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Key Points to Know About Selling Options

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Presentation Outline

- Rights/Obligations
- Option Premium
- Time Value and Volatility
- Exercise/Assignment
- Q&A



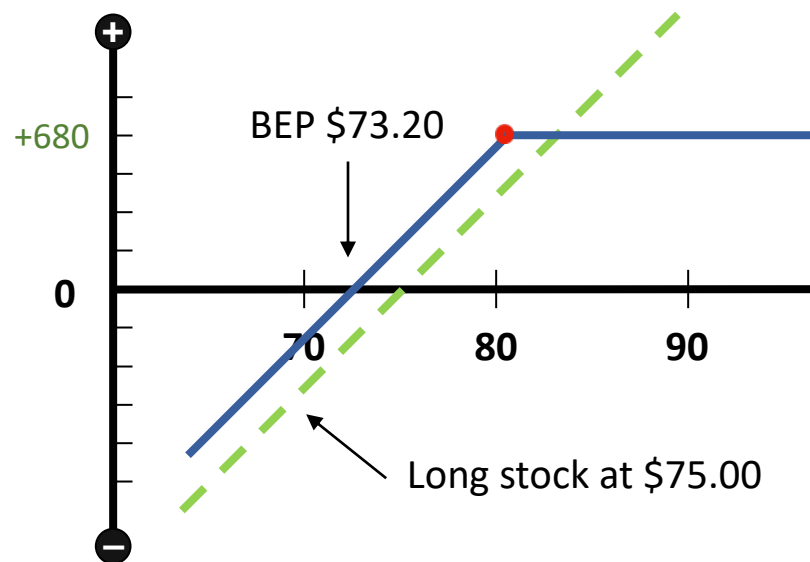
Equity Call Options

- An equity call **buyer**:
 - Pays cash debit immediately
 - Owns the **right to buy** underlying stock/ETF
 - Bullish on underlying
 - Needs stock movement > time decay
- An equity call **seller**:
 - Receives cash credit immediately
 - Has the **obligation to sell** underlying stock/ETF
 - Likely already owns shares (Covered Call)



Covered Call Example

Own 100 shares XYZ at \$75.00
Sell 1 XYZ 80 call at \$1.80



Break-even at Expiration:

Stock Price Paid –
Call Premium Received
 $\$75.00 - \$1.80 = \$73.20$

Maximum Profit if Assigned:

