



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

The ISE Sentiment Index® (ISEE®) is a unique put/call value calculated using only opening long customer transactions to determine bullish/bearish market direction. ISEE methodology has been especially useful in determining investor sentiment at points of extreme highs and lows, as noted in several articles found at www.ise.com/isee. As an investor tool, ISEE not only is good at determining investor sentiment, but was also useful in past analyses at highlighting changes in market direction when patterns of “clusters” of highs or lows across consecutive days were established. For the purposes of this whitepaper, we used publically available 2008 data to compare ISEE values to the Dow Jones Industrial Average (DJIA) to determine if this pattern continued.

A high ISEE value indicates many more calls than puts are purchased, typically seen as a bullish investor view, and a low ISEE value typically indicates a bearish investor view of the market. In previous analyses, however, we found that at clusters of consecutive lows and highs the market moved in the opposite direction, making it a contrarian indicator.

Whitepaper Methodology

We defined “highs” as the 10% highest ISEE values and “lows” as the 10% lowest ISEE values. We did not select 10% as a threshold based on any scientific or mathematical criteria. For your own analysis, selecting a different limit or threshold may be more appropriate. The length of time included in an analysis could also affect results. For example, when we looked at the first eight months of 2008 we saw three consecutive highs in August that accurately identified a turning point in the market. However, these did not show up as consecutive highs when we looked at a full year’s worth of data due to subsequently higher values over the rest of the year. With 253 trading days in 2008, we focused on 25 highs and 26 lows (26 lows were included because #25 and #26 were identical values). ISEE highs ranged from 137 to 206, and ISEE lows ranged from 56 to 81. We plotted these values and found several consecutive highs and lows. However, there were two clusters of consecutive highs (April/May and December) and one cluster of consecutive lows (March). You may obtain free ISEE data at www.ise.com/isee and DJIA data at a variety of freely available sources for your own analysis.

Consecutive ISEE Highs occurred on:

- April 29-30 (Two consecutive highs)
- May 23-27 (Two consecutive highs)
- Dec 16-17 (Two consecutive highs)
- Dec 24-30 (Four consecutive highs)

Consecutive ISEE Lows occurred on:

- Jan 17-18 (Two consecutive lows)
- Feb 5-6 (Two consecutive lows)
- March 6-10 (Three consecutive lows)
- March 14-19 (Four consecutive lows)
- June 10-11 (Two consecutive lows)



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

A TRUE MEASURE OF INVESTOR SENTIMENT

We recognize three types of trades: market maker, firm/proprietary, and customer. ISEE uses only customer opening long transactions, which is thought to best represent bullish/bearish investor sentiment because investors often buy call and put options to express their actual market view of a particular stock. Market makers provide liquidity in the marketplace, so it is our view that such trades do not indicate a bullish or bearish view of the market. Firm and proprietary trades tend to use specialized strategies, which include hedging, so it is difficult to determine whether those trades are bullish or bearish in nature. Therefore, we believe using only customer transactions for the ISEE calculation method provides a more accurate measure of true investor sentiment than standard put/call ratios.

CALCULATING ISEE

$$\frac{\text{LONG CALLS (Opening Positions)}}{\text{LONG PUTS (Opening Positions)}} \times 100 = \text{ISEE}$$

The index is then expressed as above 100 or below 100.

ISEE > 100

More customers have opened long call options than put options.
- usually indicating a bullish sentiment.

