

WHAT IMPORTANCE DOES IG PLACE ON PRICE, COST, SPEED AND LIKELIHOOD OF EXECUTION WHEN ASSESSING THE QUALITY OF EXECUTION?

We have a number of processes and reports in place, run in real time, daily and monthly, to monitor the quality of execution we deliver to our clients. These assess factors relevant in the fulfilment of best execution, including:

1. Price
2. Cost
3. Speed
4. Likelihood of execution

This document describes each of those processes and reports in greater detail.

PRICE

Price is the most important factor for IG when considering best execution. For this reason, we source our prices from multiple venues. To assess the quality of prices, we have two processes in place:

1. Our **pricing controls**, run in real time
2. An **audit of all executions**, carried out on a T+1 basis

Our **pricing controls** are a range of real-time monitoring mechanisms which assess the quality of prices, data feeds and connections to trading venues. These controls are built to deliver alerts, statistics and signals in relation to things like latency, trading status (ie if the stock is trading, suspended, in auction, etc) and spike detection (anomalous prices), to the dealing and pricing teams who monitor the health and quality of the price-generation process. Dependent on the individual control, type of problem identified and circumstance, we'll pursue an appropriate course of action. This could include exclusion of individual data feeds from aggregated pricing calculations, or suspension of the affected products from trading.

Our **daily audit** endeavours to make sure that executions carried out the previous day are consistent with the best bid and ask prices from available liquidity. In respect of leveraged over-the-counter (OTC) orders, this includes the liquidity provided by IG's own book. We use pricing technology to create a consolidated 'best bid and offer' (BBO) from the order books of selected available exchanges and multilateral trading facilities (MTFs). This will always include the primary exchange, but also other venues that we believe will make up a significant proportion of liquidity in combination with each other. Where there is a single listing (primary exchange only), then only that venue can and will be used for the formation of our best execution price.

In 2018, these daily checks were run by the dealing desks. All anomalies highlighted by the report were investigated and corrected, to ensure that each client received the best price that we were able to execute at the time of the trade.

The result of each check was recorded by the dealing desk, detailing anomalies where they were spotted or 'zero anomaly' where none were. These records were in turn monitored by our compliance team, who ensured their integrity was maintained.

With regards to IG Smart Portfolios, our discretionary managed ETF advisory product, price quality was monitored in both real time and on a monthly basis. In real time, we ensured to the best of our capacity that the current bid/ask spread we executed against was not incongruous with a historical measure of bid/ask spread at the point of trade. We also took steps to ensure that our best quote was consistent with the prevailing EBBO (European best bid offer) price, with reference to the size of the order. Our monthly reports measured the improvement of our fill price against the best bid and offer at the time of execution, and slippage from the mid price.

These measures of quality undergo the scrutiny of IG's best execution committee, who meet every month.

A full audit of the lifecycle of any order is accessible by client-facing staff when dealing with client queries. We also use third-party market data providers to audit and monitor historical bid/ask quotes, and last trade information.

COST

Keeping transaction costs low for our clients is intrinsic to our execution approach – sourcing the best available price from multiple liquidity venues. We regularly assess our execution venues, brokers and data providers, and make changes to our execution arrangements where we deem the change leads to better value for our clients. One such change was the addition of three further liquidity providers in our retail service provider (RSP) flow.

We offer clients direct market access (DMA) to both the RSP network and order book. These have different costs for trading, but we don't pass these costs on to clients. Furthermore, we have recently introduced a notification message which warns clients when they select a price which is not the best available, if dealing via the RSP through our L2 platform.

We are clear and transparent about our spreads, commissions and other charges across all products, and we regularly assess opportunities for reduction.

SPEED

IG recognises that markets can move in milliseconds. We therefore try to execute all clients' orders with the highest possible urgency, which means maximising automatic executions and minimising manual ones.

We process 100% of our clients' active⁽¹⁾ trades without any manual intervention. For all other executions carried out on behalf of clients (stop and limit execution, margin close-out), we endeavour to process the majority without manual intervention. The small percentage of executions that do require manual action are typically due to balancing the appropriate price impact of a relatively large order with the constraints of the liquidity in the underlying market.

(1) An 'active' order is where our clients give us an instruction to execute an order immediately. This is as opposed to a 'passive' order – where clients give us an instruction to execute an order later, subject to the price moving to a specific level.

