

The background of the slide is a high-angle, panoramic view of the Chicago skyline at sunset. The sky is a mix of orange, pink, and light blue, with the sun low on the horizon. The city's skyscrapers are illuminated with warm lights, and the Lake Michigan is visible in the distance. A large, white, triangular graphic element is overlaid on the left side of the image, pointing towards the center.

# Index Options vs. ETF Options

Fidelity Webinar Series

Jermal Chandler, Instructor

Cboe Global Markets

Options Institute

September 12, 2019

**Options involve risks and are not suitable for all investors.** Prior to buying or selling an option, an investor must receive a copy of Characteristics and Risks of Standardized Options. Copies are available from your broker or from The Options Clearing Corporation at [www.theocc.com](http://www.theocc.com). Futures trading is not suitable for all investors and involves risk of loss. **The information in this presentation is provided solely for general education and information purposes.** No statement within this presentation should be construed as a recommendation to buy or sell a security or future or to provide investment advice. **Any strategies discussed, including examples using actual securities or futures price data, are strictly for illustrative and educational purposes only.** In order to simplify the computations, commissions, fees, margin interest and taxes have not been included in the examples used in this presentation. These costs will impact the outcome of all transactions and must be considered prior to entering into any transactions. Multiple leg strategies involve multiple commission charges. Investors should consult with their tax advisors to determine how the profit and loss on any particular option strategy will be taxed. Past performance does not guarantee future results. Supporting documentation for any claims, comparisons, statistics or other technical data in this presentation is available from Cboe upon request. Cboe Exchange, Cboe Volatility Index, CFE and VIX are registered trademarks and Cboe Futures Exchange, Cboe Short-Term Volatility Index, Cboe 3-Month Volatility Index, Cboe Mid-Term Volatility Index, Execute Success, SPX, The Options Institute VXST, VXV and VXMT are service marks of Cboe Global Markets, Incorporated (Cboe). S&P 500® is a registered trademark of Standard & Poor's Financial Services, LLC and has been licensed for use by Cboe and Cboe Futures Exchange, LLC (CFE). Cboe's and CFE's financial products based on S&P indices are not sponsored, endorsed, sold or promoted by S&P and S&P makes no representation regarding the advisability of investing in such products. This presentation should not be construed as an endorsement or an indication by Cboe of the value of any non-Cboe product or service described in this presentation.

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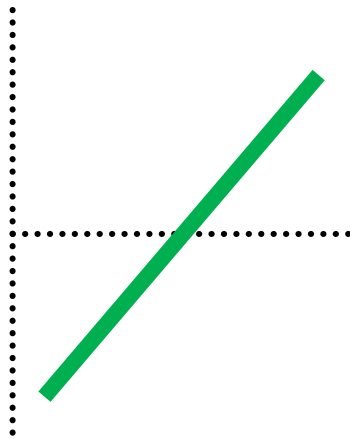
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# Today's Webinar Topics

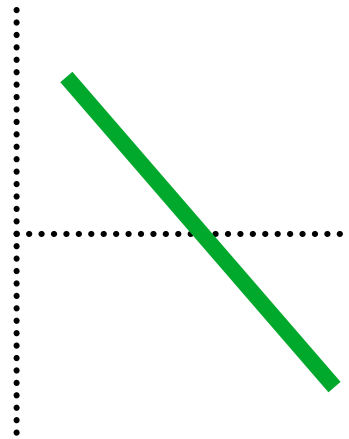
- ❖ Why Options?
- ❖ Index Options v. ETF Options
- ❖ European Exercise v. American Exercise
- ❖ Cash Settle v. Delivery of Shares
- ❖ AM Settlement v. PM Settlement
- ❖ Tax Consequences
- ❖ Mini S&P 500 Index (XSP<sup>SM</sup>) versus SPDR S&P 500 ETF (SPY)



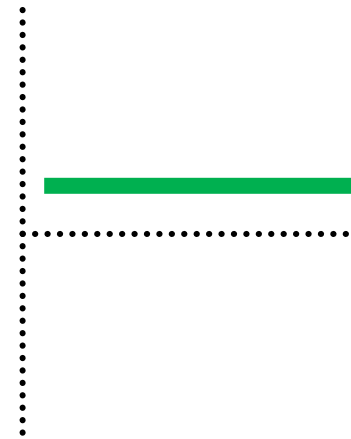
Without options, there are three choices.



