Make it fast, make it wide!

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As markets continue to fragment, and not only in Europe, the traditional specialist market maker, tied to one exchange, has ceased to be valuable. Such a player cannot ‘make’ a significant market. But a new breed of funds is stepping in to make markets across exchanges, regions and asset classes. Valerie Bannert-Thurner charts the rise of the new breed of market maker.

These days, markets aren't made in the old-fashioned way. Over the past five years, the competition for liquidity and the resulting fragmentation of markets has diminished the value of the traditional market maker, or specialist, who was tethered to a single exchange. Many such market makers have disappeared. The ones that are still operating have re-invented their business and core capabilities to encapsulate trading techniques and strategies into trading algorithms that constantly monitor the markets and trigger positions automatically - across multiple venues.

Many of today's new breed of market makers often turn out to be proprietary trading funds. They are encouraged by the broadening compensation model that MTFs and some exchanges have adopted for liquidity providers. That, plus sponsored access or sponsored DMA programs along with new high-speed execution and risk control platforms, has enabled them to operate as virtual market makers.

Such firms are taking on market and technology risk to span across trading venues, to encapsulate trading techniques into computerised mechanisms, and to supply liquidity across the changing capital market landscape.

Virtual market makers in a fragmented market

High frequency trading is the subject of political debate these days, but in fact it's just the term we use to describe what we see: extremely frequent interactions with the market. We see thousands of limit orders, cancels, and trade executions happening in less than a second. High frequency trading is the expression of an underlying trading strategy that operates across venues and across markets in the most liquid stocks. What we label as high frequency is, often, the result of a virtual market maker operating in a proprietary trading fund, filling a void in the market.

The most dramatic example of liquidity fragmentation is seen in the US, as represented by NYSE. In July of 2009, Barclays Capital reported that NYSE's market share in its own listings was only 23.7%, down from 80 percent in 2005. Fragmentation is hitting Europe as well. Chi-X Europe claims 19% market share in the UK while the LSE constitutes 64% of the market (as reported in the Wall Street Journal on 21st September 2009.

The diminishing role of the traditional or designated market maker (DMM) is also shown by the volume of business they conduct. NYSE reports that DMMs account for only 8.8% of volume on their exchange venues. Today, NYSE DMMs have affirmative quote obligations for a bid-or-offer at the National Best Bid and Offer (NBBO) for 10% of the trading day if that security has an average daily volume of 1 million shares or more. (This was increased from 5% of the trading day since October of 2009.)

However this follows a move that NYSE and NYSE Amex took, in August, to re-classify infractions of quote violations into the "minor rule violation category" which is no longer subject to disciplinary proceedings, but is subject to fines up to a $5,000 maximum. In October 2008, NYSE asked the traditional market maker "to share its market making activity" with a new set of "Supplemental Liquidity

Suppliers" (SLPs). These appointed liquidity suppliers receive direct compensation for the provision of liquidity.

Today, traditional market makers get 30 cents credited per 100 shares for NYSE liquidity, and for less liquid stocks they receive 35 cents along with all market data quote revenues for those names they handle. Alternatively, SLP's get 15 cents per 100 shares for liquidity added. The new compensation structure, also called the 'maker/taker' execution fee structure, is encouraging the SLP brokers to 'sponsor' these virtual market makers. The maker/taker has paved the way for virtual market makers.

In London, the particulars are different, but there appears to be an equivalent set of conditions that offers virtual market makers the opportunity to add efficiency. Yes, the London Stock Exchange has recently reverted away from the "maker/taker" pricing model, but if we look closely at their market maker obligations, there may be room for improvement. In Europe, there is no equivalent to the best bid and offer tape as there is in the US. Accordingly, the obligations of an LSE market maker cannot be tied to a best bid/offer. Instead their obligations are to maintain an executable spread within a range, or parameters, set by the exchange. The spread parameters that are established for groups of LSE stocks, tied to the stock's liquidity, start at 5% and can go up to as much as a 25% spread!

Key drivers are 'for profit' exchanges, sponsored direct access and technology.

Lowering the barriers

Today, however, it is not just the changing posture of the traditional market makers that is driving change; it is a collection of forces that is establishing the business case for the new breed of virtual market makers:

1. The 'for profit' exchange model, and the resulting competition for market share, has led venues to offer "compensation for liquidity" to a broader set of brokers who can offer liquidity incentives 'downward' to their high frequency funds.
2. The development of sponsored access and sponsored DMA programmes allow 'no touch' order flow to be sent directly from the fund's trading black box to the exchanges. This avoids high commission fees and offers the connectivity needed to enable a virtual market making function.
3. The trade execution technology platforms, co-located at the venues, gives firms "computerised visibility" to a virtual depth of book and the ability to execute thousands of trades or cancels a second. This provides the needed infrastructure - even in the fastest markets.

