthly's, Weekly's℠ & LEAPS®
- Exercise & Assignment
- Delta
- Q&A



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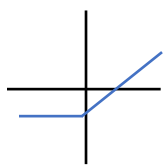
Why Options?

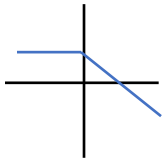
- Options give you more ways to implement your market research
- Options make it possible to target a variety of investment objectives:
  - ***Risk Reduction***
  - ***Income Generation***
  - ***Stock Acquisition***
- Options offer **FLEXIBILITY!**

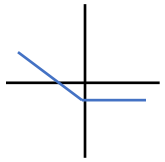


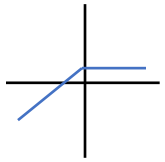
Flexibility

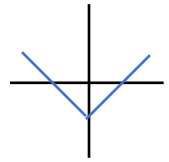
With options, these are some of the available choices.

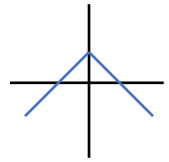

Long Call

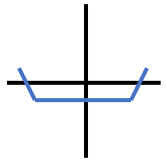

Short Call

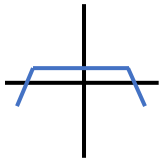

Long Put

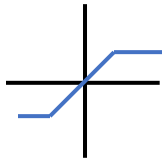

Short Put

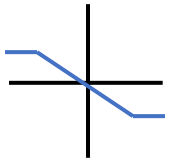

Long Straddle

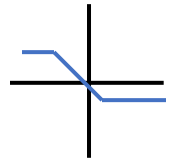

Short Straddle

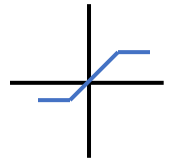

Long Strangle

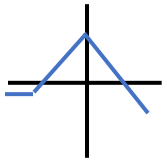

Short Strangle

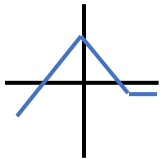

Long Call Spread

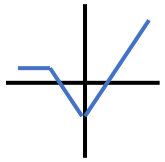

Short Call Spread

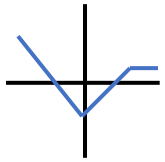

Long Put Spread

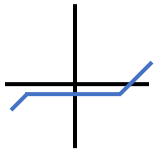

Short Put Spread

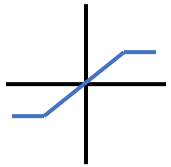

Ratio Call Spread


