A Behind-the-Scenes Look at How Trades Are Executed

An Interview With John Ramsay

Article Highlights

- An order to buy or sell a stock is often sent to an internalizer, though some limit orders may be sent to an exchange.
- The proliferation of exchanges and trading platforms, including dark pools, has led to concerns about the market becoming too fragmented.
- Some high-frequency traders act as market makers and facilitate trading, while others seek to use order information to their advantage.

John Ramsay is the chief market policy officer for IEX Group Inc. Previously, Ramsay oversaw the Division of Trading and Markets for the Securities and Exchange Commission (SEC). We spoke in September about the underlying structure of the stock market and how orders get filled.

—Charles Rotblut, AAII Journal *Editor*

Charles Rotblut (CR): *Once an investor places a trade to buy or sell a stock through their online broker, what happens behind the scenes?*

John Ramsay (JR): There is one of two things that can happen to a retail order that's entered online. If the order is marketable—either it's a market order or it's set at a limit price that is within the current best bid and offer price—then, in the overwhelming majority of cases, it will go to an internalizer. This means essentially that the order will go from the retail firm (the brokerage firm) to a wholesaler who has an arrangement with the retail firm to execute the order. The wholesaler will often make a payment back to the retail firm based on the order flow that they're receiving.

The second way an order can be filled is that some limit orders sent by retail firms may be sent to an exchange. There are some exchanges that provide an incentive program for retail orders to be sent to them. In those cases, the retail firms may receive a rebate for placing the orders there. [Editor's note: Limit orders contain instructions not to buy above or sell below a specified price.]

CR: *Let's define the concepts of payment for order flow and rebates for orders.*

JR: In general terms, payment for order flow refers to arrangements by which a firm that is consolidating retail orders (orders to buy and sell from individual investors) from retail firms makes payments to compensate retail firms for the value that the internalizers have in being able to receive those orders and execute them in large numbers.

Rebates refers to payments that exchanges make to broker-dealers for order flow, including the retail firms in exchange for allowing them to handle those retail orders that are sent to the exchanges.

CR: *Should individual investors be concerned about these payments, or do they actually help investors?*

JR: I don't think the amount of payments that are made under those arrangements are, by themselves, so significant on a per-order basis that individual investors need to be concerned. The real question is what incentives those payments provide to brokers to send orders to one place versus another.

Investors of all stripes, regardless of whether they are individuals or institutions, should ask: Where can they get the best execution? What criteria is used to measure trading performance, and how should that criteria be evaluated relative to incentives received for sending orders to one place versus another? This is a conversation that investors, both individual and institutional, can have with their brokerage firms to understand the rationale behind the routing methodology.

CR: *If they ask their broker these questions, they're obviously hoping for straight answers, but what they're actually looking for is a* *firm that will place their needs first over the firm's desire for additional income, right?*

JR: Yes. I think, big picture, it is certainly true over the last 10 to 15 years that commission costs for individual investors have come down a lot and the ability to get good executions often is quite good. So from a big picture standpoint, individual investors are generally in good shape.

CR: *This leads to another point regarding order execution: fragmentation. I've heard the issue of fragmentation brought up at industry conferences, but I don't think a lot of people outside the financial services industry understand what fragmentation is and why there are some concerns about it.*

JR: In general, fragmentation refers to the proliferation of different trading platforms, including both exchanges and alternative trading systems. We currently have 11 exchanges. We have over 40 alternative trading systems where securities can be executed.

So the concern is that because there are so many different trading platforms, there's not enough ability for shares to meet in a few places, and that can both create complexity and challenge the ability of investors to receive the best possible execution.

CR: *In the case of the internalizers, it's an additional form of complexity where their orders from individual investors could be sent to, for lack of a better word, a clearinghouse instead of exchanges, correct?*

JR: Yes, there are brokerage firms that act as market makers for both individual and institutional investor orders. Those firms will receive retail orders (orders to buy and sell placed by individual investors) and match them against each other or against the firms' own positions on their own books, in order to provide an execution. It's an additional layer of complexity. It doesn't mean that investors are being poorly served by their orders being sent to those places, but it just behooves investors to understand how and why their orders are being sent to a particular venue.