SPEED (CONTINUED)

To ensure that we maintained our policy of maximising automatic executions in 2018, we produced monthly reports which monitored the percentage of executions that were processed manually with respect to passive trades (as mentioned above, all active trades were processed automatically). Specifically, we monitored the percentage of stops and limits that were processed manually, and the number of trades processed manually within our margin close-out system. These reports were fed to the best execution committee, who assessed any failures or unusual patterns and considered changes required to rectify issues.

LIKELIHOOD OF EXECUTION

IG optimises likelihood of execution in many ways. Generally, this depends on whether a product is traded OTC or via DMA (for both leveraged products and share dealing).

Our electronic OTC order flow is designed to maximise the chance of execution by limiting the extent to which the execution interacts with the underlying market.

It also provides the benefit of IG's additional book liquidity over and above underlying liquidity. This not only increases the likelihood of execution, but also increases the speed of execution and reduces the overall transaction cost to the client – not passing on 'price impact' from the market improves the price the client receives. Additionally, clients can set an aggressive limit price ('points through current') and can accept a partial fill. Both features are designed to increase the likelihood of execution.

For DMA executions, we generally use investment banks who provide execution through their smart order router (SOR) or by 'directed' orders to exchanges. These SORs normally employ a 'spray' strategy which ensures the order has access to multiple lit and dark venues, and therefore higher levels of liquidity and a greater chance of being matched.

To assess the likelihood of execution, we monitor rejection rates of client orders on a daily and monthly basis. We also produce daily reports monitored by the dealing desk, who investigate and resolve failures or inadequacies. These daily reports are consolidated into monthly reports, and presented to the best execution committee.

In 2018, we created additional dashboards for our IG Investments business which monitor RSP rejections and venue coverage. These dashboards are reviewed monthly.

DOES IG HAVE ANY CLOSE LINKS, CONFLICT OF INTERESTS AND COMMON OWNERSHIP WITH RESPECT TO ANY EXECUTION VENUE USED TO EXECUTE ORDERS?

We use several venues for execution but do not share any close links, conflicts of interests or common ownership with any of these venues. Our selection of execution venues is based on factors likely to provide best execution, including:

1. Execution price quality
2. Execution size
3. Speed of execution
4. Cost of execution
5. Access to native and synthetic order types
6. Counterparty credit-worthiness
7. Anti-gaming features
8. Global coverage
9. Universe of instruments
10. Stock lending

DOES IG HAVE ANY SPECIFIC PAYMENT, DISCOUNT OR REBATES ARRANGEMENTS WITH ANY EXECUTION VENUES?

IG does not have any such arrangements with any execution venue, nor do we engage in any payment for order flow (PFOF).

DID IG MAKE ANY CHANGES TO ITS CHOSEN EXECUTION VENUES, AND IF SO, WHAT WERE THE FACTORS THAT LED TO THOSE CHANGES?

In 2018 IG introduced three new RSPs to the execution flow. They were introduced to improve access to liquidity and prices for leveraged and physical ETF products.

WHAT DIFFERENCES, IF ANY, ARE THERE IN THE EXECUTION OF ORDERS FROM THE VARIOUS CATEGORIES OF CLIENTS?

IG provides best execution to two categories of clients: retail and professional. Our automatic order flow is not designed to treat comparable retail or professional client orders differently. However, we are obliged to consider the differing nature of our clients when designing systems and executing orders, and to disclose this information separately.

The variation in data between retail and professional clients is usually a result of the differing type of trading that each client pursues, rather than an indication that a comparable retail or professional order would be treated differently in our systems.