Effective Stock Sale Price –

- Stock Price Paid

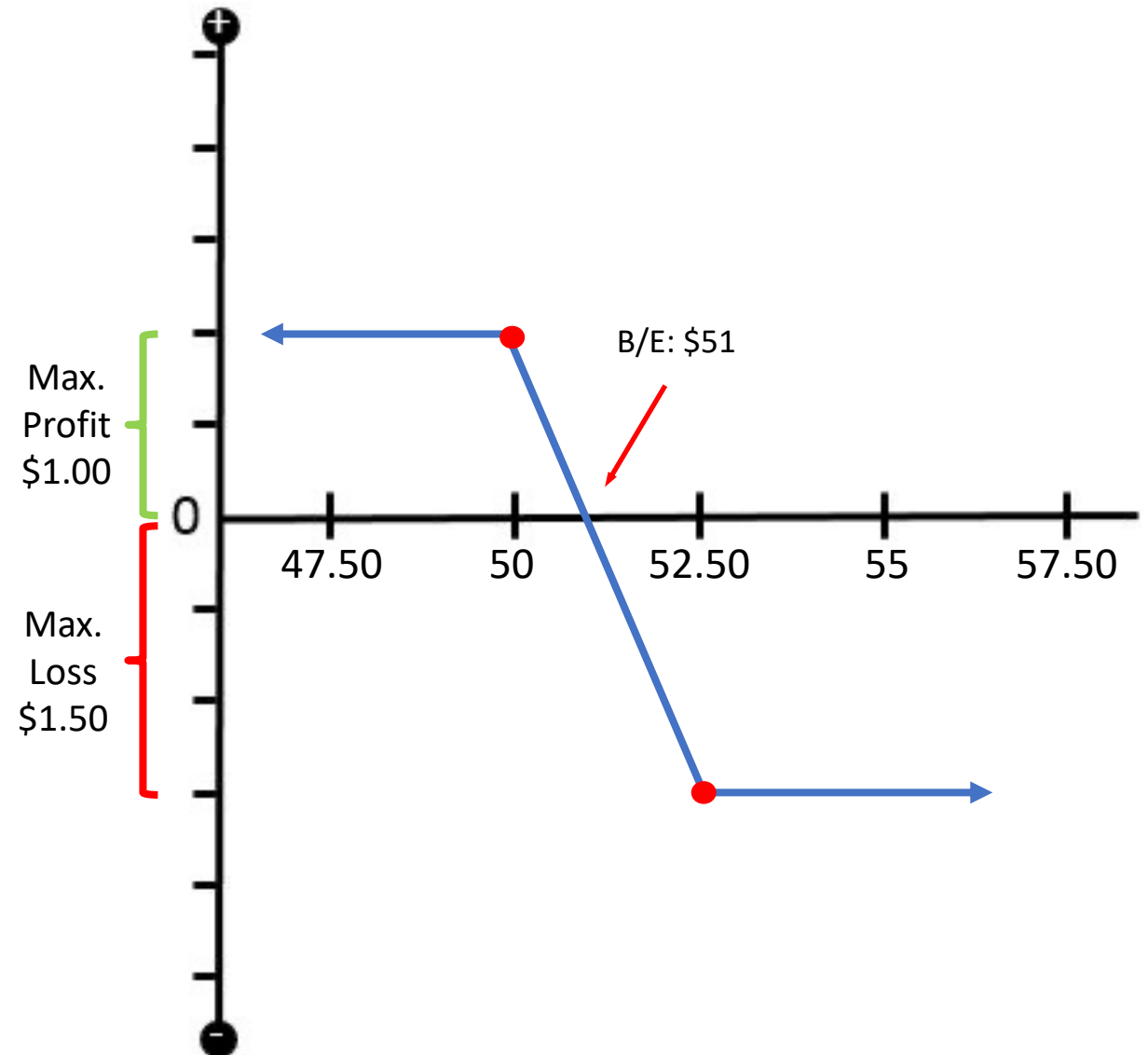
$$(\$80.00 + \$1.80) - \$75.00 = \$6.80$$

- \$680.00 Total

Bear Call Spread

Sell a lower strike call and
buy a higher strike call

- Stock @ \$50
 - Sell 1 50 Call \$1.65
 - Buy 1 52.50 Call \$0.65
- Net Credit \$1.00**



