FMSB
FICC MARKETS STANDARDS BOARD

Spotlight Review

Measuring execution quality in FICC markets

September 2020

About FMSB

FICC Markets Standards Board Limited (FMSB) is a private sector, market-led organisation created as a result of the recommendations in the Fair and Effective Markets Review (FEMR) Final Report in 2015. One of the central recommendations of FEMR was that participants in the wholesale fixed income, currencies and commodities (FICC) markets should take more responsibility for raising standards of behaviour and improving the quality, clarity and market-wide understanding of FICC trading practices. Producing guidelines, practical case studies and other materials that promote the delivery of transparent, fair and effective trading practices will help increase trust in wholesale FICC markets.

FMSB brings together people at the most senior levels from a broad cross-section of global and domestic market participants and end-users.

In specialist committees, sub-committees and working groups, industry experts debate issues and develop FMSB Standards and Statements of Good Practice and undertake Spotlight Reviews that are made available to the global community of FICC market participants and regulatory authorities. As part of its analysis on the root causes of market misconduct, FMSB is focusing on the challenges of new market structures.

Spotlight Reviews

Spotlight Reviews encompass a broad range of publications used by FMSB to illuminate important emerging issues in FICC markets. Drawing on the insight of members and industry experts, they provide a way for FMSB to surface challenges market participants face and may inform topics for future work. Spotlight Reviews will often include references to existing law, regulation and business practices. However, they are not intended to set or define any new precedents or standards of business practice applicable to market participants.

Find out more about the FICC Markets Standards Board on our website fmsb.com

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Rupak has more than 15 years' experience in FICC market structure. He was Head of Corporate Strategy for ICAP/NEX for six years providing advice on strategic direction, market structure change, customer/competitor landscape, new business ventures and M&A. He was a trusted counsellor to the PLC Board on the dramatic transformation of the business from interdealer broker to focused financial technology firm and the ultimate sale of the businesses.

Prior to this Rupak spent more than a decade at Credit Suisse as an equity research analyst where he was Top Three ranked on numerous occasions by buy-side clients in Institutional Investor and other surveys for his coverage of asset managers, exchanges and other capital markets focused companies.

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Executive summary

Measuring and evidencing trade execution quality has become critical to client servicing as well as to demonstrating ongoing compliance with investor protection regulations. A firm's ability to do this well depends heavily on the quality of data available to the firm and how it is used to draw the necessary comparative assessments. While the various regulatory requirements for measuring execution quality vary by jurisdiction and asset class, wholesale fixed income, currencies and commodities (FICC) markets face specific challenges in achieving high standards of transparency, openness and fairness. This Spotlight Review explores the root cause of these challenges, highlights the progress made in regulation, and market participants' practices with regard to data reporting and best execution, and sets out key points of focus for firms in navigating these difficult waters. It aims to create further discussion on this topic and its relevance to future standards work by FMSB. This Review is intended to benefit front office trade execution on the buy-side as well as within market makers, and for those responsible for overseeing regulatory requirements in compliance and risk functions.

The effective measurement of execution quality rests crucially upon the observability of relevant high-quality data sources. Increased electronic trading and post-trade regulatory reporting requirements have substantially increased the amount of data available. However, the vast majority of FICC instruments continue to trade episodically and, even where there is regular trading activity, there may be a limited amount of real-time public market data due to the over-the-counter (OTC) nature of the activity.

Ensuring that data is fit for purpose involves checking for accuracy, robustness and timeliness of the reported data as well as checking how data is aggregated and analysed. Much of the new data ecosystem that has emerged in recent years has not been optimised because of a lack of data quality and standardisation. This is particularly evident in the context of the Markets in Financial Instruments Directive (MiFID II)[1] where a less prescriptive approach to post-trade reporting of OTC transactions has led to inconsistencies in the disclosures provided by market participants, which has in turn impacted their usefulness to the competent authorities.