ISEE < 100

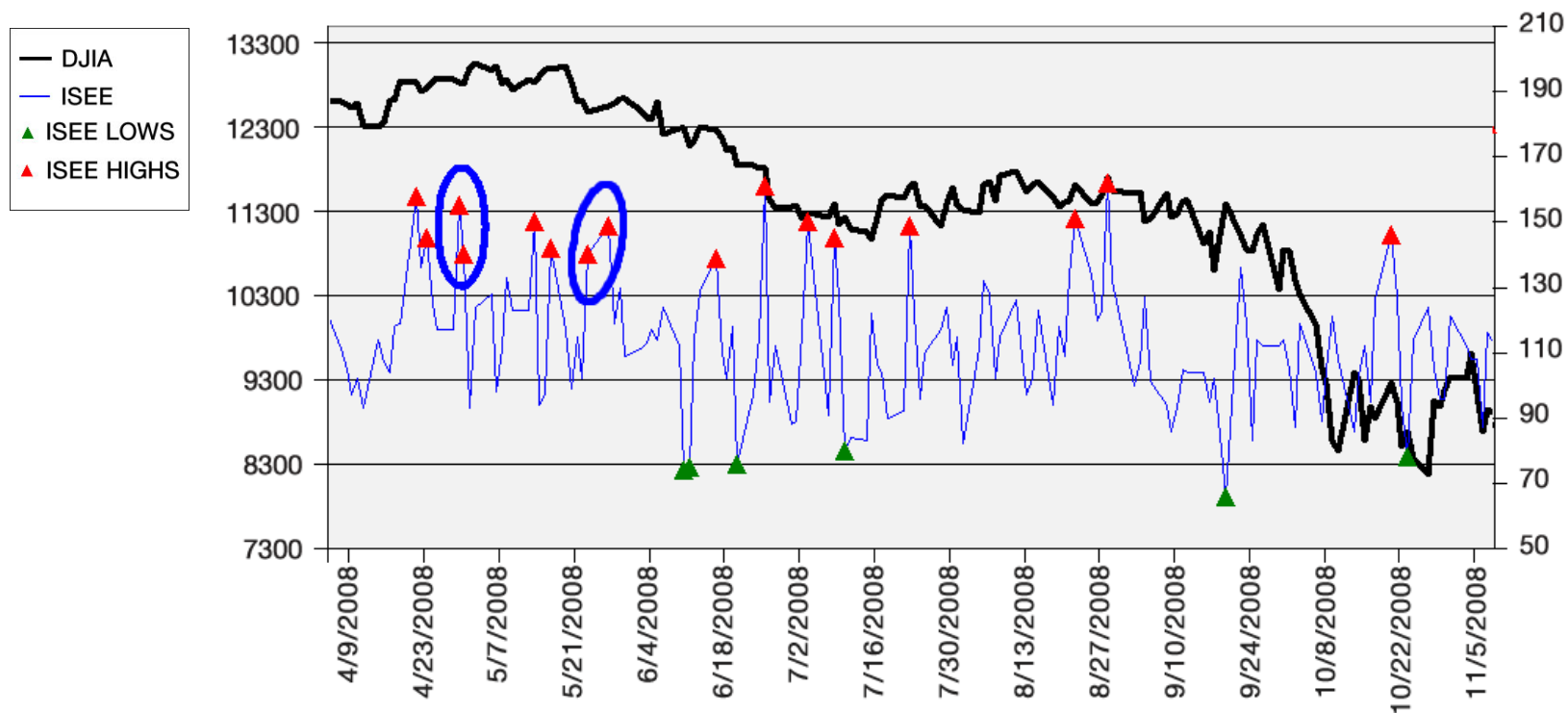
More customers have opened long put options than call options.
- usually indicating a bearish sentiment.



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

CONSECUTIVE ISEE HIGHS



Two consecutive ISEE highs occurred on April 29 and 30, and again on May 23 and 27.

