The Swiss Stock Exchange

Trading InfoSnack #05: Size Matters

29 October 2020

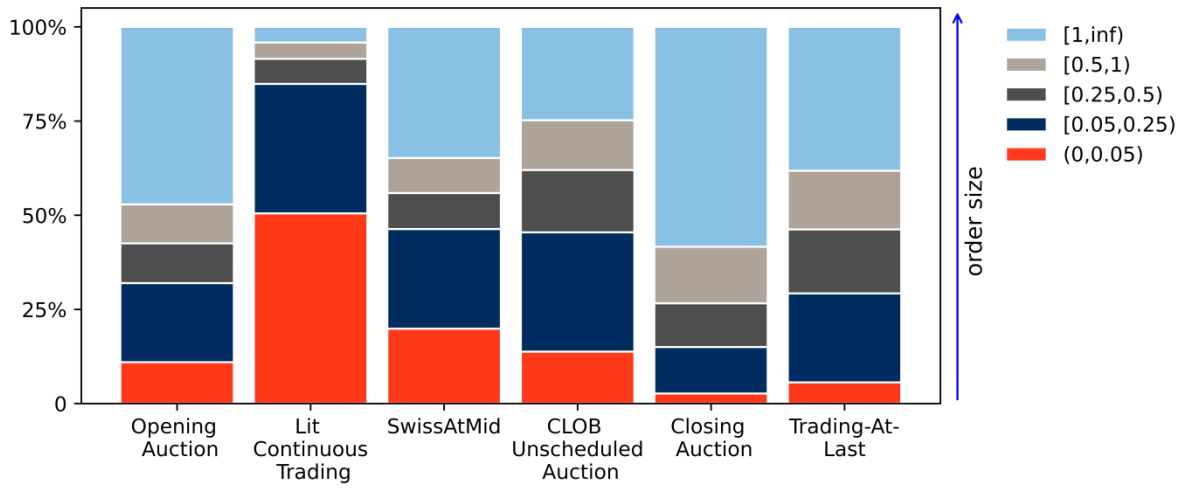
Size Matters

Liquidity composition differs significantly across market models and trading phases. Non-displayed and non-continuous models attract the highest portion of block liquidity. There are clear distinctions of liquidity structure between the most and the least liquid stocks. We observe market participants adjusting their order types depending on their trading objectives and execution urgency.

On the Swiss Stock Exchange in the first 3 quarters of the year, we observed 63% of overall trading during Lit Continuous Trading, 24% in the Closing Auction, 11% in SwissAtMid and the remaining 2% during the Opening Auction, Trading-At-Last and CLOB Unscheduled Auction. The structure of trading tariffs on the market encourages participants to submit large orders, particularly where order types or market models help to manage price impact. Increasing the order size above CHF1M results in no additional marginal cost on orders due to a cap on the Ad Valorem fee, hence trading participants are incentivised to trade in larger size.

Chart 01 below depicts liquidity composition per each trading phase and market model. Opening and closing auctions demonstrate the highest proportion of above Large-in-Scale (LIS) liquidity. We have studied the Closing Auction order activity in the Trading InfoSnack #3. The two trading models without pre-trade transparency – SwissAtMid and Trading-At-Last exhibit a very similar distribution of liquidity size. For both models, more than half of the liquidity originates from executions against orders that are 0.5xLIS and larger. However, when looking at the size distribution of orders as first submitted to our platform, we find that circa 80% of orders submitted to SwissAtMid and available to trade against are greater than 5xLIS in size. The conclusion from chart 01 is that non-continuous models and models without pre-trade transparency encourage larger size due to minimized market impact.