Ratio Put Spread


Call Volatility Spread


Put Volatility Spread

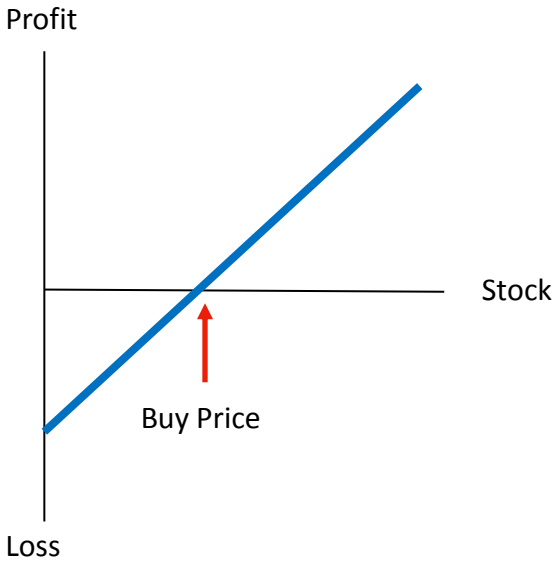

Long Split-Strike Synthetic


Collar

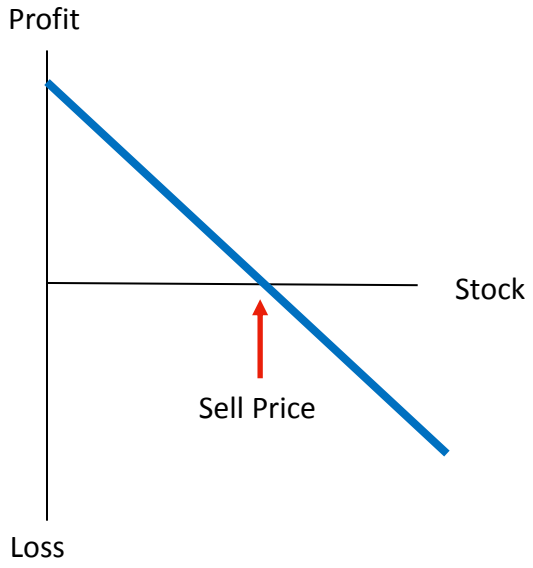
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Long Stock vs. Short Stock

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



Long Stock



Short Stock

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Defining an Option

- 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.

- **Buyers** have **rights**
- **Sellers** have **obligations**



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Calls and Puts

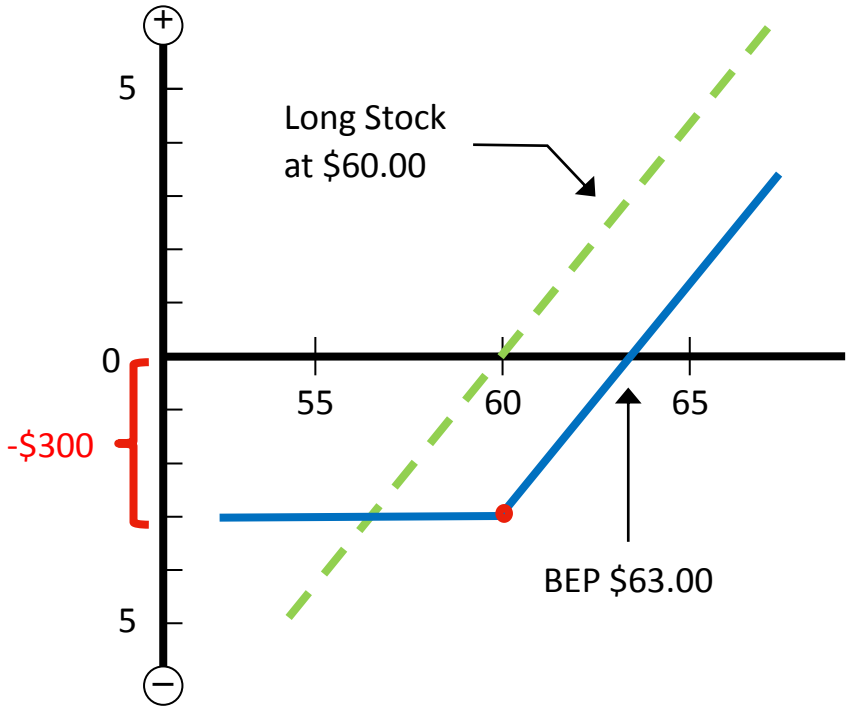


Basics of Calls

	Call Buyers	Call Sellers
Rights/Obligations	Has the **right** but not the obligation to buy shares at an agreed upon price within a specific period of time	Has the **obligation** to sell shares at the agreed upon price if assigned
Market Outlook	Typically Bullish (market increase)	Typically Bearish (market decrease)
Potential Benefits	Take advantage of rising share prices with small cash outlay and pre-defined risk. Possible to buy shares below market price	Receive premium to lower breakeven point for long stock or as income. Also possible to buy back option for profit in anticipated market declines
Potential Risks	Limited to 100% of premium paid.	UNLIMITED as you may be required to deliver shares well below market prices