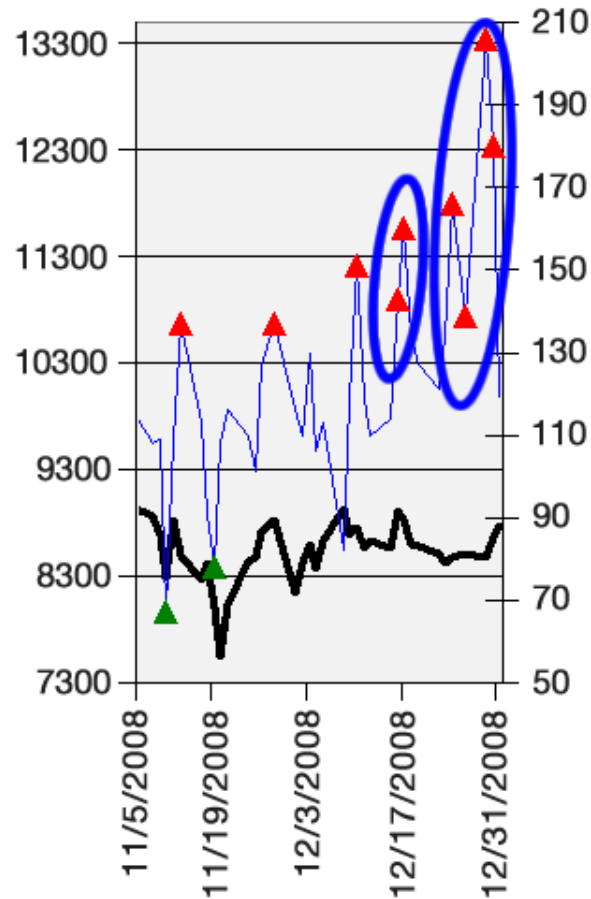
April/May

Following the cluster of consecutive lows in March, the DJIA continued to rally and hit its highest mark (13,058) for the year on May 2. From a contrarian point of view, there were signs of bearish customer sentiment, however, as ISEE hit highs on April 21 and April 23. While this is not technically consecutive ISEE highs, it is important to note that the ISEE value for the day between those highs, April 22, was 136 and that the “lowest” high as defined in this analysis (top 10% highest values) was 137. An analysis using different criteria, such as 15%, would have defined this as a “high.” Three trading days later, ISEE recorded its first “true” consecutive high for the year on April 29 and April 30. Two trading days after that, the DJIA hit its highest mark for the year, but there were further indications in May suggesting that the market was changing directions. First, there were two nonconsecutive highs on May 13 and May 16, followed by two consecutive highs on May 23 and May 27. Following this, the market steadily declined, hitting a low of 7,552 on November 20. From the end of the first consecutive highs to the bottom of the market in 2008, the DJIA dropped 41.09%!



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review



December

The market continued to decline in the second half of the year with sporadic highs and lows (please see Other Considerations on page 6), but ISEE did not produce consecutive highs until December 16 and December 17. There were then four consecutive highs from December 24 to December 30. These high values came after a rally in the Dow Jones from the November 20 lows. Given past indications that clusters of consecutive highs or lows may signal a possible change in market direction, one would expect to see the same here. There was a slight rally and dip in the new year, but at the time this analysis was completed it was too early to report. There is one caveat about highs or lows during this period, however. Because of the holidays and general market inactivity during this time of the year, volumes tend to be low and transactions of just a few thousand contracts can sway the ISEE value greatly.

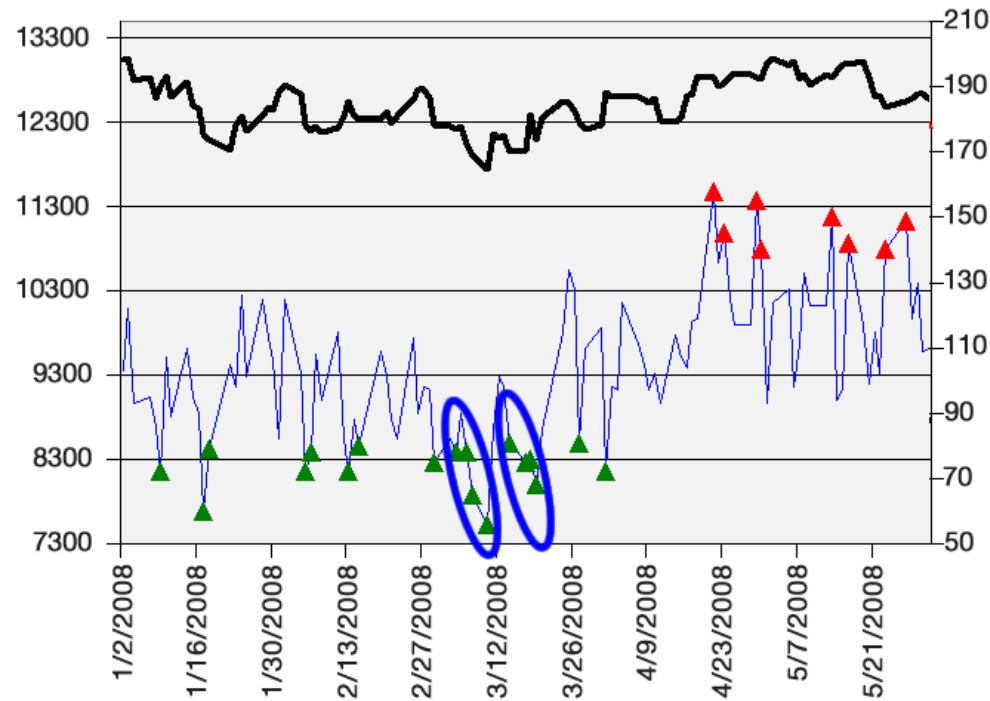
Two consecutive ISEE highs occurred on December 16 and 17, followed by four consecutive highs on December 24, 26, 29 and 30.



