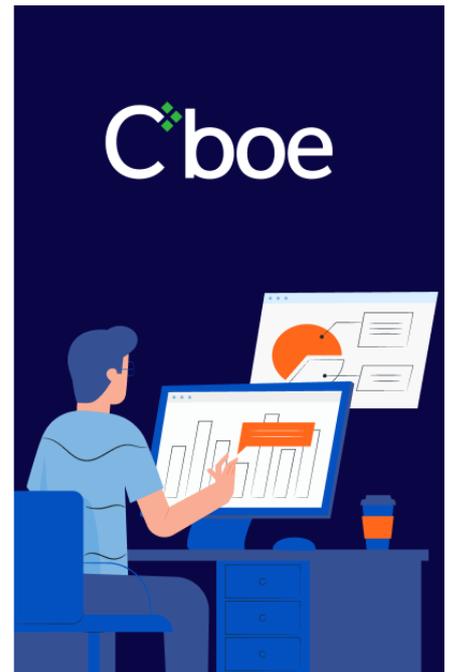


# Cboe Global Markets: More Options, More Opportunities



## Cboe Global Markets: More Options, More Opportunities



**Website** [www.cboe.com](http://www.cboe.com)

**Key dates:** Founded in 1973

**Clients:** investors, traders

**Value proposition:** options exchange, technology solutions for trading, investing

### **Senior management**

[Catherine Clay](#), Senior Vice President, Global Head of Information Solutions

Cboe provides trading and investment solutions for investors around the world. Cboe's trading venues include the largest options exchange in the United States and the largest stock exchange by value traded in Europe.

Cboe is one of the world's largest exchange holding companies, so it would be a sin to pass on the opportunity to speak with Catherine Clay, Senior Vice President, Global Head of Information Solutions, about how Cboe manages its new technological endeavors and internal processes.

Catherine Clay has been in the finance industry for 25 years. She began as a derivatives trader in 1994, trading equity and index options. Following her 12-year trading career, she founded a FinTech company called LiveVol, which Cboe acquired in August 2015. LiveVol started as an equity and index options technology and services provider and expanded into other asset classes. In her current role at Cboe, Catherine runs a group called Information Solutions, which includes derived data and analytics, index calculation services and execution platforms.

### **Cboe Vest**

Cboe has been branching out into investment solutions to elevate its offerings for clients. One such investment is Cboe Vest, an innovative company that uses derivatives in target-outcome wealth management strategies.

“Cboe Vest constructs financial products that give consumers the ability to have a known outcome, and some protection using derivatives in a package, whether it’s a mutual fund or ETF, or UIT.”

Catherine says Cboe Vest is getting a lot of traction from the idea that wrapping derivatives in a product makes it much easier to show end-clients how it works. Cboe applauds the use of derivatives in wealth management strategies that offer a protection layer for clients.

## Software development process

Cboe has a disciplined software lifecycle. According to Catherine, most of Cboe’s current processes were introduced or overhauled after the company’s 2017 [acquisition of Bats Global Markets](#), a global stock exchange operator known for its exceptional technology. Today’s Cboe engineering team is very collaborative and works in an agile environment with daily stand-ups and weekly sprints.

Catherine says the engineering processes have been overhauled throughout the organization. The disciplined software engineering process is followed by automation, specifically automated unit testing.

“It’s a huge part of what we think about here — how to be efficient, how to have that process be as automated as possible, how to have points of accountability and a system of checks to make sure that everything is completely safe for deployment.”

## Is domain expertise important for engineers?

It’s Catherine’s opinion, based on years of experience, that developers with deep domain knowledge are extremely valuable. The reasoning is simple — it takes longer for an engineer without domain expertise to understand functional requirements and specifications, especially if there are errors in the specifications. Catherine also prefers engineering team leaders who have domain knowledge.

“There’s this debate that goes on about what would you rather have, an engineer who started as an engineer and then learned about the capital markets? Or somebody who has really deep domain knowledge about the capital markets and then learned how to be a good programmer? And I would always take the latter.”

In cases where an engineering team doesn’t have domain knowledge, Catherine says the business has to spend time educating and training them about concepts like capital markets, market structures, option theory, derivatives, etc. Cboe provides internal training where outside consultants and internal coaches educate employees across departments.

“We want to get everyone elevated in terms of their knowledge base. Whether it’s internal coaching and teaching, and whether [or not] we bring in consultants, it’s happening constantly here.”

## Cboe’s API suite

Catherine says Cboe LiveVol rebuilt its analytics platform last year. In doing so, it also released a suite of APIs for transaction cost analysis, market quality, liquidity statistics,

and enhanced/derived data that its clients consume. Essentially, every part of the analytics platform has an API. In today's B2B environment, most companies want to combine information in a seamless way so as not to take up clients' desktop real estate. Catherine says Cboe's API suite is the biggest and fastest-growing part of the LiveVol business.

“The API suite we've delivered allows our clients to access the information they want to ingest without being exposed to a firehose of information. They can really select exactly what calls to make on our different APIs.”

## Product management approach

Catherine's group is revenue generating with client-facing technologies, its product management approach is consistent with other Cboe departments. Universal themes hold true for all groups. For example, if a business unit is part of a technology project, the unit is responsible for determining market impact, ROI, and the need for the technology. New ideas for projects are driven by client collaboration and a focused need to solve a pain point.

The group evaluates projects and initiatives during a weekly meeting where project owners communicate with engineering staff and teams to see what's on their plates.

“We have a continual and disciplined process to evaluate project priorities transparently across the company [and] show those initiatives and what's happening. It's a wonderful way for internal collaboration and transparency.”

## WealthTech Club takeaways

Cboe is already one of the world's leading exchange holding companies, dealing in five main segments: options, U.S. equities, futures, European equities, and global FX. Cboe is committed to a customer-focused approach to providing cutting-edge technologies that solve problems.



Written by *Vasyl Soloshchuk*, CEO and co-owner at [INSART](#), FinTech engineering company. Vasyl is also the author of [WealthTech Club](#), which conducts research into Fortune and Startup Robo-advisor and Wealth Management companies in terms of the technology ecosystem.