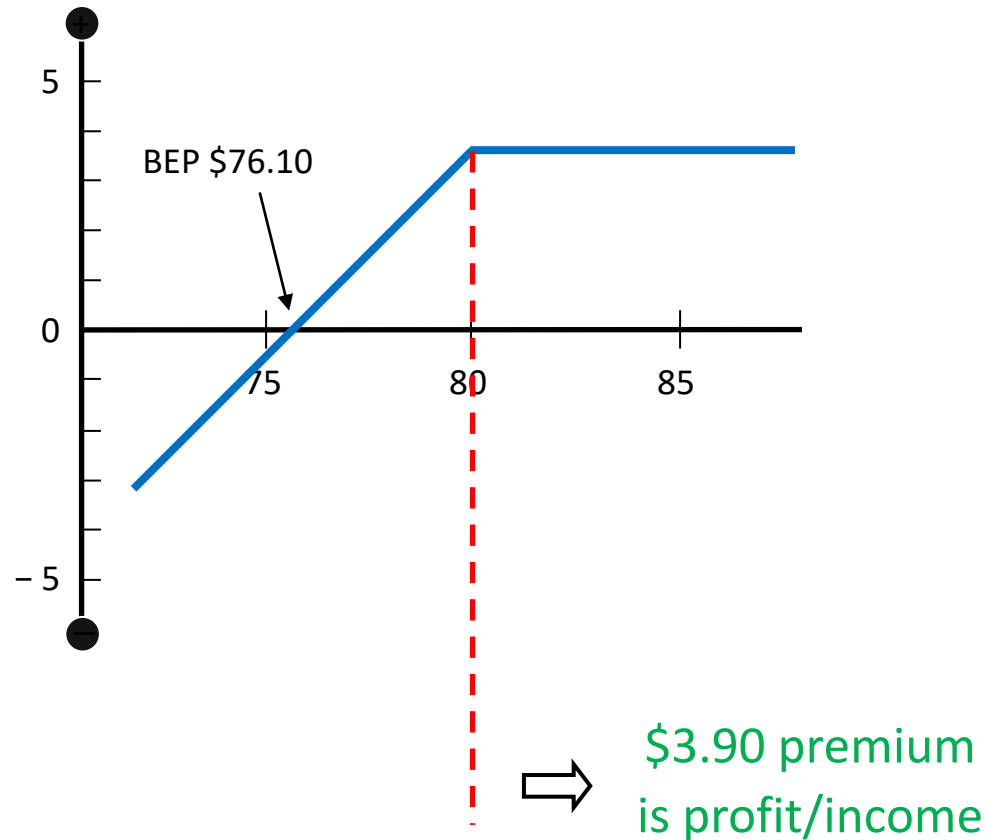
Equity Put Options

- An equity put **buyer**:
 - Pays cash debit immediately
 - Owns the **right to sell** underlying stock/ETF
 - If speculating, is bearish on underlying
 - If shares are already owned, is buying protection

- An equity put **seller**:
 - Receives cash credit immediately
 - Has the **obligation to buy** underlying stock/ ETF
 - Generate income while waiting for share price drop



Cash Secured Put Example



XYZ trading at \$81

Sell 1 XYZ 80 put at \$3.90

(47 DTE, 38% IV)

Break-even at Expiration:

$$\$80 - \$3.90 = \$76.10$$

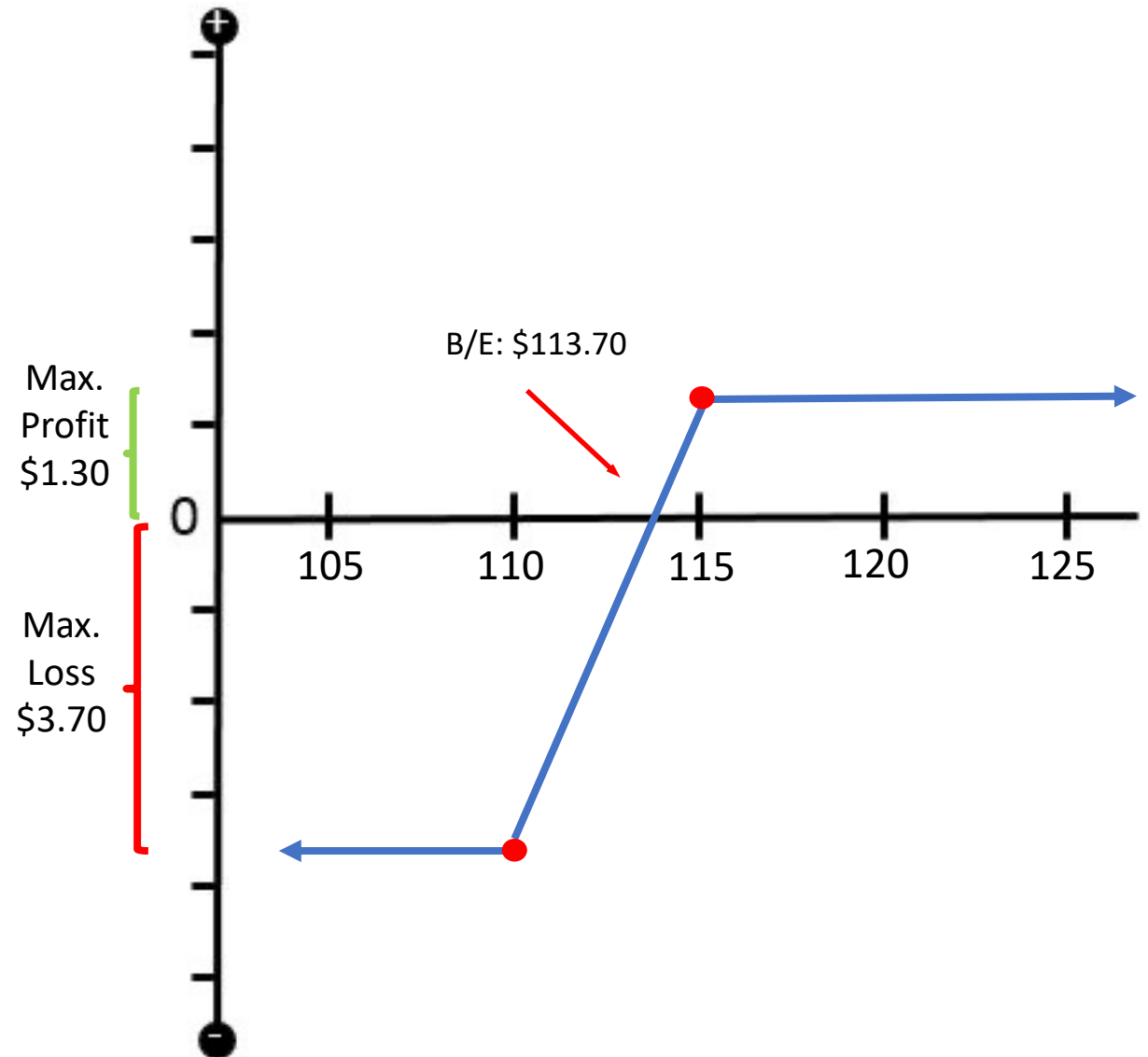
If assigned, long stock at \$76.10. Possibly start selling calls?

