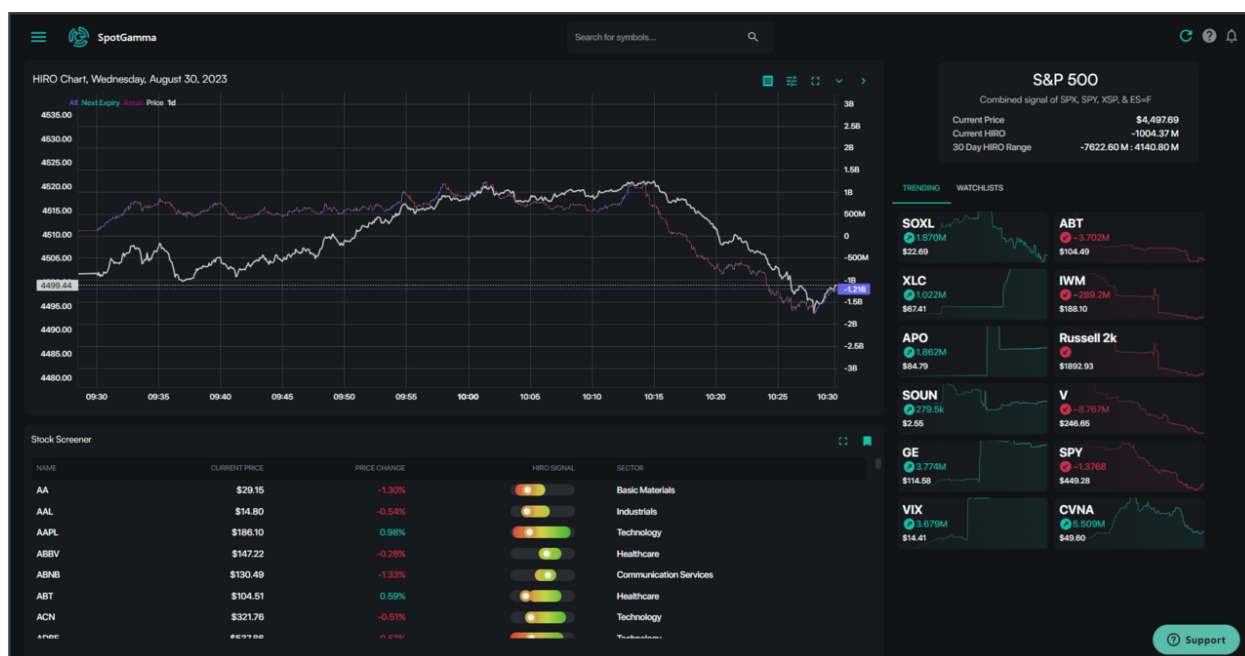


HIRO by SpotGamma User Guide

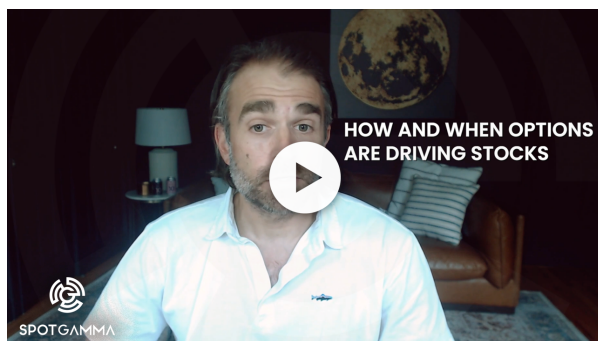
Last Update: January 3, 2024

HIRO by SpotGamma (Hedging Impact of Real-Time Options) monitors all options trades, in real time, across US stocks, indices and ETFs. By applying SpotGamma's proprietary algorithm to each transaction, HIRO translates millions of individual options trades and their estimated impact on the markets into easy-to-read tables and graphs.

To launch the SpotGamma HIRO app type **APPS SPOTGAMMA <GO>** then follow the prompts to start your free two-week trial by clicking **TRIAL <GO>**.



SpotGamma HIRO displays the real-time impact options are having more than 5,000 market securities



[VIDEO: Welcome to HIRO \(2:11\)](#)



[VIDEO: HIRO As Mean Reversion Indicator \(1:28\)](#)

JUMP TO TOPICS

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HIRO Chart Views

TOTAL OPTIONS VIEW

Total Options View displays the real-time impact of both puts and calls on an underlying security.

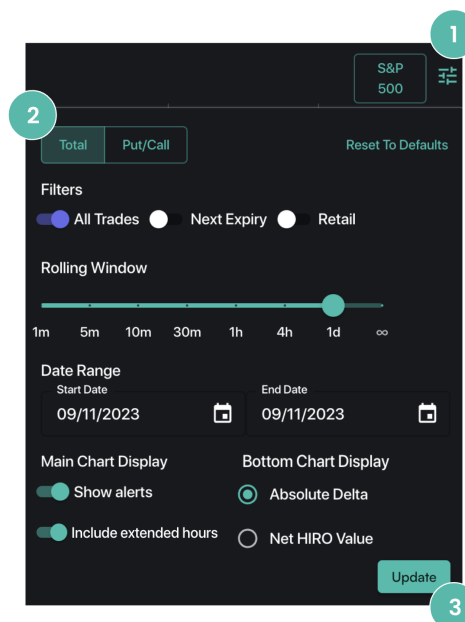


1. X-Axis
Reflects the trade time

2. Y-Axis
(Left) Pricing of the underlying security
(Right) Total estimated hedging pressure from options flows

3. White Line
Displays the live price on underlying security

4. Candlestick Line
The purple and red line displays the total hedging pressure from all options trades. Upward movement in the candlestick reflects the hedging impact of calls bought and puts sold. Downward movement reflects calls sold and puts bought.



By default, Total Options View is set to display All Trades. To ensure the "All Trades" Filter is selected:

1. Click the HIRO Settings icon
2. Verify All Trades is selected
3. Click Update

Pro Tip!

The Total Options View is the best way to start visualizing options impact before you customize your view and explore more detailed functionality.

PUTS VS. CALLS VIEW

Puts vs. Calls View allows traders to isolate the impact of puts and calls, individually, within HIRO.