CR: *As long as we're talking about fragmentation, could you explain what dark pools are?*

JR: Sure. Dark pools are alternative trading systems that are not registered as exchanges and don't publish their best prices to the market at large. They were created for the purpose of allowing large institutional investors to be able to trade large blocks without advertising their intentions in a way that could hurt their ability to trade.

Over time, though, dark pools have become something different than they started out as. That is because there's so many of them, the average size of trades is in some cases smaller than it is on the exchanges. So, it's fair to say that some of them have morphed into something different than they were first intended to be.

CR: *What about high-frequency traders? What role are they playing in all of this?*

JR: The term high-frequency trader is sometimes misunderstood. There are a lot of firms acting as market makers using advanced technology to buy and sell shares that provide a useful function to the marketplace. There are also some firms who don't act as market makers, but use technology to try to get advance notice of price changes and use those advantageously for their proprietary trading.

The latter group is the group that we sometimes have concerns about in terms of the quality of market trading. But just calling somebody a high-frequency trader doesn't mean that they're doing something that's inappropriate or that hurts the market.

CR: *Is there any data measuring how much trading volume high-frequency firms account for?*

JR: I don't know that there is good data on precise percentages, but most observers believe that high-frequency traders, depending on how you define them, account for around half or a little more than half of trades that happen in the marketplace today. But again, some of that activity provides helpful liquidity and can actually help investors. So it's important to distinguish between different kinds of trading strategies, not just different types of trading firms.

CR: *Just to clarify the concept of liquidity in terms of a discussion about trading, we're talking about having enough buy and sell orders to make it easy to transact.*

JR: Yes, liquidity just refers to the ability of investors to be able to trade at or close to the current market prices. This requires not just the presence of sufficient buy and sell orders, but buy and sell orders of sufficient size, in terms of number of shares.

CR: *Let's move onto exchange-traded funds (ETFs), since I receive questions about these. They've been accused of creating market disruptions. On the morning of August 24, 2015, we saw order imbalances, causing some ETFs and even individual stocks to be priced at significant discounts relative to how the major indexes were trading.*

Were the ETFs to blame for the pricing issues or were they due to a combination of specific strategies, not enough liquidity and the market's overall volatility—which was elevated on that day?

JR: I don't think the ETFs themselves are creating order imbalances, but what happens is that since ETFs essentially are just baskets of underlying stocks, if there is volatility in the

What Is IEX?

IEX is an alternative trading venue. It is the first trading venue in history to be owned by buy-side investors. In September 2015, IEX filed with the Securities and Exchange Commission to launch the 'Investors Exchange,' a process the firm hopes will be complete by early 2016. The founders of IEX were featured in Michael Lewis' book, "Flash Boys: A Wall Street Revolt" (W.W. Norton & Company, 2014).

The firm has a list of broker subscribers including online brokers that connect to it on its website (www.iextrading.com/trading/#subscribers).

underlying stocks then it can become harder to price the funds and you can see price gaps that are pretty significant.

On August 24, we saw the phenomenon where it became harder to price the funds because there was so much volatility in the underlying stocks, and so the regulators, we understand, are paying attention to the so-called circuit breakers that were put in place to address market volatility to understand how those are impacting the ETFs and to see whether they need to be adjusted.

***CR:** So with ETFs, it's not so much the product themselves, but what they're investing in and the strategies they're following?*

JR: In volatile market conditions, it can be harder to price the funds, depending upon how many firms out there are willing to trade in them. So everything becomes harder to price in very volatile market conditions. An important message for individual investors is to be careful about what orders you're submitting and how you're taking account of volatility in placing your orders.

But more to your question, one point I would make is that most ETFs today tend to track fairly broad indexes. They pose lesser risks. There are, however, an increasing number of alternative funds that pursue a narrower kind of trading strategy. People just need to be aware that those alternative funds could offer higher returns but also carry greater risks as well.

***CR:** This leads to a good question. In a volatile market where there are big up or big down moves, what should investors do in terms of placing an order to buy or sell? Should they place tighter limits, or refrain from trading if they can? Do you have any general guidance?*

JR: It all depends on an investor's individual objectives, and the degree of market volatility at a given time. Different order types will suit different strategies, but each order type can come with certain trade-offs. It's important that people consult with their brokers to understand the various trade-offs when choosing order types, so that they are making fully informed execution decisions.