Not including commissions

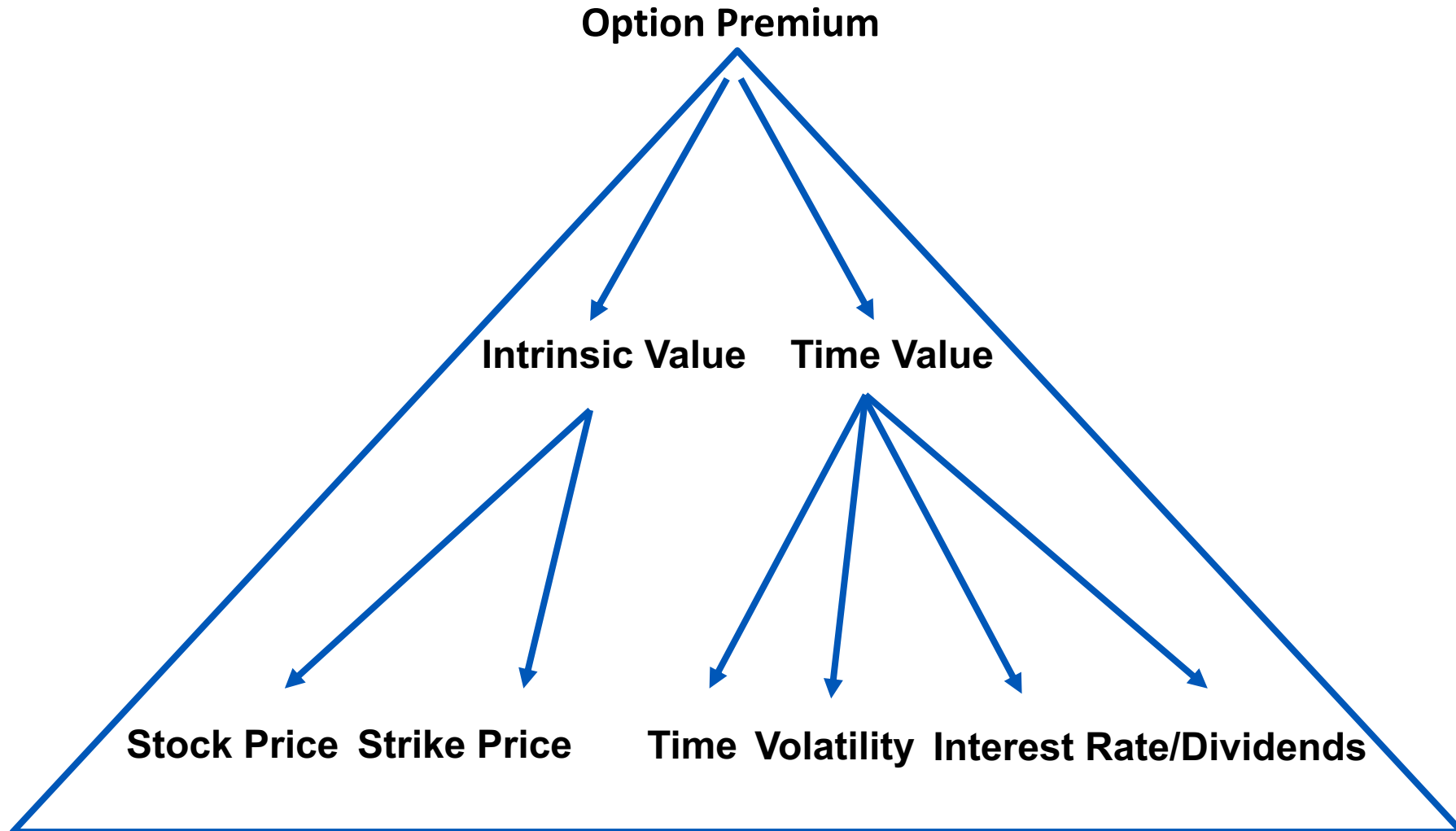
Bull Put Spread

Sell a higher strike put and
buy a lower strike put

- Stock @ \$115
 - Sell 1 115 Put \$2.00
 - Buy 1 110 Put \$0.70
- Net Credit \$1.30**



Option Premium



Time Decay (Theta)