Orange Line (Calls)	Blue Line (Puts)
---------------------	------------------

1. Rising

This reflects the net impact of call buying (bullish)

2. Falling

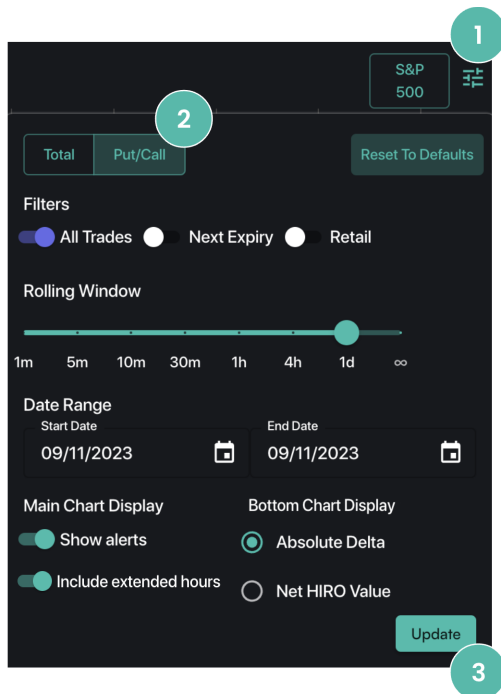
This reflects the net impact of call selling (bearish)

3. Rising

This reflects the net impact of put selling (bullish)

4. Falling

This reflects the net impact of put buying (bearish)



Switch from Total Options View to Puts vs. Calls:

1. Click the HIRO Settings icon
2. Toggle from Total to Put/Call
3. Click Update

Pro Tip!

The Puts vs. Calls View displays the direct impact of each type of option on the market. Call buying and put buying can reflect higher speculation and imply a higher likelihood of a larger price move than call selling or put selling.

HIRO Chart Filters

NEXT EXPIRY FILTER (TOTAL OPTIONS VIEW)

The Next Expiry Filter in Total Options View allows traders to see how and when options that expire the same day (ODTE) or on the next listed expiration are driving stocks, indices, and ETFs.



1. X-Axis

Reflects the trade time

2. Y-Axis

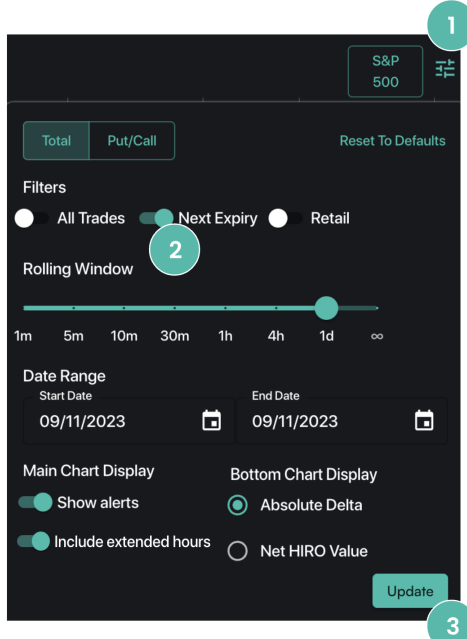
(Left) Pricing of the underlying security
(Right) Total estimated hedging pressure from options flows (\$)

3. White Line

Displays the live price on underlying security

4. Green Line

The green line displays the total hedging pressure from all same-day or next expiration options trades. Upward movement in the green line reflects calls bought and puts sold. Downward movement reflects calls sold and puts bought.



Switch from All Trades to Next Expiry:

1. Click the HIRO Settings icon
2. Toggle from All Trades to Next Expiry
3. Click Update

Pro Tip!

The Next Expiry Filter lets you see the activity of short-term traders. This next expiry options flow often doesn't have as strong a follow-through as longer-dated options positions because these options have less time to expiration.

NEXT EXPIRY FILTER (PUTS VS. CALLS VIEW)

The Next Expiry Filter in Puts vs. Calls View allows traders to isolate the impact of puts vs. calls specifically for options that expire the same day (0DTE) or within a few days.



Green Line (Calls)

Blue Line (Puts)

1. Rising

This reflects the net impact of call buying (bullish)

2. Falling

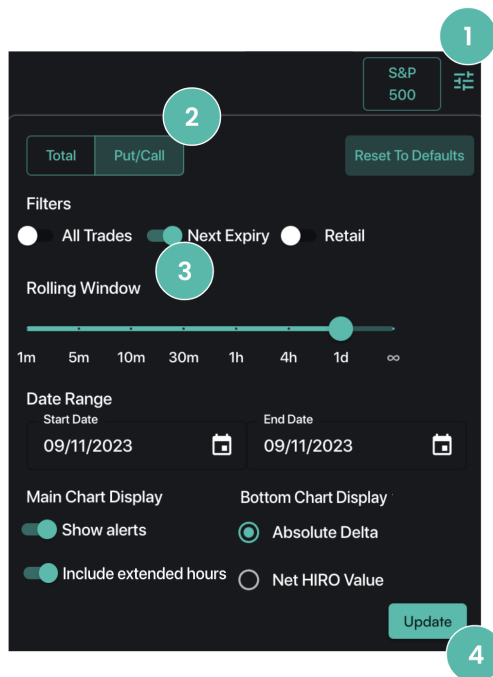
This reflects the net impact of call selling (bearish)

3. Rising

This reflects the net impact of put selling (bullish)

4. Falling

This reflects the net impact of put buying (bearish)



To see Next Expiry Filter in Puts vs. Calls View:

1. Click the HIRO Settings icon
2. Toggle from Total to Put/Call
3. Toggle from All Trades to Next Expiry
4. Click Update

Pro Tip!

The Next Expiry Filter in Puts vs. Calls View displays the direct impact of each type of option on the market. Call buying and put buying can reflect higher speculation and imply a higher likelihood of a larger price move than call selling or put selling.

RETAIL-ONLY FILTER (TOTAL OPTIONS VIEW)

The Retail-Only Filter in Total Options View allows traders to see when options flows are driven by non-institutional trades, to see which trades are likely retail-driven.



