

*Mastering* **LEAPS**  
*Considerations for*  
*Traders and Investors*

Presented by: Elliot Katz



# Today's Agenda

- What are LEAPS?
- How are they priced?
- How do they behave?
  - What you need know
- LEAPS strategies for Investors
  - Understanding the hedge
  - Controlling leverage
  - Creative positions
  - Short-term benefits
- LEAPS strategies for Traders
  - Calculating position size
  - Expectations and position management
  - Attraction of current environment

# What are LEAPS?

LEAPS = Long term Equity AnticiPation Securities

Publicly traded options contracts with expiration dates that are longer than one year.

Structurally, LEAPS are no different than short-term options – Investopedia

## Why were they created?

Introduced by CBOE in 1990

Bring new participants into the market

Dispel “purely speculative” view

Market-maker “book management”

# How are they priced?

Like every other option!

$$C_0 = S_0 e^{-\delta T} N(d_1) - X e^{-rT} N(d_2)$$

$$d_1 = \frac{\ln(S_0/X) + (r - \delta + \sigma^2/2)T}{\sigma\sqrt{T}}$$

$$d_2 = d_1 - \sigma\sqrt{T}$$

S = Stock Price

X = Strike Price

r = risk-free interest rate

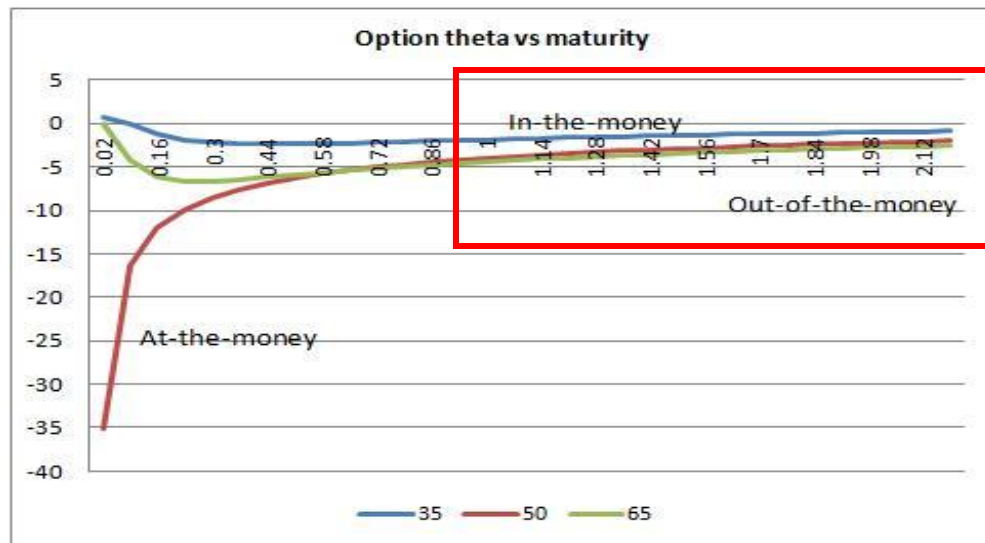
$\delta$  = dividend rate

T = time to expiration

$\sigma$  = annual volatility %

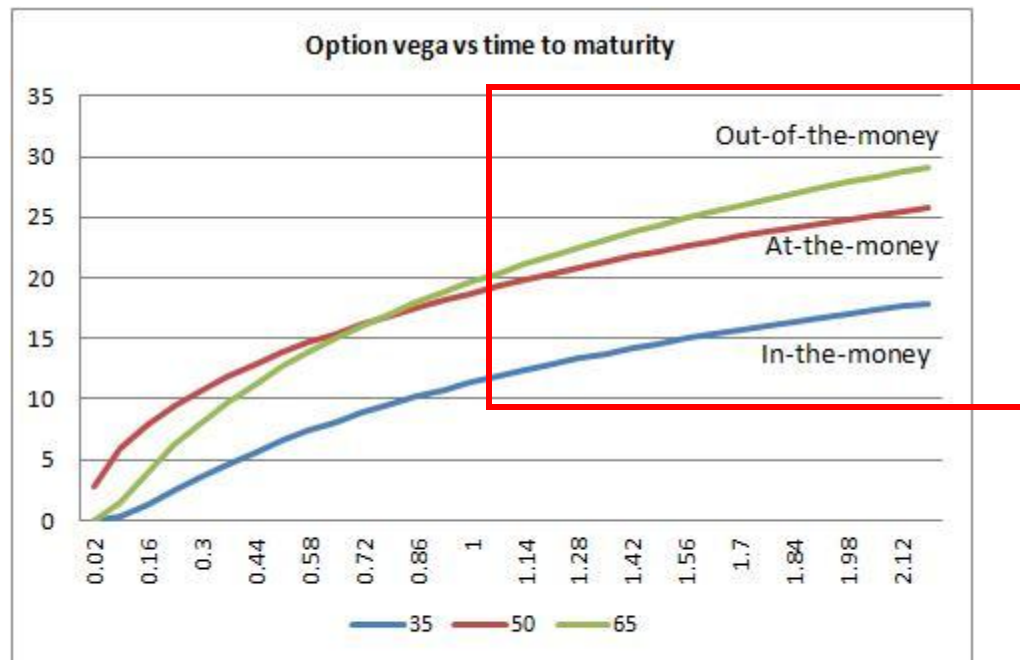
# What you really need to know

**Time Decay** – the incremental day costs you less.  
the further out in time you go the slower  
the premium decreases every day.



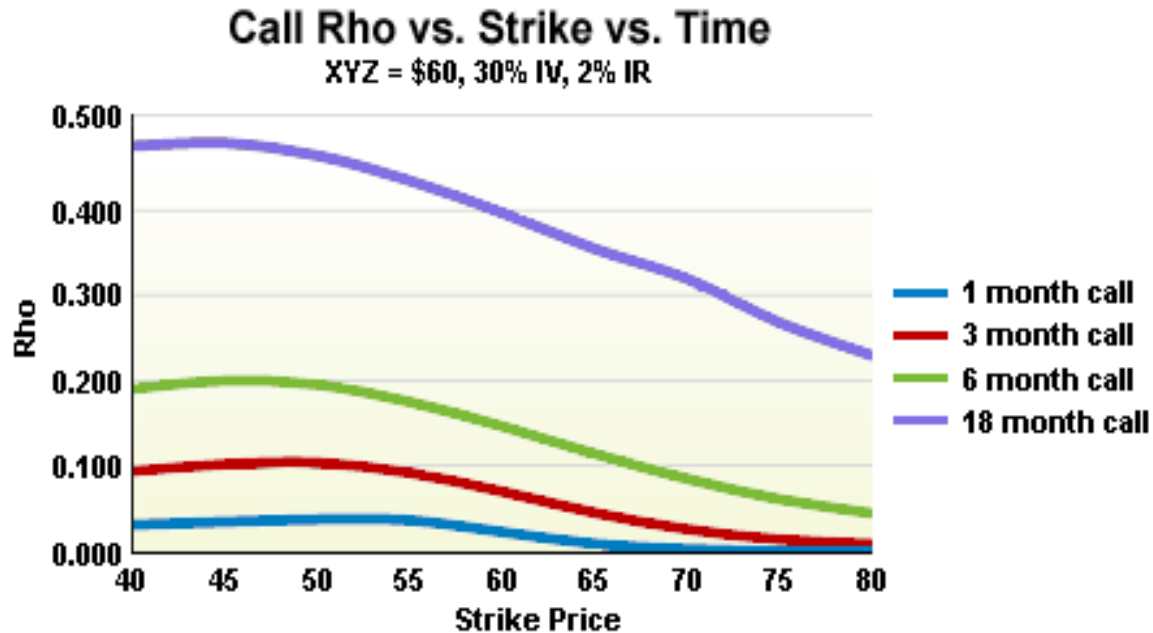
# What you really need to know

**Volatility** – Increase in long-term volatility assumptions today = stock can be further off-trend = more uncertainty and more risk. Tempered by  $\sqrt{t}$  aspect in pricing model and smaller percentage of premium.



