Introduction to Options

Part One – Option Input Variables

Disclosure of Risks

Options involve risk and are not suitable for all investors. For more information, read the "Characteristics and Risks of Standardized Options" before investing in options. For a copy call 203- 618-5800 or click here.

In order to simplify the computations, commissions, fees, margin interest and taxes have not been included in the examples used in these materials. These costs will impact the outcome of all stock and options transactions and must be considered prior to entering into any transactions. Investors should consult their tax advisor about any potential tax consequences.

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. Past performance is not a guarantee of future results.

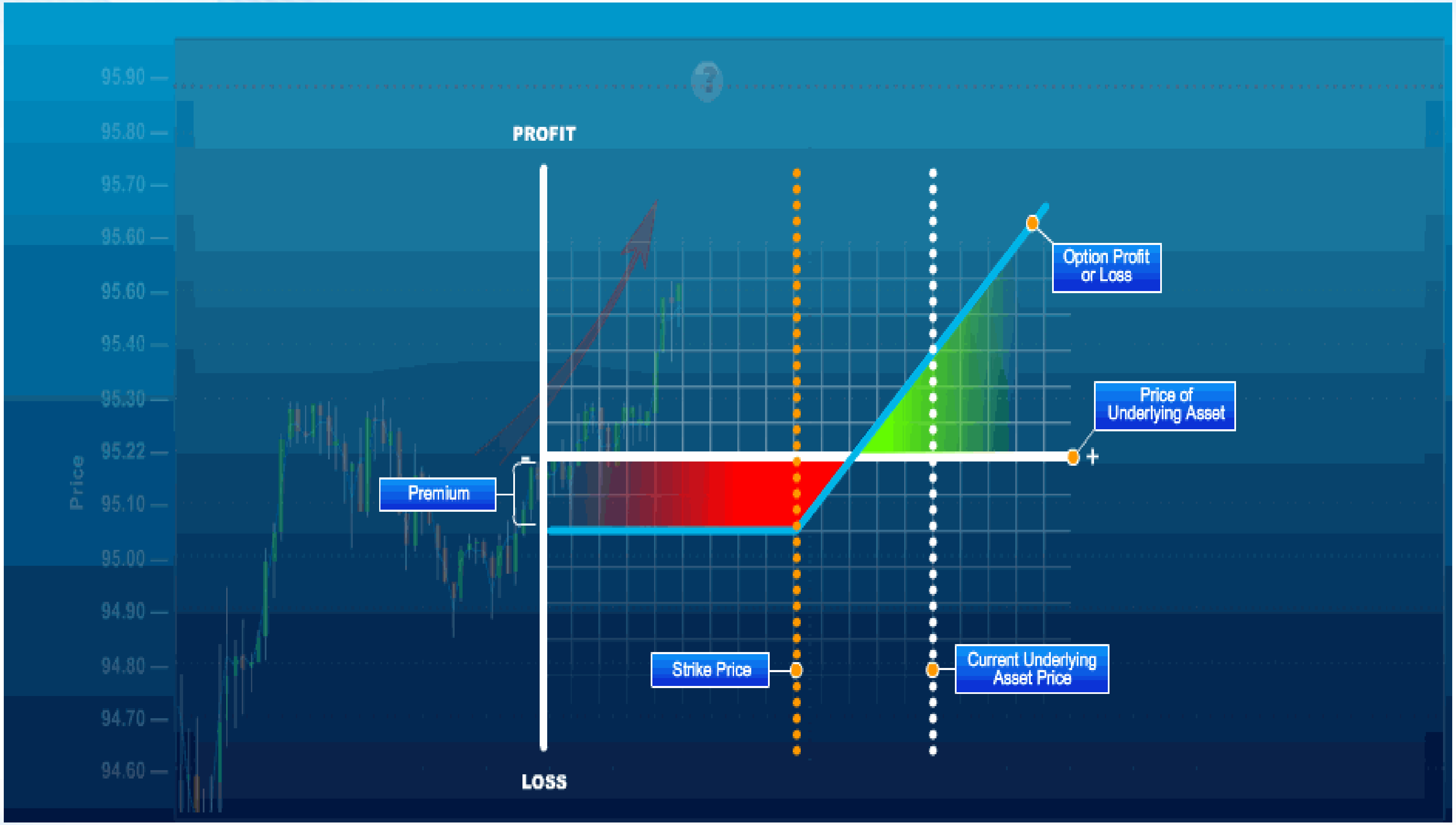
Most strategies involving futures and/or options spreads require a margin account.

Multiple leg strategies involve multiple commissions charges.