1. X-Axis

Reflects the trade time

2. Y-Axis

(Left) Pricing of the underlying security
(Right) Total estimated hedging pressure from options flows

3. White Line

Displays the live price on underlying security

4. Fuschia Line

The fuschia line displays the total hedging pressure from retail-only options trades. Upward movement in the fuschia line reflects calls bought and puts sold. Downward movement reflects calls sold and puts bought.

Switch from All Trades to Retail-Only:

1. Click the HIRO Settings icon
2. Toggle from All Trades to Retail
3. Click Update

Pro Tip!

The Retail-Only Filter isolates trades which are likely carried out by the non-institutional investing community. This group is often extremely speculative in nature, creating short term price moves which often reverse.

RETAIL-ONLY FILTER (PUTS VS. CALLS VIEW)

The Retail-Only Filter in Puts vs. Calls View allows traders to isolate the impact of puts vs. calls specifically for trades that are likely retail-driven.



Gold Line (Calls)		Purple Line (Puts)	
-------------------	--	--------------------	--

1. Rising

This reflects the net impact of call buying (bullish)

2. Falling

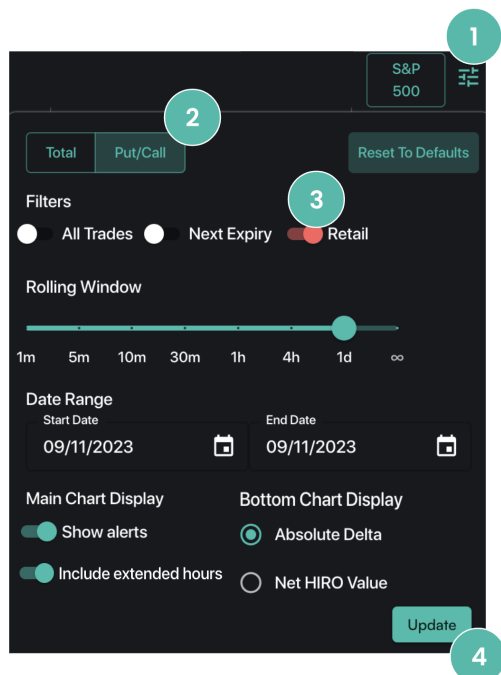
This reflects the net impact of call selling (bearish)

3. Rising

This reflects the net impact of put selling (bullish)

4. *Falling

(Not shown on chart)
This reflects the net impact of put buying (bearish)



To see Retail-Only Filter in Puts vs. Calls View:

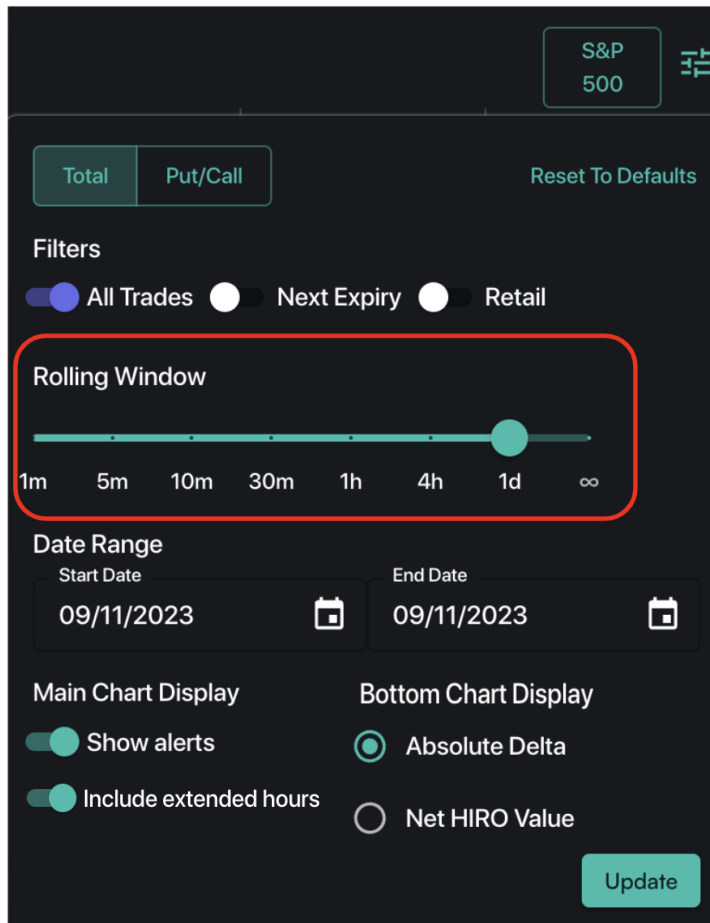
1. Click the HIRO Settings icon
2. Toggle from Total to Put/Call
3. Toggle from All Trades to Retail
4. Click Update

Pro Tip!

The Retail-Only Filter in Puts vs. Calls View displays the direct impact of each type of option on the market. Call buying and put buying can reflect higher speculation and imply a higher likelihood of a larger price move than call selling or put selling.

Rolling Window

Within HIRO, we offer a rolling window. This allows traders to view the cumulative options flows accrue over shorter time intervals. By changing the cumulative timeframe to shorter durations, you are enabling yourself to see the more active order flow.



In underlying names with large order flow, the full day cumulative readings can get very large, which obscures the size of new, incoming order flow. Shorter rolling time windows may better highlight jumps in activity.

