Why Financial Market Data is Moving to the Cloud

By Russell Blinch for CME Group: Finding a market price used to mean tilting your head up to a big chalkboard hanging over a trading floor. Perhaps runners developed the first Application Program Interfaces (APIs) back in the 1800s when they donned fur sleeves to prevent any accidental erasure of the precious info.

But market information migrated from carrier pigeons to blackboards, to newspapers, and then to servers. All because of a need for more and more quality market data to feed investors hungry for intelligence.

As the need for reliable data continues to grow, all types of market participants are looking for ways to make data management more cost-effective and efficient.

To find this nirvana, the industry is increasingly looking heavenward—to the cloud.

A Financial Fork in the Road

Cloud technology is hardly a new concept. However, the cloud is a major fork in the road for everyone in the financial sector due to a nexus of factors, not least of which is the adjustment to a work-from-home environment in 2020.

Especially for firms who may not have the need, expertise or the budget for onsite infrastructure, servers or data storage, there is a growing interest in cloud-based market data solutions.

Big Data Meets Dynamic Data

"This is an inflection point," declared Bill Bierds, President of the software house BCC Group, in a video presentation. "I think you are going to see a lot more acceleration into the cloud and market data is just one area that is ripe and ready to go."

The cloud storage market, underpinned by tech giants such as Google, Microsoft and Amazon, is expected to triple in value to over \$100 billion annually by 2024, according to a report by Market Data Forecast.

All kinds of financial data are floating upwards, but market pricing data is expected to be a major growth area for the cloud, according to industry experts.

Terabytes of Data Mouse Clicks Away

CME Group became the first derivatives exchange to offer a real-time, cloud-based market data product when it announced the launch of CME Smart Stream in 2019. This provided clients access to its real-time data feed—in conjunction with the Google Cloud Platform. In July 2020, CME Group announced clients could also tap delayed data through the cloud.

They can also now access a mind-boggling 450 terabytes of data with a few clicks of a mouse, accessing hardware and provisioning network equipment in remote data centers.

"Our adoption of cloud technologies was driven by our mission to make our data more accessible to

a broader base of customers, without compromising on quality," said Trey Berre, Global Head of CME Data Services.

"Now, more than ever, we know many market participants are looking for solutions that enable greater flexibility. Our collaboration with Google Cloud has made it easier for our clients to access the data they need from anywhere with an internet connection."

Democratization of Data

Large institutions aren't the only ones levitating to the cloud. Fintech companies are driving innovation that could mean a levelling of the playing field where small, nimble firms will take advantage of the cloud and win customers. Start-ups leveraging the cloud now, have access to as many resources and information as large financial institutions – infinite computing and storage, unlimited global data movement and access to next-generation technology like quantum computing.

Said Bierds: "A lot of the sell-side firms have tons and tons of resources and places to do all this analytics and algorithmic work. But a lot of the small firms don't have that. The cloud is bringing that—it's democratization of data that's happening here."

A case in point is Skew Ltd, a crypto trading platform based in London, which was founded in 2018 by two former JP Morgan and Citigroup derivatives traders, Emmanuel Goh and Tim Noat. The company raised \$7 million in funding and has received backing from leading investors such as Kleiner Perkins, Digital Currency Group and Octopus Ventures.

Skew announced in April 2020, that it was launching a trade execution platform in conjunction with Kyte Broking and became one of the first companies to leverage CME Smart Stream to power its solution.

Skew offers both trading and analytics and provides an institutional-grade overview of crypto derivatives markets, with over 100 charts on futures and options and historical data.

Skew's client focus is on corporations and institutions where market participants tap Skew's dashboards daily. According to the company, more than 1,000 firms have signed up for the market data analytics service since its launch last year.

Tim Noat, Skew's COO, said one highlight of working with CME Smart Stream was how cost-effective it proved for a company their size, all resulting in winning that extra step in a competitive field.

Skew's Asset Trading Platform

"On the business side of things, the main reason is the cost," Noat said in an interview. "And not only is it cheaper to receive the data from the cloud, it is also convenient for us who are in the cryptocurrency industry."

"We were among the first to get in touch with CME, build our relationships with the teams, and get early access to the cloud, which made it possible for us to have a competitive edge."

Noat and Daniel Cullender, Skew's Chief Technology Officer, also highlighted the importance of the cloud for speedy execution and the ability to quickly deliver their services to customers. Startups need to move fast to build viable services for customers, an ability cloud services allow. From their first conversation with CME Group, Skew was onboarded and using Smart Stream within just six weeks.

Cullender extolled the relative ease of aligning with CME Group's offering and praised the ready tech support from Google. Other benefits include advanced monitoring and setup of alerts with no agonizing over co-locating data in expensive installations.

"And that means the costs are kept very, very low," he said.

Noat said while virtually everyone in the crypto space is in the cloud, the movement to embrace the technology in the rest of industry is underway. But it will not happen overnight. "So I think it's going to come, but it's going to take time," he said.

The world's major stock and derivative exchanges are moving into the cloud, likely to meet client demand. According to research by Greenwich Associates, some 93% of market data professionals say they are planning to use the cloud to help manage their data.

Cloud in the Times of Virus

Other experts agree the march to the cloud is a process. But it's being kickstarted by the shift to remote work during the current pandemic.

"I think this a very strange time, and this very sad time in our history is forcing leaders to rethink the cloud, and to rethink where their workload is running and who is running their workload," said Bierds of BCC.

For Skew, Noat said the company has been helped by the fact their operation was on the cloud from day one.

"Covid has opened our eyes on the ability of our employees and everyone to keep focused on the goal. Productivity has actually been very good."

Stephane Dubois, CEO of Xignite, told the Finextra financial portal that in the old data paradigm companies were spending 90% of their budgets of maintaining their data infrastructure. Only the remaining 10% went toward innovation.

"Now, we can access this data very easily and you can really build new user experiences, new analytics, even new AI systems and models with the data," he said.

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