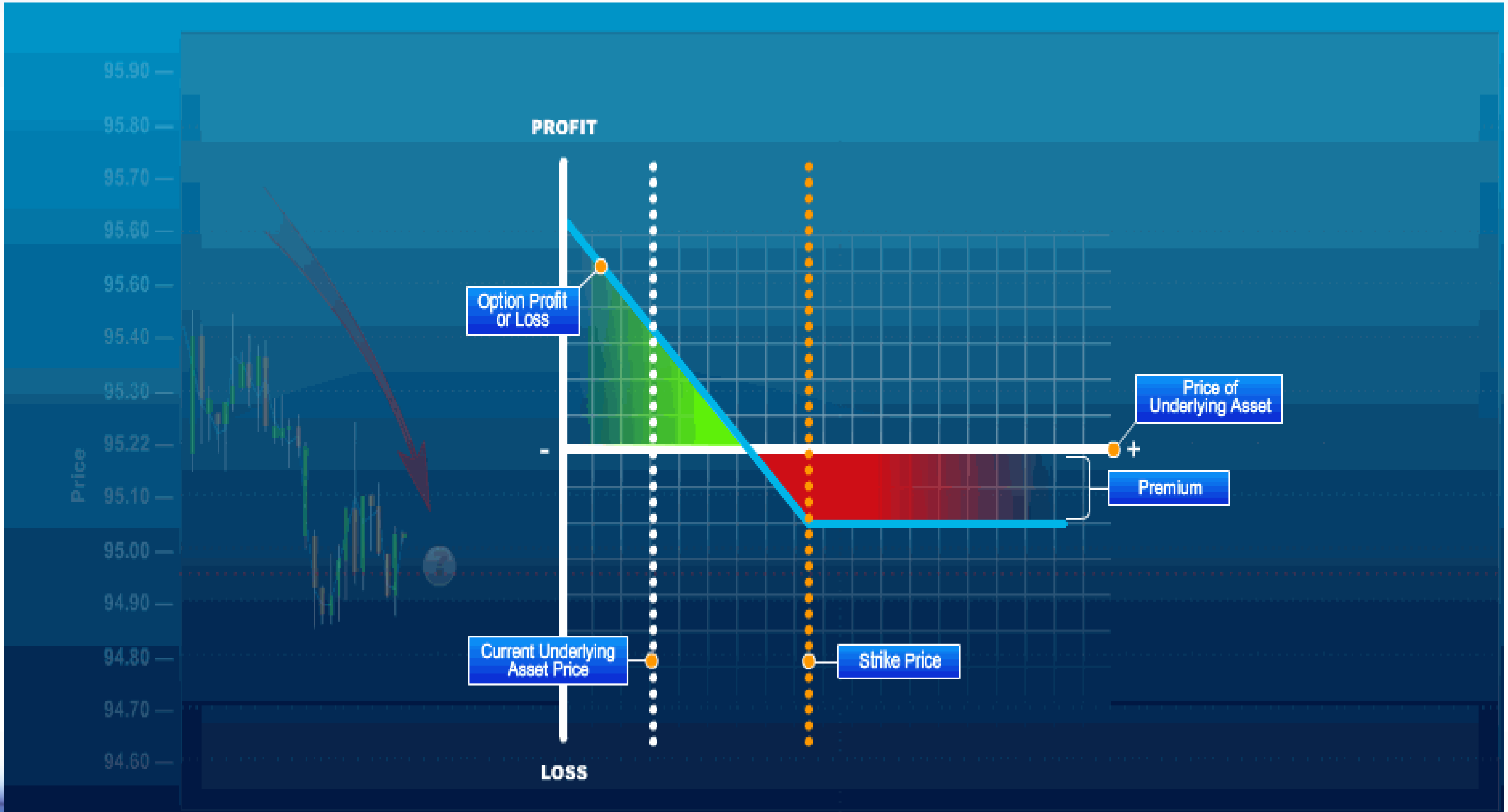
Options Pricing

- ❑ Input Variables
- ❑ Greek Risk Measurements
- ❑ Combining Options
    - IB Options Calculator

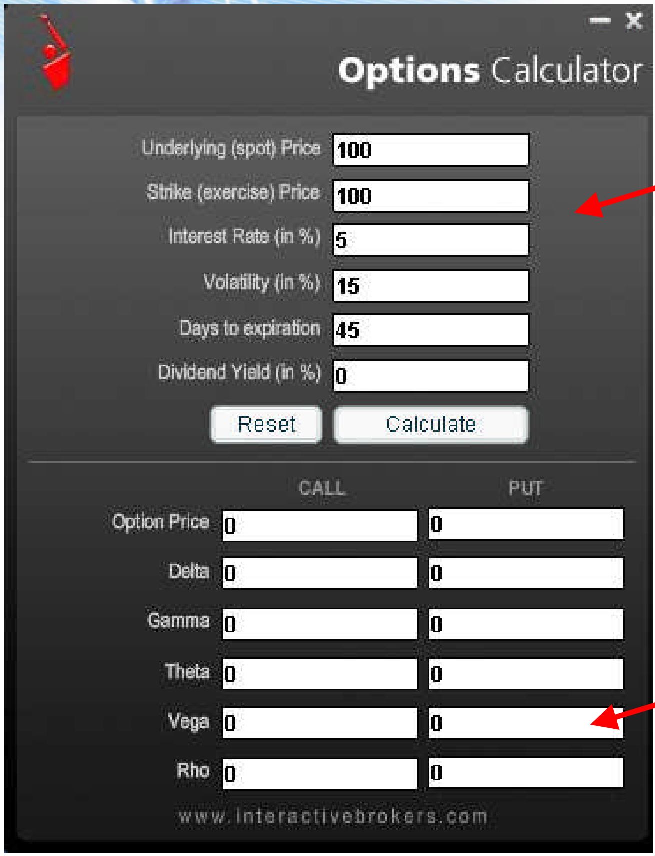
Profit & Loss Profile of a Call Option



Profit & Loss Profile of a Put Option



IB Option Pricing Calculator



User-defined inputs….

