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COUNCIL

TRADING VERTICAL SPREADS

Today's Topics

- Quick review of vertical spreads
- Entering spread orders

Presentation Outline

- Vertical Spread Basics
 - Bull & Bear Spreads Defined
 - Mechanics at Expiration
- Important Concepts of Option Prices
- Price Behavior of Vertical Spreads
- Entering Spread Orders

Vertical Spreads

Buy one option and sell another option

Same underlying

Same expiration dates

Different strike prices

Bull Call Spread

Buy a lower strike and sell a higher strike

Buy 1 100 Call 6.00

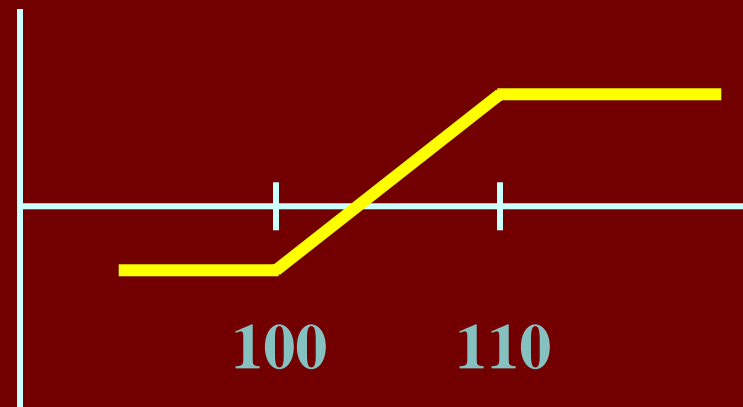
Sell 1 110 Call 2.50

Net Cost (3.50)

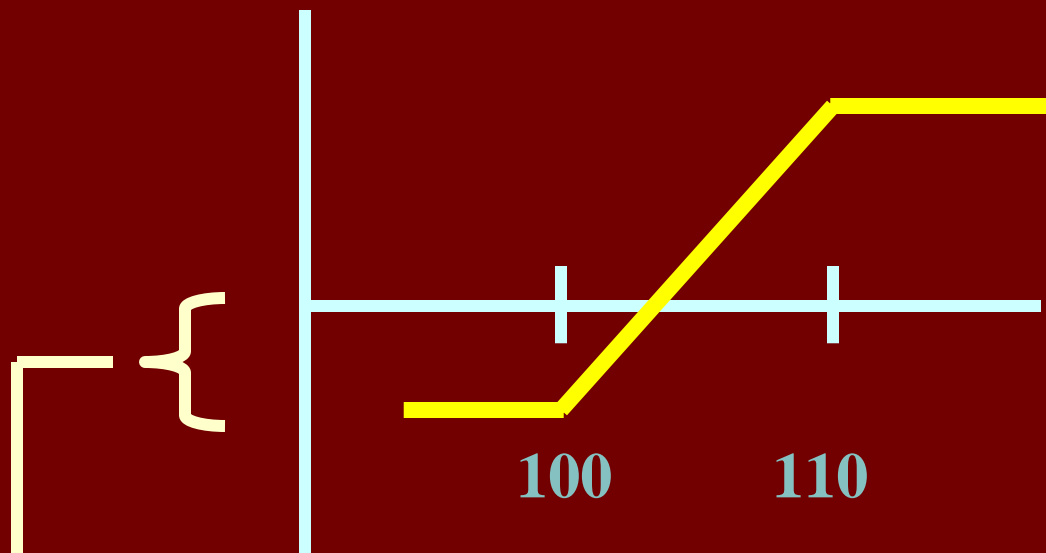
Also known as a “Debit Call Spread”

Bull Call Spread – At Expiration

Buy 1	100 Call	6.00
Sell 1	110 Call	<u>2.50</u>
	Net Cost	(3.50)

