FIN401: 13.2 Option Payoffs at Expiration

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Concept 1 - Long Position in Option

*If **Stock Price > Strike Price*** **Long Call Value (Payoff) =** Stock Price – Strike Price *If **Stock Price ≤ Strike Price*** **= 0**	*If **Stock Price < Strike Price*** **Long Put Value (Payoff) =** Strike Price - Stock Price *If **Stock Price ≥ Strike Price*** **= 0**

Key Word: YOU ARE THE BUYER

Example:
You agree to possibly buy stock for $20.
At expiry, it's worth $30.
You **CHOOSE to buy** for $20.
$30>$10 Payoff=$10

Example:
You agree to possibly sell stock for $20.
At expiry, the stock is worth $10.
You **CHOOSE to sell** for $20.
$10<$20 Payoff=$10

Concept 2 - Short Position in Option

*If **Stock Price > Strike Price*** **Short Call Value (Payoff) =** - (Stock Price – Strike Price) *If **Stock Price ≤ Strike Price*** **= 0**	*If **Stock Price < Strike Price*** **Short Put Value (Payoff) =** - (Strike Price - Stock Price) *If **Stock Price ≥ Strike Price*** **= 0**

Key Word: YOU ARE THE SELLER

Example:
You have a call option for $20.
At expiry, the stock is worth $25.
You **MUST sell** for $20.
$25>$20 Payoff=$-5

Example:
You agree to buy a stock at $20 at expiry.
At expiry, the stock is worth $10.
You **MUST buy** the stock for $20.
$10<$20 Payoff=$-10

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