

Can RFQ Quench the Buy Side's Thirst for Options Liquidity?

Introduction

Among the 16 options exchanges operating in the US there are still trading floors where trades can be negotiated in an open outcry format. But why would a trader off the floor want to submit a trade into what appears to be a less efficient method of executing a trade? The answer is: liquidity. A vast majority of the trades transacted in the old-school open outcry pits are done so for institutions that find presenting a trade to a number of market makers results in better execution prices than if they electronically fed the order to the market throughout the day.

Options market makers base their bid-offer prices, and the sizes of those quotes, on a series of factors. The primary factor is where the liquidity providers believe they can hedge their risk and what this will cost the provider. This information is baked into the price of any options quote. Other factors that come into play include where the underlying is trading and its relative liquidity, the order flow that they are seeing throughout the trading day, and any events that may impact the underlying during the life of the option, as well as inventory that the provider may have from previous trades.

Seeking Liquidity

Calling a broker on a trading floor, or having an order relayed directly to a trading post through a floor broker, is one way to seek out liquidity. This allows those seeking liquidity to obtain a bid and offer price, as well as the size of those respective prices, fairly quickly. For institutions, size may be just as important as price, and what is quoted by the market makers on the floor represents a trade that can be executed immediately. However, this quote is being solicited from one of several exchanges, so there is no guarantee that there is not a better price to be found elsewhere.

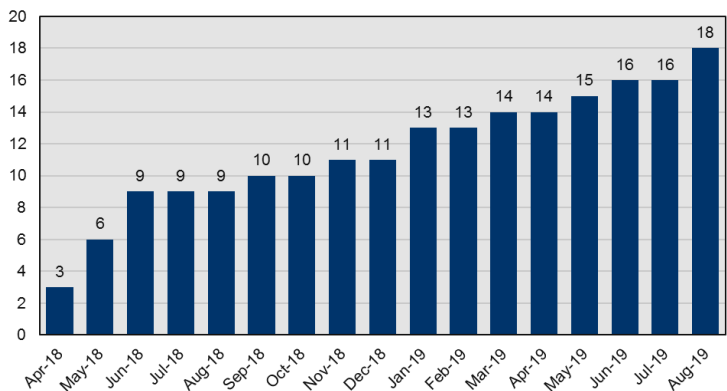
The other common method of finding liquidity for a large options order involves a purely electronic approach. This typically involves periodically sending small orders to the market throughout the day to try to achieve a favorable price. The benefit to this approach is that the firm remains anonymous and the order size remains hidden from the overall market; but this approach also exposes the trade to

price risk – specifically, the risk that the market moves against the trader or that the market adjusts to the selling or buying pressure of the periodic stream of orders.

A third – and relatively new – alternative to seeking out liquidity that combines the best of open outcry and electronic trading is becoming more common in the market. This hybrid solution gives buy-side traders the ability to use a platform to seek liquidity from multiple counterparties while limiting information leakage. In this case, an electronic request for quote (RFQ) is sent out to multiple brokers or dealers (akin to the open pit approach), and these counterparties respond with pricing and size that matches the desired execution (the benefits of electronic efficiency).

Tradeweb is among the firms bringing this sort of RFQ system to the options market, having migrated the technology from fixed income trading, where it is the principle method of electronic execution across rates and credit markets. In just more than a year since the Tradeweb RFQ platform was launched, the number of brokers and liquidity providers participating on the platform has grown from three to 18 (see *Exhibit 1, below*).

Exhibit 1: Growth in Equity Options Liquidity Providers



Source: Tradeweb

Example

Consider a trader looking to execute spread trading options on the iShares Russell 2000 ETF (IWM). The IWM options market is consistently one of the 10 largest options markets by volume. The ETF trades an average of more than 20 million shares a day and options volume is typically in the

400,000- to 500,000-contract range. Upon first glance it appears that institutional-size trading in this market should not be difficult to execute.

On Aug. 14, 2019, a buy-side trader has been instructed to sell 5,000 IWM Aug. 30 146 / 150 Call spreads. At this time IWM is quoted at 146.07. The first action any trader will take is to look at market quotes and the National Best Bid Best Offer (NBBO) for both the 146 and 150 call options. The market quotes for both options across all exchanges are displayed in Exhibit 2, *below*.

Exhibit 2: Exhibit 2: Option Markets for IWM Aug. 30 146 Call and IWM Aug. 30 150 Call

IWM Aug. 30 146 Call Book

Exchange	Size	Bid	Offer	Size	Exchange
NASD	18	3.13	3.17	46	ISE
PHLX	70	3.13	3.17	83	BZX
ISE	3	3.13	3.17	4	C2
C2	2	3.13	3.17	16	PEARL
GEMX	29	3.13	3.18	25	NASD
PEARL	10	3.14	3.18	52	EDGX
CBOE	36	3.14	3.18	72	ARCA
EDGX	64	3.14	3.18	20	AMEX

IWM Aug. 30 150 Call Book

Exchange	Size	Bid	Offer	Size	Exchange
BZX	4	1.25	1.28	18	PEARL
ISE	10	1.25	1.28	19	BZX
C2	76	1.25	1.28	26	ISE
GEMX	50	1.26	1.28	23	NASD
ARCA	10	1.26	1.29	10	PHLX
PHLX	6	1.26	1.29	20	MIAX
PEARL	13	1.27	1.29	10	GEMX
EMLD	13	1.27	1.30	31	PHLX

Source: Tradeweb

Both bid and offer prices for the combined spread can be determined using these market quotes. The best bid price for the 146 Call is 3.13 and the best offer price is 3.17. For the 150 Call, the market price is 1.25 bid and 1.28 offer. Note that for both options the best bid and offer prices are displayed at multiple exchanges.