While not a new concept, in the last four years there has been a significant focus on best execution and transaction cost analysis (TCA) by both market participants and regulators. Additional regulatory requirements have been a key driver of this, combined with an increasing business focus on execution quality in order to ensure firms have a competitive offering. Moreover, the growing shift of liquidity risk to the buy-side over the last decade has increased its desire to ensure adequate liquidity sources across all types of market conditions.

Creating a rigid one-size-fits-all set of requirements is not suitable given differences in the application of best execution factors and TCA principles across asset classes, geographies and firms, and the variability in data availability. However, there may be benefits to agreeing broad best practice, including due diligence as to how execution quality is measured, with a view to better fulfilling regulatory requirements and driving greater efficiencies.

For global wholesale FICC markets this review examines:

> the observability of relevant data sources;
> the reliability and quality of data sources;
> variations in data observability and reliability across different products;
> obligations and priorities in measuring execution quality; and
> a role for industry standards.

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Ensuring availability of relevant data

The regulatory push to improve transparency in OTC FICC markets has significantly increased the amount of trade data that is required to be reported by market participants. Nevertheless, the range of data inputs in OTC FICC markets remains much smaller than for equities and exchange-traded markets. Fragmentation of OTC FICC liquidity with low levels of consolidation in centralised electronic trade venues impedes market participants' ability to access representative prices.

At the same time, MiFID II imposes an explicit requirement on firms to ensure external market data and externally verifiable reference prices have checks done on a systematic basis. Acquiring relevant market data can be a costly exercise. A recent call for input from the UK Financial Conduct Authority (FCA),[2] points to the increased importance of accessing relevant market data:

"The MiFID II best execution rules also mean that dealers need to obtain trading data from venues in order to ensure their customers are receiving the best possible execution results on a consistent basis. Where there are no substitutable trading data available, firms may have no choice but to buy these data from the relevant providers. Where firms do have a choice, they may still face barriers to switch to alternative data providers."

Market participants face difficult decisions when considering the different sources and types of data available for measuring execution quality in FICC markets. The following outlines some important considerations for firms building a checklist of data sources, types and their relevance.

Low penetration of Central Limit Order Books (CLOBs) – An effective input into price discovery and benchmarking in trade execution is the availability of market reference prices such as firm pre-trade quotes and real-time post-trade reporting provided by CLOBs. In highly liquid FICC products such as foreign exchange and G10 on-the-run government bonds there are typically CLOBs, but most OTC FICC markets have a low penetration of CLOBs owing to more episodic liquidity and the preference for disclosed liquidity channels.

Growth of disclosed liquidity electronic trading platforms – The last decade has seen a significant growth in electronic trading on multi-dealer RFQ (Request for Quote) and streaming platforms as a result of regulatory requirements, technology advancements, cost pressures and a shift in focus of market makers from holding inventory to price distribution. Although the pricing information is typically bespoke to individual clients, there is increasing provision by electronic platforms of aggregated pre-trade axes/composite pricing. These can be valuable for price discovery and measuring execution quality. There has also been significant growth in the use of single bank direct application programming interface (API) feeds through order and execution management systems, which provide an aggregated view of pricing.

Regulatory reporting requirements – These have considerably increased the amount of post-trade data that is available. Nevertheless, this tends to be focused on smaller size trades while prices for block liquidity may be very different and vary significantly across different bond issues. The breadth of reported data is greatest in the US owing to TRACE (Trade Reporting and Compliance Engine) in fixed income securities (primarily corporate bonds), and Dodd-Frank focused on OTC derivatives. There are significant inconsistencies in transaction reporting across geographies and depending on the size of a trade. For instance, MiFID II provides real-time reporting on a small number of bonds up to a certain trade size.