These forces have collectively lowered the barriers to entry and have changed the landscape of the capital markets. It has opened up the landscape for more to participate.

The founders of the new virtual market makers operate proprietary trading funds that have been spawned from the statistical arbitrage desks of the world's largest brokers. They trade their own capital, instead of investors', and use credit from brokers to scale their models. They have severed their physical ties to the execution venue and to the physical broker. They invest heavily to acquire high speed execution platforms and to build the connections between light and dark venues in order to become the virtual market making function of the industry.

So, today, instead of buying a seat on an exchange, they invest in colocation data centres, high speed networks and 'rapid fire' execution platforms that can synchronise 'market making' across multiple trading venues.

Regression to mean is a proxy for market making

The market maker model has been under academic study for many decades, but has received validation with the foundational text book "The Theory of Micro Market Structure", a doctorial thesis written by Maureen O'Hara. This is a branch of micro economics that investigates price formation under different trading rules. O'Hara suggests that greater predictability of "price formation outcomes" can come with a deep understanding of the specific trading rules and mechanisms used.

Today's 'trading rules' allow very clever approaches to having a 'risk free' supply of inventory, for the most liquid stocks. But the risk factors are many including: venue capacity, order type, supply, volatility, and momentum factors that need to be incorporated in the trading strategy. The market velocity is also fierce these days, and a trading system must perform at thousands of trades per second in order to suit the virtual market maker's needs. This is the playground of quantitative regression-to-mean strategies.

Virtual market makers specialise in order types - they form limit books throughout the day and look to make markets in major 'segments of liquidity' such as a symbol, a sector or a particular set of correlated instruments. In fact as the market encapsulates 'order types' that assume age old trading techniques, there are new opportunities for virtual market makers.

Risk oversight is still needed

The fundamentals of the market have not changed. There are still concerns about front running, time arbitrage, unduly leveraged positions and market manipulation. These are age-old concerns. They have been addressed in the past with regulations and must be addressed in the current market with technology.

The industry must continue to move toward real-time, dynamic trading risk controls. Risk controls are insufficient if they rely solely on order checks at each individual exchange - a more holistic approach is needed. Proper trading oversight includes a real time awareness of the fund's overall account: the aggregated profit and loss, offsets for hedge positions and the current margin limit consumed. Real-time controls are also needed to ensure restricted stocks are not traded. These controls also extend, if necessary, to stop the trading strategy remotely or to only allow trades that offset the exposure. We refer to these risk controls as account level checks as apposed to order checks that are typically done at an exchange risk gateway.

Some participants argue that the regulation in the US and parts of Europe does not prohibit what we call 'naked access'. Naked access refers to a non member firm trading directly with the exchange, using a broker's identification, under a sponsored access programme without real time position risk oversight by the sponsoring broker.

However, regardless of the current regulation, many leading firms, because of financial and reputational risk, have implemented dynamic real time risk controls over their high frequency flow.

Is this evolution of virtual market makers good for the market?

Virtual market makers, we believe, indicate a market that is evolving toward greater efficiencies. Previously this was the playground for the privileged few. Now the barriers to entry have fallen, and many can participate. In the past, statistical arbitrage was a significant source of direct revenue for the world's largest brokers who had the membership and technology to add value to the market. Now, with the advent of sponsored access and DMA programmes, firms of varying size can participate.

Many experts agree that the market today is flatter and fairer than in previous decades. Now there are hundreds of liquidity suppliers rather than just a handful. This level of competition has narrowed spreads, reduced volatility, and makes the market more difficult for any one entity to manipulate prices.

What shifts will take place in the future? Regulation, international competition, economics and even politics are directly affecting the competitive landscape. Today, the traditional exchanges sell data, sell technology, sell colocation services, and generate listing fees as well as execution fees. In some ways, they are competing with services typically provided by the broker. In the coming years, we may see a re-design of the brokerage and settlement functions as well.

And finally, do you ever ask yourself why it is possible to execute thousand of trades a second, but it takes days to settle a trade? Perhaps there are yet more 'virtual' opportunities to be had in this evolving market.

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