Chart 01: Turnover across trading models per order size

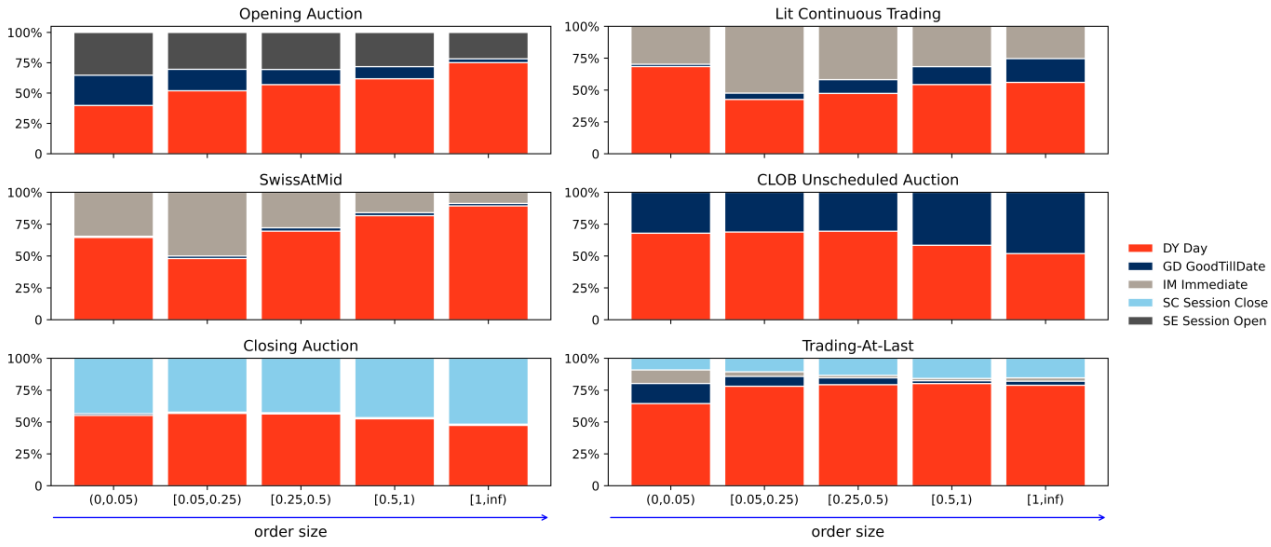


Data source: SIX | Securities: Swiss Blue Chips and Mid-/ Small- Caps
Sample period: 3 Jan 2020 - 30 Sep 2020, executed orders
LIS bins are based on the ratio of order size to LIS thresholds, taken from the ESMA as of April 2020

In chart 02 below, we drill down across market models and executed order size to review order type usage for each model and size bucket. We observe that for the opening auction, the larger the order size the more likely it originates from a day order. For continuous trading, the smaller the order size the more likely it originates from a day order, with immediate orders accounting for the largest proportion of orders in the mid-size bucket. In SwissAtMid, day orders dominate the liquidity composition for the largest size buckets where execution urgency typically decreases with block size; however, in smaller size buckets the proportion of immediate order usage increases. This is probably related to the removal of a full price level by immediate orders targeting both the mid-point orderbook and the central limit orderbook (i.e. sweep orders).

During the Trading-At-Last session, we record very little immediate order activity which indicates willingness to rest orders and limited desire to opportunisticallly consume liquidity. This is probably due to the fact that price variability, price improvement and price impact is negated in the TAL phase due to the execution price being fixed and the session being traded entirely in the dark. For the closing auction, 50% of the liquidity comes from dedicated session close orders which are largely submitted as market orders. Noticeably, the share of session close orders increases with size. Finally, in general we observe a higher proportion of resting orders for non-continuous or non pre-trade transparent market models.