The market bid price for the spread is 1.85, which is based on selling the 146 Call at 3.13 and purchasing the 150 Call at 1.28. The market offer price for the combined spread is 1.92. This is determined by purchasing the 146 Call at 3.17 and selling the 150 Call for 1.25. The natural bid-offer for the IWM Aug. 30 146 / 150 Call Spread is 1.85 x 1.92 (see *Exhibit 3, below*). Since the trader was instructed to sell the call spread, he is looking at a market bid price of 1.85 across all of the options exchanges that offer options on IWM.

Exhibit 3: Market Pricing for IWM Aug. 30 146 / 150 Call Spread

Size	Bid	Offer	Size
86	1.85	1.92	90

Source: Tradeweb

A trader may be happy with the price of 1.85, but there is also a liquidity issue – specifically, the 146 Call bid price is shown on five exchanges, but the total number of contracts that can be sold at the moment is 122. The current offer price for the 150 Call is 1.28, but the number of contracts offered at that time totals 86 across four exchanges. If the trader were considering purchasing this call spread, the liquidity is not much better, with the 146 Call offer price of 3.17 having a size of 149 contracts and the 150 Call bid price of 1.25 having a size of 90 contracts. Despite the fact that the IWM options market is one of the largest by volume, fewer than 100 spreads can be executed at current market prices.

Exhibit 4: Liquidity Provider Quotes

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Source: Tradeweb

Tradeweb's Options Request for Quote (RFQ) system allows the trader to reach out to multiple liquidity providers for both a bid and offer quote based on trading the spread 5,000 times. Note that the buy-side trader expresses interest in trading and does not indicate if he is buying or selling. This means the buy-side trader can receive a two-sided market from more than one liquidity provider at a time.

The first step requires the trader to share the instrument specifics and the size of the trade. Using the IWM example above, the trader would indicate that he wants to trade the 5,000 IWM Aug. 30 146 / 150 Call Spreads. He would then select the liquidity providers for quotes. Using Tradeweb's RFQ system, the trader gets four quotes, indicating the liquidity providers are willing to trade 5,000 of the IWM Aug. 30 146 / 150 Call Spreads. The buy-side trader is looking for the best bid price since he is selling the spread, but he has not indicated his intention to the market yet, so he receives a two-sided market response. These quotes appear in Exhibit 4, *above*.

All four of the dealers respond with quotes that are not outside the NBBO despite the size of the trade. Even if there were no price improvement, an agreement to buy or sell the full order at these current market prices is still favorable to lifting the smaller size shown on the Exchange NBBO.

The best bid price comes from Dealer 3, which is willing to pay 1.87 for 5,000 of the IWM 146 / 150 Call spreads. This is a price improvement of 0.02 over the NBBO and would result in the trader completing the order at a price that is better than what is shown on screens across all options markets. Exhibit 5, *below*, shows the original NBBO displayed on screens versus the NBBO offered by soliciting quotes using the Tradeweb RFQ system.

Exhibit 5: Options Market NBBO vs. Tradeweb RFQ NBBO

Exchange NBBO

Size	Bid	Offer	Size
86	1.85	1.92	90

Tradeweb RFQ NBBO

Size	Bid	Offer	Size
5000	1.87	1.89	5000

Source: Tradeweb

Note that the improvement regarding all aspects of liquidity for this spread trade. Not only can several thousand more spreads be executed immediately versus what is available across the options markets, there also is price improvement from the NBBO bid and offer. As mentioned, the bid on Tradeweb's RFQ system is 0.02 higher than the Exchange NBBO, and the offer price is an improvement of 0.03.

If the choice is made to execute the trade, the transaction will be crossed at one of the 16 options exchanges. This process is just like any other options trade that executes on an exchange and is then cleared by the Options Clearing Corporation. Even if the trade was negotiated directly with

a counterparty, clearing through the OCC results in very little counterparty risk for the trader.

Summary

One of the benefits of an electronic market organized by Reg NMS is that quotes can be consolidated, across exchanges, into a single best price. This information is invaluable for participants, and the transparency of both the U.S. equities and options markets is notable in this regard. However, the market remains fragmented, even for the most actively traded options, whether trading on the screen or on the floor.

Hybrid solutions such as the Tradeweb RFQ platform offer a means of navigating that fragmentation for the buy side, which can limit information leakage and understand both sides of the market before committing to buying or selling. And there is a further level of control: Only the buy-side trader gets to choose which providers are solicited for quotes as well as with which dealer the final trade takes place.

Until recently buy-side traders had two choices when executing an options trade: calling up and relying on a broker or using an electronic solution that sends orders into the marketplace over the course of an extended period of time. There are positives and negatives to each approach. Now, with a tool such as the Tradeweb RFQ platform, there is a third choice that combines the best of voice and electronic trading.

Disclosures:

Options trading entails significant risk and is not appropriate for all investors. Certain complex options strategies carry additional risk. Before trading options, please read [Characteristics and Risks of Standardized Options](#). Supporting documentation for any claims, comparisons, recommendations, statistics, or other technical data will be supplied upon request. Options trading may carry additional fees such as but not limited to brokerage, exchange and settlement fees which may impact returns.

The Characteristics and Risk of Standardized Options and the November 2012 Supplement to Characteristics and Risks of Standardized Options can be found via the following links:

- <https://www.theocc.com/components/docs/riskstoc.pdf>
- https://www.theocc.com/components/docs/about/publications/november_2012_supplement.pdf