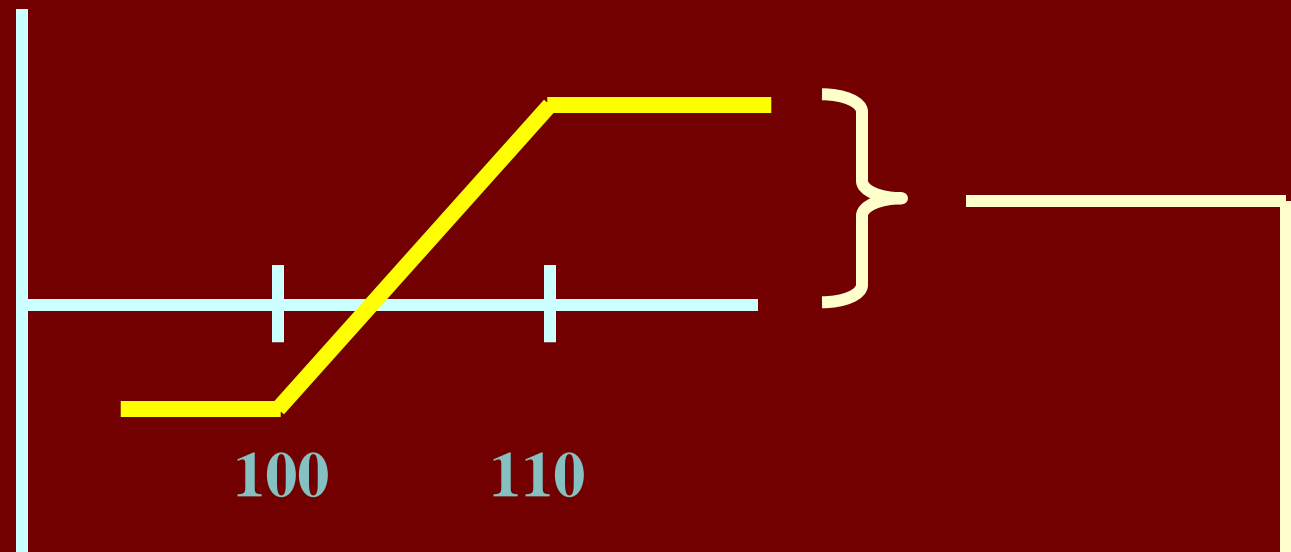


Bull Call Spread – At Expiration



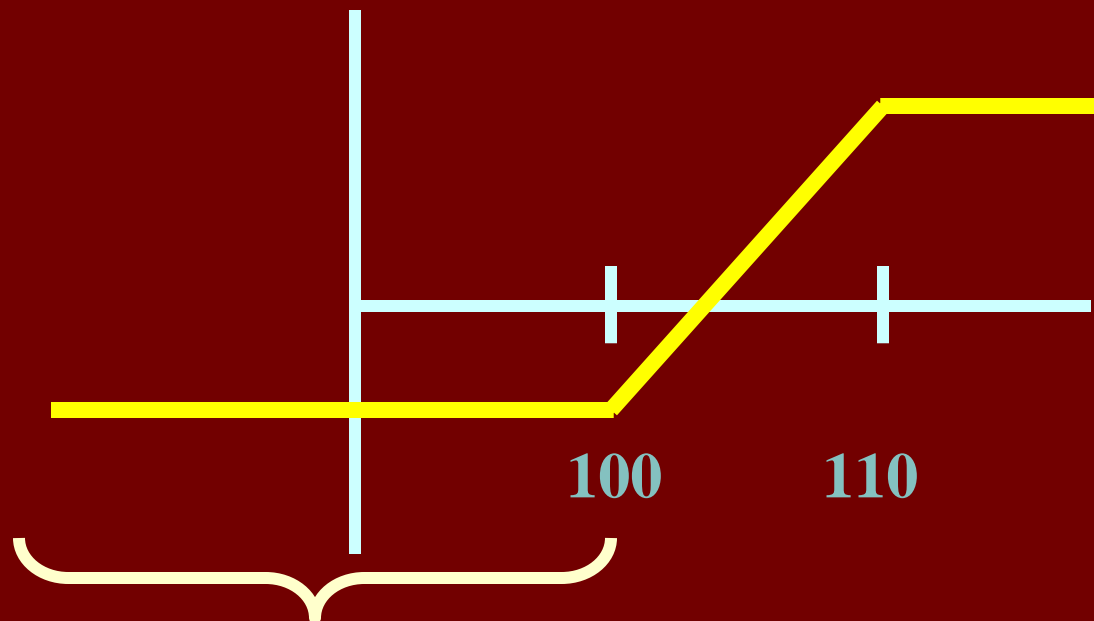
Maximum loss = net cost
(3.50 in this example)

Bull Call Spread – At Expiration



Maximum profit = Spread – Net Cost
(= 10.00 - 3.50 = 6.50 in this example)

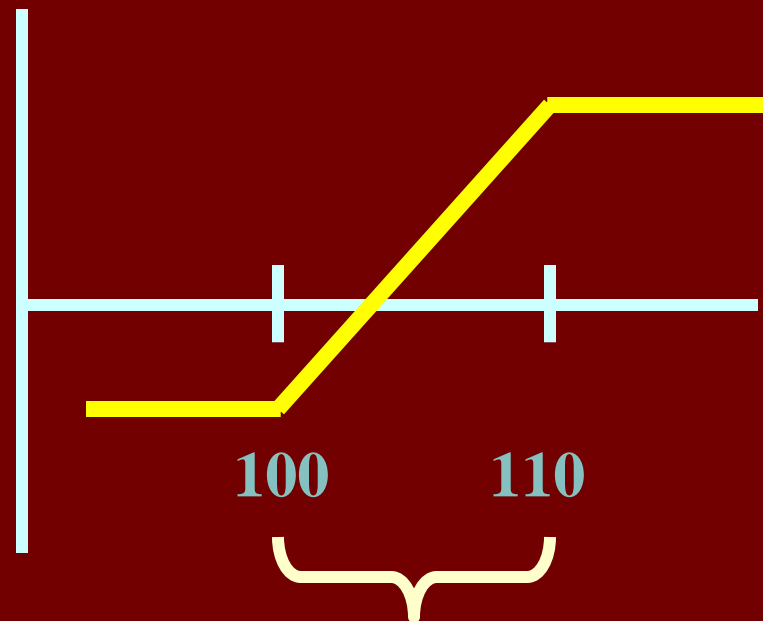
Bull Call Spread – At Expiration



Stock price below lower strike at expiration:

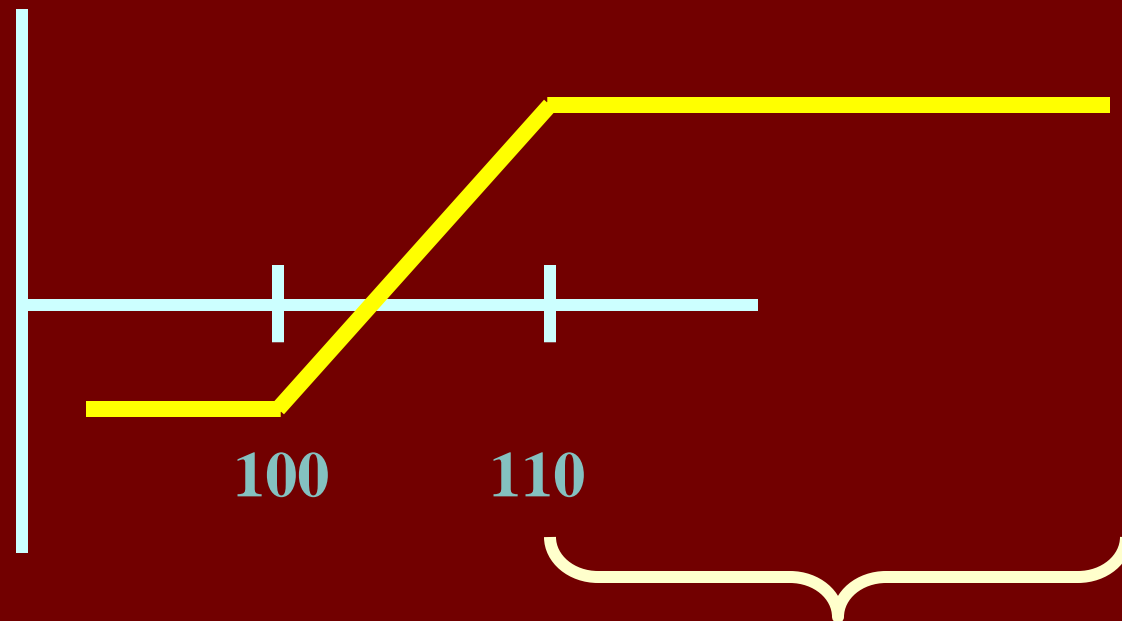
Both calls expire; result = no position, max loss

Bull Call Spread – At Expiration



Stock price between strikes at expiration:
Long call is exercised; short call expires;
result = long stock (at strike + net cost)

Bull Call Spread – At Expiration

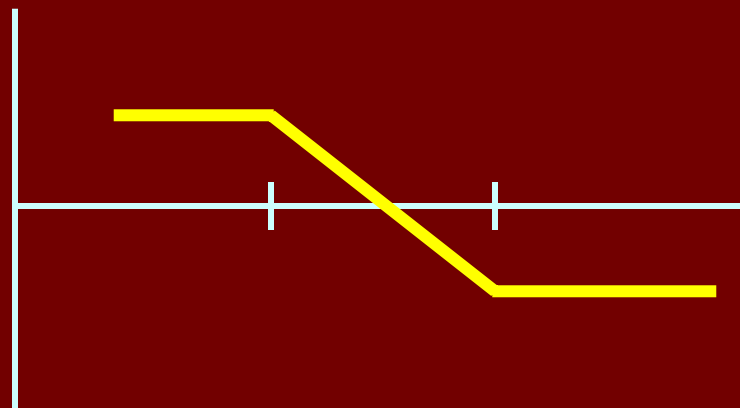


Stock price above higher strike at expiration:
Long call exercised; short call assigned;
result = buy stock, sell stock, no position