Call Buying Example

Buy 60.00 strike call at $3.00



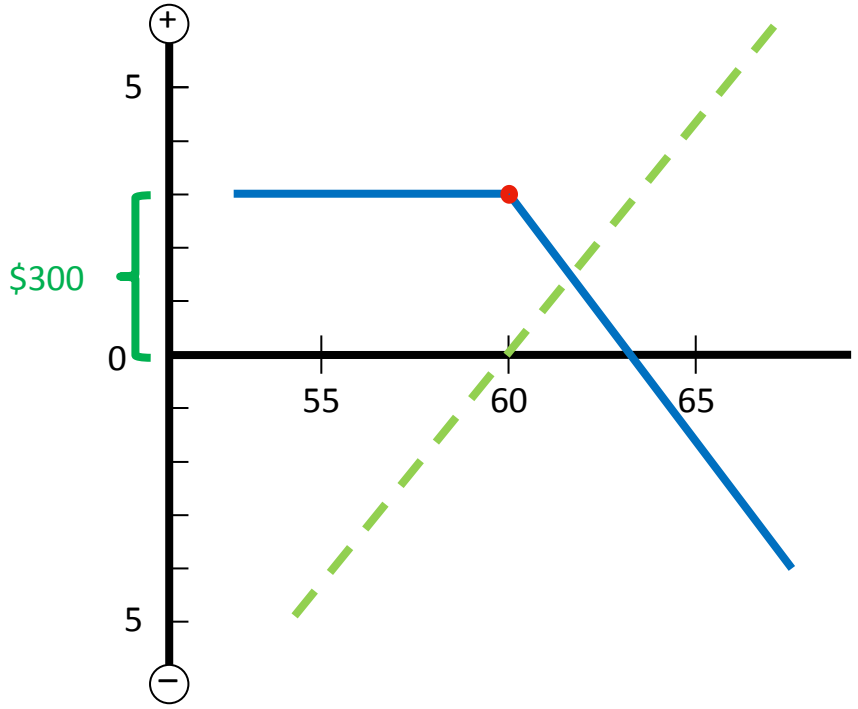
Break-even at Expiration:
Strike Price + Call Premium Paid
$60.00 + $3.00 = $63.00

Maximum Loss:
$3.00 Call Premium Paid
$300.00 Total

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Call Selling Example

Sell 60.00 strike call at $3.00



Break-even at Expiration:
Strike Price + Call Premium Rec'd
$60.00 + $3.00 = $63.00

Maximum Profit:
$3.00 Call Premium Rec'd
$300.00 Total

Maximum Loss: UNLIMITED

Risks/Rewards with Covered Call substantially different!

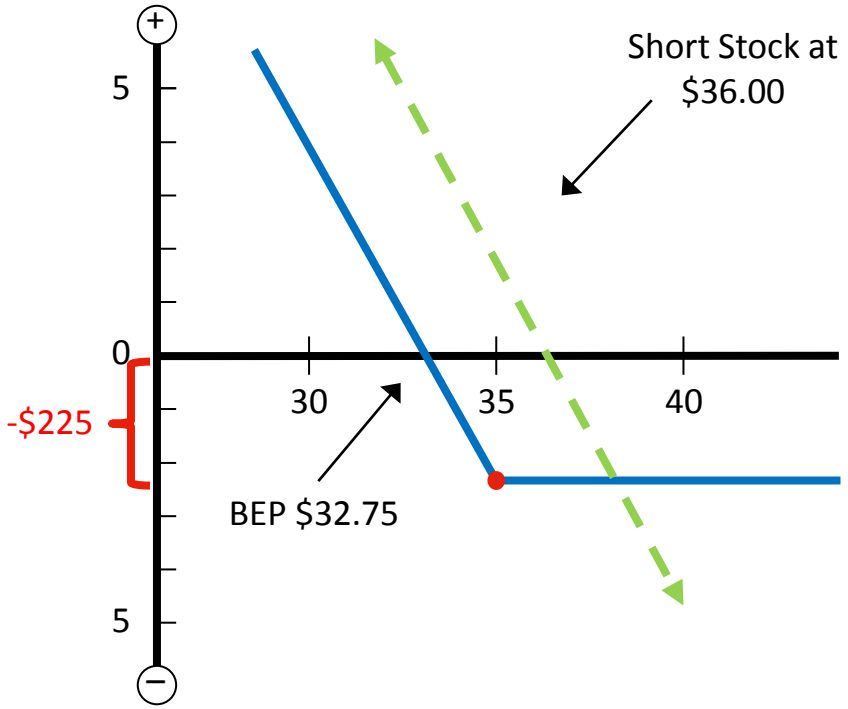
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Basics of Puts