Long Stock

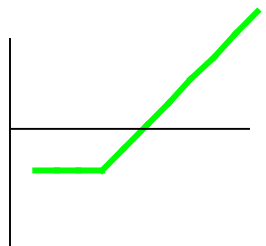


Short Stock

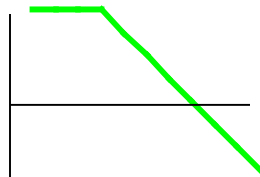


Out of the Market

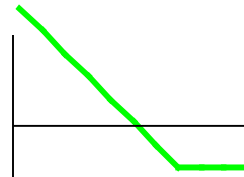
# Why Options?



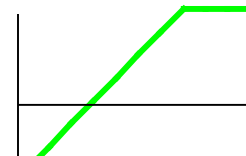
Long Call



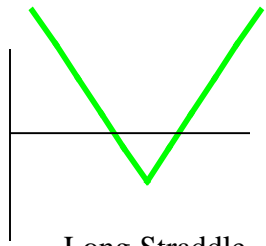
Short Call



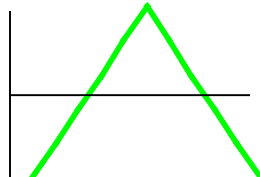
Long Put



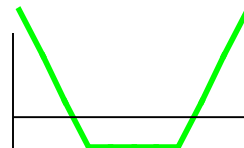
Short Put



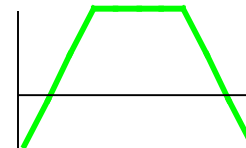
Long Straddle



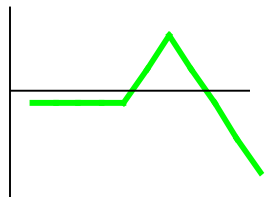
Short Straddle



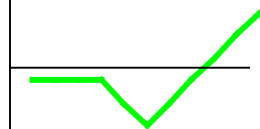
Long Strangle



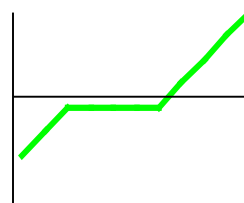
Short Strangle



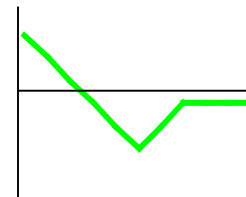
Short Ratio Call Spread



Long Call Ratio Spread



Split-strike Synthetic



Long Put Ratio Spread



## Index Options

- ❖ An Index is a measure or calculation of a group of securities
  - Ex: DJIA, Nasdaq and S&P 500 are indexes
- ❖ Listing of options on various market indexes was created to allow for trading broad segments of the market in a single transaction
  - Speculation on price direction of underlying index
  - Hedging of a portfolio that might closely correlate to a particular index
- ❖ One contract equals \$100 (the index multiplier) times the index level
- ❖ Index options settle to cash based on value of an index at expiration
  - Dollar difference b/t index settlement value and strike price (100x)
- ❖ Most index options are European-style exercise (OEX is American)
- ❖ Cboe Global Markets offers listed options on 50 domestic, foreign, sector and volatility-based indexes

