

Glossary of Trading Terms, Definitions, and Formulas

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1. QuoteData:

- $\text{mark_price} = (\text{bid} + \text{ask}) / 2$
- $\text{net_change} = \text{last_price} - \text{close_price}$
- $\text{percent_change} = (\text{net_change} / \text{close_price}) * 100$

2. OptionData:

- $\text{mark_price_option} = (\text{bid} + \text{ask}) / 2$
- $\text{intrinsic_value_call} = \max(\text{last_price} - \text{strike_price}, 0)$
- $\text{intrinsic_value_put} = \max(\text{strike_price} - \text{last_price}, 0)$
- $\text{extrinsic_value} = \text{option_price} - \text{intrinsic_value}$
- $\text{covered_return} = (\text{extrinsic} / \text{mark_price}) * (365 / \text{days_to_expiration})$
- $\text{return_on_capital} = (\text{mark_price} * \text{dv} / -\text{bp_effect}) * (365 / \text{days_to_expiration})$
- $\text{return_on_risk} = (\text{mark_price} / \text{max_risk}) * (365 / \text{days_to_expiration})$

3. VolatilityData:

- $\text{volatility_difference} = \text{front_vol} - \text{back_vol}$
- $\text{weighted_back_volatility} = \sqrt{((\text{back_vol}^2 * t_2) - (\text{front_vol}^2 * t_1)) / (t_2 - t_1)}$
- $\text{norm_cdf} = \text{Normal CDF of } x$
- $\text{expected_move} = \text{last_price} * \exp(\text{vol}^2 / 2) * (2 * \text{norm_cdf}(\text{volatility}) - 1)$
- $\text{front_expected_move} = \text{expected_move}(\sqrt{t_1} * \text{front_vol})$
- $\text{back_expected_move} = \text{expected_move}(\sqrt{t_2} * \text{back_vol})$
- $\text{expected_move_difference} = \text{expected_move}(\sqrt{t_2 - t_1} * \text{wbv}^2)$
- $\text{market_maker_move} = \text{expected_move}(\sqrt{t_1 * (\text{front_vol}^2 - \text{wbv}^2)})$

4. FundamentalData:

- $pe_ratio = last_price / earnings_per_share$
- $dividend_yield = (dividend * freq_multiplier) / last_price$
- $market_cap = last_price * shares_outstanding$

5. VolumeData:

- $put_call_ratio = put_volume / call_volume$

6. HistoricalData:

- $historical_volatility = std(log_returns) * sqrt(252)$

7. SwingTradeAnalytics:

- $sma = \text{Simple Moving Average of close over period}$
- $ema = \text{Exponential Moving Average of close over period}$
- $atr = \text{Avg. True Range over period}$
- $rsi = 100 - (100 / (1 + RS)); RS = avg_gain / avg_loss$
- $price_change_percent = \% \text{ change in close over period}$
- $support_level = \text{rolling min of low over lookback}$
- $resistance_level = \text{rolling max of high over lookback}$