You can use your mouse cursor to increase or decrease the timeframe by scrolling up or down, or you can use the HIRO Settings button above the chart to choose from one of our default time frame settings including:

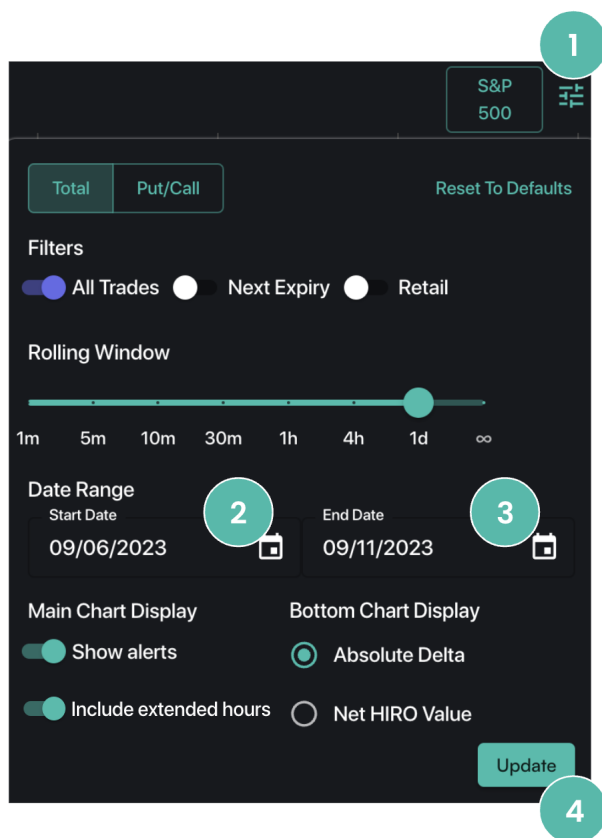
- 1 Minute
- 5 Minutes
- 10 Minutes
- 30 Minutes
- 1 Hour
- 4 Hours
- 1 Day

Pro Tip!

We recommend you start with 1d (one day) as your initial view. Then, you can scale the HIRO chart via the zoom function. By zooming in on more recent trading, you can see larger recent jumps in activity, before shifting to shorter time intervals. To zoom, drag the x-axis (time) to the left on the chart.

Reviewing HIRO History

Looking at today's HIRO activity as compared to activity over the previous days can help provide you with a perspective on options flows. This view pulls in trading activity that captures HIRO flows up to the previous 5 trading days.

Look back up to five trading days to see HIRO flows:

1. Click the HIRO Settings icon
2. Choose a start date
3. Choose an end date
4. Click Update

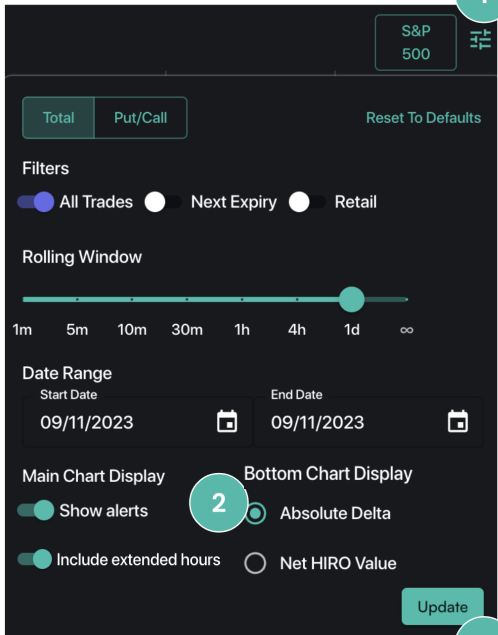
Pro Tip!

For traders active pre- and post-market, the Main Chart Display defaults to "Include Extended Hours" to display additional trading activity from outside normal standard US trading hours.

Bottom Chart Display

DISPLAYING ABSOLUTE DELTA

Absolute Delta displays the sum of all options delta being traded, without regard for being bought or sold, passed through SpotGamma's HIRO logic. This display allows you to see when there are large flows related to trades, like crosses or spreads.

1

S&P 500

Total Put/Call Reset To Defaults

Filters

All Trades Next Expiry Retail

Rolling Window

1m 5m 10m 30m 1h 4h 1d ∞

Date Range

Start Date 09/11/2023 End Date 09/11/2023

Main Chart Display Bottom Chart Display

Show alerts Absolute Delta

Include extended hours Net HIRO Value

Update

2

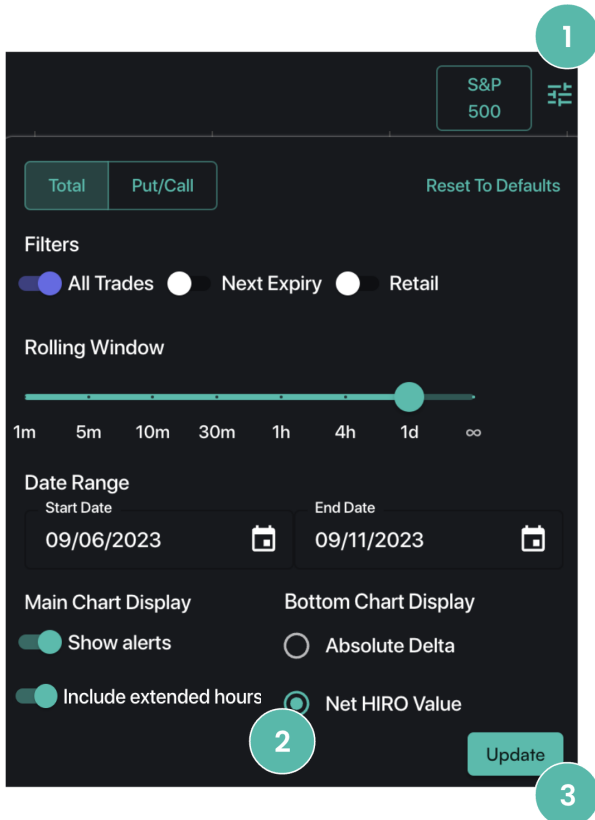
3

By default, Absolute Delta is shown. To display Absolute Delta:

1. Click the HIRO Settings icon
2. Under Bottom Chart Display, ensure Absolute Delta is clicked
3. Click Update

DISPLAYING NET HIRO VALUE

The Net HIRO Value expresses HIRO's cumulative result as a series of vertical bars on the X-axis of the chart. This helps the user to better identify periods of relatively large options flow, differentiating by negative and positive flow.