# What you really need to know

**Interest Rates** – because of the effects of compounding, the further you go out in time, the more sensitive your option gets to changes in interest rates





# What you really need to know The Put-Call Parity

Long Call = Buy Put + Buy Stock + Short T-Bill



Insurance

RISK

VOLATILTY



Borrow

Interest Rates

## What you can do with LEAPS

TRADE

INVEST

- Distinct approaches to use as investing tool and trading tool.
- What you need to know about LEAPs pricing behavior is different for each approach

## Investor's approach to LEAPS

- Use LEAPS CALL as substitute for stock
- Limits risk to premium paid
- Paying extra for limited risk
- Not receiving dividend (if paid)
- All of the upside above break-even
- Protects capital
- Controls leverage

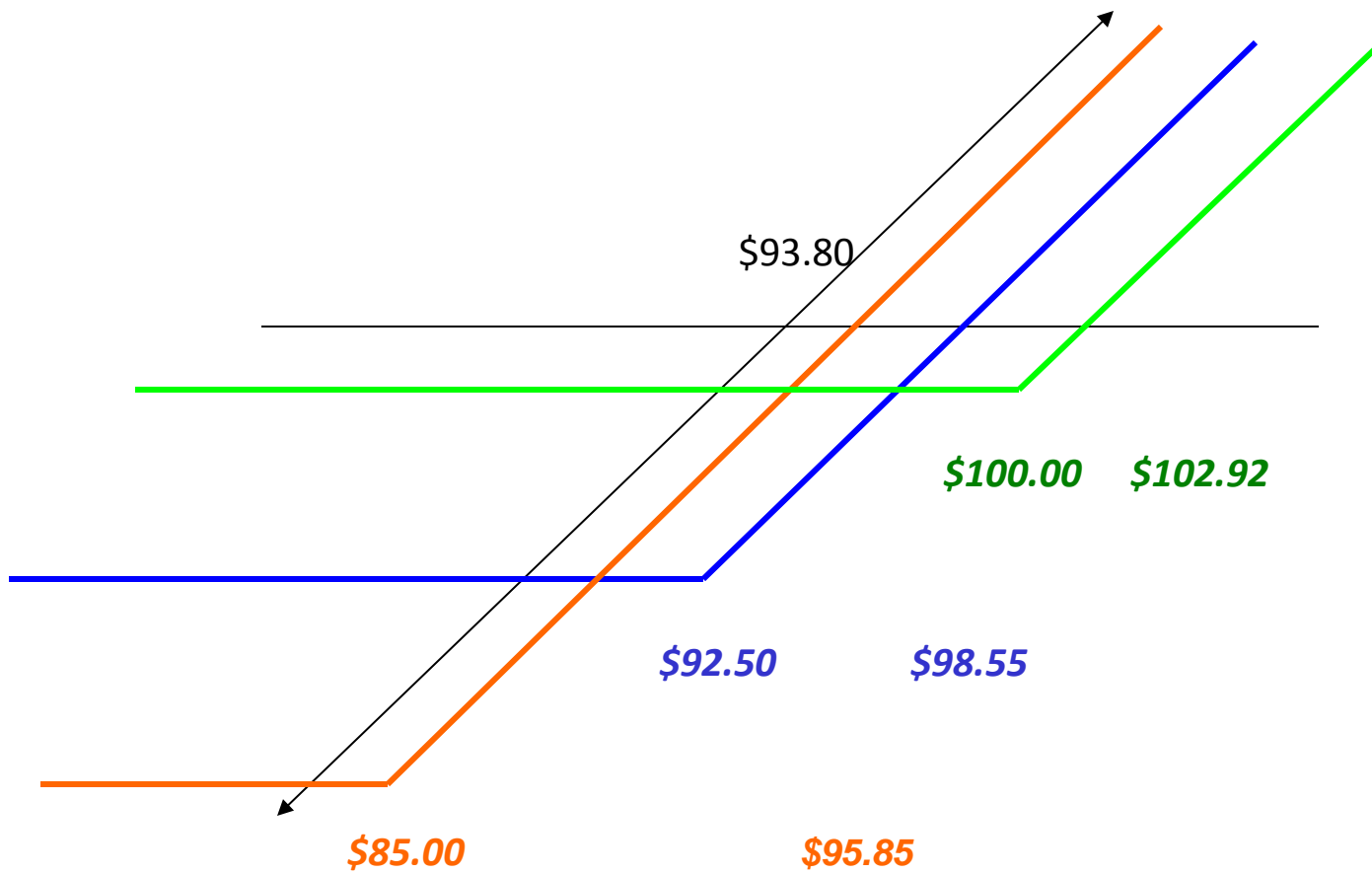
## Investor's approach to LEAPS

- Scenario : Want to take investment position in XOM = \$93.80
- LEAPS Strategy : Buy 1 Call for every 100 shares
- Compare various Calls to Stock
- Stock Position = 1,000 shares
- LEAPS Position = 10 Calls