Bear Call Spread

Sell a lower strike and buy a higher strike

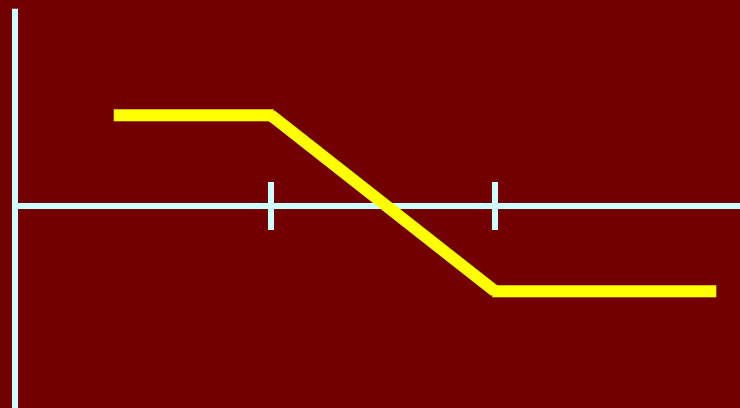
Sell 1	100	Call	6.00
Buy 1	110	Call	<u>2.50</u>
		Net Credit	3.50



Bear Put Spread

Buy a higher strike and sell a lower strike

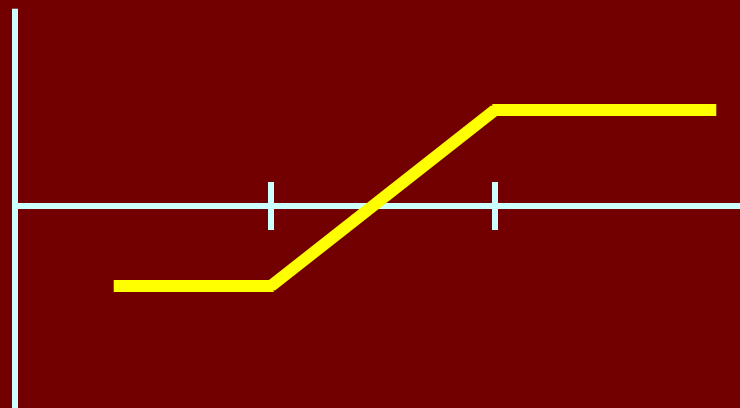
Buy 1	100 Put	5.00
Sell 1	90 Put	<u>2.00</u>
	Net Cost	(3.00)



Bull Put Spread

Sell a higher strike and buy a lower strike

Sell 1	100 Put	5.00
Buy 1	90 Put	<u>2.00</u>
	Net Credit	3.00





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Option Prices - Important Concepts

Option Pricing Concepts

Quiz

Days to Expiration 44 → 28

XYZ Stock 99 → 102

XYZ 100 Call 1.50 → ??

Estimate the new price of the 100 Call

Option Pricing Concepts

Quiz

Starting Assumptions

Days to Expiration

44

→

28

XYZ Stock

99

→

102

XYZ 100 Call

1.50

→

??

Estimate the new price of the 100 Call

Option Pricing Concepts

Quiz

Stock price rises 3

Days to Expiration

44 → 28

XYZ Stock

99 → 102

XYZ 100 Call

1.50 → ??

Estimate the new price of the 100 Call

Option Pricing Concepts

Quiz

16 days pass

Days to Expiration

44 → 28

XYZ Stock

99 → 102

XYZ 100 Call

1.50 → ??

Estimate the new price of the 100 Call

Option Pricing Concepts

Quiz

Days to Expiration 44 → 28

XYZ Stock 99 → 102

XYZ 100 Call 1.50 → ??

Estimate the new price of the 100 Call

Option Pricing Concepts

Quiz - Answer

Days to Expiration	44	→	28
XYZ Stock	99	→	102
XYZ 100 Call	1.50	→	2.80

Option Pricing Concepts

Days to Expiration	44	→	28
XYZ Stock	99	→	102
XYZ 100 Call	1.50	→	2.80

Concepts: Delta & Time Decay

Option Pricing Concepts

Days to Expiration	44	→	28
XYZ Stock	99	→	102
XYZ 100 Call	1.50	→	2.80

**Delta: option prices change
less than stock prices**

Option Pricing Concepts

Days to Expiration	44	→	28
XYZ Stock	99	→	102
XYZ 100 Call	1.50	→	2.80

**Time Decay: option prices decrease
as time passes**

Option Pricing Concepts

Conclusions:

Option traders must know the delta of their options and have a specific time forecast.



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Price Behavior of Spreads

Price Behavior of Spreads

XYZ @ 88.90 28 Days to Expiration

Buy 1 28-day 90 Call 3.50

Sell 1 28-day 95 Call 1.80

Net Debit (1.70)

**What is the estimated profit in 21 days
(7 days to expiration) with XYZ at 94?**

Price Behavior of Spreads

	<u>Price</u>	<u>Delta</u>
XYZ Stock	88.90	
28-day 90 Call	3.50	+0.48
28-day 95 Call	<u>1.80</u>	<u>-0.30</u>
Net	1.70	+0.18

Price Behavior of Spreads

	<u>28 days</u>		<u>7 days</u>	
XYZ Stock	88.90		94.00	
90 Call	3.50	→	4.60	+30%
95 Call	<u>1.80</u>	→	<u>1.60</u>	-12%
Spread Value	1.70	→	3.00	+75%

90 Call: Profit = \$110 (30%)

Price Behavior of Spreads

	<u>28 days</u>		<u>7 days</u>	
XYZ Stock	88.90		94.00	
90 Call	3.50	→	4.60	+30%
95 Call	<u>1.80</u>	→	<u>1.60</u>	-12%
Spread Value	1.70	→	3.00	+75%

95 Call: Loss = \$20 (-12%)

Price Behavior of Spreads

	<u>28 days</u>		<u>7 days</u>	
XYZ Stock	88.90		94.00	
90 Call	3.50	→	4.60	+30%
95 Call	<u>1.80</u>	→	<u>1.60</u>	-12%
Spread Value	1.70	→	3.00	+75%

90-95 Call Spread: Profit = \$130 (+75%)

Price Behavior of Spreads

Conclusions:

Lower cost (risk) than A-T-M options

Lower (limited) maximum profit

Less sensitive to time erosion

In some cases a higher % profit



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Entering a Spread Order

Entering a Spread Order

	<u>Bid</u>		<u>Ask</u>
100 Call	6.00	-	6.20
110 Call	2.50	-	2.70

Entering a Spread Order

	<u>Bid</u>	<u>Ask</u>
100 Call	6.00	6.20
110 Call	2.50	2.70

“Natural Bid”

100 Call @ 6.00

110 Call @ 2.70

Spread @ 3.30

Entering a Spread Order

	<u>Bid</u>		<u>Ask</u>
100 Call	6.00	-	6.20
110 Call	2.50	-	2.70

“Natural Offer”

100 Call @ 6.20
110 Call @ 2.50
Spread @ 3.70

Entering a Spread Order

- First, determine the “natural” bid and offer.
- Second, decide if you can “do better” than the natural bid or offer.
- Third, enter a limit-price order for the spread.

Entering a Spread Order

Case 1	<u>Bid</u>	<u>Ask</u>
80 Call	3.10	3.30
85 Call	1.60	1.70

You want to buy the 80-85 Call Spread.

Can you pay lower than the natural?

Entering a Spread Order

Case 1	<u>Bid</u>	<u>Ask</u>	
80 Call	3.10	3.30	3.20
85 Call	1.60	1.70	<u>1.60</u>
			1.60

“Natural bid” 1.40 – “Natural ask” 1.70

Maybe you can pay 1.60.