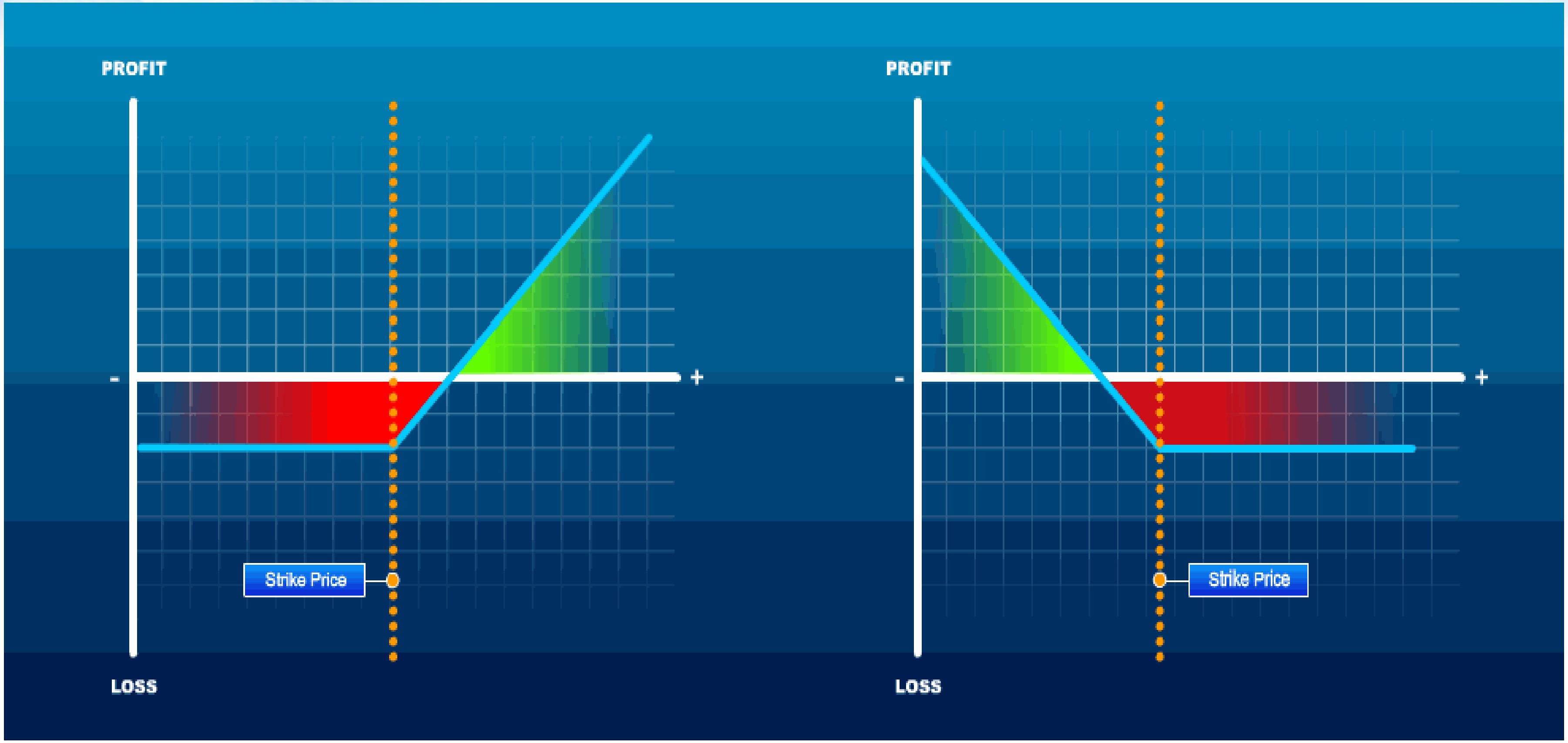
Option prices and risk outputs….

- Available for download from http://individuals.interactivebrokers.com/en/general/education/TradersUniversity.php?ib_entity=llc

Option Pricing Model Inputs

- Strike Price
- Rate of Interest
- Implied Volatility
- Underlying Asset Price
- Time Value
  - Intrinsic and extrinsic value
- Dividends, Exercise