Theta: Option value's sensitivity to time

Expected time decay in option value

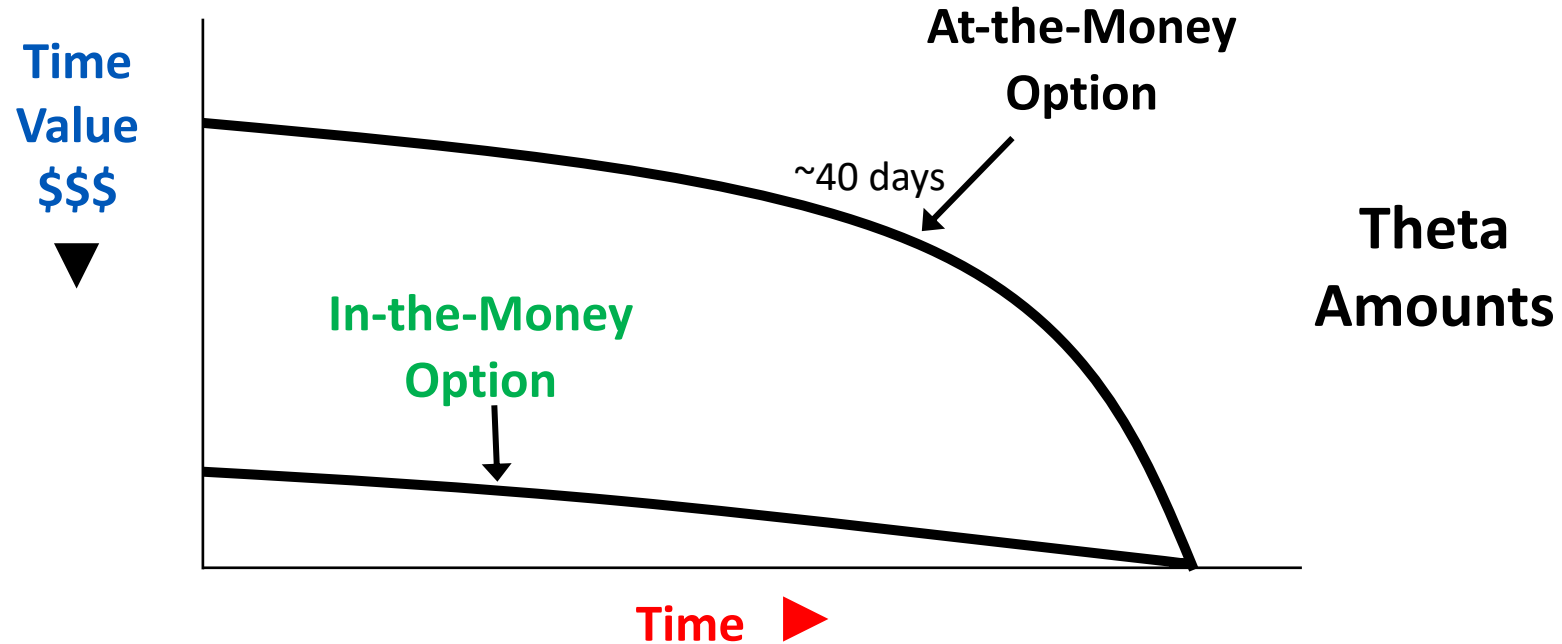
- With the passage of 1 day
- Expressed in decimal form (-.080)
- Decay is per calendar day, not per trading day
- Represents cash amount per option
- All other pricing factors constant

Calls and puts both have negative theta amounts



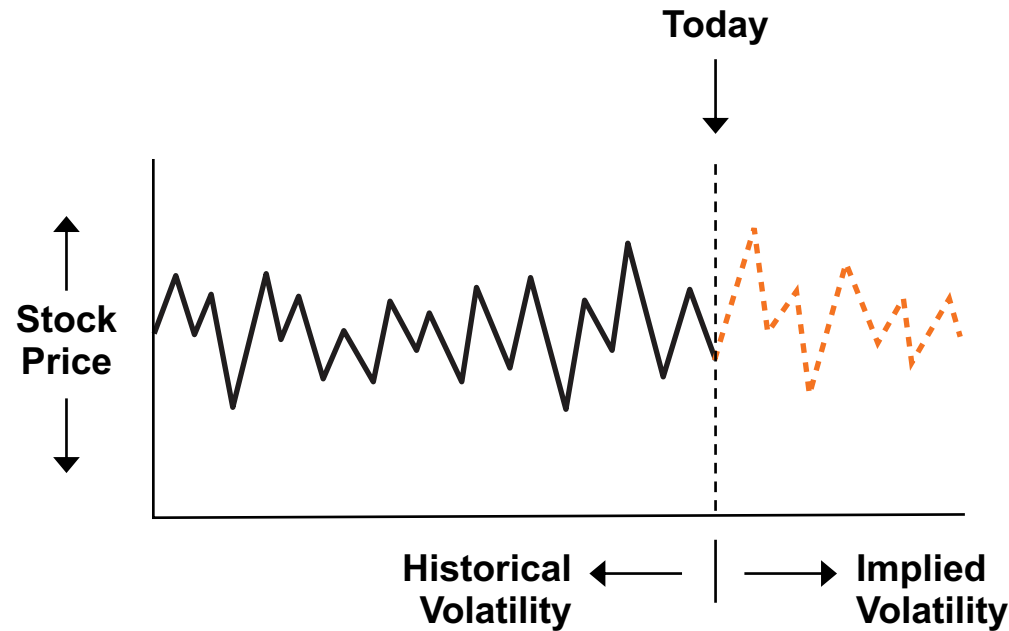
Theta

Time Decay Not Constant



Overall rate of time decay is exponential (**accelerates** towards expiry)