	Put Buyers	Put Sellers
Rights/Obligations	Has the **right** but not the obligation to sell shares at an agreed upon price within a specific period of time	Has the **obligation** to buy shares at the agreed upon price if assigned
Market Outlook	Typically Bearish (market decrease)	Typically Bullish (market increase)
Potential Benefits	Take advantage of falling share prices and sell stock above market price	Receive premium as income. Also possible to buy shares below market or buy back option for profit in anticipated market increases
Potential Risks	Limited to 100% of premium paid.	SUBSTANTIAL as you may be required to buy shares well above market prices

Put Buying Example

Buy 35.00 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
$225.00 Total

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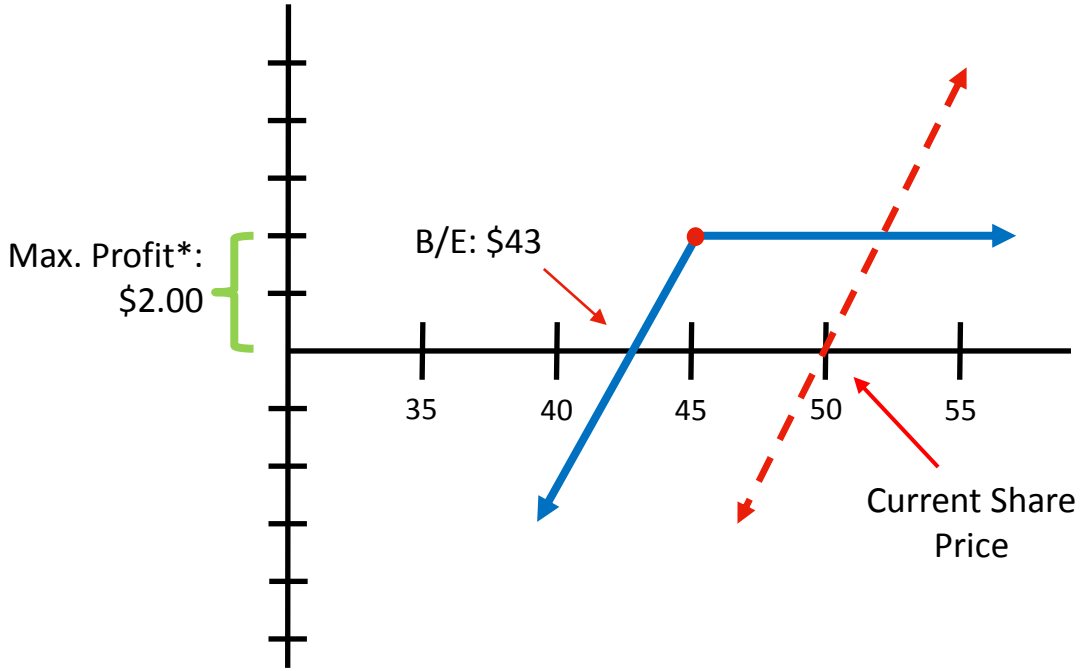
Cash Secured Put Example

Stock trading $50
Sell 1 XYZ 60-day 45 put at $2.00

Max profit = Premium received

Max loss = **Substantial**

B/E: Strike minus premium



*Max. profit does not take into account long stock position, if assigned

Excludes transaction costs

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Contract Terms



Option Contract Terms

- Have an expiration date
- Equity option contracts have standardized terms:
  - underlying stock/ETF
  - unit of trade
  - strike or exercise price
  - expiration month



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Option Components

XYZ September 20, 2019 45 call at $3.50

Underlying

- Typically 100 shares of the stock/ETF on which the right or obligation exists
- Example: XYZ September 20, 2019 45 call at $3.50
- 100 shares of **XYZ** is the underlying for this option

Expiration Date

- The day on which the option ceases to exist
- Example: XYZ **September 20, 2019** 45 call at $3.50

Option Components

XYZ September 20, 2019 45 call at $3.50

Strike or Exercise Price

- Price at which the underlying may be bought or sold
- Example: XYZ September 20, 2019 **45** call at $3.50

Premium

- The price of an option that is paid by the buyer and received by the seller
- Example: XYZ September 20, 2019 45 call at **$3.50**
    - ($3.50 per share or $350 per option plus/minus commissions)

Monthly's

- Standard option contract
- Expiration generally 3rd Friday of the month
- AM/PM settlements: Equity/ ETF are PM, Indexes are AM
- Expiry's up to 9 months
- Cycles: In general, two near-term months are listed along with two additional months in the cycle. High volume options typically list additional months beyond the minimum.

