

IBKRWEBINARS.COM



July 19, 2023

# Toggle AI

## Generative AI – Your New Trading Companion?

---

**Jan Szilagy**

CEO & Co-founder  
Toggle AI

Exchange and Industry Sponsored Webinars are presented by unaffiliated third parties. Interactive Brokers LLC is not responsible for the content of these presentations. You should review the contents of each presentation and make your own judgment as to whether the content is appropriate for you. Interactive Brokers LLC does not provide recommendations or advice. This presentation is not an advertisement or solicitation for new customers. It is intended only as an educational presentation.



## Disclosure:

IB Global Investments LLC, a subsidiary of Interactive Broker Group Inc., the parent company of Interactive Brokers LLC, is a minority owner of Toggle AI.

Options involve risk and are not suitable for all investors. For information on the uses and risks of options, you can obtain a copy of the Options Clearing Corporation risk disclosure document titled Characteristics and Risks of Standardized Options by visiting [ibkr.com/occ](http://ibkr.com/occ). Multiple leg strategies, including spreads, will incur multiple transaction costs.

Futures are not suitable for all investors. The amount you may lose may be greater than your initial investment. Before trading futures, please read the [CFTC Risk Disclosure](#). For a copy visit [interactivebrokers.com](http://interactivebrokers.com).

There is a substantial risk of loss in foreign exchange trading. The settlement date of foreign exchange trades can vary due to time zone differences and bank holidays. When trading across foreign exchange markets, this may necessitate borrowing funds to settle foreign exchange trades. The interest rate on borrowed funds must be considered when computing the cost of trades across multiple markets.

The Order types available through Interactive Brokers LLC's Trader Workstation are designed to help you limit your loss and/or lock in a profit. Market conditions and other factors may affect execution. In general, orders guarantee a fill or guarantee a price, but not both. In extreme market conditions, an order may either be executed at a different price than anticipated or may not be filled in the marketplace.

There is a substantial risk of loss in trading futures and options. Past performance is not indicative of future results.

Any stock, options or futures symbols displayed are for illustrative purposes only and are not intended to portray recommendations.

- IRS Circular 230 Notice: These statements are provided for information purposes only, are not intended to constitute tax advice which may be relied upon to avoid penalties under any federal, state, local or other tax statutes or regulations, and do not resolve any tax issues in your favor.

- Interactive Brokers LLC is a member of [NYSE FINRA SIPC](#)

# TOGGLE

TURN ON INSIGHTS. TURN OFF NOISE.

## GENERATIVE AI - YOUR NEW TRADING COMPANION?

IB Webinar – July 19, 2023

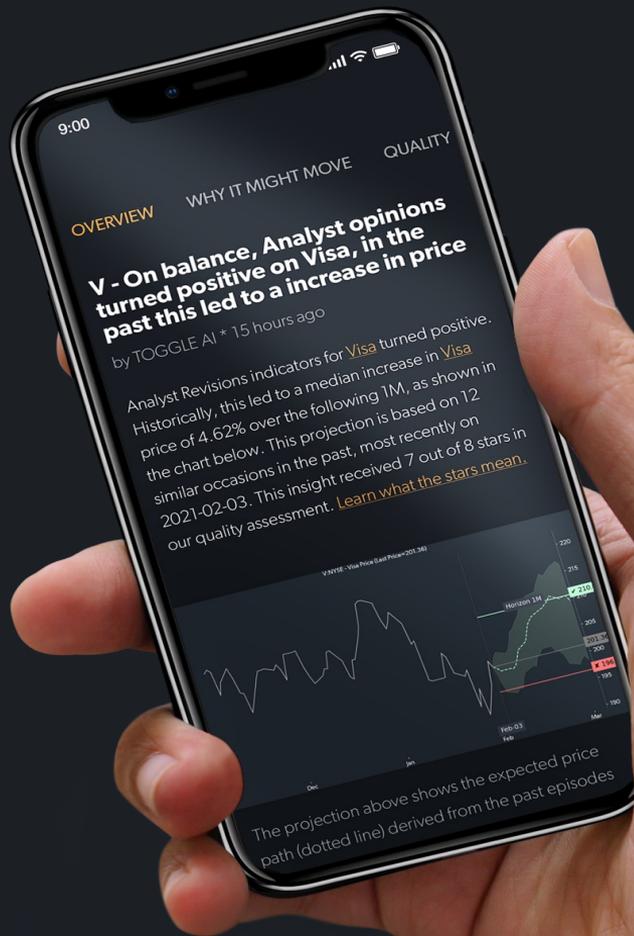
tog•gle

/ˈtägəl/

verb

### 1. COMPUTING

switch from one effect, feature, or state to another by using a toggle.  
"the play/pause button toggles between those functions"