### LEAPS JANUARY 2015 CALL CHOICES

<u>Strike Price</u>	<u>Premium</u>	<u>Break-Even</u>	<u>Cost.....</u>
\$ 85.00	\$10.85	\$ 95.85	\$10,850
\$ 92.50	\$ 6.05	\$ 98.55	\$ 6,050
\$100.00	\$ 2.92	\$102.92	\$ 2,920

# Investor's approach to LEAPS



## Investor's approach to LEAPS

Stock \$	P/L Stock	\$85 Call	\$92.50 Call	\$100 Call
\$75	(\$18,800.00)	(\$10,850)	(\$6,050)	(\$2,920)
\$85	(\$8,800.00)	(\$10,850)	(\$6,050)	(\$2,920)
\$90	(\$3,800.00)	(\$5,850)	(\$6,050)	(\$2,920)
\$95	\$1,200.00	(\$850)	(\$3,550)	(\$2,920)
\$100	\$6,200.00	\$4,150	\$1,450	(\$2,920)
\$110	\$16,200.00	\$14,150	\$11,450	\$7,080
\$120	\$26,200.00	\$24,150	\$21,450	\$17,080

What's missing from this analysis?

\$2,520 in dividends!

## Investor's approach to LEAPS

- Calculating “True” Return
- Option market assumes you are investing Strike Price risk-free
- Using \$92.50 Call example = \$92,500
- True total “investment” = \$98,550
- The “Insurance” value of the Call is to protect your capital!

# Investor's approach to LEAPS

## Calculating "TRUE" return

### Using \$92.50 Call

Stock \$	LEAPS	LEAPS + Cash	LEAPS + Cash %	Stock w/Div%
\$75	(\$6,050)	\$92,500	-6%	-17%
\$85	(\$6,050)	\$92,500	-6%	-7%
\$90	(\$6,050)	\$92,500	-6%	-1%
\$95	(\$3,550)	\$95,000	-4%	4%
\$100	\$1,450	\$100,000	1%	9%
\$110	\$11,450	\$110,000	12%	20%
\$120	\$21,450	\$120,000	22%	31%



## Investor's approach to LEAPS

### How to properly leverage the position

Stock \$	LEAPS	LEAPS + Cash	LEAPS + Cash %	Stock w/Div%
\$75	(\$6,050)	\$46,250	-12%	-17%
\$85	(\$6,050)	\$46,250	-12%	-7%
\$90	(\$6,050)	\$46,250	-12%	-1%
\$95	(\$3,550)	\$48,750	-7%	4%
\$100	\$1,450	\$53,750	3%	9%
\$110	\$11,450	\$63,750	22%	20%
\$120	\$21,450	\$73,750	41%	31%

**Invest 50% of Strike + Premium = \$6,050 + \$46,250**

# Investor's approach to LEAPS A Creative Alternative

- Not too happy about higher break-even & missing dividend
- Would like to lower break-even & improve returns
- VERY interested in buying XOM @ \$82.50