❖ **Note: No trading happens in the index itself**

## ETF Options

- ❖ An Exchange-Traded Fund (ETF) is a collection of securities that tracks an underlying index
  - Ex: DIA, QQQ and SPY are ETFs
- ❖ ETF share prices fluctuate all day as the ETF is bought and sold; unlike mutual funds that only trade at market close
- ❖ Since ETFs hold multiple underlying securities rather than only one stock, they can be a popular choice for diversification
- ❖ ETFs can contain many types of investments such as – stocks, bonds, commodities, or a mixture of investment types
  - SPY – seeks to provide results the correspond to performance of S&P 500
  - GLD – seeks to represent the performance of the price of gold bullion
  - XLF – seeks to represent the financial sector of the S&P 500
- ❖ **Note: ETFs are different from Exchange Traded Notes (ETNs)**



## European Style Exercise

- ❖ **May only be exercised at expiration**
- ❖ **CASH SETTLE** - No shares exchange hand
- ❖ Last day to trade Thursday before 3<sup>rd</sup> Friday
  - Non-standard (weekly) options trade until 3pm Central, 4pm Eastern(e.g. SPXW)
- ❖ Settlement value determined Friday morning
- ❖ Most index options are European



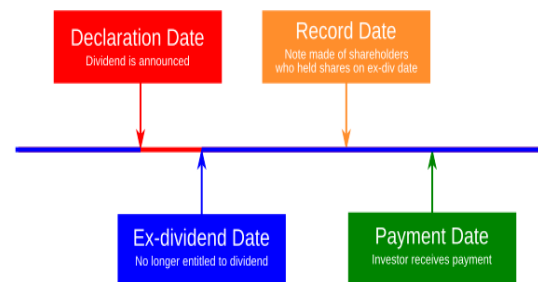
Do not confuse buying and selling an option with exercising an option!

## American Style Exercise

- ❖ All optionable equity stocks and ETFs
- ❖ Holder has right to exercise at any time prior to expiration
  - Any option ITM by \$0.01 is subject to auto-exercise
- ❖ Long option holder has right exercise option to buy/sell underlying
- ❖ Short option holder has obligation to option owner
- ❖ American call options are often exercised before an ex-dividend date allowing investors to own shares and capture dividend payment



## What is the Ex-Dividend Date?



Do not confuse buying and selling an option with exercising an option!

# Cash Settle v. Delivery of Shares

## Cash Settle

- ❖ No physical delivery of underlying asset or security required
- ❖ Account is credited or debited the ITM value of the options
- ❖ Amount of payment is difference between underlying settlement value on expiration and strike price of the option
- ❖ No disruption of portfolio structure upon assignment
- ❖ Reduce or eliminate costs associated with transportation, insurance and financing (commodities)
- ❖ Cash-settled options typically use the European-style exercise

## Delivery of Shares

- ❖ Shares of underlying are delivered on the expiration date of ITM option contract
- ❖ Shares are transferred from seller to buyer
  - Call option holder exercises option to buy shares
  - Call seller must sell stock to buyer at strike price
  - Put option holder exercises option to sell shares
  - Put seller must buy stock from seller at strike price
- ❖ Options that deliver shares often use the American-style exercise