Strike Price



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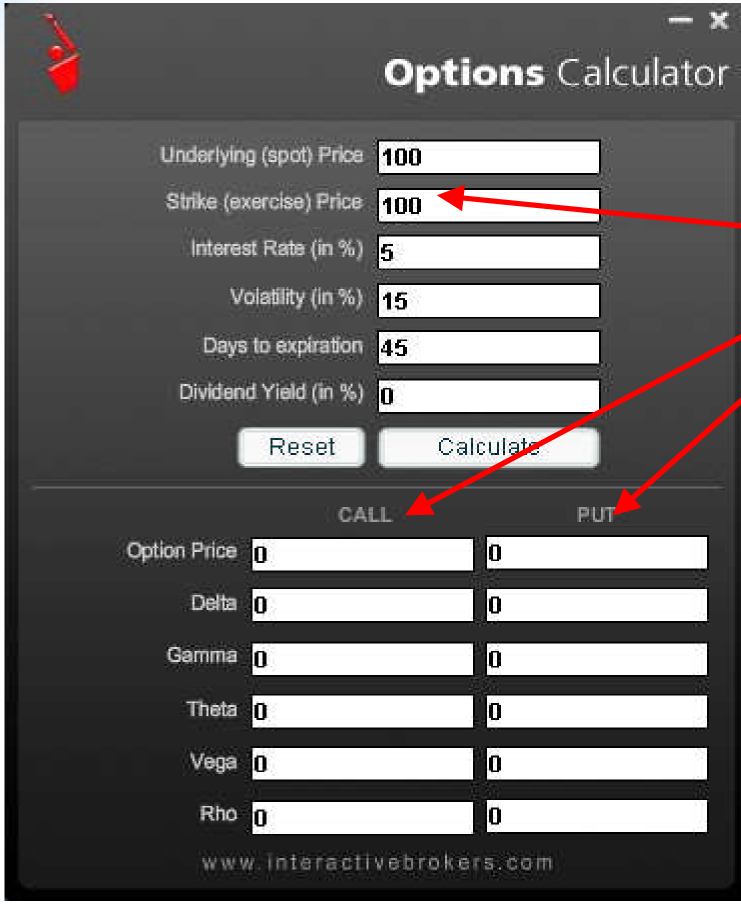
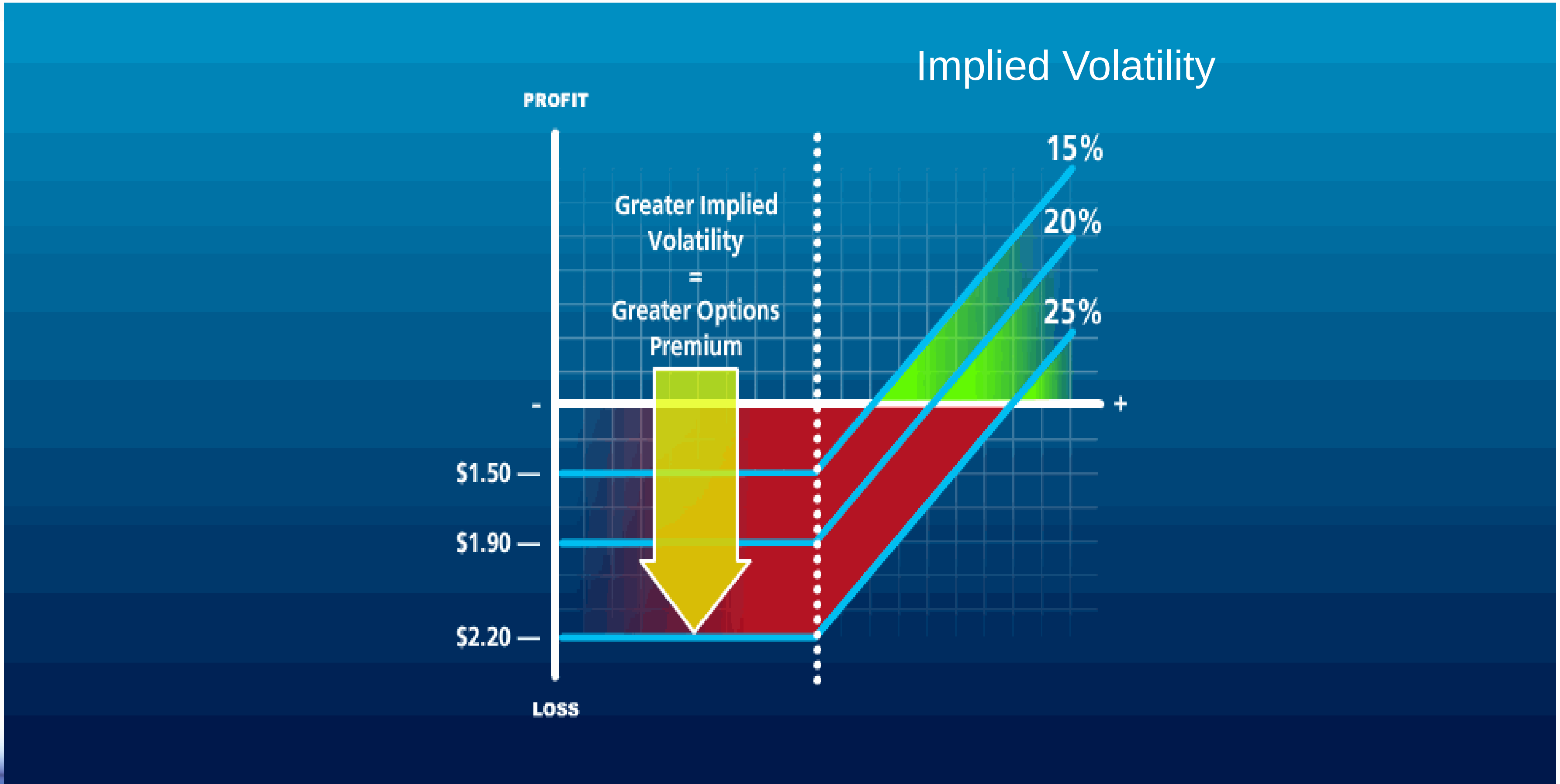
Interest Rates