1

S&P 500

Total Put/Call Reset To Defaults

Filters

All Trades Next Expiry Retail

Rolling Window

1m 5m 10m 30m 1h 4h 1d ∞

Date Range

Start Date 09/06/2023 End Date 09/11/2023

Main Chart Display Bottom Chart Display

Show alerts Absolute Delta

Include extended hours Net HIRO Value

2

Update

3

To display the Net HIRO Value:

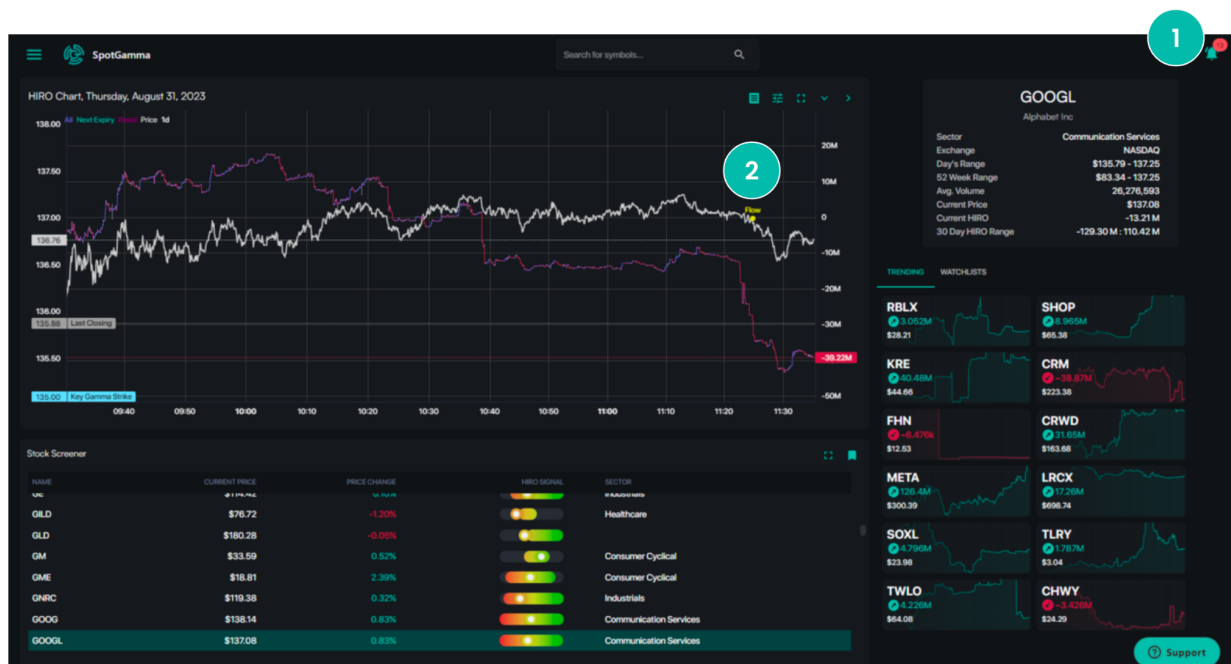
1. Click the HIRO Settings icon
2. Under Bottom Chart Display, ensure Net HIRO Value is clicked
3. Click Update

SpotGamma Alerts

THE HIRO FLOW ALERT

The HIRO Flow Alert flags large option flows in real time so users can be alerted to significant options activity in a given stock or ETF. Using a proprietary SpotGamma model, influenced by estimated hedging impact, the alert fires when flows are most likely to drive prices in the underlying stock. For all listed US options, SpotGamma calculates a specific “impact threshold” for the given security, and alerts the user when this threshold has been breached.

By default, HIRO Flow Alerts are automatically turned on for the most active US securities.

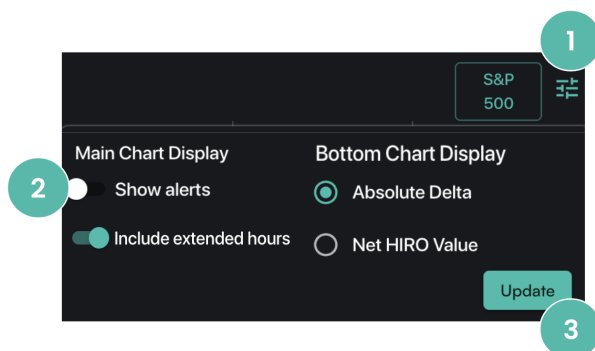


1. Alert Bell

When an alert fires, users will see the alert bell icon on the top right of the application turn red

2. Flow Alert

Additionally, “Flow” is displayed on the HIRO chart corresponding to the time the alert was triggered



To disable Alerts:

1. Click the HIRO Settings icon
2. Under Main Chart Display, click the “Show alerts” toggle to the “off” position
3. Click Update

PUT WALL ALERTS

The Put Wall is considered SpotGamma's major support level, based on current open interest. SpotGamma alerts users when this level is breached, as the stock may find support or mean revert back above this key trading level. The Put Wall Alert will fire on the most active securities.



1. Alert Bell

When an alert fires, users will see the alert bell icon on the top right of the application turn red

2. Put Wall Breached

Additionally, "Put Wall Breached" is displayed on the alert dropdown along with the time the alert was triggered

3. Put Wall Line

You can see the Put Wall key level line across the main viewing pane within HIRO

CALL WALL ALERTS

The Call Wall is considered SpotGamma's major resistance level, based on current open interest. SpotGamma alerts users when this level is breached, as the stock may find resistance or mean revert back below this key trading level. The Call Wall Alert will fire on the most active securities.



1. Alert Bell

When an alert fires, users will see the alert bell icon on the top right of the application turn red

2. Call Wall Breached

Additionally, "Call Wall Breached" is displayed on the alert dropdown along with the time the alert was triggered

3. Call Wall Line

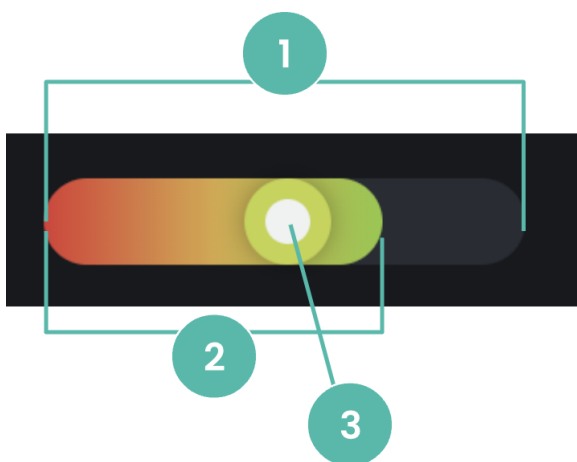
You can see the Call Wall key level line across the main viewing pane within HIRO

Stock Screener Application

The stock screener feature helps you see the hedging activity for all stocks, ETFs, and indices.