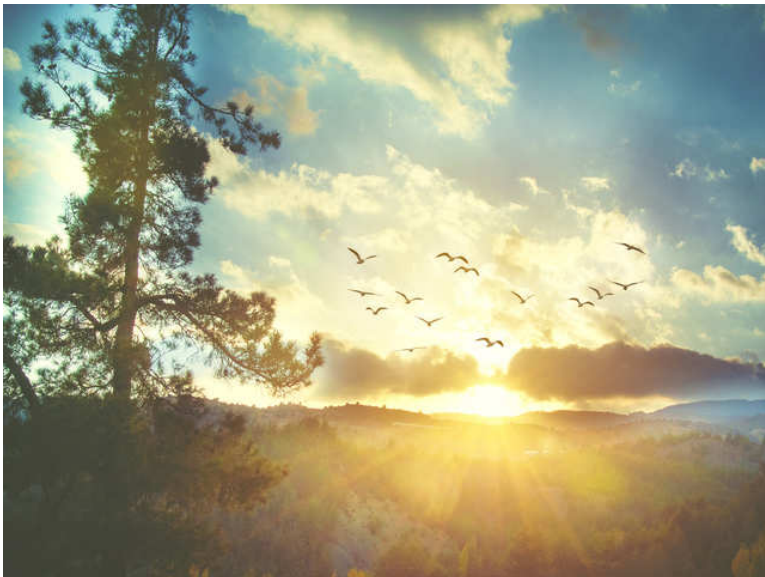
# AM Settlement v. PM Settlement

## AM Settlement

- ❖ Options that expire on the morning after the last trading day
- ❖ Last trading day is typically Thursday
- ❖ Settlement is calculated from Friday OPENING prices
- ❖ Examples: SPX, DJX, and RUT

## PM Settlement

- ❖ Options that expire at the close of the market on the last trading day
- ❖ Last day of trading is typically Friday
- ❖ Settlement is calculated from Friday CLOSING prices
- ❖ Examples: Equity stocks and ETFs, SPXW, OEX



# Tax Consequences

## Index Options

- ❖ Likely receive Section 1256 Tax treatment
- ❖ Profits and losses: *60% long term and 40% short term*
- ❖ Regardless of holding period
- ❖ Applies whether investor is long or short the option
- ❖ Positions marked-to-market at EOY and taxed as if closed

## ETF Options

- ❖ Treated similar to equities and equity options for tax purposes
- ❖ ETF options generally taxed as long-term or short-term trades
- ❖ Long-term have been held for over a year
- ❖ Short-term have been held for LESS than a year

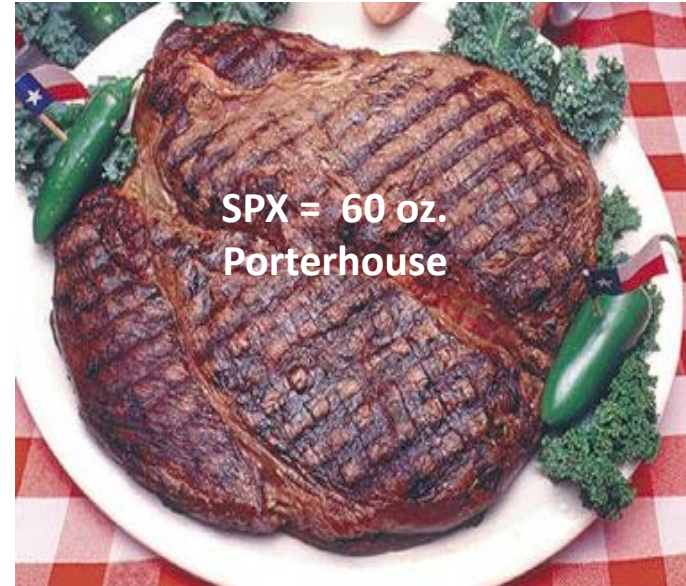


**Investors should consult with their tax advisors to determine how the profit and loss on any particular option strategy will be taxed. Tax laws and regulations change from time to time and may be subject to varying interpretations.**



## Mini S&P 500 Index Options (XSP)

- ❖ XSP is an Index option product similar to SPX and therefore designed to track underlying S&P 500 index
- ❖ XSP options are 1/10<sup>th</sup> the size of SPX options
  - If SPX is 3000; contract value is \$300,000
  - If XSP is 300; contract value is \$30,000
- ❖ Smaller size allows for flexibility for traders that are new to index options
- ❖ European style exercise and cash settlement are arguably advantages



## SPDR S&P 500 ETF Trust (SPY)

- ❖ Launched in January 1993 and was first exchange traded fund listed in the U.S.
- ❖ SPY is designed to track (before expenses) the performance of S&P 500 Index
- ❖ Value of one share is worth 1/10 of S&P 500 cash index
- ❖ ADV of 71.2 million shares; ADV of 1.8 million options; Ratio of 1.0:1.6 call for every put
- ❖ SPY pays a quarterly dividend which may affect ITM call options that need to be exercised to collect it