Entering a Spread Order

Case 2	<u>Bid</u>	<u>Ask</u>
40 Call	2.00	2.05
45 Call	0.85	0.90

You want to buy the 40-45 Call Spread.

Can you pay lower than the natural?

Entering a Spread Order

Case 2	<u>Bid</u>	<u>Ask</u>	
40 Call	2.00	2.05	2.05
45 Call	0.85	0.90	<u>0.85</u>
			1.20

“Natural bid” 1.10 – “Natural ask” 1.20

1.20 is likely the best price.

Entering a Spread Order

Conclusion:

Spread orders should be entered at a net price. Traders must consider the bid-ask spread of each option when calculating the net price of a spread.



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- Call us: 1-888-OPTIONS
- Visit us: www.888options.com

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- Corporate headquarters: Greenwich, Connecticut, USA.
- Trade stocks, options, futures, futures options, single stock futures, and ETFs on 48 market centers in 13 countries from a single IB Universal Account.
- Open an account in one currency, then trade in Australian dollars, British pounds, Canadian dollars, Euros, Hong Kong dollars, Japanese Yen, Swiss Francs, or U.S. dollars. IB does the FX calculations.
- Specialized account configurations are available for institutions, independent investment advisors, brokers, and active traders.
- Low commissions and finance rates.
- Customers in over 100 nations.

Financial Strength

- A member of Interactive Brokers Group LLC ("IBG")—with consolidated equity capital that exceeds US \$1.6 billion.
- IBG is regularly named one of the top ten program trading firms on the NYSE.
- IBG executes 11% of global volume of exchange traded equity derivatives.
- The Group provides continuous, firm quotes for over 400,000 proprietary and customer trades a day.
- Weiss A Rating "excellent" for Financial Stability.
- The 20th largest US brokerage and trading firm, according to *Institutional Investor*

Unrivalled Technology

- Direct access via our proprietary Trader Workstation (TWS) to markets in Australia, Belgium, Canada, France, Germany, Hong Kong, Italy, Japan, Korea, Netherlands, Spain, Switzerland, United Kingdom, and the United States.
- The same workstation that keeps IB affiliate Timber Hill—the largest market maker of equity options worldwide—ahead of the curve through constant upgrades is offered to institutions, independent investment advisors, brokers, and active traders.
- IB's smart-routing software performs extremely fast, reliable, direct access best execution trades worldwide—or choose the market center you want when trading US shares or options.
- 29 different order types—including stops, stop-limits, trailing stops and OCA.
- Program directly to industry-standard FIX or our proprietary application programming interface (API).
- A history of innovation, starting with creation of the first handheld computers used for trading in 1983.

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Main Trading Screen

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Rapid Order Entry

Symbol Expiry Strike Quantity Type Lmt Price Aux Price Opn/Cls Routing

Order Management

Underlying	Exch	Description	Bid Exch Time In F...	Bid Size Action	Bid Price Quantity	Ask Price Lmt. Price	Ask Size Aux. Price	Ask Exch Type	Last Price Transmit	Change Cancel	High Status	Low Dest	Volume
MSFT	SMART (...)	Stock MSFT (N...		261	27.61	27.61	23		27.61	+0.34	27.61	27.23	47.123M
MSFT	SMART (I...	OCT04 27.5 C...		XB	375	0.40	58	I	0.40	+0.10	0.40	0.25	6.272K
MSFT	AMEX	OCT04 27.5 C...		401	0.35	0.45	25		0.40	+0.10	0.40	0.25	6.272K
MSFT	BOX	OCT04 27.5 C...		150	0.40	0.45	1260		0.40	+0.10	0.40	0.25	6.272K
MSFT	CBOE	OCT04 27.5 C...		9356	0.35	0.45	4469		0.40	+0.10	0.40	0.25	6.272K
MSFT	ISE	OCT04 27.5 C...		17228	0.35	0.40	58		0.40	+0.10	0.40	0.25	6.272K
MSFT	PHLX	OCT04 27.5 C...		222	0.35	0.45	585		0.40	+0.10	0.40	0.25	6.272K
MSFT	PSE	OCT04 27.5 C...		2366	0.35	0.45	980		0.40	+0.10	0.40	0.25	6.272K
MSFT	SMART (I...	OCT04 27.5 P...		CIXP	1921	0.30	22946	ACIXPB	0.35	-0.15	0.50	0.30	2.355K
MSFT	AMEX	OCT04 27.5 P...		40	0.25	0.35	1		0.35	-0.15	0.50	0.30	2.355K
MSFT	BOX	OCT04 27.5 P...		850	0.25	0.35	1261		0.35	-0.15	0.50	0.30	2.355K
MSFT	CBOE	OCT04 27.5 P...		3	0.30	0.35	1886		0.35	-0.15	0.50	0.30	2.355K
MSFT	ISE	OCT04 27.5 P...		1250	0.30	0.35	10476		0.35	-0.15	0.50	0.30	2.355K
MSFT	PHLX	OCT04 27.5 P...		664	0.30	0.35	1521		0.35	-0.15	0.50	0.30	2.355K
MSFT	PSE	OCT04 27.5 P...		4	0.30	0.35	1801		0.35	-0.15	0.50	0.30	2.355K

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Rapid Order Entry

Symbol Expiry Strike Quantity Type Lmt Price Aux Price Opn/Cls Routing

Order Management

Underlying	Exch	Description	Bid Exch Time In F...	Bid Size Action	Bid Price	Ask Price Lmt. Price	Ask Size Aux. Price	Ask Exch Type	Last Price Transmit	Change Cancel	High Status	Low Dest.	Volume
MSFT	SMART (...)	Stock MSFT (N...		786	27.59	27.60	2459		27.59	+0.32	27.62	27.23	48.031M
MSFT	SMART (I...	OCT04 27.5 C...		ACIXPB 37603	0.35	0.40	18	IX	0.40	+0.10	0.40	0.25	7.375K
				DAY BUY		0.40		LMT	T			SMART	
MSFT	AMEX	OCT04 27.5 C...		400	0.35	0.45	25		0.40	+0.10	0.40	0.25	7.375K
MSFT	BOX	OCT04 27.5 C...		1500	0.35	0.45	1250		0.40	+0.10	0.40	0.25	7.375K
MSFT	CBOE	OCT04 27.5 C...		10190	0.35	0.45	5014		0.40	+0.10	0.40	0.25	7.375K
MSFT	ISE	OCT04 27.5 C...		21408	0.35	0.40	8		0.40	+0.10	0.40	0.25	7.375K
MSFT	PHLX	OCT04 27.5 C...		1740	0.35	0.40	10		0.40	+0.10	0.40	0.25	7.375K
MSFT	PSE	OCT04 27.5 C...		2365	0.35	0.45	1030		0.40	+0.10	0.40	0.25	7.375K
MSFT	SMART (I...	OCT04 27.5 P...		CIXP 1194	0.30	0.35	28377	ACIXPB	0.30	-0.20	0.50	0.30	3.025K
MSFT	AMEX	OCT04 27.5 P...		40	0.25	0.35	500		0.30	-0.20	0.50	0.30	3.025K
MSFT	BOX	OCT04 27.5 P...		1450	0.25	0.35	1260		0.30	-0.20	0.50	0.30	3.025K
MSFT	CBOE	OCT04 27.5 P...		3	0.30	0.35	8231		0.30	-0.20	0.50	0.30	3.025K
MSFT	ISE	OCT04 27.5 P...		725	0.30	0.35	15071		0.30	-0.20	0.50	0.30	3.025K
MSFT	PHLX	OCT04 27.5 P...		462	0.30	0.35	1515		0.30	-0.20	0.50	0.30	3.025K
MSFT	PSE	OCT04 27.5 P...		4	0.30	0.35	1800		0.30	-0.20	0.50	0.30	3.025K