## **WHAT CAN YOU DO?!**

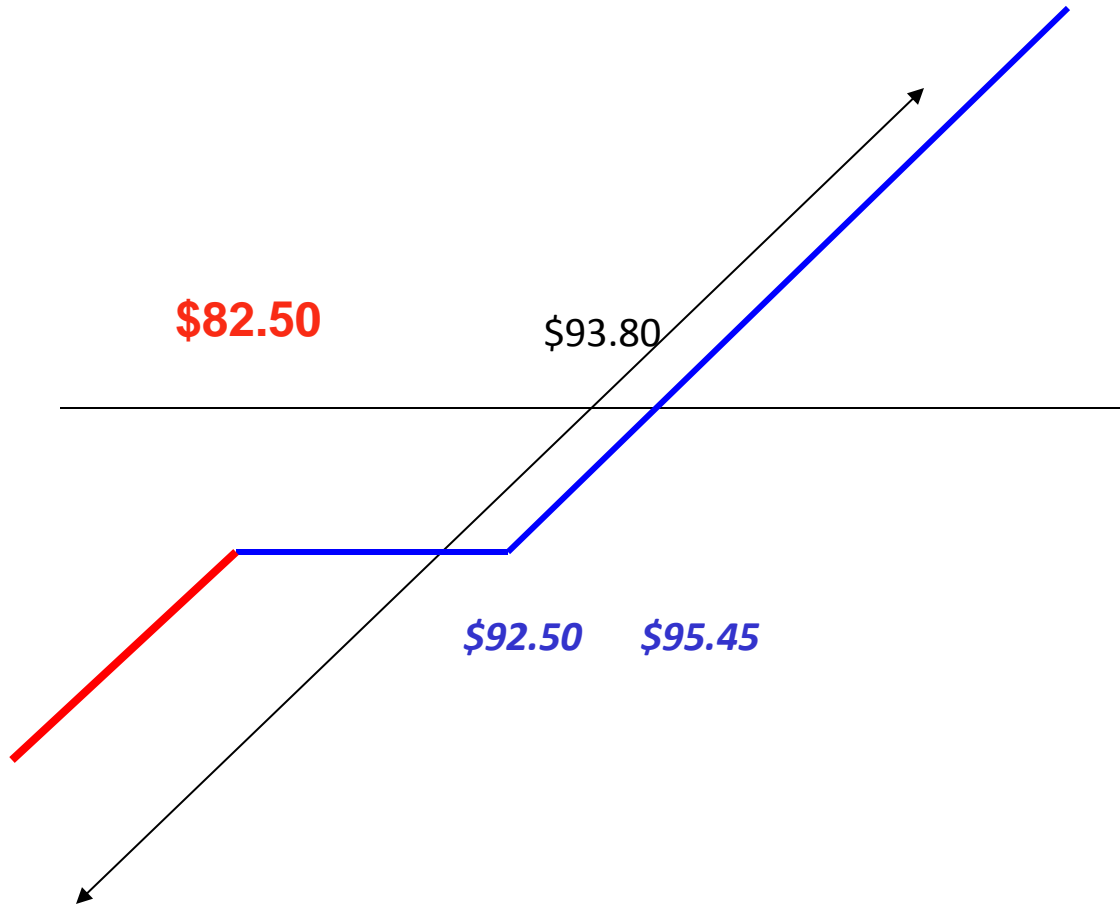
**SELL the January 2015 \$82.5 PUT for \$3.10!**

## Investor's approach to LEAPS A Creative Alternative

**SELL the January 2015 \$82.5 PUT for \$3.10!**

- Lowers cost of options to \$2.95 & B/E to \$95.45 (\$6.05 - \$3.10)
- Improves returns between 3% and 4%
- ADDITIONAL RISK = YOU OWN XOM @ \$82.5
- LOSE BENEFITS OF LIMITED RISK OF LONG CALL BELOW \$82.50

# Investor's approach to LEAPS A Creative Alternative



# Investor's approach to LEAPS

## Benefits over the short-run

Stock \$	P/L Stock	90-days (325 days)		180-days (235 days)	
		<u>Premium</u>	<u>P/L</u>	<u>Premium</u>	<u>P/L</u>
\$75	(\$18,800.00)	\$0.35	(\$5,697.50)	\$0.18	(\$5,870.00)
\$85	(\$8,800.00)	\$2.03	(\$4,020.00)	\$0.59	(\$5,460.00)
\$90	(\$3,800.00)	\$3.84	(\$2,214.00)	\$1.52	(\$4,530.00)
\$95	\$1,200.00	\$6.39	\$340.00	\$3.20	(\$2,850.00)
\$100	\$6,200.00	\$9.67	\$3,620.00	\$9.17	\$3,120.00
\$110	\$16,200.00	\$18.02	\$11,970.00	\$17.84	\$11,790.00
\$120	\$26,200.00	\$27.65	\$21,600.00	\$27.62	\$21,570.00

## Investor's approach to LEAPS

- Motivation = Protect Capital
- Use 1 option for every 100 shares
- Invest Strike Price at risk-free rate = “True Return on Capital”
- Control Leverage = Reg T = Invest 50% of Strike Price
- Add Short Put to lower cost but introduce risk @ Put strike
- Consider benefits of LEAPS position over the short run

Who are you?