## Disclaimer



**Note that past performance does not indicate future performance.** TOGGLE email briefings, newsletters, alerts, insights, and similar publications "Publications" do not reflect any opinions of TOGGLE or its affiliates. Publications are meant for informational purposes only, are not intended to serve as a recommendation to buy or sell any security in a brokerage account or any platform, and are not an offer or sale of a security nor an endorsement or advertisement of the same. While TOGGLE seeks to ensure the accuracy of the information it presents, it has no obligation and shall not be liable for errors in any data, information, or Publications accessible through TOGGLE products or services. All investments involve risk and the past performance of a security or financial product does not guarantee future results or returns. TOGGLE is not a broker-dealer nor an investment adviser, and makes no representations or warranties, express or implied, and disclaims any and all warranties with respect to any information accessible via any TOGGLE Publications or TOGGLE data.

## Decision making in the battlefield



In a daily barrage of new “information” portfolio managers are often forced to make a large number of fast decisions with incomplete knowledge.

- "Big sell-off in the largest portfolio holding: is it temporary? Do we hold? Add?"
- "The government just announcement a new fiscal package: is that good for our allocations? They are rallying!"
- "Yield curve has inverted, signaling a recession. But my economist says activity is picking up. If they're wrong, what is my downside risk?"

## Investing is hard work



Finding promising trade ideas regardless of style – day-trading, swing-trading, fundamental – requires a substantial time commitment

- Data is widely available (and often free) but **dispersed across numerous sites** (FinViz, Yahoo Finance, TradingView ...) and still **has to be analyzed before it's useful**
- **News and data changes daily**, often several times intra-day
- **Market data is constantly updating** (prices, volume, positioning)

So how do you follow all this for not one stock, but hundreds? It's like sipping from an ocean with a straw.

## Can't we have some help?



Smart assistants are ubiquitous in our daily lives... Why don't they exist in investing?

- Machines are really good at monitoring and processing **large amounts of information**
- They can **uncover price patterns in assets** around events/data changes
- They can **test each relationship for robustness** ... in seconds
- They can **deliver curated insights** tailored to specific users

## Can smart machines help active investors/traders?



Human intelligence is very good at strategy (the “big picture”) but AI can be helpful with the tactics (the “details”).

For example, a portfolio manager decides they want to be long risk in equities and let the machine highlight the assets that are most undervalued/have strongest momentum.

## Smart machines can offer help to active investors



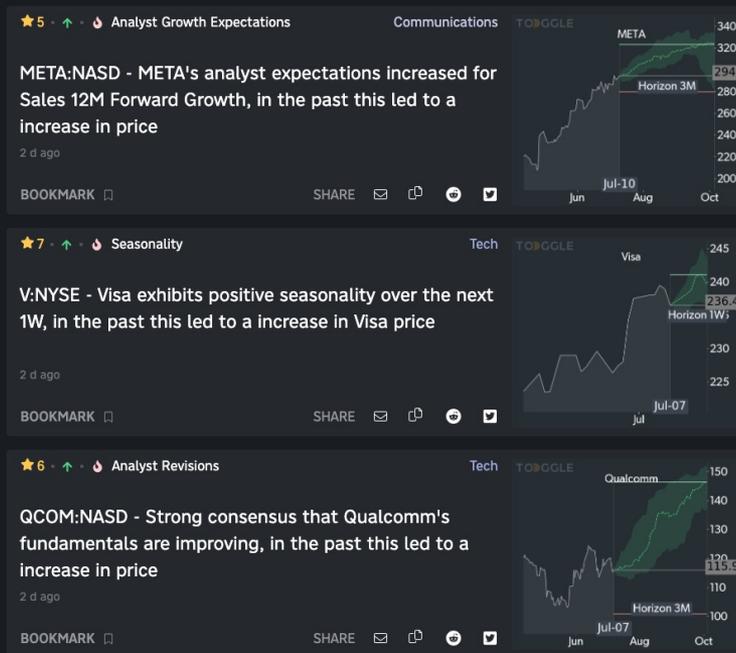
Where in the investment process can machines add most value

- Idea generation (“What assets best reflect my thesis?”)
- Trade entry (“Do I buy now or later?”)