Chart 02: Turnover across trading models per order type and order size

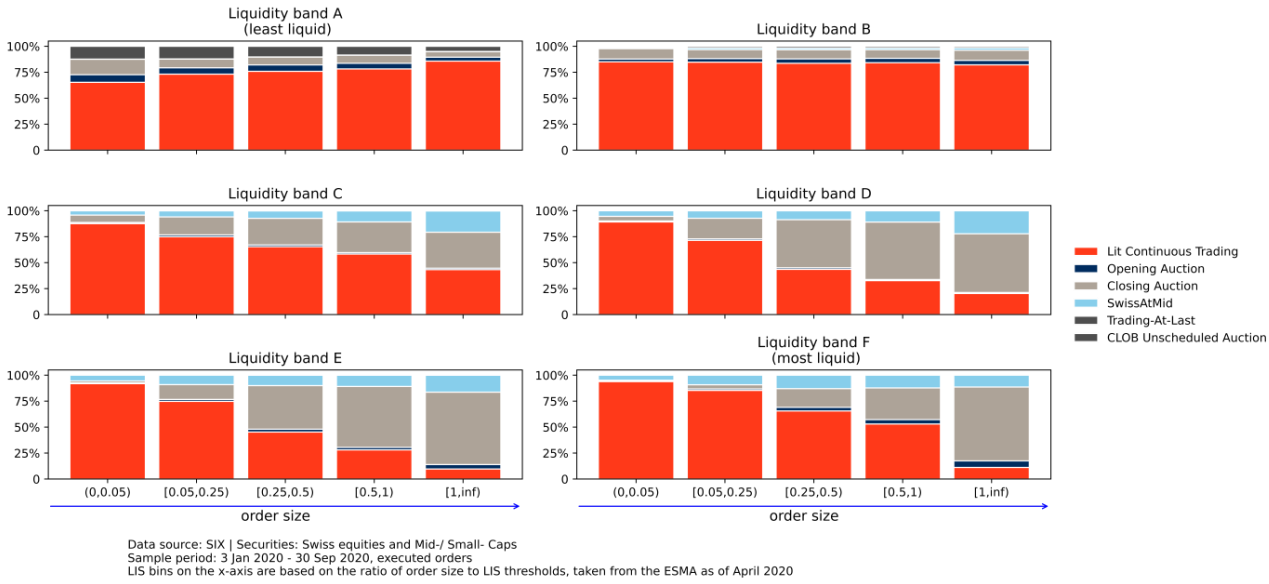


Data source: SIX | Securities: Swiss Blue Chips and Mid-/ Small- Caps
Sample period: 3 Jan 2020 - 30 Sep 2020, executed orders
LIS bins on the x-axis are based on the ratio of order size to LIS thresholds, taken from the ESMA as of April 2020

In chart 03, we use the Swiss Stock Exchange published tick size bands to categorize securities into 6 different liquidity buckets. As a result, we assign the following number of Swiss listed stocks to each bucket: A – 46, B – 55, C – 72, D – 42, E – 29 and F – 3. Despite a small number of securities in the most liquid bucket, the 3 stocks represent more than one fifth of overall trading activity. We notice that the proportion of trading activity executed in continuous trading decreases with the stock liquidity. For more liquid stocks (bands C to F), one can observe a clear differentiation of order size split across market models. For bands A and B, the allocation of liquidity across market models is relatively static regardless of the order size. We note that the securities in these liquidity bands (A and B) are not part of any signifcant indices, tend to have a domestic trading

bias and lower penetration with institutional investors – hence are typically traded with less technical sophistication. In the liquidity bands E and F, there is a large clustering of closing auction activity for LIS order size and above. Additionally, we infer that for large- and mid- caps, continuous lit trading is not a preferred model for block executions whereas as for illiquid stocks any liquidity appears to be good liquidity.