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

CONSECUTIVE ISEE LOWS



Three consecutive ISEE lows occurred on March 6, 7 and 10, followed by four consecutive lows on March 14, 17, 18 and 19.

March

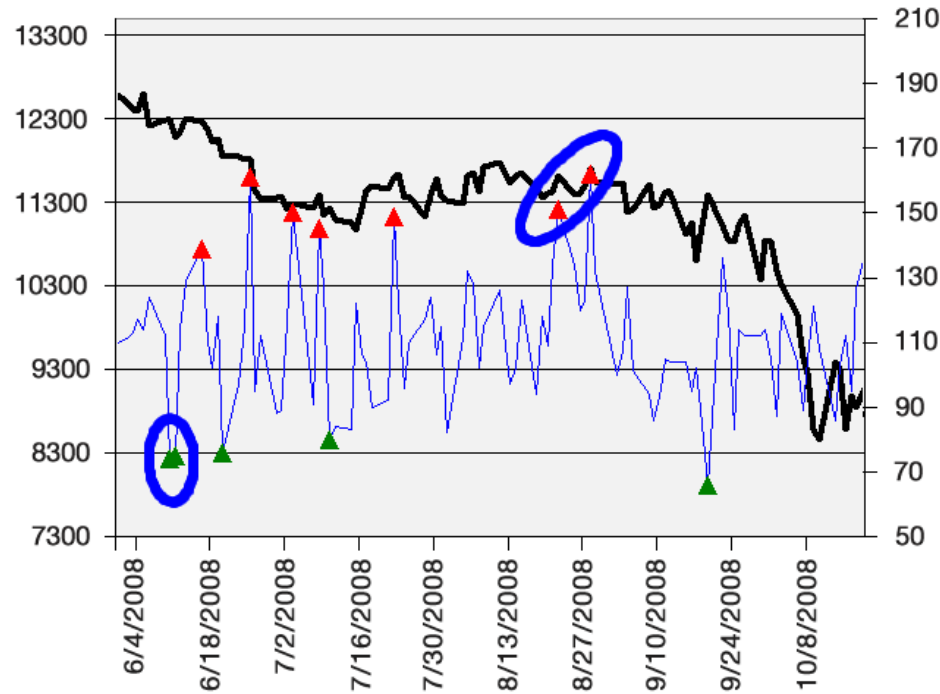
There were three consecutive low ISEE values from March 6 to March 10, followed by four consecutive low ISEE values just three trading days later from March 14 to March 19. At the end of the first group of consecutive lows, on March 10, the DJIA closed at 11,740. The market rallied slightly after March 10 and closed at almost 12,100 at the end of the second group of consecutive lows on March 19. After this, the market continued to rally and closed at its highest for the year (13,058) on May 2, two days after the year's first consecutive ISEE highs. During this timeframe, the DJIA rose 11.23%.



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

OTHER CONSIDERATIONS



July/August Rally & Decline

As the market continued to decline in the second part of 2008, there was one interesting anomaly, which we highlighted in our analysis of the first eight months of 2008 (found at www.ise.com/iseewhitepapers). On June 10 and June 11, ISEE produced two consecutive lows. While there were no other consecutive lows around that time, which would have resulted in a cluster of consecutive lows and may have therefore signaled a possible change in market direction, it is an interesting anomaly because the DJIA continued to decline before rallying slightly around July 16. Following this rally, we did have two ISEE highs on August 22 and August 28, but these were not consecutive, which could be seen as an indicator of the market decline that followed. As previously noted, the length of time used in an analysis could affect results. In our last whitepaper, which was published last September that covered the first eight months of 2008, we indicated this as an area to watch because we found three consecutive highs at that time. Once we looked at a full year of data, however, these three highs no longer qualified as a cluster. Again, in your own analysis you may want to consider modifying the timeframe of the analysis, whether you use a trailing average over several months, etc. since the timeframe can affect your analysis.