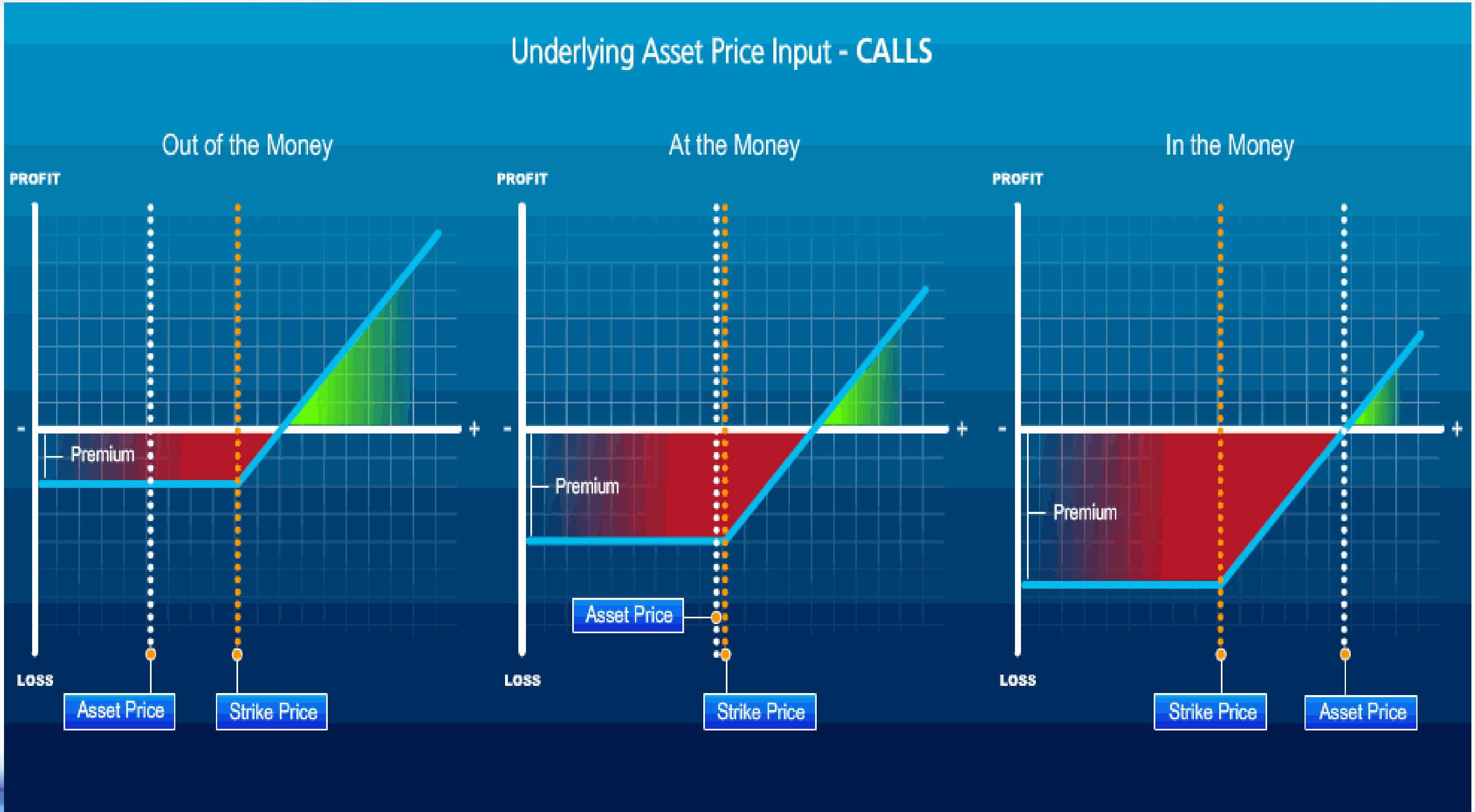


Try varying the Interest Rate field and notice the impact on the Call and Put output values