Implied Volatility Represents the Future



- Option implied volatility reflects current expectations of future stock volatility
- Only options have implied volatility

Implied Volatility: Effect on Option Prices

- A change in underlying stock historical volatility may or may not affect an option's market price. However...
- **Other pricing factors remaining constant, a change in implied volatility will affect option prices:**
- As implied volatility increases ↑
 - both call and put prices will increase ↑
- As implied volatility decreases ↓
 - both call and put prices will decrease ↓

Time Decay and Implied Volatility in Action

Pre-Earnings

- Stock \$100
- 13-day expiry
- 50% IV

	105 Call
Value	\$1.85
Delta	.30
Gamma	.05
Theta	.15
Vega	.10
Rho	.01

Post-Earnings

- Stock \$105
- 3-day expiry
- 30% IV

	105 Call
Value	\$1.15
Delta	.50
Gamma	.15
Theta	.20
Vega	.05
Rho	.01

Even with a \$5 increase in share price, these calls lost value due to time decay and decreasing IV



Buyers have
RIGHTS

Sellers have
OBLIGATIONS

Option buyers **exercise** their rights by exercising the option contract

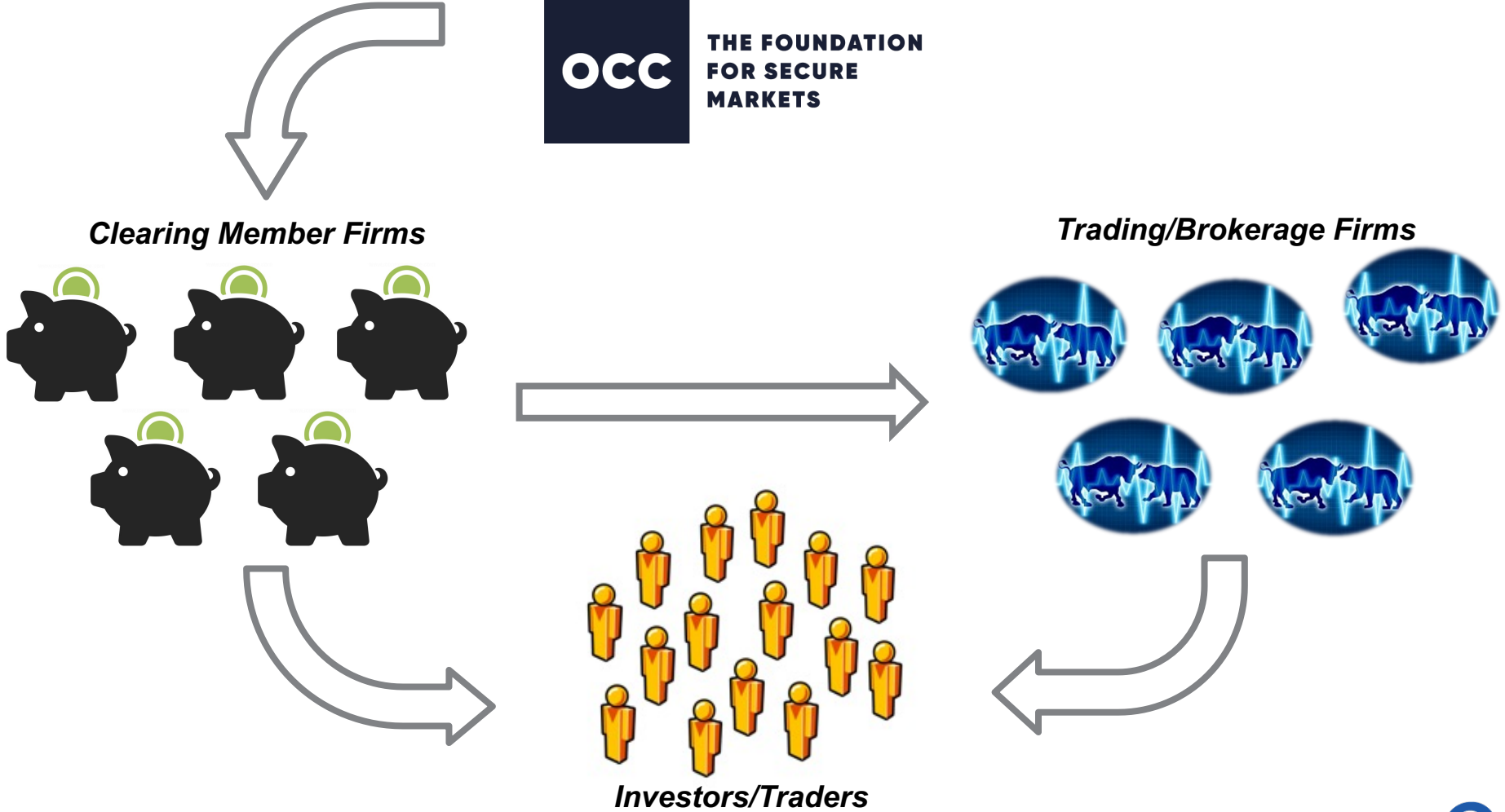
Option sellers fulfill the terms of the contract via **assignment**