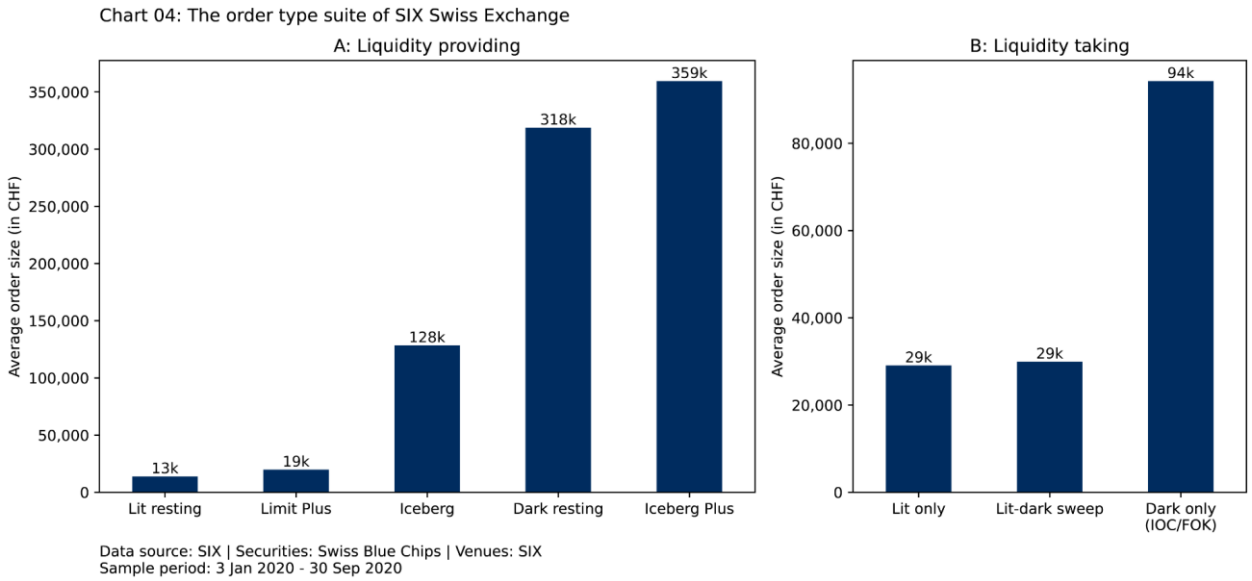
Chart 03: Turnover across trading models per liquidity band and order size



Data source: SIX | Securities: Swiss equities and Mid-/ Small- Caps
Sample period: 3 Jan 2020 - 30 Sep 2020, executed orders
LIS bins on the x-axis are based on the ratio of order size to LIS thresholds, taken from the ESMA as of April 2020

In chart 04, we look at the average order size across different order types available on the Swiss Stock Exchange. We split the picture in to A and B panels representing order types for liquidity posting and liquidity taking respectively. On chart 04.A we observe that the average lit resting order is approximately 25 times smaller than the average dark resting order. Also, the average Iceberg order is roughly 10 times larger than the average Lit resting order. Furthermore, Plus orders are greater in size than their regular equivalents (Limit Plus > Lit resting and Iceberg Plus > Iceberg). We anticipate this is due to dual representation feature of Plus orders, its dark interaction and predominant usage by Swiss clients that tend to trade in larger size.

On chart 04.B, we can observe that the average lit aggressive and dark-lit sweep orders are equivalent in size. This makes sense as the intention of the sweep order is to opportunistically take available liquidity at a particular price point, which is the same as for a lit aggressive order. Also, we observe that lit aggressive orders are 3 times larger than lit resting orders – suggesting that the need to manage down the size of passive orders is a consequence of an asymmetry of information leakage between passive and aggressive interactions. On the other hand, the Dark resting order is 3 times larger than dark IOC which presents an opportunity for dark immediate orders to be sized up to. Finally, we notice that order size is inversely correlated with execution urgency.



To summarize, we observe a clear distinction in liquidity composition across continuous, non-displayed and non-continuous market models. For the most liquid securities, we see a clear preference for non-displayed and non-continuous market models for executing in larger sizes. Whereas for the least liquid stocks, it appears that any source of liquidity is desirable. Last but not least, we notice a clear difference between passive and aggressive interactions on our market. For resting orders, the transparent nature of continuous lit books restricts the ability to show size, reinforcing that continuous lit books are not the optimal place to execute block liquidity.

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