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Underlying

Underlying	Exch	Description	Avg Cost	Unrealized...	Bid Size	Bid Price	Ask Price	Ask Size	Last Price	Change	High	Low	Volume
OEX	CBOE	Index OEX	Time In Fo...	Action	Quantity	Lmt. Price	Aux. Price	Type	Transmit	Cancel	Status	Dest.	
									585.34	+1.15			

Option Chains (OEX)

Strike: Multiple... Expiry: ALL... Exchange: SMART... Submit Reset Clear Chains Clear All

CALL										PUT									
Bid Size	Bid Price	Ask Price	Ask Size	Last Price	Change			Description	Bid Size	Bid Price	Ask Price	Ask Size	Last P...	Change			Description		
Action	Quantity	Lmt. Price	Aux. Price	Type	Transmit	Cancel	Status		Action	Quantity	Lmt. Price	Aux. Price	Type	Transmit	Cancel	Status			
100	35.90	37.90	100	C35.50				OCT04 500.0 ...	10	0.20	0.40	101	0.30	-14.2...					
100	30.80	32.80	100	C30.60				OCT04 505.0 ...	1	0.25	0.50	100	0.40	-11.1...					
100	25.80	27.80	100	C25.70				OCT04 510.0 ...	22	0.50	0.65	108	0.50	-16.6...					
100	21.10	23.10	100	C20.90				OCT04 515.0 ...	100	0.65	0.80	100	0.75	-16.6...					
100	16.70	17.70	100	C16.20				OCT04 520.0 ...	41	1.05	1.20	100	1.10	-18.5...					
100	12.20	13.20	100	12.20	+0.35			OCT04 525.0 ...	100	1.60	2.00	110	1.75	-22.2...					
1	8.30	8.50	15	8.30	+0.40			OCT04 530.0 ...	20	2.80	2.90	2	2.90	-21.6...					
5	5.00	5.10	15	5.00	+0.35			OCT04 535.0 ...	121	4.60	4.90	5	4.70	-20.3...					
100	2.45	2.60	49	2.55	+0.15			OCT04 540.0 ...	1	7.50	8.00	100	7.50	-16.2...					
10	1.05	1.15	1	0.90	-0.20			OCT04 545.0 ...	3	11.10	11.80	100	11.40	-10.9...					
10	0.40	0.45	8	0.45	0.00			OCT04 550.0 ...	100	15.20	16.20	100	16.80	-1.75%					
100	37.10	39.10	100	C36.95				NOV04 500.0 ...	22	2.00	2.35	100	2.20	-4.35%					
100	32.50	34.50	100	C32.45				NOV04 505.0 ...	100	2.50	2.80	1	C2.95						
100	27.80	29.80	100	C28.05				NOV04 510.0 ...	100	3.10	3.60	100	C3.70						
100	23.70	25.70	100	C23.85				NOV04 515.0 ...	100	3.90	4.40	100	5.00	7.53%					
100	19.90	21.40	100	C19.85				NOV04 520.0 ...	100	4.90	5.40	100	5.10	-12.8...					
100	16.30	17.80	100	C16.15				NOV04 525.0 ...	100	6.10	6.80	100	7.70	4.05%					
100	12.70	14.20	100	12.20	-0.45			NOV04 530.0 ...	100	7.80	8.50	100	8.30	-9.78%					
100	9.80	10.50	100	9.50	-0.20			NOV04 535.0 ...	105	10.00	11.00	100	11.00	-4.35%					
100	7.10	7.80	100	7.10	-0.05			NOV04 540.0 ...	100	12.10	13.10	100	12.90	-9.15%					
100	5.00	5.20	5	4.80	-0.20			NOV04 545.0 ...	100	15.10	16.10	100	C17...						

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Rapid Order Entry

Symbol Expiry Strike Quantity Type Lmt Price Aux Price Opn/Cls Routing

Buy Sell Clear SMART

Order Management

Underlying	Exch	Description	Bid Exch Time In F...	Bid Size Action	Bid Price Quantity	Ask Price Lmt. Price	Ask Size Aux. Price	Ask Exch Type	Last Price Transmit	Change Cancel	High Status	Low Dest.	Volume
MSFT	SMART (...)	Stock MSFT (N...		786	27.59	27.60	2459		27.59	+0.32	27.62	27.23	48.031M
MSFT	SMART (I...	OCT04 27.5 C...	ACIXPB	37603	0.35	0.40	18	IX	0.40	+0.10	0.40	0.25	7.375K
			DAY	BUY		0.40		LMT	T			SMART	
MSFT	AMEX	OCT04 27.5 C...		400	0.35	0.45	25		0.40	+0.10	0.40	0.25	7.375K
MSFT	BOX	OCT04 27.5 C...		1500	0.35	0.45	1250		0.40	+0.10	0.40	0.25	7.375K
MSFT	CBOE	OCT04 27.5 C...		10190	0.35	0.45	5014		0.40	+0.10	0.40	0.25	7.375K
MSFT	ISE	OCT04 27.5 C...		21408	0.35	0.40	8		0.40	+0.10	0.40	0.25	7.375K
MSFT	PHLX	OCT04 27.5 C...		1740	0.35	0.40	10		0.40	+0.10	0.40	0.25	7.375K
MSFT	PSE	OCT04 27.5 C...		2365	0.35	0.45	1030		0.40	+0.10	0.40	0.25	7.375K
MSFT	SMART (I...	OCT04 27.5 P...	CIXP	1194	0.30	0.35	28377	ACIXPB	0.30	-0.20	0.50	0.30	3.025K
MSFT	AMEX	OCT04 27.5 P...		40	0.25	0.35	500		0.30	-0.20	0.50	0.30	3.025K
MSFT	BOX	OCT04 27.5 P...		1450	0.25	0.35	1260		0.30	-0.20	0.50	0.30	3.025K
MSFT	CBOE	OCT04 27.5 P...		3	0.30	0.35	8231		0.30	-0.20	0.50	0.30	3.025K
MSFT	ISE	OCT04 27.5 P...		725	0.30	0.35	15071		0.30	-0.20	0.50	0.30	3.025K
MSFT	PHLX	OCT04 27.5 P...		462	0.30	0.35	1515		0.30	-0.20	0.50	0.30	3.025K
MSFT	PSE	OCT04 27.5 P...		4	0.30	0.35	1800		0.30	-0.20	0.50	0.30	3.025K