# Idea generation



Machines can identify potential price drivers across 100s of stocks



Source: Toggle

*Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.*

# Machines are ... good with numbers

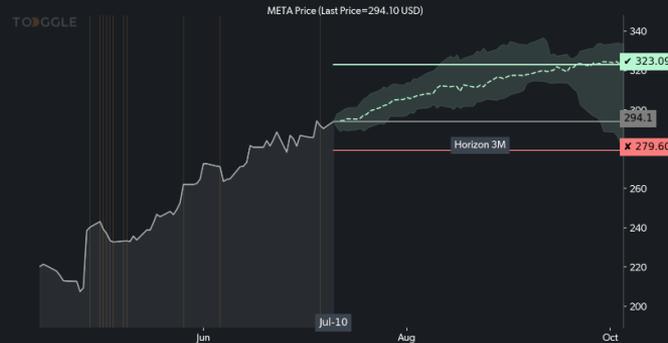


## AI-powered systems can do fast robustness checks on any driver

META:NASD - META's analyst expectations increased for Sales 12M Forward Growth, in the past this led to a increase in price

by Toggle A.I. 2 d ago

Analyst Expectations indicators for META <META:NASD> improved. Historically, this led to a median increase in META price of **9.86% over the following 3M**, as shown in the chart below. TOGGLE analyzed **4 similar occasions** in the past to produce the median projection and the confidence band below (**How do you do this?**), most recently on **2023-07-06**. This insight received **5 out of 8 stars (What are stars?)** in our quality assessment.



Source: Toggle

*Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.*

# AI helps you understand the why



Source: Toggle

Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.

## Key considerations in timing your entry



- What's your time horizon? Knowing how long you'll be in the trade can help you better decide your entry and exit points. The longer your time horizon, the more flexible you can be.
- How much risk can you afford to take on a particular trade? Make sure you're comfortable with the size of the trade based on your overall portfolio value.
- Does this trade align with your strategy? Don't feel like you need to jump into a trade if it doesn't fit your trading strategy—keep looking for the right opportunity.

## Use a range of indicators



You have to determine which ones may work for you. Here are a few examples:

- Are there any upcoming events that could cause the stock to move in one direction or another? (Earnings announcements, Product launches etc.)
- What are analysts saying?
- Are there macro events coming up that could impact the entire market (Fed meeting, government policy announcements ...)
- Are there technical indicators that indicate bearish or bullish sentiment?

Technical indicators are based on market price and trading volume.

1. **On-Balance Volume (OBV)** is used to measure the positive and negative flow of volume in a security over time. When OBV is rising, it shows that buyers are willing to step in and push the price higher. When OBV is falling, the selling volume is outpacing buying volume, which indicates lower prices. In this way, it acts like a trend confirmation tool.
2. **The Moving Average Convergence Divergence (MACD)** indicator helps traders see the trend direction, as well as the momentum of that trend. When the MACD is above zero, the price is in an upward phase. If the MACD is below zero, it has entered a bearish period.
3. **The relative strength index (RSI)** is a momentum indicator used in technical analysis that measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of a stock or other asset. The RSI can have a reading from 0 to 100.

# Fundamental indicators – Alpha vs. Beta timing



It's important to distinguish between timing the market (Beta) and asset (Alpha)

## Alpha timing

1. **Valuation** is used primarily as a way to think about the overall potential return but – when really stretched – it can also serve as a timing indicator, offering a brief window to enter at a better price
2. **Equity Risk premium** is the extra return stock investors are demanding to take on the inherently higher risk of owning a stock rather than a risk-free government bond. Extreme deviations in this value can also serve as a good indicator of opportune entry and exit

## Beta timing

1. **Macro indicators** et. Yield curve, Fed meetings, business cycle indicators are all useful aids in timing the right moment from a Beta (market systemic risk) rather than Alpha perspective

## The issue with trade entry timing



While extremely popular with both experienced and novice investors, trade entry timing requires substantial commitment of time and resources:

- Testing each indicator to see whether it works for the asset you are considering is time consuming and requires access to a long time series of data
- Following several indicators across a range of assets can be impractical for most individual investors

