

Size Matters...

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Amongst the many questions posed in the CESR/ESMA MiFID II consultation is this one;
“Is it necessary that minimum tick sizes are prescribed?”

Almost everyone (apparently excluding NYSE Euronext) agreed (at least until two days ago) that a lack of tick-size harmonisation is an unnecessary inefficiency that depresses volumes, creates trading errors and results in significant maintenance costs for venue operators and participants. And consensus seems to be growing that the dangers of restricting order-to-trade ratios or imposing minimum resting times on orders would outweigh any potential (poorly articulated) benefits. So attention is refocusing on tick sizes. And yet getting and keeping a consensus on tick sizes has been difficult, so, perhaps it's worth revisiting why tick sizes matter so much, and to whom.

What are the pros and cons of small tick sizes?

- Smaller ticks intensify competition amongst market-makers and liquidity providers, and thus attract more liquidity and tighten spreads.
 - Tighter spreads are the most obvious measure of market quality. They reduce transaction costs for marketable orders.
 - For larger orders, greater depth of liquidity is required to reduce effective and realised spreads – and there has been a strong correlation between tighter bid-ask spreads and increasing depth of liquidity.
 - More tick granularity improves the efficiency with which statistical arbitrageurs can “port” liquidity from one asset to a related one, resulting in more efficient and more liquid market.
 - So on the face of it, narrow ticks allow tighter spreads, and tighter spreads improve overall market efficiency.
- But, with many more price points to choose from, liquidity is naturally distributed across more price points, which has a number of possible implications:
 - Liquidity at the touch (and every other individual price point) may be lower, which some have used to support a somewhat disingenuous argument that “liquidity has reduced since MiFID”. This argument is weak, since the “effective spread” or cost to trade any given size of order has declined due to an increase in visible liquidity when all price points are considered.
 - This distribution of liquidity, and smaller volume at each tick, might reduce incentives to post larger orders, as they will be more easily discerned by other market participants. So smaller tick sizes can encourage the further slicing & dicing of orders.
 - The participation by algorithms and market makers at a greater number of price points subsequently requires more order amendments and cancellations as markets move, driving higher volumes of market data and putting strain on the infrastructure of market operators, data vendors and consumers alike.
- Some argue that tick sizes can be too low (although exactly what constitutes “too low” is a subject of fierce debate):
 - Where the tick size is too low, the cost of setting a new best bid/offer is small, and so large orders are more prone to being “stepped ahead of”. This reduces the incentives to display size in the public markets, continuing the trend towards smaller order and trade sizes and more frequent data updates.
 - Lower liquidity (shorter queues) at each price point, combined with a number of competing order books for each security, might also dilute the incentives to leave

orders in the market for a period of time so as to reach the front of queue – and without such an incentive orders will tend to have a shorter duration – once again fuelling faster market data update rates.

What about larger tick sizes?

- Larger ticks force a consolidation of liquidity at fewer price points, leading to greater price stability and potentially strengthening the “time” component of “price-time” priority by requiring orders to remain in the book for a while in order to reach the front of the queue. This has the potential to drive greater stability and hence to reduce market data volumes.
- But, and it’s a very big ‘but’, larger ticks reduce the capacity for participants to price improve, and force wider spreads, and thus they:
 - Materially increase transaction costs for marketable orders (particularly smaller orders from retail participants or algorithms).
 - Exclude some liquidity from the market that cannot afford to cross the spread, and which is unable to gain time priority by setting a new best price.
 - Increase incentives for investors to find price-improvement via non-display or OTC trading avenues.
 - Increase the potential profits of market makers, creating stronger incentives for firms with a substantial distribution network to internalise client flow rather than route it to public markets.

Who wins with larger ticks?

- Many market makers and day-traders have seen their profits eroded by smaller spreads, and hence typically advocate larger ticks (or at least argue against further reduction). Whilst sustaining the profitability of such participants is unlikely to be regulators’ principal concern, a lack of profitability will lead to a further reduction in liquidity from such participants.
- Smaller brokers (and often investors executing on a DMA basis) struggle to execute amongst the “blur” resulting from smaller tick sizes and hence higher data volumes. Only those with significant IT budgets can invest in Smart Order Routers capable of capturing the visible liquidity spread across many price points and venues. So perhaps many would welcome a re-consolidation of liquidity at fewer price points, even if it moderately increased their transaction costs. And exchanges to whom such members are more important might reach different conclusions about the optimal level for tick sizes.
- Both data vendors and data consumers have been stretched by the climb in the order-to-trade ratio. Might they breathe a sigh of relief if tick sizes were increased?