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Interactive Brokers
The Professional's Gateway to the World's Markets

Chain Stock Order

Universal Account U157836 - Interactive Brokers Trader Workstation

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US Equities Global Equities FOREX Futures JPM ifin Webinar OEX OEX2 Pending

Underlying

Underlying	Exch	Description	Avg Cost	Unrealized...	Bid Size	Bid Price	Ask Price	Ask Size	Last Price	Change	High	Low	Volume
			Time In Fo...	Action	Quantity	Lmt. Price	Aux. Price	Type	Transmit	Cancel	Status	Dest.	
OEX	CBOE	Index OEX							535.30	+1.11			

Option Chains (OEX)

Strike: Multiple... Expiry: ALL... Exchange: SMART... Submit Reset Clear Chains Clear All

CALL										PUT									
Bid Size	Bid Price	Ask Price	Ask Size	Last Price	Change					Description	Bid Size	Bid Price	Ask Price	Ask Size	Last P...	Change			
Action	Quantity	Lmt. Price	Aux. Price	Type	Transmit	Cancel	Status				Action	Quantity	Lmt. Price	Aux. Price	Type	Transmit	Cancel	Status	
	100	35.70	37.70	100	C35.50					OCT04 500.0 ...	10	0.20	0.40	101	0.30	-14.2...			
	100	30.60	32.60	100	C30.60					OCT04 505.0 ...	1	0.25	0.50	100	0.40	-11.1...			
	100	25.70	27.70	100	C25.70					OCT04 510.0 ...	25	0.45	0.60	100	0.50	-16.6...			
	100	20.90	22.90	100	C20.90					OCT04 515.0 ...	5	0.70	0.75	100	0.75	-16.6...			
	100	16.50	17.50	100	C16.20					OCT04 520.0 ...	16	1.00	1.20	100	1.10	-18.5...			
	100	12.00	13.00	100	12.20	+0.35				OCT04 525.0 ...	105	1.55	1.95	100	1.70	-24.4...			
	1	8.30	8.50	115	8.40	+0.50				OCT04 530.0 ...	5	2.75	2.90	2	2.90	-21.6...			
	10	4.90	5.10	15	5.00	+0.35				OCT04 535.0 ...	40	4.60	4.70	1	4.70	-20.3...			
BUY			5.10	LMT	T														
	100	2.35	2.55	14	2.55	+0.15				OCT04 540.0 ...	20	7.40	8.00	103	7.50	-16.2...			
	10	1.05	1.15	1	1.10	0.00				OCT04 545.0 ...	3	11.10	11.80	100	11.40	-10.9...			
	10	0.40	0.45	3	0.45	0.00				OCT04 550.0 ...	100	15.30	16.30	100	16.80	-1.75%			
	100	37.00	39.00	100	C36.95					NOV04 500.0 ...	22	2.00	2.30	100	2.20	-4.35%			
	100	32.40	34.40	100	C32.45					NOV04 505.0 ...	100	2.45	2.80	1	C2.95				
	100	27.70	29.70	100	C28.05					NOV04 510.0 ...	100	3.00	3.50	100	C3.70				
	100	23.50	25.50	100	C23.85					NOV04 515.0 ...	100	3.80	4.30	100	5.00	7.53%			
	100	19.80	21.30	100	C19.65					NOV04 520.0 ...	100	4.90	5.40	100	5.10	-12.8...			
	100	16.10	17.60	100	C16.15					NOV04 525.0 ...	100	6.10	6.80	100	7.70	4.05%			
	100	12.50	14.00	100	12.20	-0.45				NOV04 530.0 ...	3	8.00	8.40	100	8.30	-9.78%			
	100	9.60	10.30	100	9.50	-0.20				NOV04 535.0 ...	5	10.00	10.40	100	11.00	-4.35%			
	100	7.00	7.70	100	7.10	-0.05				NOV04 540.0 ...	100	12.00	13.00	100	12.90	-9.15%			

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US Equities Global Equities FOREX Futures JPM ifin Webinar OEX OEX2 Pending

Rapid Order Entry

Symbol	Expiry	Strike	Quantity	Type	Lmt Price	Aux Price	Opn/Cls	Routing
				LMT			OPN	Buy Sell Clear SMART

Order Management

Underlying	Exch	Description	Bid Exch Time In F...	Bid Size Action	Bid Price Quantity	Ask Price Lmt. Price	Ask Size Aux. Price	Ask Exch Type	Last Price Transmit	Change Cancel	High Status	Low Dest	Volume
MSFT	SMART (...)	Stock MSFT (N...		1657	27.59	27.60	2326		27.60	+0.33	27.62	27.23	48.340M
MSFT	SMART (I...	OCT04 27.5 C...	ACIXPB	32873	0.35	0.40	39	IX	0.40	+0.10	0.40	0.25	7.375K
MSFT	AMEX	OCT04 27.5 C...		400	0.35	0.45	25		0.40	+0.10	0.40	0.25	7.375K
MSFT	BOX	OCT04 27.5 C...		1503	0.35	0.45	1253		0.40	+0.10	0.40	0.25	7.375K
MSFT	CBOE								0.40	+0.10	0.40	0.25	7.375K
MSFT	ISE								0.40	+0.10	0.40	0.25	7.375K
MSFT	PHLX								0.40	+0.10	0.40	0.25	7.375K
MSFT	PSE	MSFT OCT04 27.5							0.40	+0.10	0.40	0.25	7.375K
MSFT	SMART (I...								0.30	-0.20	0.50	0.30	3.025K
MSFT	AMEX								0.30	-0.20	0.50	0.30	3.025K
MSFT	BOX								0.30	-0.20	0.50	0.30	3.025K
MSFT	CBOE								0.30	-0.20	0.50	0.30	3.025K
MSFT	ISE	OCT04 27.5 P...		725	0.30	0.35	11071		0.30	-0.20	0.50	0.30	3.025K
MSFT	PHLX	OCT04 27.5 P...		462	0.30	0.35	1515		0.30	-0.20	0.50	0.30	3.025K
MSFT	PSE	OCT04 27.5 P...		4	0.30	0.35	1800		0.30	-0.20	0.50	0.30	3.025K

Interactive Analytics(sm), Option Analytics

Contract	delta-call	delta-put	gamma	vega	theta
MSFT OCT04 27.5	.5609	-.4391	.4278	.0229	-.0128

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**For additional information about Interactive
Brokers**

<http://www.interactivebrokers.com/>

cshaw@interactivebrokers.com

INDEX OPTIONS

Introduction to “Trading the Market”

Presented by: The CBOE's Options Institute
Options_Institute@cboe.com
www.cboe.com

Disclosures

In order to simplify the computations, commissions have not been included in the examples used in these materials. Commission costs will impact the outcome of all stock and options transactions and must be considered prior to entering into any transactions.

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

Options involve risks and are not suitable for everyone. Prior to buying or selling an option, an investor must receive a copy of *Characteristics and Risks of Standardized Options*. Copies may be obtained from your broker or from The Chicago Board Options Exchange, 400 S. LaSalle, Chicago, IL 60605. Investors considering options should consult their tax advisor as to how taxes may affect the outcome of contemplated options transactions.