# Pro-active alerts are essential

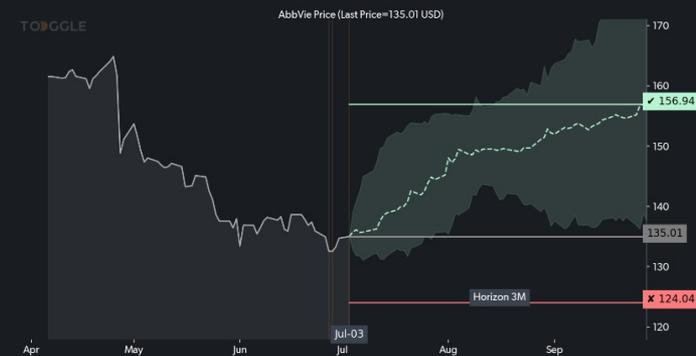


## TOGGLE will highlight a particular PAST pattern ...

ABBV:NYSE - AbbVie's price dropped abruptly to 135.01, in the past this led to a increase in price

by Toggle A.I. Jul-05-2023

Price Level indicators for AbbVie <ABBV:NYSE> dropped abruptly to 135.01. Historically, this led to a median increase in AbbVie price of **16.24% over the following 3M**, as shown in the chart below. TOGGLE analyzed **13** similar occasions in the past to produce the median projection and the confidence band below (*How do you do this?*), most recently on **2023-06-27**. This insight received 7 out of 8 stars (*What are stars?*) in our quality assessment.



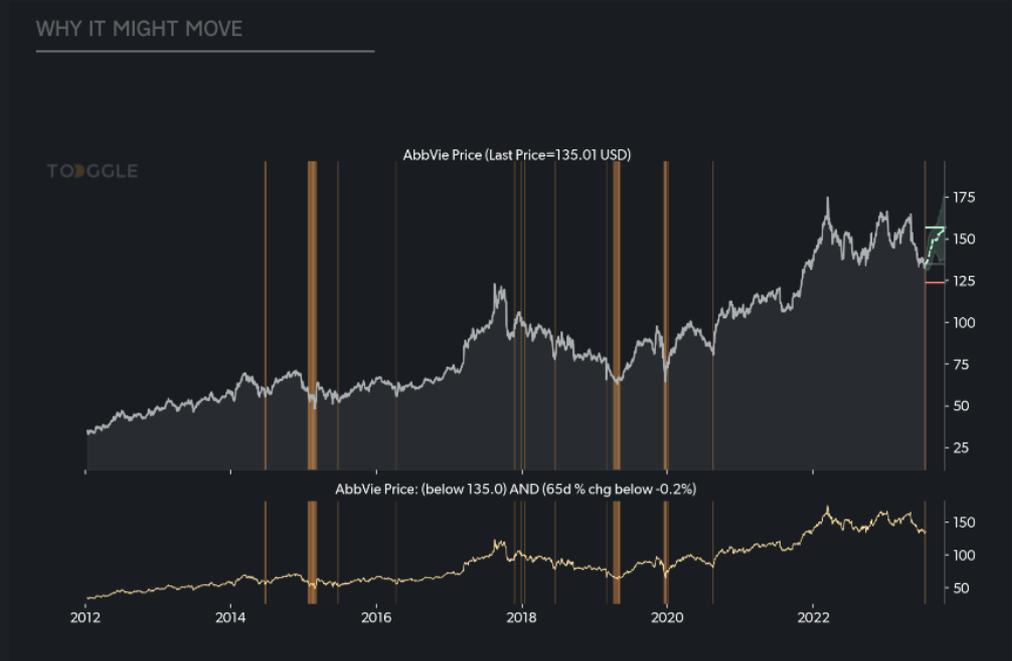
Source: Toggle

*Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.*

# Pro-active alerts are essential



... and test it



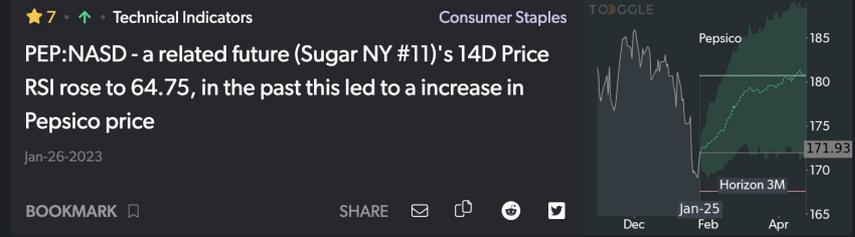
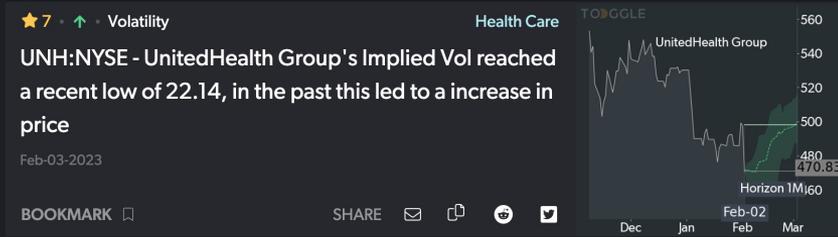
Source: Toggle

Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.