NAME	CURRENT PRICE	PRICE CHANGE	HIRO SIGNAL	SECTOR
DIS	\$81.61	1.34%		Consumer Cyclical
DKNG	\$31.85	1.51%		Consumer Cyclical
DOCU	\$50.15	-7.16%		Technology
DWAC	\$16.82	-3.86%		Financial Services
EBAY	\$43.43	0.69%		Consumer Cyclical
EDU	\$54.35	-0.16%		Consumer Defensive
EEM	\$38.73	0.23%		

The HIRO Signal column features a sliding scale that represents the 30-day range of HIRO for a given stock or index.



1. The full width of the gauge represents the 30-day range of the HIRO signal.
2. The colored segment, ranging from red to green in color, represents the 5-day range of the HIRO signal.
3. The open circle plots today's HIRO signal so you can see today's HIRO reading relative to the last 30 days and last 5 days. The color of the open circle represents today's intraday flow.



Red indicates a negative HIRO reading and negative delta flow, where traders are selling calls and buying puts. A dark red open circle indicates the HIRO signal is near the low of the day.



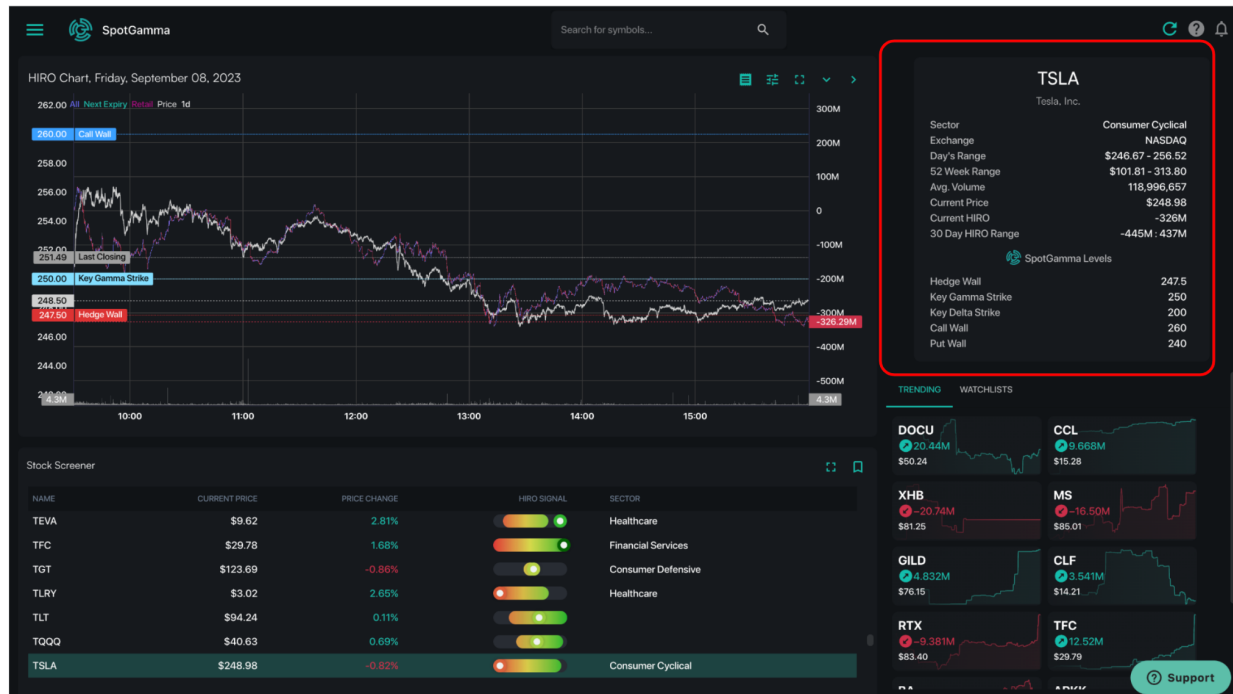
Green indicates a positive HIRO reading and positive delta flow, where traders are buying calls and selling puts. A dark green open circle indicates the HIRO signal is near the high of the day.



Yellow indicates a neutral position.

Stock Information & SpotGamma Key Levels


In the upper right corner of the viewing pane, HIRO shows you the current stock, ETF or index of interest. It also includes SpotGamma proprietary levels which are refreshed each trading day.



TSLA

Tesla, Inc.

Sector	Consumer Cyclical
Exchange	NASDAQ
Day's Range	\$246.67 - 256.52
52 Week Range	\$101.81 - 313.80
Avg. Volume	118,996,657
Current Price	\$248.98
Current HIRO	-326M
30 Day HIRO Range	-445M : 437M

 SpotGamma Levels

Hedge Wall	247.5
Key Gamma Strike	250
Key Delta Strike	200
Call Wall	260
Put Wall	240

Current HIRO: This value reflects the current delta notional hedging pressure for a stock based on today's flow. A negative value would indicate current downward hedging pressure and a positive value indicates upward hedging pressure. This shows whether the options market may have been pushing the price up or down.

30 Day HIRO Range: This value reflects the range for HIRO Hedging pressure over the last 30 days.

Hedge Wall: This is a volatility flip line, where stocks above their Hedge Wall have lower volatility than stocks below their Hedge Wall.

Key Gamma Strike: This price can serve as a powerful support or resistance level.