DESCRIBE WHEN ANY OTHER CRITERIA WAS GIVEN PRECEDENCE OVER PRICE AND COST WHEN EXECUTING RETAIL CLIENT ORDERS, AND EXPLAIN HOW THIS MAINTAINED BEST EXECUTION FOR THE CLIENT

For our retail client orders, price and cost are our most important consideration. However, in certain circumstances we may determine that other execution factors take precedence over immediate price and cost factors if they are instrumental in delivering the best possible overall result for clients. In 2018, we identified two instances where other criteria may have been given precedence over price and cost:

- Specific instructions from the client
- Order aggregation

SPECIFIC INSTRUCTIONS

Where a client gave us specific instructions, then those instructions took precedence over other aspects of our policy. These instructions included, but were not limited to:

1. Specifying a venue where the client wished a transaction to be executed or for us to hedge
2. Specifying the price of a CFD contract with us (eg through a direct dealing platform such as L2)
3. Specifying the price at which a CFD contract is to be closed if the market moves against the client (eg a limited-risk transaction)
4. For us to 'work' an order

In such instances, our approach to maintaining best execution was to adhere to our policy on any of the four factors (price, cost, speed, likelihood of execution) that was not directly impacted by the client's instruction.

ORDER AGGREGATION

In the instances where we send client orders to market, we will not normally aggregate orders. We may do when it is unlikely that the aggregation of orders will work, overall, to the disadvantage of any client whose order is aggregated. However, the effect of aggregation may work to a client's disadvantage in relation to any particular order. We inform clients that we may sometimes aggregate their orders with orders from other clients, or with our own orders for the purposes of hedging other client activity. Clients whose orders have been aggregated will be filled basis our order allocation policy (please refer to our Summary Order Execution Policy) when the aggregated order is only partially filled by the market.

We may sometimes aggregate orders to reduce the time it takes to get all client orders to market. Execution of many small orders one at a time could also 'signal' to the market that this pattern may continue, which may result in our clients getting worse fills than if IG sent one single order to market. This may be particularly important in the illiquid, quote-driven or fast-moving markets. In light of these potential issues, we believe that aggregating orders can sometimes deliver a better overall outcome for clients.

With respect to IG Smart Portfolios, our ETF discretionary managed service, we may seek to aggregate orders as a result of single client investments, regular contributions and portfolio rebalances. Where simultaneous buying and selling of the same ETF was required, IG used the mid price as the execution price. All clients received the same weighted average price of the units executed with the RSP, and those 'crossed' at mid. This provides the best possible price for clients overall, with preference not given to any one client.

WHAT DATA OR TOOLS DOES IG USE TO MONITOR THE QUALITY OF EXECUTION?

The three most important datasets that we use to monitor and assess the quality of execution are spread capture data, broker transaction cost analysis (TCA) and a series of reports collectively known as the 'best execution pack'.

DAILY EXECUTION MONITORING

IG has an internal system which captures the following:

1. The price of every client execution
2. The price contained in IG's pricing engine at the exact time of the trade
3. The underlying market price at the exact time of the trade

This data underpins the daily T+1 check mentioned above. The audit, carried out by dealers, looks at instances where these three sets of prices do not match up; where anomalies are spotted, dealers will normally reference data from independent third-party providers to establish the correct price at the time of execution.

EXECUTING BROKER ANALYSIS

We regularly review the quality of execution achieved by our executing brokers. We receive and analyse TCA provided by brokers. In 2018 we continued to develop our own reports to monitor the quality of execution by our executing brokers. This allows us to better identify any outliers in the results.

MONTHLY EXECUTION INFORMATION

Every month, a document prepared by our dealing desk is reviewed by our best execution committee, to oversee the quality of execution over the previous month. Various execution quality metrics are reviewed, including data relating to:

1. Fairness of prices
2. Order rejections
3. Manual executions
4. Execution anomalies and system issues
5. The extent and nature of queries relating to execution

Consolidated tape providers (CTPs) offer a service which combines price and volume data from multiple execution and trading venues into a continuous electronic data stream for individual financial instruments. They can therefore provide useful data against which to measure best execution, particularly in terms of price. This type of service is very new and still being established in Europe, with providers needing to receive authorisation under the newly implemented MiFID II regulation. As a result, IG is not yet able to use a consolidated tape for benchmarking prices in European products. However, we will continue to monitor the development of this service in Europe.

As the concept of a consolidated tape is well-established in the United States, we ensure that our price feeds for our leveraged OTC products on US equities reference the best price available from the consolidated tape before execution. We also verify the quality of execution in US equity products for our share dealing clients and OTC clients post-trade.

In the absence of authorised CTPs in Europe, we strive to execute and monitor for the 'best price' by using a range of execution venues and by benchmarking our OTC price feed against the European best bid or offer (EBBO) which take into account live price data from multiple exchanges.