What is Assignment?

- 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



Assignment Process



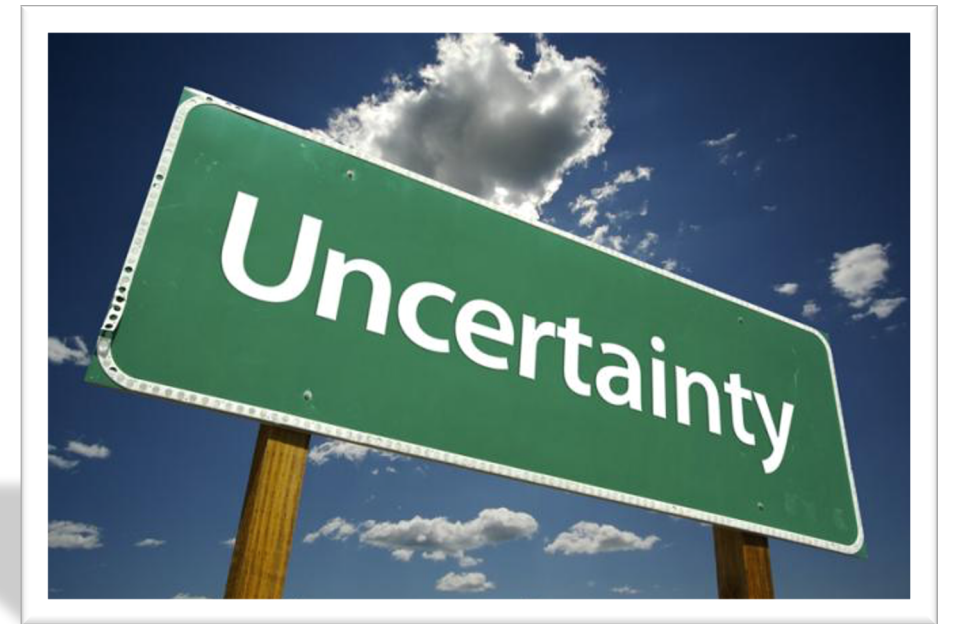
Pin Risk

What is it?

Pinning occurs when the stock settles close to the strike price at expiration. The risk is the uncertainty of the seller as to whether or not the option will finish ITM and thus be assigned

Why is it important?

Sellers need to be aware of the potential uncertainty/likelihood and risk of being assigned—including overnight gap risk and commitment of capital



Pin Risk Scenario

On expiration, a seller is short the expiring 270 strike put with shares trading just above 270 heading into the closing bell.

- If assigned, the put seller will be obligated to buy \$27,000 worth of shares per option contract (strike price x \$100)
- If the market drops after hours, the holder (buyer) of a put option which closed OTM could still exercise



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