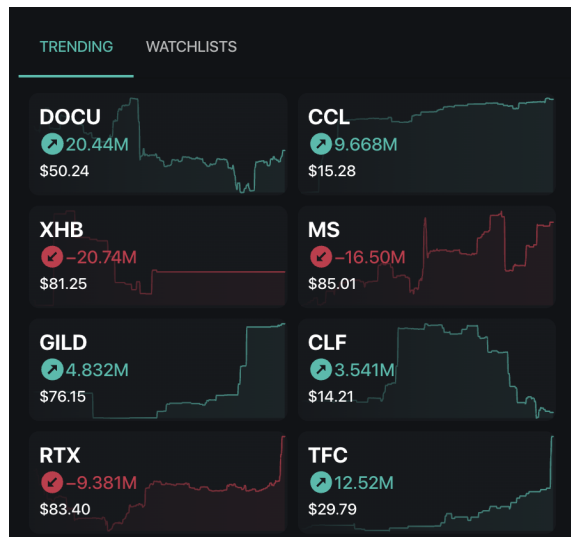
Key Delta Strike: This price can serve as a powerful support or resistance level.

Call Wall: This level often serves as resistance.

Put Wall: This level often serves as support.

Trending and Watchlists

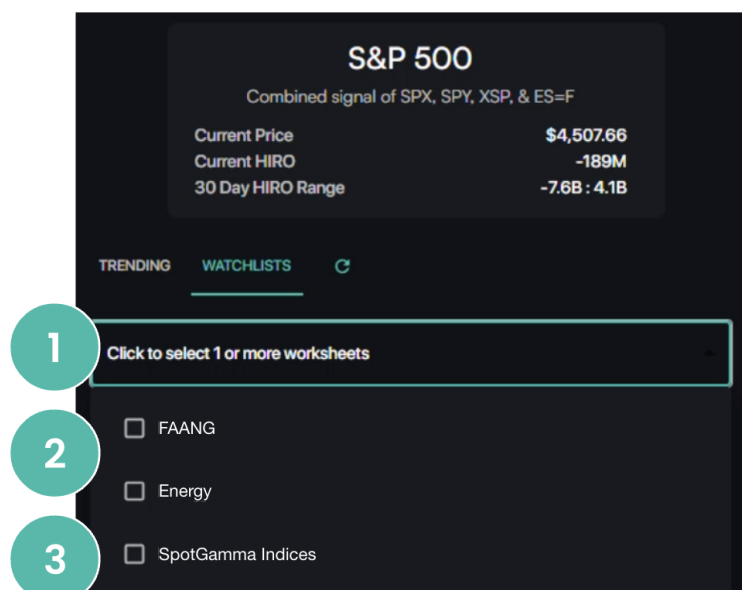
TRENDING



The Trending List identifies stocks of material interest, as determined by a proprietary SpotGamma algorithm. Specifically, this list highlights companies with unusual activity which warrants attention. The Trending List is specific to each security and not comparable to any other ticker.

WATCHLISTS

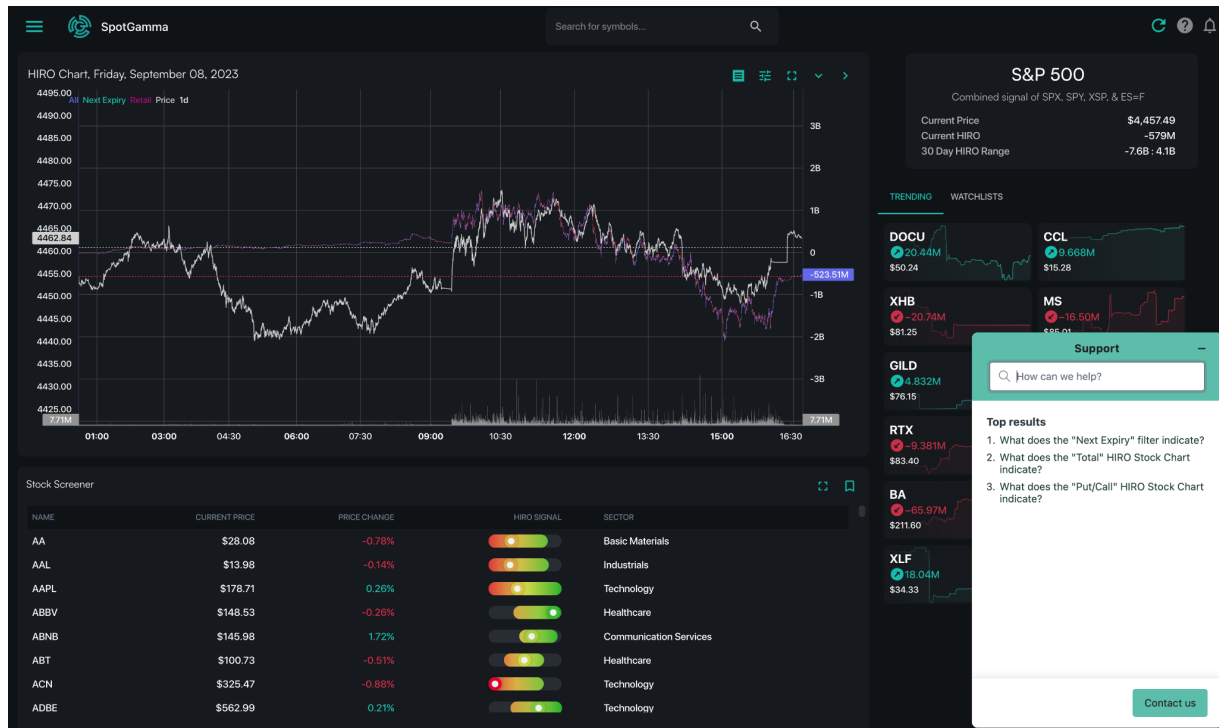
HIRO can automatically import your current Bloomberg Worksheets into your Watchlist (excluding non-US equities). To perform this function, there are a few easy steps:



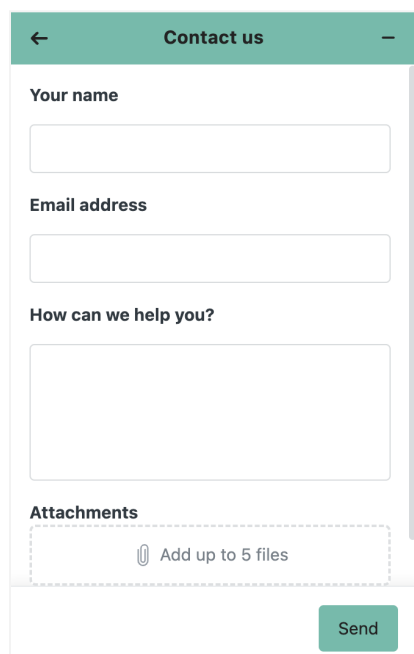
1. Click the drop-down and your worksheets will show up from Bloomberg
2. Select the worksheets you want to have loaded into the Watchlist
3. We will also add a SpotGamma Indices Worksheet with the large Indices and Combos

Support

We have a comprehensive support system available through HIRO. You can click on the Support Button at any time, located in the bottom right corner.