There is a continuing debate among market participants and regulators about the benefits of increased real-time reporting and dissemination of this market data. This is particularly relevant in less liquid securities, where there is a balance between ensuring transparency and liquidity. One recent example is the discussion around whether increasing the current dissemination caps for US large corporate bond trades and introducing a 48-hour dissemination delay for trades above the suggested caps would increase block trade liquidity.[3]

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Less liquid products and the growing use of evaluated pricing models – Some FICC instruments see significant daily notional volumes but in large ticket sizes, hence a limited number of actual trades, particularly in any given size range. The vast majority of off-the-run FICC instruments do not trade every day (and in some cases do not trade for months at a time) and data inputs can be sparse. Here the limited amount of available transaction data necessitates the use of evaluated pricing products that source data from a combination of transaction data, analyst and model driven valuations. The frequency of evaluated pricing and liquidity assessments has, in many cases, increased from end of day to intraday, and in some circumstances to real time.

Internal data sources – A firm's ability to measure FICC trading performance will depend to some extent on their size. For instance, on the buy-side, internal data sets at firms with scale will be far richer. In the absence of reliable pre-trade data, the existence of a rich historical data set may be a competitive advantage. It can potentially enable the firm to target fewer counterparties when submitting an RFQ.

A wide number of independent relevant sources – When comparing transaction or indicative price data for purposes such as measuring execution quality, it is important that the data set used is appropriate. Data inputs should be as representative and independent as possible. This requires data being sourced from a wide range of liquidity providers and representing prices that are actually available to the relevant liquidity consumer and in the size required. In certain markets there may be very different prices across market segments, i.e. prices in the dealer-to-dealer market may differ from those in the dealer-to-client segment. In liquid asset classes, where there are a huge number of market participants, the estimated mid-market data, that is used to calculate slippage, is often sourced from high frequency trading firms, but this may not be representative of the prices which can be obtained by other types of market participant, e.g. a pension fund. Accessing enough appropriate data can be challenging for market participants.

Parent and child orders – When large ('parent') orders are broken down into smaller ('child') orders, monitoring the market impact of this process and how it affects the available liquidity to execute future trades is highly relevant. TCA providers, computing cost metrics accurately for any order worked over time, require granular trade data with the prices of each component 'slice' as it was executed across multiple venues, rather than just the average price achieved of an order executed. The first few trades in any such order can have signalling risk in terms of market impact, potentially moving market prices and thereby disadvantaging later portions of the same order. This is typically a focus for buy-side investors in foreign exchange markets but less so in fixed income. The roll out of execution algorithms in fixed income may result in this type of granular information having increased relevance.

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Ensuring high quality data sources

In addition to ensuring adequate availability of relevant data there needs to be a focus on sourcing high quality data that is fit for purpose. This section outlines how the available data sources and types highlighted in the previous section need to be accurate and timely. Robust due diligence of sources of data should be carried out to ensure there is enough rigour and control around their creation or aggregation. This includes transaction data directly from exchange-like CLOBs, the use of post-trade transparency reporting and any pre-trade axes.

Transaction data – The recent FMSB Spotlight Review 'Emerging themes and challenges in algorithmic trading and machine learning'[4] highlighted the potential risk of a lack of depth or market structure issues driving price changes on CLOBs that are not in line with underlying market fundamentals. Examples included flash crashes seen in US Treasuries and spot foreign exchange in recent years. Disclosed liquidity platforms have been the main area of growth for electronic trading and data in recent years. Nevertheless, it is worth noting that a major constraint of indicative pre-trade data is that it may represent a view on a prevailing market rate and as such may not always reflect an intent to trade at that price and size. This was illustrated to some extent in the recent market volatility caused by the COVID-19 pandemic.

Post trade transparency requirements – Both the European Securities and Markets Authority (ESMA) and the FCA point to feedback from users of market data that, despite the increased provision of real-time post-trade transaction data, there continue to be difficulties in accessing the data in a usable format.[5] A lack of consistency and the number of different sources make aggregation a challenging and costly exercise.

The reporting requirements in Regulatory Technical Standards (RTS) 27[6] and 28[7] were intended to add transparency around the measurement of best execution, and ESMA had stated that these reports should allow for robust comparison between different firms and enable comparison over time. In practice this has not been achieved, mainly due to the lack of clarity about the information that must be reported in OTC markets, and the huge volume of information being created. Moreover, these reports only include information on EU venues and do not show the full picture of liquidity, for instance excluding that of market makers operating in US and Asian markets.