# Monitor ... everything



It will keep an eye on developments across a range of Technical and Fundamental (macro and micro) indicators, over 40,000 assets ...



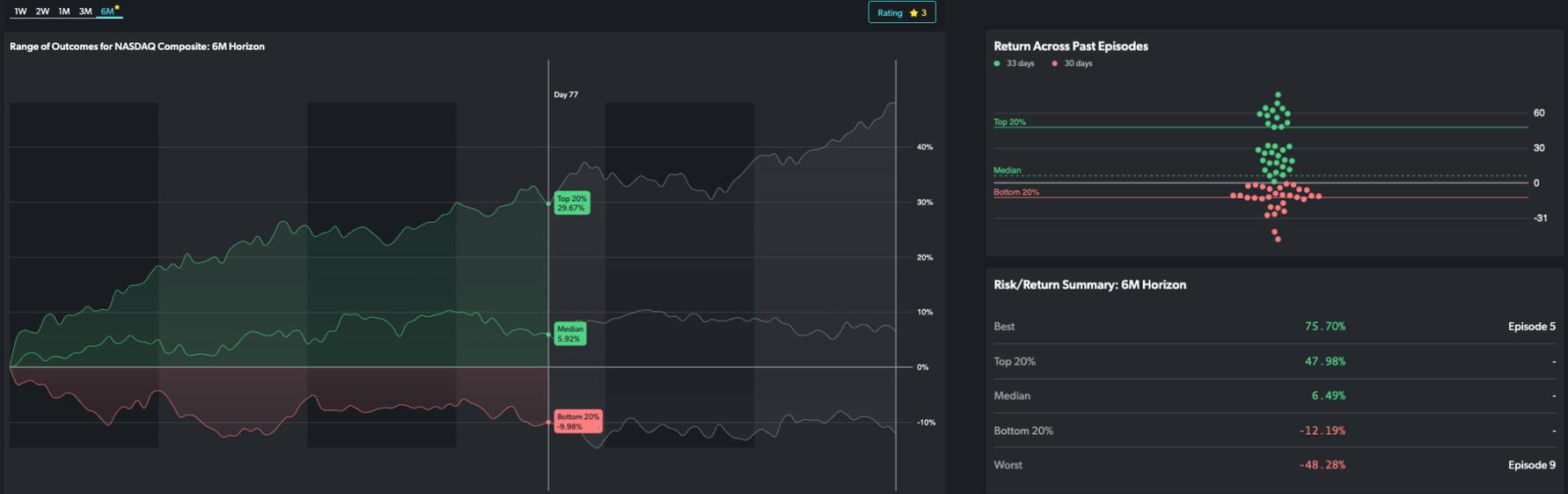
Source: Toggle

Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.

# Look before you leap (trade)



Is 10% sell-off in Nasdaq over a week an opportunity? Historical data can give you a lot of answers.



Source: Toggle

Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.

# Coming soon ...



when does bank of america report earnings?

Bank of America (BAC) is expected to report earnings in 6 days on 2023-07-18. Here's a summary of historical performance based on beating or missing earnings:  
When BAC beats earnings:

- Historically, the stock has been up 1.66% over 1 week (28 times in the past)
- Bad-case scenario: -1.97%
- Good-case scenario: 4.23%

When BAC misses earnings:

- Historically, the stock has been up 0.64% over 1 week (3 times in the past)
- Bad-case scenario: -1.76%
- Good-case scenario: 2.60%

[Open WhatIF Earnings](#)

Not relevant

how is apple stock doing today?

Apple stock (AAPL) performance summary:

- Last day: -0.28%
- Last week: -2.28%
- Last month: 2.33%
- Last three months: 13.60%
- Last six months: 39.57%
- Last year: 22.06%

Today, Apple stock is down by 0.28%. However, it has experienced a decline of 2.28% over the last week.

[Open AAPL:NASD Overview](#)

Not relevant

AAPL Market Insights

Bullish [Risk-On Watch](#)

WhatIF - Earnings

If EPS **Beats** Misses expectations

BAC price movement after 28 previous earnings beats



\*Top 20% to bottom 20% range

Powered by TOGGLE

[Dig into the 28 beats](#)

Source: Toggle

Any trading symbols, entities or investment products displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance is not necessarily indicative of future results.

# TOGGLE

Questions?

[www.toggle.ai](http://www.toggle.ai)

[support@toggle.ai](mailto:support@toggle.ai)

