

Quantcha US Equity Option Ratings (QOR)

Quantcha invests heavily in solving the important problems faced by options investors. Through detailed customer research, we have identified some of the most common challenges and developed data solutions to meet their needs. This data is ideal for developing personal and professional tools that focus on screening stocks and trades for option potential, as well as efficiently trading volatility.

Introducing the Quantcha Volatility Rating™ (IV Rating)

For most investors, the most important aspect of trading options is [implied volatility \(IV\)](#). Given the nature and complexity of options, IV provides a more reliable measure of risk/reward than price. As the most direct measure of risk, IV rises when there is greater uncertainty and falls as those unknowns are resolved. Many efforts have been made to produce a rating system to describe how the current IV relates to the historical IV for a given stock. These relative ratings attempt to provide some insight for an investor to understand whether they should expect the IV to move up or down from its current position.

IV Rank

One method for rating the current IV is to rank it relative to its historical low/high range. For example, if the past year of IV measurements has ranged from a low of 20 to a high of 50, a current IV of 35 would be halfway between the low and high, producing an IV Rank of 50%. If the current IV were 44, then it would be 4/5 of the way from 20 to 50, resulting in an IV Rank of 80%. While IV Rank is an effective way to understand where the current IV trades relative to its extreme range, it doesn't provide much information regarding the density of historical IV readings and can be skewed by an extreme value.

IV Percentile

Another method for rating the current IV is to rank it relative to all IV measurements over the historical term. For example, if half of the past year's measurements of IV have been lower than the current IV, then the current IV Percentile would be 50%. If only 20% of the measurements were below the current IV, then the IV Percentile would be 20%. This approach effectively accounts for the density of historical measurements, although it doesn't provide the range insight of IV Rank.

Quantcha Volatility Rating™ (IV Rating)

While IV Rank and IV Percentile both provide part of the picture, neither complete the story in such a way that investors can understand the likelihood of IV movement. This is where the Quantcha Volatility Rating™ (also known as IV Rating) comes in. Using a proprietary method, our volatility rating provides an effective estimation of the likelihood of IV dropping from its current value. The method accounts for not only the historical measurements, but also their absolute range and relative density.

The rating is simple to use—it's the percentage likelihood that IV will drop from its current measurement. If the rating is 75%, then it's estimated that there is a 75% chance of the IV going down.

Included Fields

This database includes IV Rank, IV Percentile, and the Quantcha Volatility Rating™ using the past year's history for four different terms—30, 60, 90, and 360 days. For example, the 30-day rating is based on a year of history of the 30-day IVs, the 60-day rating is based on a year of 60-day IVs, and so on.

Introducing the Quantcha Earnings Crush Rate™

The most common source of uncertainty for stocks is the earnings announcement. Given the impact these announcements have on the value of a stock and its options, many investors are drawn in for the potential to profit using a variety of option-centric strategies. As a result, IV typically peaks in the days

leading into the announcement and returns to “normal” after the information has been disclosed publicly. This rapid drop in IV is often referred to as the “earnings crush”.

Whether taking long or short positions on these options, investors need to understand the impact that this earnings crush is expected to have on their options. This is where the Quantcha Earnings Crush Rate™ comes in. Using a proprietary method, our crush rate estimation provides an effective measurement for how the market is pricing the post-earnings IV crush.

The rate is simple to use—it’s provided as a percentage and optimized for at-the-money (ATM) options expiring on the first post-earnings expiration date. For example, a rate of 0.70 implies that those options are expected to see an IV drop to 70% of their current value. A rate of 1.2 implies that the IV of those options are expected to rise to 120% of their current value (which can happen when an earnings announcement is far off).

Given the nature of implied volatility relative to the earnings announcement date, the crush rate can be expected to be more accurate as the date approaches and when used for options closer to the money and closer to the expiration following earnings. It is not intended to be a guide for options expiring prior to the earnings announcement.

Included Fields

In addition to the crush rate, this database also includes the number of calendar and trading days until the stock’s next earnings announcement. These fields are extremely useful in screening potential candidates.

Introducing the Quantcha Options Liquidity Rating™

One of the biggest challenges option investors face when searching for new opportunities is that the liquidity of a stock’s options can be unpredictable. Stocks with great share liquidity do not necessarily have options with great liquidity, and the nature of liquidity measurement for stocks doesn’t fit well with options.

This is where the Quantcha Options Liquidity Rating™ comes in. Using a proprietary method, our liquidity rating provides an effective measurement for how liquid a given stock’s options have been. The approach is optimized for options expiring in around 30 days and includes option pricing, daily volume, open interest, and several other factors to distill how easy it should be to enter and exit a position at a fair price.

Liquidity Rating	Expectation
5 – Great	The top 1-2% of stocks with many options that are highly traded and have tight bid/ask spreads
4 – Good	The next 1-2% of stocks with many options that are moderately traded and have moderate bid/ask spreads
3 – Fair	The next 5-10% of stocks with some lightly traded options with moderate bid/ask spreads
2 – Poor	The next 20-30% of stocks with some lightly traded options available with wide bid/ask spreads
1 – None	All other optionable stocks

Liquidity ratings are assigned per-stock using an objective methodology. As a result, the number of stocks (and overall percentage) in any given rating may vary from day to day based on market activity and option interest. Liquidity tends to improve during times of increased volatility, such as when approaching earnings announcements or during market corrections.

Included Fields

In addition to the liquidity rating, this database also includes flag (1/0) fields indicating whether the stock offers weekly and/or LEAP options. These fields are extremely useful in screening potential candidates.

Data Details

This database covers over 9,000 optionable US equities with history to 2010. There are over 5,000 optionable stocks currently trading. Data is updated by 5:30PM ET on market days.

Data Dictionary

Field	Description
EarningsCrushRate	The expected crush rate for the ATM IV of the expiration immediately following the next earnings announcement.
CalendarDaysUntilEarnings	The number of calendar days until the next earnings announcement.
TradingDaysUntilEarnings	The number of trading days until the next earnings announcement.
LiquidityRating	The 1-5 rating of option liquidity for the stock.
HasLeapOptions	Set to 1 if the stock offers long-term (15+ month) options.
HasWeeklyOptions	Set to 1 if the stock offers weekly options over the next six weeks.
Iv30Rank	IV Rank based on 30-day IV using one year of historical data.
Iv30Percentile	IV Percentile based on 30-day IV using one year of historical data.
Iv30Rating	IV Rating based on 30-day IV using one year of historical data.
Iv60Rank	IV Rank based on 60-day IV using one year of historical data.
Iv60Percentile	IV Percentile based on 60-day IV using one year of historical data.
Iv60Rating	IV Rating based on 60-day IV using one year of historical data.
Iv90Rank	IV Rank based on 90-day IV using one year of historical data.
Iv90Percentile	IV Percentile based on 90-day IV using one year of historical data.
Iv90Rating	IV Rating based on 90-day IV using one year of historical data.
Iv360Rank	IV Rank based on 360-day IV using one year of historical data.
Iv360Percentile	IV Percentile based on 360-day IV using one year of historical data.
Iv360Rating	IV Rating based on 360-day IV using one year of historical data.