An option trader

OR

A trader who uses options



# Who are you?

Odds are you are the latter - you believe it is often better to use options to express your opinion on a security than the security its self.

Therefore - to determine which option strategy you should use you have to know enough about how options behave to make a proper comparison of the strategies you are considering.

Furthermore - this level of understanding makes you aware of market conditions that can make certain strategies stand out.



# Why LEAPS?

1. They are long-dated options – incremental cost of insurance
2. Time decay (theta) has smaller short-term effect
3. “Truer” response to price move in underlying

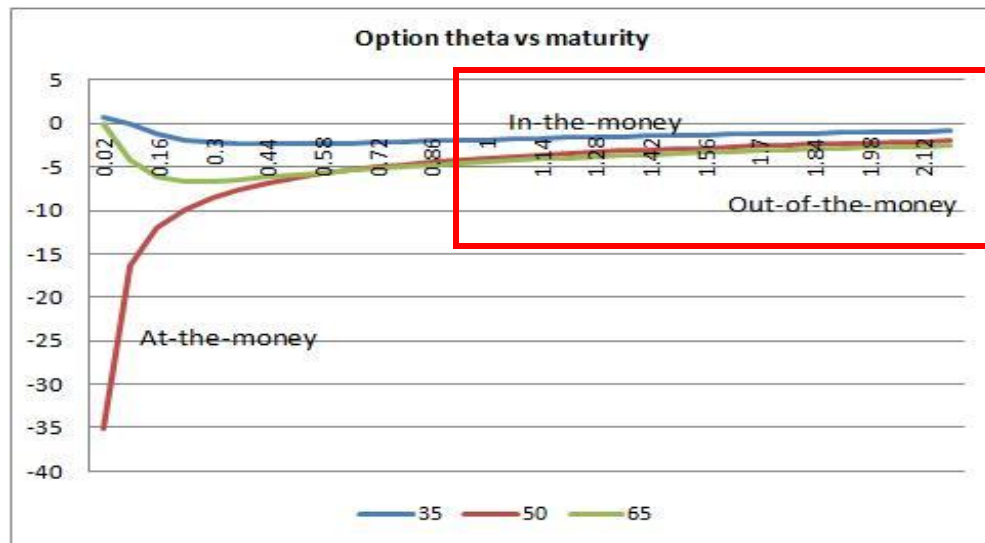
SPY = \$155.48

SPY June 21, 2014 Call \$156.00

Why current environment is favorable

# What you really need to know

**Time Decay** – the incremental day costs you less.  
the further out in time you go the slower  
the premium decreases every day.



# HOW MANY?

SPY = \$155.48

SPY June 21, 2014 Call \$156.00 = \$7.70

How much stock?

1,000 shares

How Many Calls?

~~20~~



# Secret is DELTA

DELTA = change in price of an option for a 1 unit change in the underlying

SPY June 21, 2014 Call \$156.00 = \$7.70

DELTA = .42

1. SPY increases by \$1.00 expect option to increase by \$0.42
2. Option to increase by \$42.00
3. What else increases by \$42.00 if SPY increases by \$1.00?

42 SHARES!

4. Therefore, one call behaves like owning 42 shares!

# Secret is DELTA

SPY June 21, 2014 Call \$156.00 = \$7.70

DELTA = .42

1. Therefore, one call behaves like owning 42 shares!
2. How many Calls does it take to behave like 1,000 shares?
3.  $1,000 \text{ shares} / 42 \text{ shares per Call} = 24 \text{ CALLS!}$

**#Options X DELTA per option = # Share Equivalents**

# WHAT HAPPENS?

Cost of Calls = 24 x \$7.70 = \$18,480

DELTA = 1008

+ 60 Days

<u>SPY</u>	<u>LEAP</u>	<u>GAIN/LOSS</u>	<u>1,000 SPY GAIN/LOSS</u>
140	2.17	\$(13,272.00)	\$(15,480.00)
145	3.32	\$(10,512.00)	\$(10,480.00)
150	4.87	\$( 6,792.00)	\$ (5,480.00)
155	6.81	\$( 2,136.00)	\$ (480.00)
160	9.09	\$ 3,336.00	\$ 4,520.00
165	11.86	\$ 9,984.00	\$ 9,520.00
170	15.04	\$ 17,616.00	\$ 14,520.00
175	18.52	\$ 25,968.00	\$ 19,520.00