You can search for and read helpful articles related to HIRO, as well find links that will connect you to the [SpotGamma Bloomberg Support Center](#) with comprehensive articles explaining core concepts and key terms.



The 'Contact us' form is displayed in a mobile app interface. It includes a back arrow and a 'Contact us' title. The form fields are: 'Your name' (text input), 'Email address' (text input), 'How can we help you?' (text area), and 'Attachments' (file upload area with a plus icon and 'Add up to 5 files' text). A 'Send' button is located at the bottom right of the form.

The Support Button also allows you to contact the SpotGamma team directly with any questions.

Additionally, you're always welcome to email us at info@spotgamma.com for more support.

Key Terms

For even more explanations and applications of these terms, please visit the complete [SpotGamma HIRO Support Center for Bloomberg Users](#).

Key Gamma Strike

Large gamma strikes contain a significant amount of Gamma. The largest gamma strike appears on index products and is similar to the Key Gamma Strike, which can be found on stocks in HIRO.

Key Delta Strike

The Key Delta Strike has the largest delta. In general, this is one of the major key levels of support and resistance. The other two of its kind—that can be found in between the Put Wall and Call Wall—are the Key Gamma Strike and Hedge Wall.

Call Wall

The Call Wall is the largest net call gamma. Call Walls are essential in our daily levels analysis. Their main function is that they define the upper bound of the wider probable range. The direction that walls shift overnight is a strong directional signal: up equals bullish and down equals bearish. This is often what we are keeping the closest eye on while waiting for a bullish signal from the market.

Put Wall

The Put Wall is our major support level, which measures the most amount of put gamma. Our data shows that the Put Wall offers strong support, but it is not quite as strong in equivalence as the Call Walls are in being a resistance point. The Put Wall is often a point where buyers will enter the market. It is also a point where put holders are likely to close their positions for a profit.

Hedge Wall

A Hedge Wall has a similar impact for individual stocks as the Volatility Trigger™ for indices, and can be thought of as the point where realized volatility is expected to start increasing (the expected percentage range over a period of time based on historical prices with 68.3% confidence). Like any other of our major key levels, when Hedge Walls increase it is a bullish sign for the market and it is a bearish signal when they decrease.

ODTE

Zero DTE refers to trading (or analyzing) options on their last day of expiration (opex). DTE means days to expiration, and so “zero DTE options” are simply options on their last day before either expiring worthless or with some value. Zero DTE options have extremely high gamma levels (how quickly the size of an option changes based upon success with direction) and extremely high theta levels (the accelerating pace of the time decay of an option’s price). As long as most institutional players are short zero DTE options, then this has a stabilizing effect for the market during the day; overnight gaps lack this liquidity protection.

Volatility Trigger™

The Volatility Trigger™ is our proprietary indicator which detects the level below which we expect bearish feedback loops (chain reactions) to start kicking in. Above this level we expect bullish flows that lead to relatively lower market volatility. Underneath the VT, realized volatility (the expected percentage range over a period of time based on historical data with 68.3% confidence) is modeled to expand significantly. In HIRO, a similar calculation is used for what is called the Hedge Wall.

Realized Volatility

Realized Volatility shows the actual trading range of how much a stock is moving. It is calculated based on historical movements, and measures the standard deviation, which means about how far it can be expected to move with a 68.3% chance. Another way to look at it is that 68.3% of historical moves would have fallen under what is measured as a standard deviation. Realized volatility can be applied to any length of time period, and can also be used as a forecast of future [realized] volatility.

Implied Volatility

Implied volatility tells us what percentage range the options market is pricing in as a one standard deviation move (68.3% chance) over the next year. For example, if IV is 17%, then it has a one standard deviation's chance (68.3%) of moving 17% either direction in a year. Rather than use historical data to calculate a one standard deviation move, which is what realized volatility does, implied volatility calculates the expected percentage range by how relatively expensive options are. If long options are in demand and trading at a strong premium, then implied volatility is going to be higher, which means the options market will be pricing in a wider percentage range.

Price Line

The white line on the HIRO chart pulls in the current price of the underlying security or index. This is used to track the live streaming price movement and compare to the HIRO impact reflected by the colored lines on the chart.

Total Options View

The Total tab within the HIRO settings panel indicates that you will view all options trades on the chart via one line that captures the net put and call impact.

Put/Call View

The Put/Call tab within the HIRO settings panel differentiates the put options impact from the call options impact via two unique lines.

All Trades Filter

This view captures all projected impacts of all options trades within the US options complex for a given security or index. This view does use SpotGamma proprietary logic to filter out some trades that we consider hedged and therefore do not drive the underlying security.

Next Expiry Filter

This view only captures the nearest dated options expiration impact for any underlying security or index. This can be the same day (ODTE), the upcoming Friday, or at a set time once a month.

Retail-Only Filter

This view, based on SpotGamma proprietary logic, only captures the trading which is assumed to be traded by a retail audience.

Absolute Delta Bottom Chart Display

Absolute Delta displays the sum of all options delta being traded, without regard for being bought or sold, passed through SpotGamma's HIRO logic. This view allows you to see when there are large flows related to trades, like crosses or spreads.

Net HIRO Value Bottom Chart Display

The Net HIRO Value expresses HIRO's cumulative result as a series of vertical bars on the X-axis of the chart. This helps the user to better identify periods of relatively large options flow, differentiating by negative and positive flow.