Regarding taxes, you should consult a professional tax advisor for the latest IRS regulations and how they apply to your individual situation. Comments in this presentation about taxes are taken from "Taxes and Investing," published by The Options Industry Council and may not reflect the latest regulations.

Presentation Outline

- Motivation for Trading Index Options
- Unique Features of Index Options
- A Trading Exercise

Why Trade Index Options?

Individual stocks have:

Company Risk

Sector Risk

Market Risk

**Index options enable you
to trade “the market.”**

Which Indexes Have Options?

- Many major market averages have options
 - S&P 500[®] Stock Index
 - Dow Jones[®] Industrial Average
 - NASDAQ 100[®] Stock Index

Which Indexes Have Options?

- Many major market averages have options
 - S&P 500 Stock Index
 - Dow Jones Industrial Average
 - NASDAQ 100 Stock Index
- Sector Indexes also have options
 - GSTI™ Internet Index
 - Dow Jones® Equity REIT Index
 - CBOE Oil Index® Options

What is an Index Option?

- Stock options give the buyer the right to buy or sell the underlying stock (100 shares)

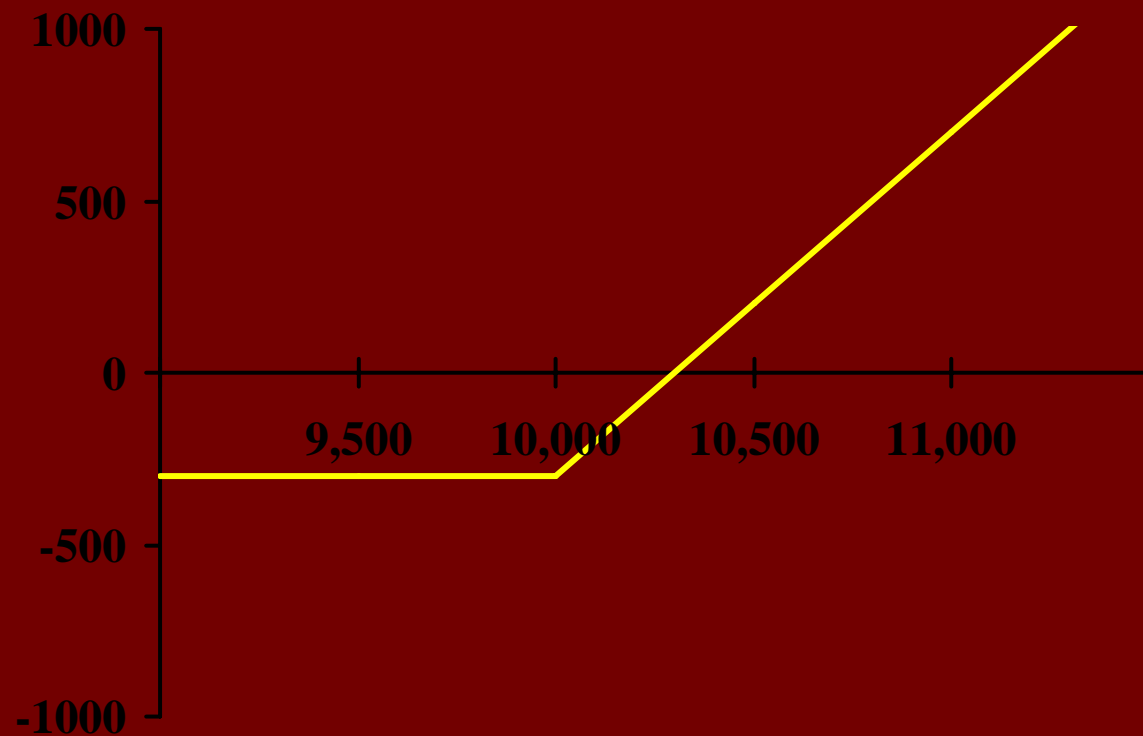
What is an Index Option?

- Stock options give the buyer the right to buy or sell the underlying stock (100 shares)
- Index options give the buyer the right to receive a cash payment equal to the in-the-money amount.

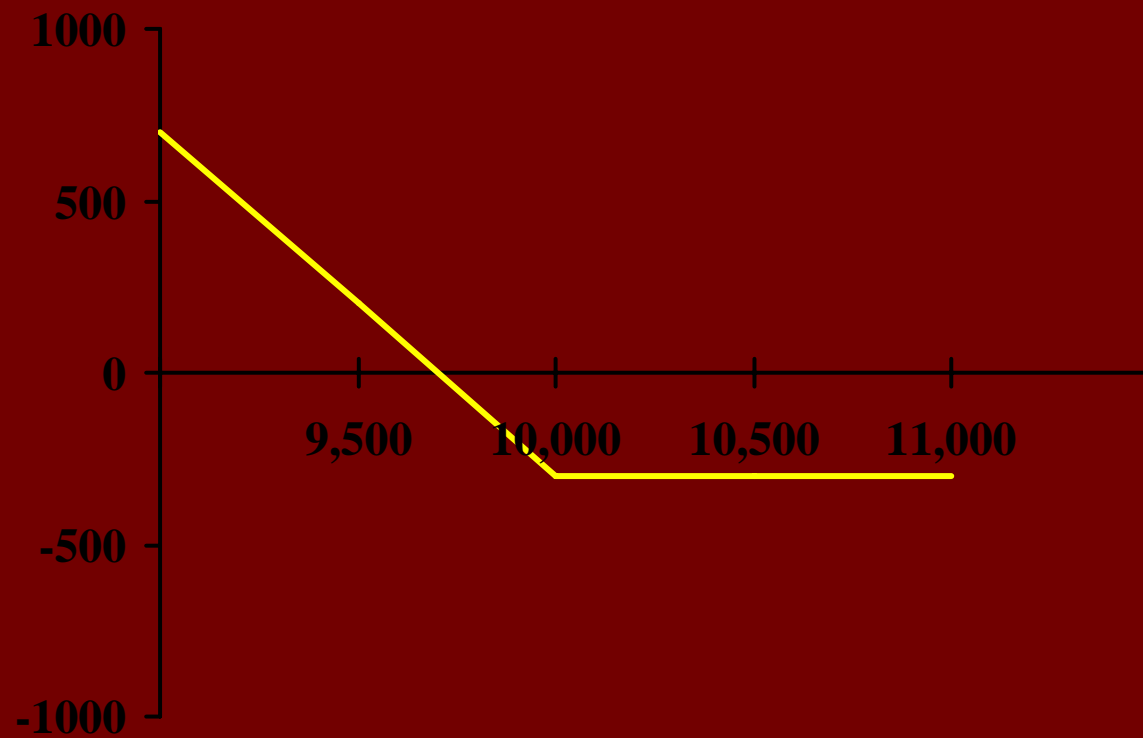
What is an Index Option?

- Stock options give the buyer the right to buy or sell the underlying stock (100 shares)
- Index options give the buyer the right to receive a cash payment equal to the in-the-money amount. THIS IS KNOWN AS “CASH SETTLEMENT”

Basic Strategy – Buy Call



Basic Strategy – Buy Put



Features of Index Options

1. \$100 Multiplier
2. Cash Settlement
3. Exercise Style
4. Settlement Method
5. Broad-Based vs. Narrow-Based

\$100 Multiplier

The actual dollar cost of an index option is \$100 times the stated option price.