RTS 27 involves quarterly disclosures by execution venues, market makers and Systematic Internalisers (SI) that include a significant number of fields such as venue/market segment details, outages, failed transactions, prices, costs applied to users of venues and likelihood of execution in the form of the number of orders/quotes versus transactions. The original ambition for RTS 27 to be used as a source of information for the buy-side to help determine which venues (or market makers) might be the most competitive and in determining the quality of execution, remains largely unfulfilled. RTS 27 reports are highly complex and are not currently comparable across different firms. There is often better pricing information available to clients through other reporting/price analysis providers. The July 2020 EU Capital Markets Recovery Package Commission Staff Working Document[8] recommends inserting a new subparagraph in Article 27 (3) of MiFID II in which the reporting requirement will be suspended until 2022. The time limit reflects that there will be a new assessment of the reports during a review with legislative initiatives, if appropriate, that is provided for in 2021.

Data analytics – Any data analytics in fixed income markets involves the collection and cleaning of a vast amount of raw data. Most of this comes in an unstructured format, hence the need for a systematic process for choosing the most accurate dataset, the use of the latest relevant calculation technology and adjustments where necessary. Given the episodic nature of transaction data in most FICC markets, benchmarking of execution quality may rely heavily on observed actionable indications of interest with quotation information and market colour around both voice and electronic trades parsed from messages.

Processes that use data, such as TCA, should gather standard information around a trade, such as size, current liquidity and the type of order submitted. This contextual information is critical to understanding execution quality, especially relative to the respective market conditions at the time of trading. There should be consistency in how data is aggregated from multiple sources and how trade data is enriched (so that trades can be mapped against each other with all the relevant fields).

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Evaluated and consensus pricing models – A lengthy track record of bond pricing is necessary to provide enough back-testing information for accurately pricing a bond that has not traded for a long period of time. Moreover, evaluated and derived pricing products need to have adequate records of the decisions made in the past about how to include or disregard certain sources. In such episodic markets, liquidity measurements including using trade data in similar bonds and sectors, or price volatility data, are also important in trying to gauge the latent potential for a transaction in a bond which has been generally purchased by investors as 'buy and hold' and so been relatively thinly traded historically. It may well be that a bond has not traded because none of the holders had been sellers, but that very similar bonds (same issuer, similar duration etc.) have been actively traded. As well as rigorous validation of inputs, ensuring transparency in how any consensus pricing or market axes are generated is particularly important.

Unique price-forming data – In an era of electronic and algorithmic trading there has been a surge in the amount of order and transaction data across most liquid FICC markets. However, there is a fundamental difference in quality between price-forming market data created by true risk transfer and data resulting from an increased recycling of liquidity (i.e. immediate hedging by market makers externally rather than holding positions) across different trading platforms or pure latency arbitrage strategies (as often seen between cash and futures markets).

Moreover, in any single financial instrument market makers may offer liquidity and credit on multiple venues, but when the liquidity is consumed on any single venue those same market makers may instantaneously withdraw orders from other venues or in adjacent markets. The appearance of liquidity may not survive it being tested by actual trading and so liquidity and credit cannot be simply aggregated across venues to determine market liquidity at any given price: apparent overall market volumes may therefore be a poor predictor of true market depth and quality. This problem can be greater where pre-trade price transparency is based on indicative rather than firm pricing. It is also worth noting that the speed of electronic trading has underpinned these trends, but they can also be evidenced in voice brokered/ traded markets.

The importance of correct timestamps – Correct timestamping of trades is important in determining the relevant price and size at any given time, which is vital to measuring the execution quality of a trade relative to other trades taking place at the same time. For such comparisons, it is necessary for timestamping to be done on a like-for-like basis across different venues. MiFID II created an obligation for accurate timestamping by different types of venues and SIs. Market participants must actively find solutions to the need to synchronise their business clocks, monitor latency capabilities and not have any anomalies in the performance of market data. Timestamping is a relatively efficient process in highly electronic markets. There is greater variability in the accuracy and granularity of timestamping, at the point of trade, in voice-traded markets.