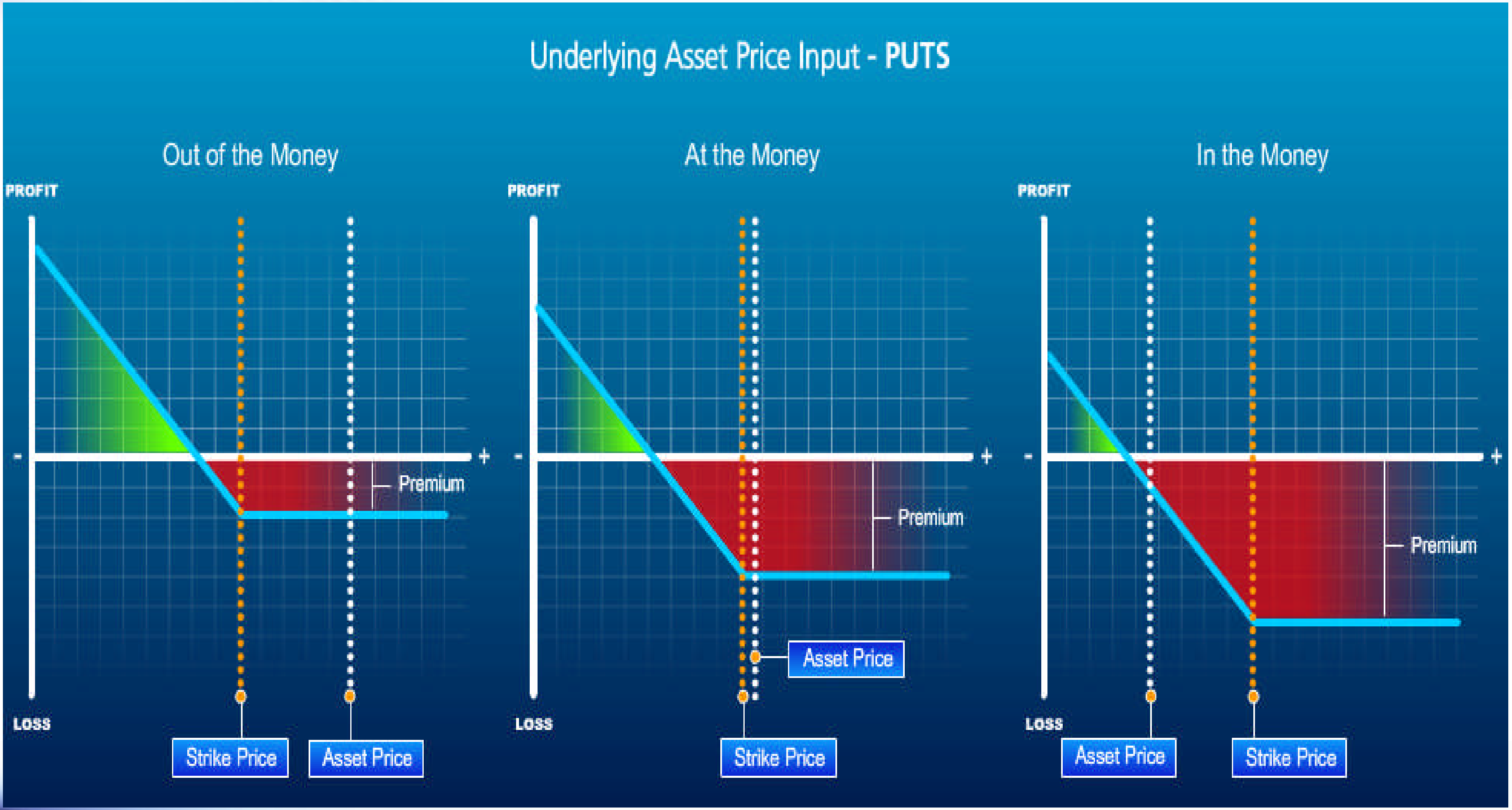
Implied Volatility



Underlying Asset Price



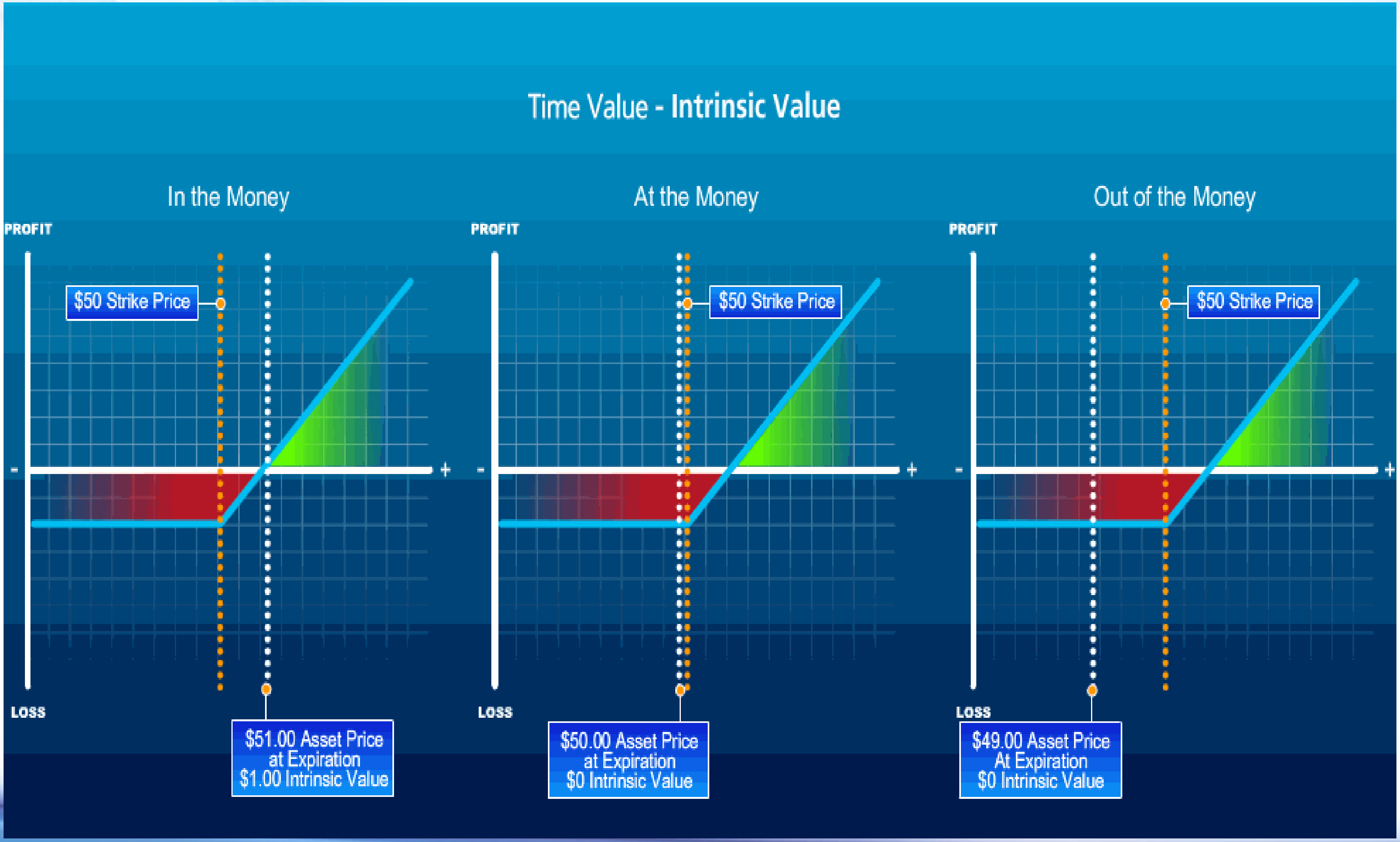
Underlying Asset Price



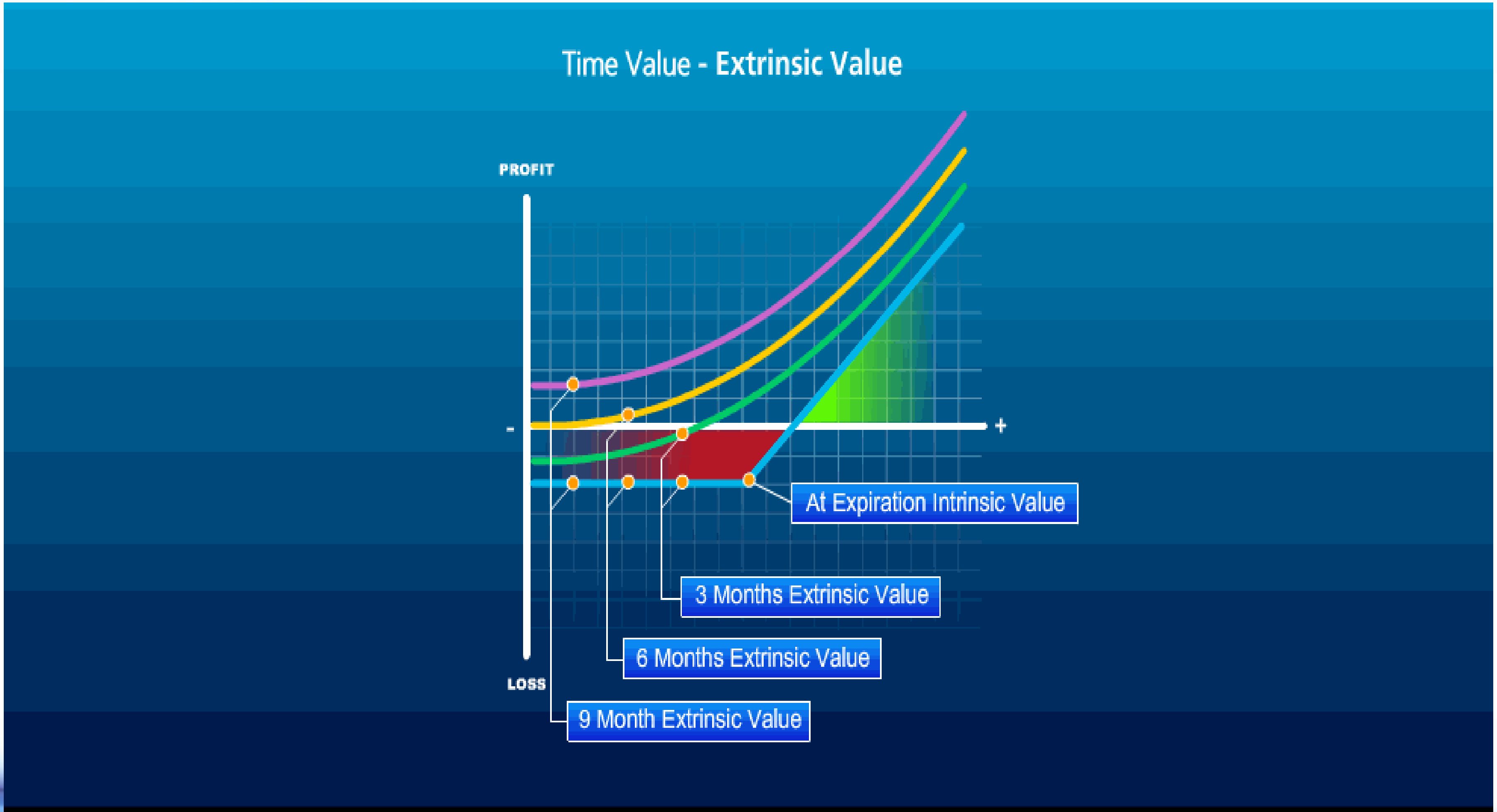
Time Value

- Current Value of an option is made up of:
  - Time Value
  - Extrinsic Value
  - Adjusted for Volatility

Intrinsic Value



Extrinsic Value



Current Value

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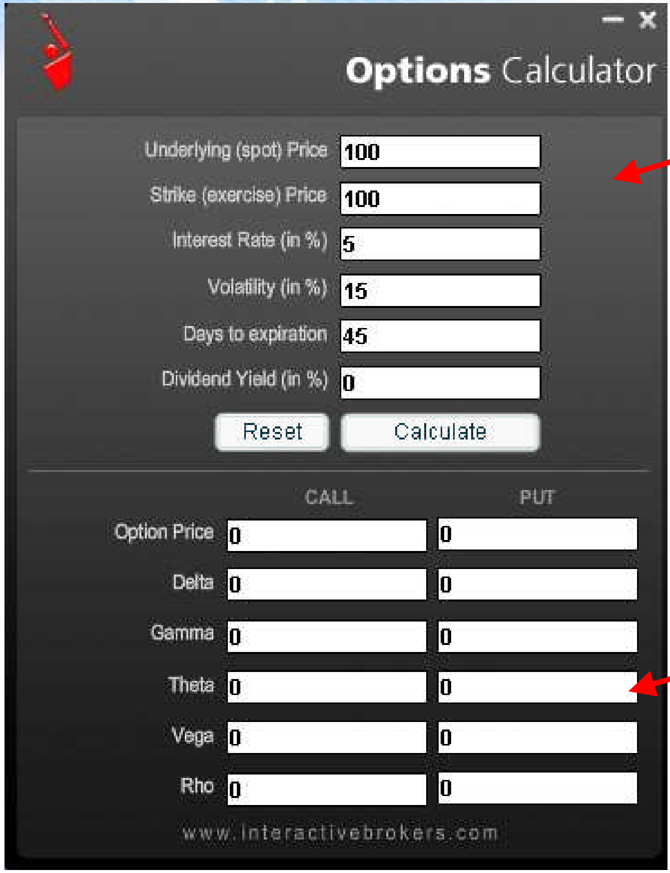