	<b>Mini SPX Index (XSP)</b>	<b>SPDR ETF (SPY)</b>
<b>Notional Value (SPX @ 3000)</b>	\$30,000	\$30,000
<b>Settlement AM or PM</b>	PM-Settled	PM-Settled
<b>Expirations</b>	Mon., Wed., Fri., EOM, EOQ	Mon., Wed., Fri., EOM, EOQ
<b>Settlement Type</b>	Cash	Physical Shares of ETF
<b>Exercise Style</b>	European	American
<b>GTH Available?</b>	Early trade 7:30-8:15	No

## Advantages of XSP

- ❖ 1/10<sup>th</sup> size of SPX
- ❖ Cash Settle
- ❖ No Early Assignment
- ❖ Possible 1256 Tax Treatment
- ❖ Can be hedged with SPY

## Advantages of SPY

- ❖ 1/10<sup>th</sup> size of SPX
- ❖ Very liquid with narrow bid-ask spreads
- ❖ Settles in cash for those who want shares
- ❖ Pays a dividend
- ❖ Much more retail flow (PMs)

- ❖ Why Options? – ***Options provide flexibility***
- ❖ Index Options v. ETF Options – ***DJX/SPX v. DIA/SPY – Know the differences***
- ❖ European Exercise v. American Exercise – ***Expiration Exercise/Early Exercise***
- ❖ Cash Settle v. Delivery of Shares – ***Cash position v. Stock position***
- ❖ AM Settlement v. PM Settlement – ***Opening prices versus Closing prices***
- ❖ Tax Consequences – ***Consult a tax advisor***
- ❖ Mini S&P 500 Index (XSP<sup>SM</sup>) versus SPDR S&P 500 ETF (SPY)



# Expert Options Analysis



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**THE TRADE DESK INC (TTD) - The Trade Desk**  
 POSTED 3:41:05PM ET 03/11/2019

**Overview**  
 The Trade Desk (TTD) is a global technology company based in Ventura, California. The company offers brands and media buyers a self-service software platform to manage data-driven advertising campaigns. Buyers can create highly personalized ad experiences across multiple channels including display, native, video, audio and social, and on a several devices, such as, computers, mobile and television.

CEO Jeff Green co-founded the company in 2009 with Jeff Pickles. Their mission was to become "the Goldman Sachs" of online advertising with a platform that offers a marketplace that allows buyers to place specific ads in front of precisely targeted audiences. TTD has posted a profit every quarter since going public in 2016. Revenue was up 52% to \$308 million in 2017.



The stock is up an impressive 235% over the past 52 weeks and the momentum is largely fueled by an increase in connected TV ad spending as well as increases in audio and mobile video ad spending as well. In mid-2018, TTD launched a total overhaul of its digital ad-buying platform. Collectively, referred to as Next Wave, the release included three transformative products: Koa, The Trade Desk Planner and Megagon. These products allow for a more data-driven approach to advertising that benefits advertisers, publishers and consumers.

**RESEARCH IN THIS DAY'S POSTS**  
**TTD - THE TRADE DESK INC**  
**\$207.80** ↑3.42 (1.67%)

AS OF 4:00:00PM ET 03/12/2019

**Bid** 207.85 X 1  
**Ask** 208.65 X 5  
**Vol** 1,265,276  
**IV30** 44.78 -0.35  
**HV30** 89.94 +0.66

[Stock Research](#) | [Quotes & Tools](#)

**RELATED NEWS**

**Analyst Actions: The Trade Desk's Price Target Raised to \$210 at Oppenheimer; Outperform Rating Reiterated**  
 MTF Newswires - 03/08/2019 11:10:00AM