Consistent labelling of venues – With increased electronic trading and growing fragmentation across different platforms there are significant benefits in the clear labelling of venues for platform users. All liquidity providers can help liquidity consumers to assess accurately the quality of algorithmic trades that sweep multiple liquidity providers and venues by adding consistent labelling of venues. This is particularly relevant in foreign exchange, where there are a huge number of multi-dealer trading platforms.

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Comparing data quality across different FIC products

As the previous section illustrates, the size and diversity of FICC markets means there is a significant variation in the amount and quality of data inputs. There are millions of FICC instruments (e.g. many bond issuers have numerous bonds with many different durations and structures as well as being sometimes denominated in different currencies) with extremely diverse liquidity characteristics. In this section we have summarised data quality issues on a more granular basis looking at different products and financial instruments. Given the breadth of financial instrument types, we have included most, but not all, major fixed income and currencies (FIC), i.e. rates, credit, and currencies products. Moreover, we have excluded a discrete discussion of individual commodities markets in this section given the significant number of categories, but the points made in the last section are just as relevant in energy, metals and other commodities markets as they are in FIC.

Data quality is typically best in terms of observability and reliability when products are most liquid and less complex. Consequently, a good place to start any consideration of data quality is by highlighting the most liquid products. Spot foreign exchange, on-the-run government bonds, exchange-traded futures and short-dated repos, all in G10 currencies, are the most liquid. OTC interest rate derivatives, despite their large notional volumes, tend to have less frequent large trades, even for on-the-runs denominated in the major currencies. Although G10 macro products tend to be more liquid than emerging markets and credit there is also a huge variation here. Newly issued sovereign debt for large emerging market issuers can be fairly liquid as can newly-issued debt for large corporate issuers or major credit derivatives indices. Similarly, corporate bond exchange-traded funds (ETFs) have proven to have highly liquid secondary markets many times greater than the underlying bonds, even in recent volatile market conditions. At the same time, off-the-run government debt, longer dated or off-the-run OTC interest rate (IR) and foreign exchange derivatives from many G10 countries can be less liquid. In OTC derivatives markets there is also a greater degree of complexity than in cash markets and this is particularly so in non-linear and exotic derivatives such as swaptions.

In less continuous markets, the assessment of live orders and available volume and market depth can be very hard to establish at the point of execution. Selecting an appropriate data set involves determining how many transactions are needed for a sample and whether these transactions are the relevant ones. Where there is relatively sparse trading activity in a financial instrument, it is necessary to consider what is an appropriate lookback period for relevant benchmarking (e.g. one week, two weeks, or longer) and how much weight should be given to non-transaction data such as evaluated pricing models.

The following table sets out the observability and reliability of data in seven major FIC product categories. Most of these cover a spectrum of financial instruments with significant variation in liquidity.

	Observability	Reliability
G10 foreign exchange (FX)	Most liquid market with CLOBs but vast majority of G10 trades are through disclosed channels and do not create market data available to the wider universe of market participants for benchmarking purposes. Longer-dated FX forwards and FX options have more episodic liquidity and are voice brokered so there is more limited market data. Effective TCA needs to incorporate both parent and child orders.	Lack of market depth on CLOBs can lead to flash crashes, e.g.7 October 2016 in Sterling and 3 January 2019 in Yen. Liquidity/credit reproduced across multiple venues, hence the need to be careful about aggregating pre-trade indicative market data. Moreover, a significant proportion of G10 activity and trade prices are from recycled liquidity. High degree of venue fragmentation and lack of consistent labelling of venues means it is more difficult to conduct comparisons on execution quality. Timestamping is effective.