# WHAT HAPPENS?

Cost of Calls = 24 x \$7.70 = \$18,480

DELTA = 1008

<u>SPY</u>	<u>LEAP</u>	+ 60 Days <u>Option DELTA</u>	<u>Position DELTA</u>	<u>GAIN/LOSS</u>
140	2.17	0.194	465	\$(13,272.00)
145	3.32	0.264	633	\$(10,512.00)
150	4.87	0.342	820	\$( 6,792.00)
155	6.81	0.425	1020	\$( 2,136.00)
160	9.09	0.509	1221	\$ 3,336.00
165	11.86	0.660	1584	\$ 9,984.00
170	15.04	0.668	1603	\$ 17,616.00
175	18.52	0.820	1968	\$ 25,968.00

# WHAT HAPPENS?

Cost of Calls =  $24 \times \$7.70 = \$18,480$       DELTA = 1008

+ 60 Days

<u>SPY</u>	<u>LEAP</u>	<u>Option DELTA</u>	<u>Position DELTA</u>
140	2.17	0.194	465
145	3.32	0.264	633
150	4.87	0.342	820
155	6.81	0.425	1020
160	9.09	0.509	1221
165	11.86	0.660	1584
170	15.04	0.668	1603
175	18.52	0.820	1968



# WHAT TO DO NEXT?

SPY	LEAP	PROFIT	Option DELTA	Position DELTA
165	11.86	\$9,984	0.66	1584

1. Original position was to behave like 1,000 shares
2. Now position behaving like 1,584 shares
3. How do we get back to 1,000 shares?
4. Sell enough LEAPS to create 584 shares
5. Sell 9 LEAPS x 0.66 DELTA per = 594 shares
6. Keep 15 LEAPS x 0.66 DELTA per = 990shares

Take \$10,674 off the table!!!

Cost of Calls = \$18,480

Cost of Calls = \$ 5.20!

Remaining risk = \$ 7,806

# Why are Call Options attractive?

Two major determinants of option prices are:

INTEREST RATES      &      VOLATILITY

## INTEREST RATES

Increase → Premiums Increase

Decrease → Premiums Decrease

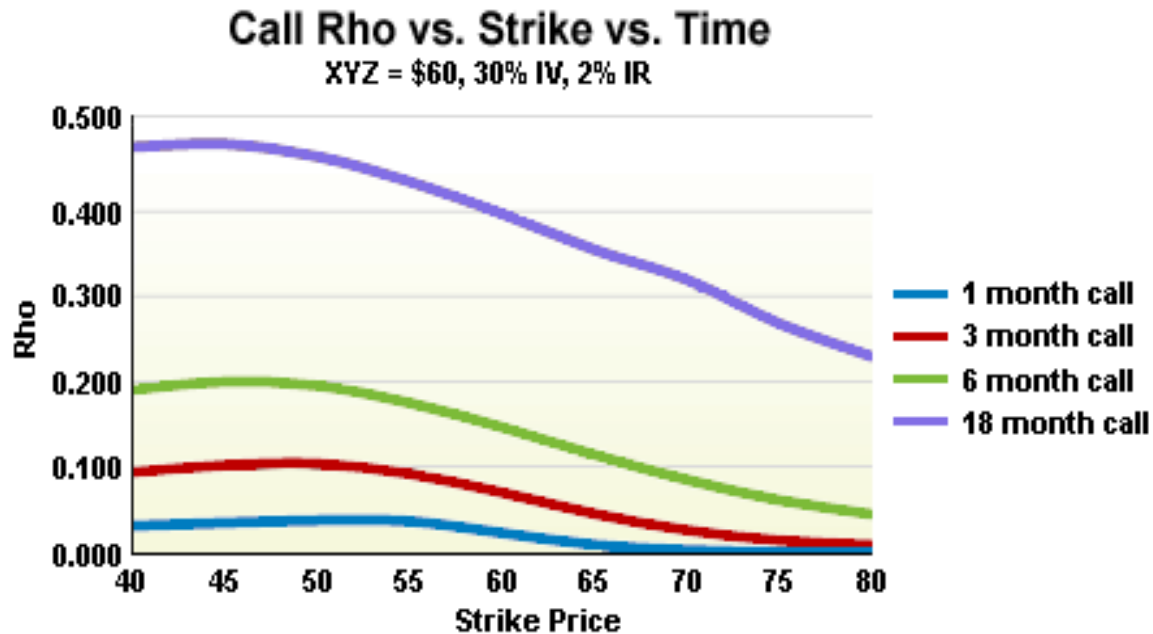
## VOLATILITY

Increase → Premiums Increase

Decrease → Premiums Decrease

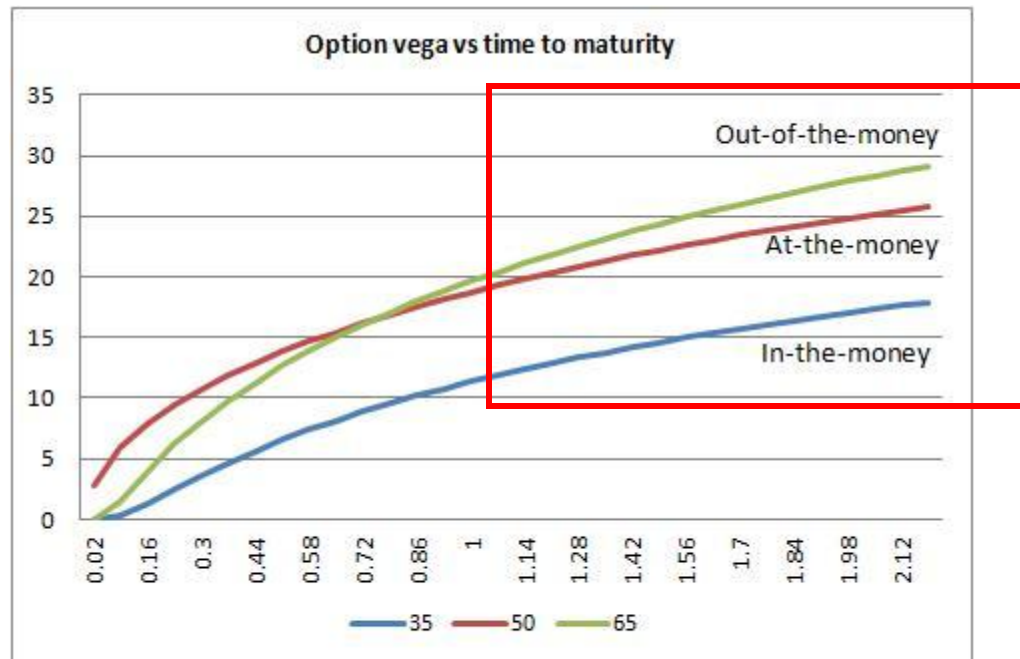
# The Low Rate & Low Volatility Cushion!

**Interest Rates** – because of the effects of compounding, the further you go out in time, the more sensitive your option gets to changes in interest rates



# The Low Rate & Low Volatility Cushion!

**Volatility** – Increase in long-term volatility assumptions today = stock can be further off-trend = more uncertainty and more risk. Tempered by  $\sqrt{t}$  aspect in pricing model and smaller percentage of premium.



# The Low Rate & Low Volatility Cushion!

SPY	LEAP	Gain/Loss	DELTA	Position DELTA	VEGA	RHO
145	\$3.32	\$(10,480.00)	0.264	633.6	<b>0.4537</b>	<b>0.3177</b>

VEGA = sensitivity of option price to 1% change in volatility

If volatility rises to 20%, LEAP is no longer \$3.32:

<u>LEAP</u>	<u>Gain/Loss</u>
\$5.32	\$(5,712)

**These effects will also help those who use LEAPS as investors!**

# Conclusions

1. Present levels of interest rates and volatility make calls attractive
2. LEAPS let you mitigate effects of time decay for “purer” response
3. Use DELTA as measure of “Share Equivalent” behavior
4. Potential to manage position by maintaining original position DELTA
5. Decline in environment of increasing rates and/or volatility  
CUSHIONS THE BLOW

# Contact Information

Elliot Katz  
ekatz538@ATT.NET  
714-745-7298

Available for education & coaching  
Individuals & groups  
Hourly



**BEST OF LUCK TO ALL!**

**QUESTIONS?**