Who prefers smaller ticks and spreads?

- For retail brokers, tighter spreads translate directly into lower transaction costs.
- Firms with diversified investment portfolios (e.g. index and quant investors) who rely heavily on algorithmic trading should also realise lower transaction costs.
- Electronic market makers and some [retail brokers](#), who prefer “egalitarian” markets in which they can interact with liquidity on a fair and equal basis with banks and brokers, like smaller ticks because they reduce brokers’ appetite and capacity to internalise flow. Reduced internalisation, they [argue](#), results in more natural liquidity reaching the public markets, thereby reducing the potential for adverse selection and encouraging greater limit order liquidity (whether from market makers or investors) into the markets.
- Statistical arbitrageurs, upon whom market participants rely to transfer liquidity and risk across venues and correlated instruments, are negatively impacted by larger ticks and by internalisation, and so hence have a strong preference for smaller tick sizes.

- Any individual venue enjoys a relative advantage if it allows smaller ticks than its competitors, simply because it can publish a tighter BBO, and hence attract order flow from brokers seeking best execution. But, this is tragedy (of the commons) waiting to happen, and can lead to a “race to the bottom” which harms market quality.

Historically, tick sizes were set by exchanges. They sought to balance the needs of different types of market participant. In the UK, the buy-side, led by the IMA, consistently lobbied for smaller ticks, with the banks (and market makers in particular) resisting, and the exchange was stuck in the middle. Only as the business migrated towards DMA did this impasse clear, with narrower ticks becoming more widely accepted.

Then the MTFs arrived, and by offering standardised pan-European ticks across their own markets and adopting smaller ticks, we succeeded in attracting new liquidity to our platforms and to the market as a whole. The success of MTFs in attracting this liquidity forced exchanges to follow suit or find that they no longer offered best execution.

After a while, market participants, struggling with inconsistent tick-size regimes across venues, then gave impetus to the discussions that have resulted in today’s “gentleman’s agreement” on [harmonised](#) dynamic tick tables for many markets. And somewhere along the way, some on the buy-side seem to have switched to the other side of the debate, and now advocate larger ticks.

So what happens next?

- The harmonisation of tick sizes, attractive in principle, requires a compromise between firms with opposing interests. How robust is the consensus that harmonisation should trump individual venue’s ability to tailor their market to their customers needs? NYSE Euronext seem to be challenging the need for a consensus by announcing changes to their own ticks (deviating from the FESE tables) without consulting many market participants or other platforms.
- If we aim to retain harmonised ticks, how do we allow different types of market participant to have an appropriate level of influence in the debate, or should we be looking to put the decisions in the hands of academics or regulators rather than practitioners with vested interests?
- Can the current “gentleman’s agreement” approach involving venues and brokers working together be relied upon to keep working, as new MTFs spring up, or in the face of a global exchange group announcing changes (whether considered good or bad) without consultation?
- If ESMA intends to prescribe tick sizes, then how should the terms of reference be set to ensure they reach an appropriate balance between Europe-wide harmonisation and the dynamics of different markets?

Regardless of who makes the decisions, a larger problem is determining whether proposed changes are likely to be beneficial for investors (who should matter more than intermediaries). There are two problems:

1. We have no universally accepted measure for market quality.
2. Because MiFID coincided with the credit crisis, we have no way of disaggregating MiFID’s effects on liquidity and market quality from the effects of the crisis.

Perhaps we can take a leaf out the SEC’s book in the US. When considering changes of this kind, the SEC has a longstanding practice of running short pilot programmes (of a few months), applying the proposed changes to a small but representative sample of securities. This allows the SEC, market

participants and academics to gather solid empirical evidence and evaluate the impact of the changes on liquidity and transaction costs relative to a control group of stocks for which no changes were made. I don't suppose this resolves the arguments or competing interests, but it must surely guarantee a more informed debate.

Or perhaps the dynamic tick tables we use in Europe (whereby the tick size changes intra-day based on the instrument's price) already provide adequate data for academics to pour over?

This has been, and will continue to be, an imperfect process, and I worry that this week's announcement by NYSE Euronext will harm our ability to maintain a consensus in the future.