

## High-frequency trading



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“The main differences between traditional buy-side investors and high-frequency traders are their trading objectives and strategies. This directly affects the importance of latency in the trading process.

Typically, a long-only buy-side firm would make a decision on what stocks to participate in based on their trading style and portfolio requirements and look to work an order into the market taking into consideration market impact, volatility and other factors. The only need for low latency in this process is when smart order routers and algorithms hunt for best execution.

Conversely, high-frequency traders require low latency throughout the whole trading process. Their objective is not deciding what specific stocks

to buy, but spotting price anomalies across one or multiple markets that can be exploited. Market impact isn’t a concern, but the ability to grab opportunities before anyone else is.

High-frequency traders therefore need to think about the speed of their execution platform, where their trading systems are located and having the freshest, fastest and best quality direct data from exchanges so they can be first to find and act upon opportunities. We have seen many examples where the return on a particular high-frequency strategy increases when that same strategy is not only operated in an ultra-low-latency environment but also specifically tuned to this environment.

It is also just as important for high-frequency traders to be able to cancel resting orders quickly. When there is any incremental price movement, a trader will have to cancel a set of limit orders rapidly to

adjust his outstanding position in the market.

There are a wide variety of latency numbers touted for high-frequency execution platforms that range from under 100 microseconds up to a millisecond, but this can depend on a number of factors such as whether real-time management of open orders is done, if risk checks and symbology or message translations are included and whether a firm routes to multiple destinations.

High-frequency traders’ execution platforms also need the capacity to cope with a burst of orders as well as sustaining a constant flow. For instance, in the US, hedge funds can send 250,000 orders to the exchange within the first four seconds of the market opening.

The sponsoring broker of a high-frequency trader may have to adhere to strict regulatory guidelines and also needs sophisticated technology to manage high-frequency flow.