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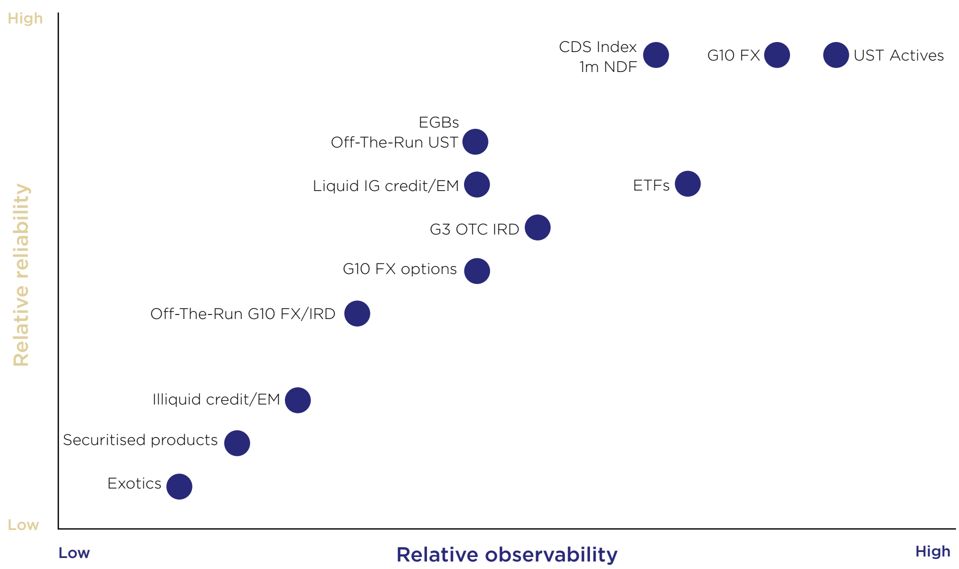
	Observability	Reliability
G10 government bonds and repos	Centralised marketplaces and large proportion of dealer-to-client market traded electronically, hence large percentage of trades creating market data. High degree of liquidity in US Treasury Actives but more mixed in European Government Bonds (EGBs) and off-the-runs. Latter has less frequent market data.	Small proportion of US Treasury CLOB volumes are driven by hedging of actual client business, with most activity focused on high-frequency trading strategies. High profile example of flash crash was on 15 October 2014. Timestamping is effective for market sizes executed on venue, but these tend to have a proportion of risk recycling as opposed to price-forming trades (larger trades are typically done off venue).
OTC IR derivatives	High notional volumes but low number of trades. G10 benchmark prices available through electronic trading. More sporadic activity in off-the-run IR derivatives with less market data.	Market data mostly indicative in all other currencies and tenors and does not necessarily reflect actual executable prices, especially in volatile market conditions.

	Observability	Reliability
G10 credit	Most bonds trade rarely and hence market data is limited. Investment grade bonds from large frequent issuers are liquid with significant data available through electronic trading. Regulatory reporting data focused on smaller trades and cost of block liquidity can be very different. Data is greater in the US where TRACE offers real-time reporting of most trades. In Europe only small proportion of trades are reported in real time. In credit derivatives securities (CDS) a contrast between liquid electronically traded indexes and low liquidity in single names.	Relies heavily on pre-trade indicative quotes from market makers (or third party evaluated pricing models) that may not reflect firm prices, especially in volatile market conditions. Need for clear identification, tagging and labelling as the way of measuring the outcome will depend to some extent on the execution convention, e.g. corporate bonds may be priced as an outright price or on a relative basis as a spread to relevant government debt. Timestamping less consistent in voice-brokered trades.
ETFs	Highly liquid especially in the US with prices available through electronic trading. Efficient secondary market with a high ratio of secondary market trading relative to the underlying market. In volatile markets ETFs remained significantly more liquid than corporate bond prices.	Volatility in March 2020 saw the spread between ETF prices and their underlying fund net asset value (NAV) widen sharply. The spread to NAV is typically a function of the risk/volatility in the arbitrage process but also incorporates the market's view that prices for bonds that have not traded for a period of time are out of date and likely stale.