Other Factors

Option Pricing Model Inputs

- Strike Price
- Rate of Interest
- Implied Volatility
- Underlying Asset Price
- Time Value
  - Intrinsic and extrinsic value
- Dividends, Exercise

IB Option Pricing Calculator



User-defined inputs….

Option prices and risk outputs….

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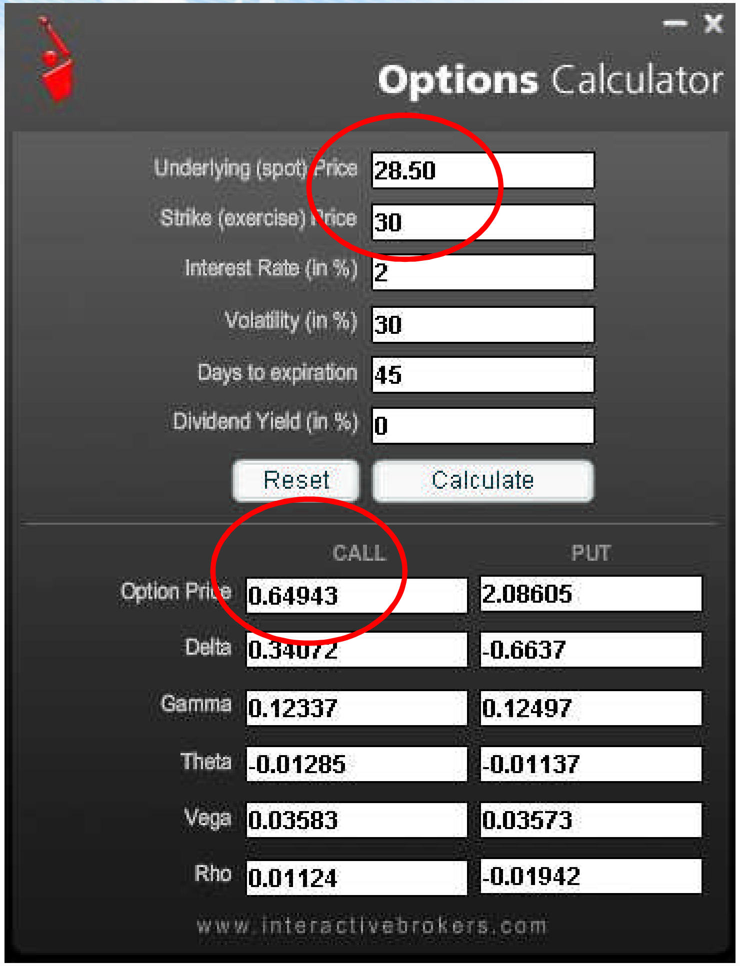
Call Option Example