“OEX 600 Call @ 8.00”

Price of Option = 8 x \$100 = \$800

The Cash Settlement Process

The Cash Settlement Process

Example: The OEX Index is 613.53 at exp.

What is the value of a 600 Call?

The Cash Settlement Process

Example: The OEX Index is 613.53 at exp.

What is the value of a 600 Call?

Index Value	613.53
Less Strike Price	<u>600.00</u>
Difference	13.53

The Cash Settlement Process

Example: The OEX Index is 613.53 at exp.

What is the value of a 600 Call?

Index Value	613.53
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Difference	13.53
x Multiplier	<u>x \$100</u>

The Cash Settlement Process

Example: The OEX Index is 613.53 at exp.

What is the value of a 600 Call?

Index Value	613.53
Less Strike Price	<u>600.00</u>
Difference	13.53
x Multiplier	<u>x \$100</u>
Cash from Seller to Buyer	\$1,353.00

Alternatives to Exit Positions

Alternatives to Exit Positions

- Index Option Buyers
 - Sell the option to close the position
 - Hold to expiration

Alternatives to Exit Positions

■ Index Option Buyers

- Sell the option to close the position
- Hold to expiration

Receive the cash settlement value

Let the option expire worthless (maximum loss)

Alternatives to Exit Positions

■ Index Option Sellers

- Buy the option to close the position
- Hold to expiration

Alternatives to Exit Positions

■ Index Option Sellers

- Buy the option to close the position
- Hold to expiration

Pay the cash settlement value

Let the option expire worthless (maximum profit)

Exercise Style – Two Types

American-Style Exercise

European-Style Exercise

American-style Exercise

An option subject to American-Style Exercise can be exercised on any business day before the option's expiration date.

Exercise must also occur before your brokerage firm's daily exercise deadline.

Remember, options can be sold on any business day.

European-style Exercise

An option subject to European-style Exercise can only be exercised at a specific time, which is generally the last day prior to the option's expiration date.

Remember, options can be sold on any business day.

Price Behavior Prior to Expiration

- Today is September 15. The OEX Index is 500.
- The December OEX 500 Call is currently 20.
- Your forecast:
The OEX Index will rise 10 index points in 1 week.
- Question:
If your forecast is correct and you buy 1 OEX 500 Call,
how much will you make?

Price Behavior Prior to Expiration

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- The December OEX 500 Call is currently 20.
- Your forecast:
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- Question:
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how much will you make?

Price Behavior Prior to Expiration

- OEX on 9/15 500 → 510 (in one week,
on 9/22)
- OEX 500 Call 20 → ??

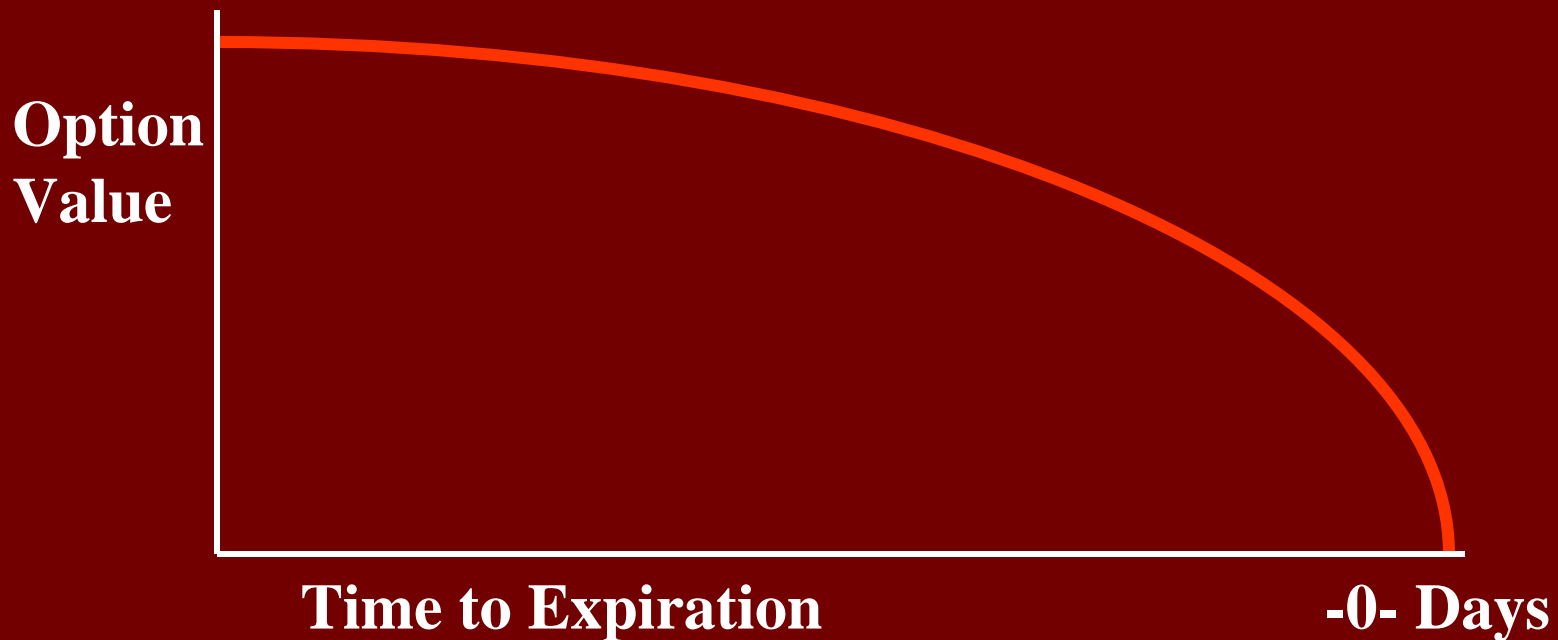
What is your forecast for the price of the
OEX December 500 Call?

Concept #1 - Delta

Most options do not change in price as much as the underlying changes in price.

Delta is an estimate of the rate of change in an option's price for a one unit change in the price of the underlying assuming all other factors are unchanged.

Concept #2 - Time Decay



Option prices generally do not decrease at the same rate that time passes to expiration.

Price Behavior Prior to Expiration

- OEX on 9/15 500 → 510 (in one week,
on 9/22)
- OEX 500 Call 20 → 24.80

Summary - Trade the Market

Avoid the risks of trading individual stocks.

Summary - Trade the Market

Avoid the risks of trading individual stocks.

Broad-Based Index Options:

Trade the “Whole Market”

Summary - Trade the Market

Avoid the risks of trading individual stocks.

Broad-Based Index Options:

Trade the “Whole Market”

Narrow-Based Index Options:

Trade the “Sectors You Know”

Thank You for Attending

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- The Options Institute
 - 1-877-THE-CBOE then press 4,3
- Questions: options_institute@cboe.com
- Courses: <http://www.cboe.com/LearnCenter/Seminars.asp>

The logo for the Chicago Board Options Exchange (CBOE) features the letters 'CBOE' in a large, white, stylized serif font with a slight shadow effect, set against a red rectangular background.

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