	Observability	Reliability
Emerging markets	Most emerging market (EM) financial instruments, especially local market ones, trade episodically with limited data. Bonds from large, frequent issuers and one-month non-deliverable forwards (NDFs) are liquid and electronically traded with significant market data.	Majority of EM instruments continue to be voice brokered, with significant participation from local brokers. The accuracy of timestamping at the point of trade, can vary considerably.
Exotic derivatives and structured products	Limited liquidity and voice brokered. May not trade for long periods of time thereby creating reliance on evaluated pricing models or indicative quotes.	Given product complexity and limited liquidity, greater scope for indicative quotes or evaluated pricing to be unreliable. Voice traded with prices negotiated over time hence accuracy of timestamping may vary considerably.

This assessment is summarised in the following chart, which plots observability and reliability across these major product segments, with some further granularity added to reflect the wide number of instruments in each asset class with varying liquidity characteristics. The data is purely an illustrative directional summary of the data quality points made so far in this Spotlight Review as opposed to a detailed and scientific bottom-up model. There is a high degree of correlation between observability and reliability in most cases. The short-hand labels given here for each product category are set out in the key to the chart.

Data quality across OTC FIC products



Key

UST Actives	The latest issued US Treasury bonds for benchmark durations/dates (e.g. 5yr, 10yr)
G10 FX	G10 foreign exchange
CDS Index	Credit derivatives securities index
1m NDF	Non-deliverable forwards with a duration of one month
ETFs	Exchange-traded funds
EGBs	European Government Bonds
Off-The-Run UST	US Treasury bonds that are not the latest issued for benchmark durations/dates
Liquid IG credit/EM	Investment grade and emerging market credit in liquid issues
G3 OTC IRD	G3 over-the-counter interest rate derivatives in benchmark durations/dates
G10 FX options	G10 foreign exchange options
Off-The-Run G10 FX/IRD	Foreign exchange and interest rate derivatives for non-benchmark dates
Illiquid credit/EM	Less liquid credit and emerging markets securities
Securitised products	Securities that are backed by pools of underlying financial assets; these pools make up a new security, which is split up and sold to investors
Exotics	Complex exotic derivatives

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Defining obligations and priorities for best execution

Greater regulatory requirements have been key to the increased prominence of measuring execution quality, most notably with the introduction of MiFID II. There are also commercial benefits to market participants from measuring execution quality. Sell-side market participants are looking at execution quality in order to improve the competitiveness of their offering. The asset management industry is facing competitive and market structure challenges, including the shift of liquidity risk increasingly from the sell-side to the buy-side. Moreover, end investors are increasingly sophisticated and looking for best-in-class processes. Best execution and TCA may seem relatively abstract concepts to those outside wholesale financial markets, but execution costs are borne by fund investors and directly by corporations, with an impact on investor and shareholder returns.

Defining best execution obligations

In Europe, best execution refers to the duty of an investment firm (buy-side and market maker) to take all sufficient steps to obtain, when executing orders, the best possible results for its clients taking into account a number of execution factors, including price, costs and speed. Although MiFID II increased the focus on best execution and TCA, they are not new concepts. The difference between MiFID I and MiFID II as regards best execution was a change in the language from "take all reasonable steps" to "take all sufficient steps", which was interpreted as an attempt to raise the bar on compliance. As part of MiFID II, ESMA outlined the need for execution policies that are effective day to day as well as contingent arrangements for points of stress in markets. They highlighted the importance of front-office accountability coupled with strengthened controls to detect any potential deficiencies.

Illustrating rigorous process around best execution has become increasingly important for buy-side firms. Any best execution obligations for market makers are much more easily determined in agency transactions, which are common in equities but are a small proportion of overall FICC trading activity. A 2017 FCA study identified that where best execution does apply in FICC, best execution monitoring is less sophisticated than in equities.[9] Most institutional buy-side investors assess liquidity across the whole market and multiple venues, and when entering into transactions with market makers as principal, best execution obligations may not be owed by the market maker. Moreover, it is worth remembering that the scope of MiFID II is limited to Europe and excludes asset classes such as spot foreign exchange.