- Share price $28.50
- Call premium 65 cents

Share Price Increase

Options Calculator

Underlying (spot) Price	28.50
Strike (exercise) Price	30
Interest Rate (in %)	2
Volatility (in %)	30
Days to expiration	45
Dividend Yield (in %)	0

Reset Calculate

	CALL	PUT
Option Price	0.64943	2.08605
Delta	0.34072	-0.6637
Gamma	0.12337	0.12497
Theta	-0.01285	-0.01137
Vega	0.03583	0.03573
Rho	0.01124	-0.01942

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Options Calculator

Underlying (spot) Price	29.50
Strike (exercise) Price	30
Interest Rate (in %)	2
Volatility (in %)	30
Days to expiration	45
Dividend Yield (in %)	0

Reset Calculate

	CALL	PUT
Option Price	1.05638	1.48902
Delta	0.46693	-0.53605
Gamma	0.12903	0.13021
Theta	-0.01454	-0.01303
Vega	0.04135	0.04134
Rho	0.01575	-0.01733

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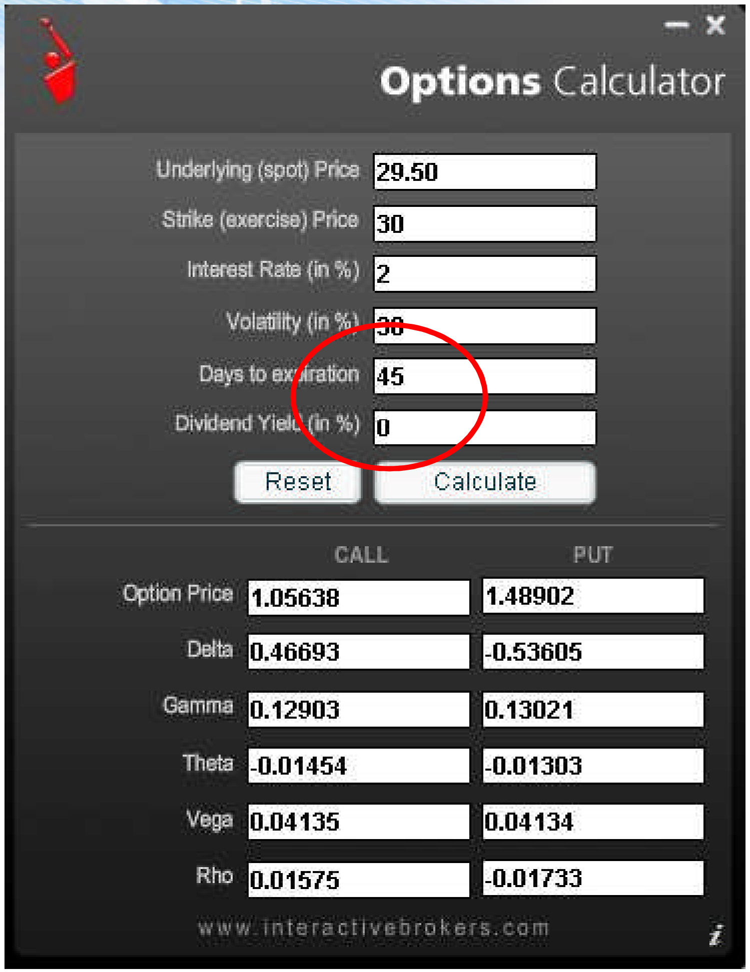
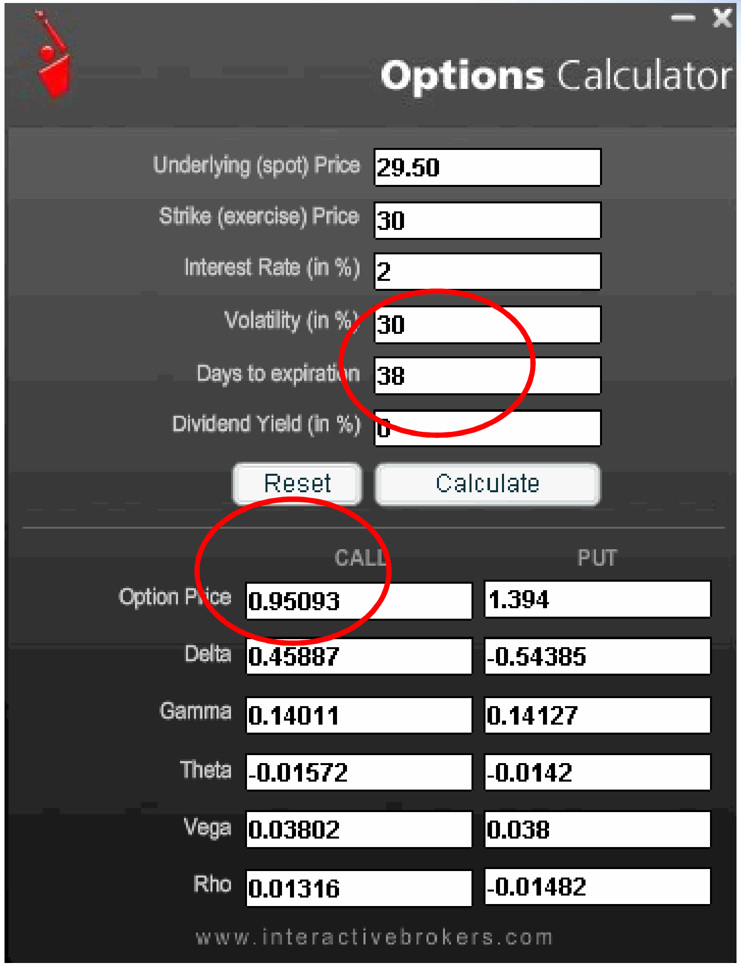
Time Decays by One Week





Conclusion and Questions

- Session 2 – Greeks
- Question time