Weekly's[SM] – a Misnomer

- Introduced in 2005 to give investors more targeted trading opportunities (earnings, the Fed, etc.)
- Available on approximately 15% of listings
- Most are listed on Thursdays with a Friday expiration ***up to five or more weeks away.***
- Various expiration days (Mon/Wed/Fri – typically ETF and/or Indexes)
- Not listed if they would expire on a normal Monthly, quarterly, or EOM expiry that already exists.

LEAPS® 101

Long-term **E**quity **A**nti**c**i**P**ation **S**ecurities℠

- Available on ~1/3 of stocks
- Expiration dates up to 2 ½ years away
  - January 2020 & 2021 (2021 LEAPS® were added Sept. 2018)
- Change to 'normal options' when there is < 9 months to expiration
- All types of strategies



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Exercise and Assignment



Exercise:Buy or Sell Underlying Stock

- The option **buyer** has the **right**:
  - to buy (for a call) or sell (for a put)
  - 100 shares of underlying stock/ETF
  - 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 (or Auto-ex)
- Only option buyers may exercise an option contract

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What is Exercise?

Example: XYZ trading $79.00

Investor buys 1 XYZ March 15, 2019 80 call paying $1.50

On March 15th, XYZ now trading $84.00 & buyer exercises

- Investor pays strike price x $100 (80 x $100) or $8,000 and takes delivery of 100 shares XYZ (valued at $8,400)
- Profit is $250 ($8,400 - $8,000 - $150 premium)
- Investor now has risk/reward of being long 100 shares from $81.50

—OR—

- Option now worth $4.00 and investor sells back to market to close position (est. profit $250)

Assignment:Buy or Sell Underlying Stock

- The option **seller** has the **obligation**:
  - to sell (for a call) or buy (for a put)
  - 100 shares of underlying stock/ETF
  - 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

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What is Assignment?

Example: XYZ trading $79.00

Investor sells 1 XYZ March 15, 2019 80 call at $1.50

On March 15th, XYZ now trading $84.00 & seller is assigned

- Investor collects strike price x $100 (80 x $100) or $8,000 and delivers of 100 shares XYZ (valued at $8,400)
- Loss is $250 ($8,000 + $150 premium - $8,400)
- Investor now has risk/reward of being short 100 shares from $81.50

Exercise Style

American

- Long side can exercise **at any time** during the life of the option.
- Short side can be assigned **at any time** during the life of the option.



European

- Exercise and assignment can take place **only at expiration** —typically 3rd Friday of the month for monthly contracts.
- *Weeklys℠ expire more often



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Settlement Style

Physical

- Securities credited to and cash debited from investor's account (purchase transaction).
- Securities debited from and cash credited to investor's account (sale transaction).