**Trade Desk CEO Talks Growth, Asia, and Advertising in a New Age -- Barrons.com**  
 Dow Jones & Company, Inc. - 03/08/2019 4:23:00PM

**Rubicon Project Implements Standardized Common ID With The Trade Desk**  
 Business Wire - 03/05/2019 9:00:00AM

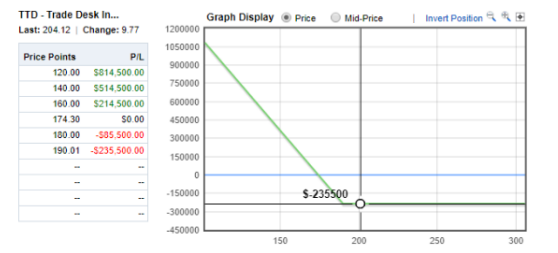
**Ford Equity Research downgrades THE TRADE DESK INC from 2 to 3.**  
 Investors Analyst Actions - private - 03/01/2019 2:10:00PM

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**Today's Biggest Trades**

Time	Option	QTY	Price	Exchange	Condition	Market	IV	Underlying
11:10	May17 190 P	150	15.70	AMEX	Spread	15.20 x 15.90	63	200.93
12:49	Mar15 212.5 C	119	1.84	CBOE	Spread	1.65 x 2.00	50	205.58
12:49	Mar15 215 C	119	1.31	CBOE	Spread	1.15 x 1.50	51	205.58
12:14	Mar15 192.5 P	100	0.90	PEARL	Regular	0.90 x 1.00	52	204.10
10:51	Mar15 192.5 P	100	1.50	BZX	Regular	1.25 x 1.70	52	201.13
10:26	Mar22 220(W) C	100	1.10	CBOE	PriceVariation	0.95 x 1.10	47	199.66
11:47	Mar15 200 C	80	5.10	BZX	Regular	5.10 x 5.40	51	201.33
09:38	Mar15 197.5 C	76	4.60	BZX	Regular	4.60 x 4.90	59	197.21
13:58	Mar29 200(W) C	68	10.65	NASD	AutoExecution	10.60 x 11.00	47	203.82

One of today's largest trades appears to be a buyer of 150 May17 190 puts for 15.70. It is notable that they chose May options since TTD earnings have fallen around the second week of May over the last two years, so this option appears to capture a May earnings move. Just as a reference, the last four price moves in TTD stock on earnings have been 43%, 37%, 0.3% and 31.4% - all of them being in the positive direction. It is possible that this trader is looking to protect some gains in the event the stock trades down on a quarterly report. If held until expiration, the trade would need to be below the breakeven of \$174.30 before it begins to make a profit.



If held until expiration, should TTD stock trade \$190 or above, then the trader will lose all premium paid for these puts, or \$235,500 (150 x 100 x \$15.70).

As always, this is an analysis and not a recommendation.  
 Categories: Education, Miscellaneous, Order Flow  
 Posted By: Jermal Chandler

**CATEGORIES**

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- Depressed Volatility
- Time Spreads
- Order Flow
- Earnings Opportunities
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## Using the Greeks to understand options trading

Take your options knowledge a step further using Greek values that can help inform your options strategy.

October 31, 2019  
Noon – 1:00 p.m. ET

[Register Now](#)

Intermediate | Options Strategies | Options

Attempting to predict what will happen to the price(s) of a single option or an option portfolio as the market changes is not easy. For this purpose, option traders typically use the Greeks to measure the sensitivity of an option's price to quantifiable factors. Terms like delta, gamma, vega, theta and rho help the option trader navigate the derivative trading landscape daily. These terms can seem confusing and intimidating to new options traders at first glance. This webinar aims to simplify the Greeks and help provide a better understanding of the risk and potential reward of an option position.

### Presenters



**Jermal Chandler**  
*Options Instructor*  
CBOE Options Institute



**John Deyeso**  
*Regional Brokerage Consultant*  
Fidelity Investments