

## Module 2: Intrinsic Value and Time Value

### CALL

**Intrinsic value:** is the amount by which the underlying asset price exceeds the strike price.

$$(S - K) \text{ or } \max (S-K, 0)$$

Example:

June CME stocks are trading at \$82.5 and the June CME call option is trading at \$3.5 with the strike price of \$80. What is the intrinsic value?

**Time value:** represents the amount option traders are willing to pay over intrinsic value, given the amount of time left to expiration. OR the amount that the traders are willing to pay for the potential increase in value that the option could gain before expiration.

$$\text{Option Premium} - \text{Intrinsic Value} = \text{Time Value}$$

$$\text{Time Value} + \text{Intrinsic Value} = \text{Premium}$$

## PUT

**Intrinsic value:** is the amount by which the underlying asset price is below the strike price.

$$(K - S) \text{ or } \max(K - S, 0)$$

Example:

What are the intrinsic value and time value of a CME put with the strike price of \$95, if the underlying asset is trading at \$94.98 and the option premium is \$0.03

Intrinsic value:

$$\text{Option Premium} - \text{Intrinsic Value} = \text{Time Value}$$

$$\text{Time Value} + \text{Intrinsic Value} = \text{Premium}$$