Cash

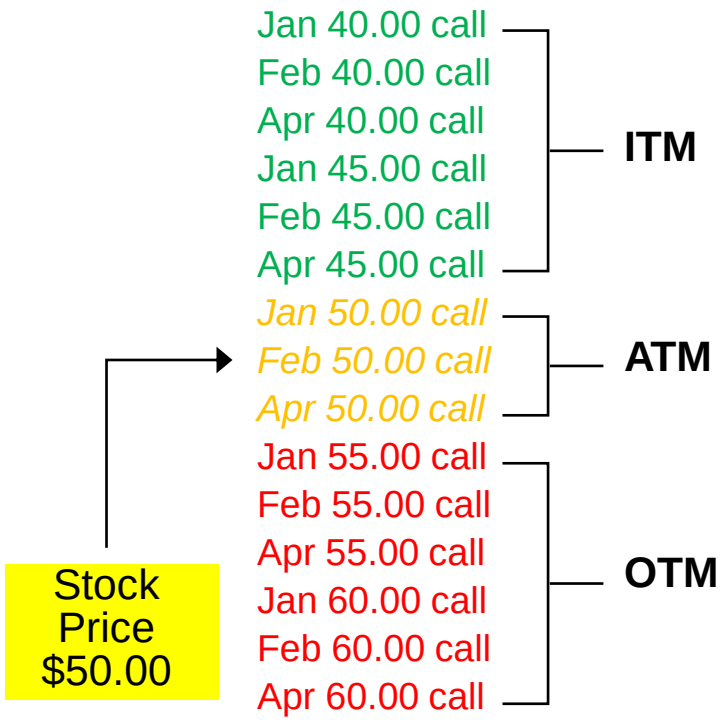
- Investor receives or pays out the cash difference between the in-the-money strike price and the settlement value of the index (intrinsic value).



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

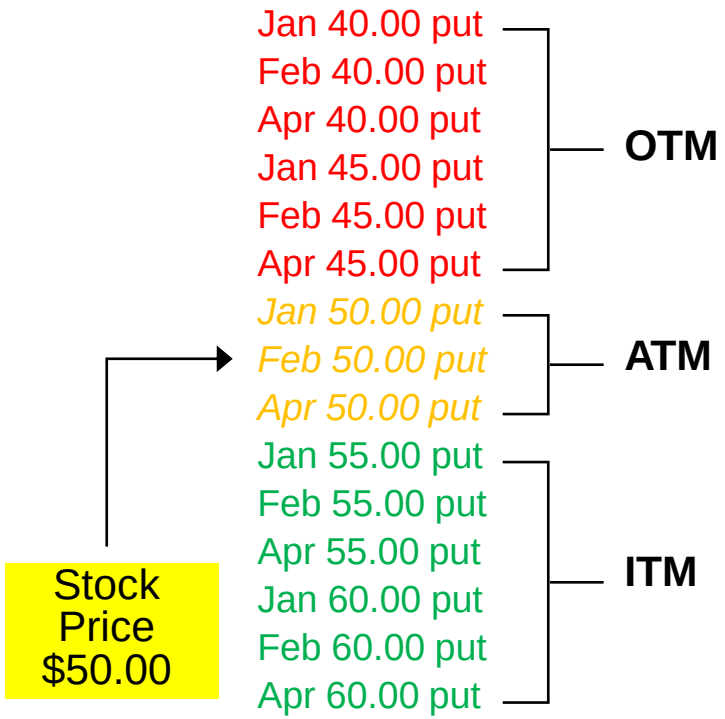
- Call is in-the-money (ITM)
  - Strike price **below** stock price
- Call is at-the-money (ATM)
  - Strike price **same** as stock price
- Call is out-of-the-money (OTM)
  - Strike price **above** stock price



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

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



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Premium Value Quiz

Stock Price	Option	Option Price	ITM/ATM/OTM	Intrinsic Value	Time Value
$27.00	25.00 Call	$3.50	In-the-money	$2.00	$1.50
$78.50	80.00 Put	$3.75	In-the-money	$1.50	$2.25
$33.00	35.00 Call	$1.25	Out of-the-money	$0.00	$1.25
$95.00	95.00 Call	$2.50	At-the-money	$0.00	$2.50

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Questions I Should be Asking

- ***How much time do I need?***
  - Time is money – 60 days? 90 days? More?
- ***How much protection do I want?***
  - Greater the protection = greater the cost
  - Strike determines exit price
- ***How much am I willing to pay?***
  - Cost of “premiums”
  - Hedge full position? Half? Less?

Bull/Bear Markets: What Kind of Risk & Profit Potential, Defined or Unlimited



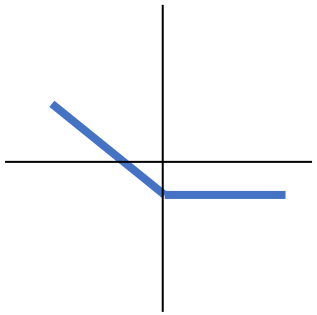
Why Buy Calls?