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

What it Means

Past analyses of ISEE values vs. market indices (DJIA and S&P 500) seemed to suggest that clusters of consecutive ISEE highs or lows may appear to signal changes in market direction, and usually the direction of the turn was contrarian to investor sentiment. By analyzing the data for ISEE vs. DJIA for all of 2008, we see this same pattern. It appears that the ISEE Index may be a good tool and useful contrarian indicator for potentially identifying turns in the market when clusters of extreme readings appear to occur.

Please note: Past whitepapers are available at www.ise.com/iseewhitepapers.

ISE Sentiment Index (ISEE) - Message (HTML)

From: isee@ise.com Sent: Thu 2/14/2008 4:45 PM
To: isee@ise.com
Cc:
Subject: ISE Sentiment Index (ISEE)

ISEE		
ISEE	88	2/14/2008
10-Day Moving Average	94	2/1/2008-2/14/2008
20-Day Moving Average	97	1/17/2008-2/14/2008
50-Day Moving Average	107	12/4/2007-2/14/2008
52-Week High	212	5/7/2007
52-Week Low	51	8/7/2007

[View/Export All Historical Data](#)

Example of daily email delivered after market close.

Getting ISEE Data

ISEE is free, and there are two ways to get it:

- Visit www.ise.com/isee to get 20-minute intra-day updates starting at 9:50 am ET, and historical data can be downloaded.
- Sign up to receive a daily email with the ISEE closing values. Check your spam filters or bulk folders as your email system may miscategorize this email. To ensure ISEE emails gets to you, add ise.com to your email system's list of approved/whitelisted domains.



ISE MARKET DATA

ISEE vs. Dow Jones Industrial Average 2008 in Review

OTHER AVAILABLE DATA

ISE Depth of Market Feed

www.ise.com/depth

This feed provides a consolidated view of tradable prices and liquidity beyond the top of the book. Provides real-time order book information, which shows aggregated quote and order volume for the top five price levels.

ISE Spread Book Feed

www.ise.com/spreads

This feed provides subscribers with a complete view of all multi-legged strategies including Complex, Buy-write and Delta Neutral orders. The messages are defined using the FIX 5.0 standard for market data, and follow the best practices outlined by the FIX Market Data Working Group.

ISE HOT Data™

www.ise.com/hotdata

Developed in response to member, academic and investor requests for full OPRA tick data to help improve trading efficiency. Typical uses include back-testing of trading models, post-trade analysis, compliance, and time and sales queries.

ISEE Select XML Feed

www.ise.com/iseeXML

Unlimited access to intra-day updates of ISEE values for all securities that trade options at ISE. This XML feed provides the ability to develop analytical models based on ISEE calculated values.

ISE Open/Close Trade Profile

www.ise.com/openclose

This end-of-day file provides extensive underlying put/call data for every series that can be used to create custom analytical models and test trading strategies.

ISE Market Data Put/Call Widget

www.ise.com/marketdata

Based on ISE proprietary put/call data updated every hour. Click individual symbols to get stock price, volatility information, options prices and volume. Only opening long customer trades used for a more accurate investor sentiment.

Options involve risk and are not suitable for all investors. Prior to buying or selling an option, a person must receive a copy of Characteristics and Risks of Standardized Options (ODD). Copies of the ODD are available from your broker, by calling 1-888-OPTIONS, from The Options Clearing Corporation, One North Wacker Drive, Suite 500, Chicago, Illinois 60606 or from the OCC Website. The information provided in this material is solely for general education and information purposes and therefore should not be considered complete, precise, or current. Many of the matters discussed are subject to detailed rules, regulations, and statutory provisions which should be referred to for additional detail and are subject to changes that may not be reflected in this material. No statement herein should be construed as a recommendation to buy or sell a security or to provide investment advice. The inclusion of non-ISE products or services should not be construed as an endorsement or an indication of the value of any such product or service.

The ISE Sentiment Index® and ISEE® are trademarks of the International Securities Exchange, LLC. All other trademarks are the property of their respective owners. Copyright 2009. International Securities Exchange, LLC. All rights reserved