A Brief Glossary of U.S. Equity Market Terminology

Below is a short glossary of common terms used in discussing how orders to buy and sell get filled, as well as some of the major market participants and regulatory rules.

Broker-Dealer: A business buying and selling securities for clients and for its own account, if the latter is not part of its regular business. A dealer, as defined by the Securities and Exchange Commission, may seek to make a market in a particular stock.

Circuit Breakers: A mechanism to halt or suspend trading in the entire market should a daily price decline exceed pre-specified levels. Circuit breakers can also be triggered if a certain security moves sharply up or down within a very short period of time.

Dark Pools: Private, alternative trading platforms. The term "dark" refers to the fact that information about the transactions occurring on these platforms is not made public. At the time of publication, there have been calls to make dark pools more transparent, or "lit."

Fragmentation: The large number of trading platforms, which includes stock exchanges and trading venues.

High-Frequency Traders: Institutional firms using technology to rapidly buy and sell stocks.

Internalizers: Also referred to as wholesalers, these are large traders that hold large blocks of shares in certain stocks to facilitate trading with their clients. Internalizers can be market makers or other financial firms.

Limit Order: An order to buy or sell a stock based on a specific price. A buy limit order will only be filled if the price stays below a certain level. A sell limit will only be executed if a stock stays above a certain level. Using a limit can prevent an order from being filled.

Liquidity: The ability to transact quickly at or near quoted prices. Liquidity is determined by the number of buyers and sellers, the size of transactions and the number of shares available for trading.

Market Maker: A financial entity that buys and sells securities at all times with the purpose of maintaining an orderly market.

Market Order: An order to buy or sell a security at the best available price.

Payment for Order Flow: A fee paid by internalizers to retail firms to receive orders placed with specific broker-dealers. It is an incentive for a broker-dealer to direct orders to a specific venue.

Rule 48: A New York Stock Exchange (NYSE) rule that allows the suspension of trading in certain securities in the event of extremely high market volatility. The NYSE can implement Rule 48 without other exchanges or trading venues following suit.

Stock Exchange: A formal, regulated organization designed to facilitate the trading of stocks and exchange-traded funds.

Stop Order: An order to sell a security if its price falls below pre-specified amount. Once the stop order is activated, it will be filled at the best available price, though adding a limit can prevent the stock from being sold at too low of a price or bought at too high of a price.

CR: *What about stop orders? During the 2010 flash crash, obviously some investors had stocks sold because prices temporarily plunged. During volatile markets, should investors use a stop-limit order or simply set up a price alert so they can analyze the situation as opposed to having an order suddenly become open?*

JR: Investors should consult their brokers about stop orders and specifically discuss what situations will trigger them. Investors should take care about using them, especially in a volatile trading environment.

CR: *Is there any particular time of the day investors should try not to place orders? I've heard some people say to avoid the first 30 minutes of trading.*

JR: The decision of when to place an order can be important in itself, and its importance will largely depend on the investor's individual objectives. If investors are trying to capture a short-term price change, it might be more important, but if they're getting into or out of a long-term position, it may matter less. Again, I'd recommend that people consult with their brokers to determine whether and how that factor matters to them.

CR: *In terms of market activity, have you noticed any common traits among the stocks traded more often by high-frequency traders and hedge funds? Do these firms tend to target the more active and more highly traded stocks? Or does it just depend on their individual strategies?*

JR: I think all traders tend to trade much more in the high-capitalization, most liquid names. That's just a fact of life. There are a lot of proposals from time to time on how to encourage more trading in smaller-cap names, but those are rarely silver bullets. So, it's not just the high-frequency traders, but all kinds of traders tend to concentrate in the largest issuers.

CR: *Some individual investors have expressed concerns about the role technology now plays. Should investors have any concerns about the various trading programs and other technologies that now play a vital role in what we consider to be "the market"? Should they be concerned when they see headlines about minor flash crashes, or should they realize that it's not that harmful to them?*

JR: I don't think investors need to be afraid of technology. Electronic-driven trading has been the rule for many years now. The regulators have imposed new obligations on markets to make sure that they have good technology controls in place.

The real opportunity for technology is making sure that trading occurs in a way that is fair and benefits both issuers and investors, not just the intermediaries. ➤

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