Investor is near-term **BULLISH** on a particular stock

- Looking to benefit from rising prices with:
  - a small cash outlay (premium)
  - a limited, pre-defined risk (100% of investment)
- Wants an alternative to buying stock with the idea of reselling option for a profit
- Leverage

Why Buy Puts?

- Investor is **BEARISH** on a particular stock or looking to **hedge** a position
- Investor is looking to benefit from falling prices with:
  - a small cash outlay
  - a limited, pre-defined risk (up to 100% of your investment)
- Investor wants an alternative to selling stock short
- Has the right to sell underlying stock
- For this right the put buyer pays premium

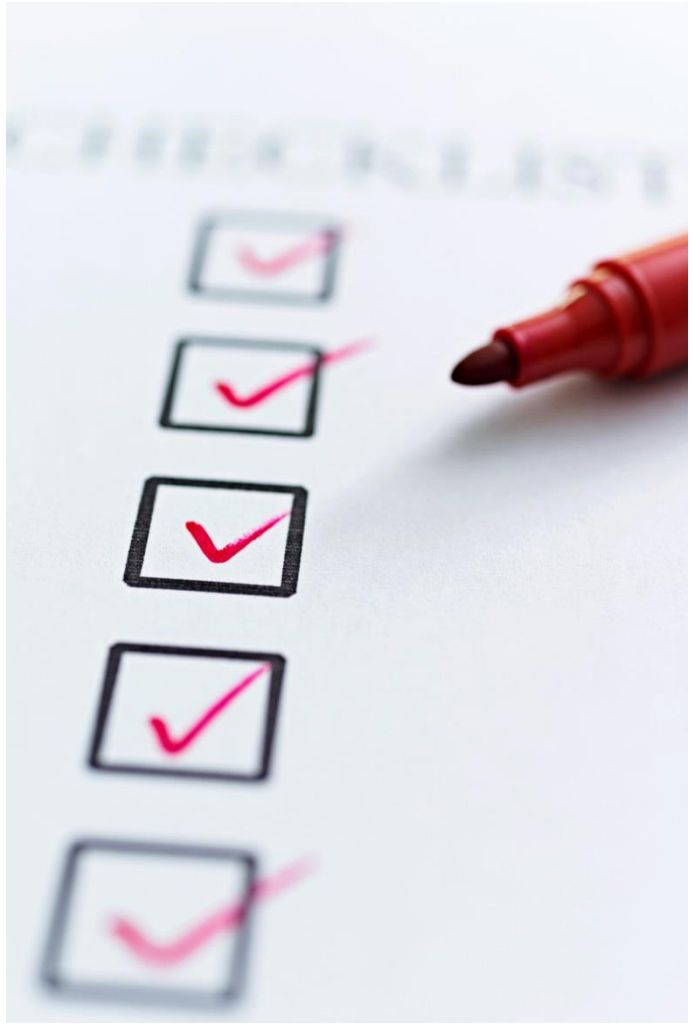


Long Put

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Things to Remember

- Options have specific terms
  - Unit of trade
  - Strike price
- Options don’t last forever—expiration dates
- Buyers purchase rights
- Sellers take on obligations—know what they are



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About OIC

- **FREE** unbiased and professional options education
- OptionsEducation.org
- Online courses, podcasts, videos, & webinars
- Investor Services desk at *options@theocc.com*

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OCC THE FOUNDATION FOR SECURE MARKETS

For More Information

www.OptionsEducation.org

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Options involve risks and are not suitable for everyone. Individuals should not enter into options transactions until they have read and understood the risk disclosure document, *Characteristics and Risks of Standardized Options*, available by visiting OptionsEducation.org. To obtain a copy, contact your broker or The Options Industry Council at 125 S. Franklin St., Suite 1200, Chicago, IL 60606

In order to simplify the computations used in the examples in these materials, **commissions, fees, margin, interest and taxes have not been included.** These costs will impact the outcome of any stock and options transactions and must be considered prior to entering into any transactions. Investors should consult their tax advisor about any potential tax consequences.

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