MiFID II and measuring execution quality

Although MiFID II highlights the need for improved processes around execution policies, it does not prescriptively define all aspects of what is required, leading to potential inconsistencies between firms. RTS 28 is intended to enable investors to evaluate the quality of an investment firm's (this regulatory term includes asset managers and market maker banks) execution practices and compliance with its execution policy. This requires annual publication of information about how and where the firm has executed client orders, including a report on the top five venues on which a firm has executed client orders and the quality of service achieved. One of the objectives of RTS 28 was to allow relative and historical comparisons. In assessing the factors firms consider in order to achieve quality of execution, many have tended to focus only on the list that ESMA provides. This includes price, costs, speed, likelihood of execution, and settlement and size for individual financial instruments, but there is little structure to the granularity beyond this and relatively limited attempts to quantify measures. The FCA and ESMA have started a review of the benefits of parts of MiFID II reporting requirements, including RTS 27 and 28 and, as cited earlier, a recent staff working paper recommends delaying these reporting requirements until the review is complete.

Liquidity and order sizes

In assessing execution quality in FICC, there can be huge variability in the relevance of different execution styles and priorities. As a rule of thumb, the more liquid and continuous the market, the more important price and speed are as drivers of trade execution. In less liquid markets, likelihood of execution is crucial and a key metric to be tracked for both buy-side and market maker trades is slippage between the arrival time (i.e. point at which a trade is put on) and the execution time. As well as liquidity, order sizes are also a significant factor, and the larger the order, the more important that minimising market impact and information leakage becomes.

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Asset class variations

There are measurement outputs that are common across most asset classes such as tightness of spreads, market impact, and price variation, but others are determined by asset class specific characteristics. In foreign exchange, fill ratios, hold times, cost of rejects, and market impact get a lot of focus. In bond markets, particularly those that are less liquid, certainty of execution, relative market liquidity and trade size are important factors. Given the significant variations between foreign exchange, rates, credit and commodities in terms of market structure, a key consideration for any industry best practice on how execution quality is measured will be whether there would need to be asset class specific guidance incorporating these nuances.

Market segments

FICC markets tend to be divided into the interbank market and dealer-to-customer market, albeit in certain markets such as foreign exchange, there can be a blurring between the two. In the interbank market, market maker banks and professional traders trade with each other, largely on CLOBs or through interdealer brokers. In the dealer-to-customer market, market maker banks trade with smaller banks and end investors such as corporates and asset managers, largely through electronic disclosed liquidity platforms or directly on the phone. This distinction is important when trying to make meaningful comparisons in terms of measuring execution quality. Pricing in the interbank market and dealer-to-customer market has historically been distinct from each other, although these differences can vary considerably across different products and individual market participants.

The benefits and risks from increased transparency

The more prescriptive the definition of how execution quality should be measured, the more cumbersome and costly the process becomes for market participants to follow. A key question to consider when deciding any best practice around the extent of disclosure requirements will be to balance the appropriate transparency with the potential for adverse outcomes in terms of liquidity and the effectiveness of markets. In general, increased pre- and post-trade transparency, whether it is in terms of the amount of publicly available market data or transparency as to why and how transactions are conducted, is considered positive for market users given that it levels the playing field and allows better access to a wider number and type of market users. Nevertheless, too much disclosure can impact liquidity in thinly traded markets or large order sizes.

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Improving data inputs and measuring execution quality

Achieving a one-size-fits-all set of requirements for best execution and TCA is impossible given the fundamental differences across asset classes, geographies, firms' business models, and the lack of wide availability of key data points. However, there are opportunities to agree principles of best practice in broad terms regarding the due diligence of how execution quality is measured; fulfilling regulatory requirements while driving greater efficiencies. A broader approach to establish standardised models and processes rather than specific obligations related to an individual trade could be crucial to building trust between buy-side clients and market makers over the fairness and effectiveness of FICC markets.

Designing best practice focused on the measurement of execution quality must strike a fine balance between being detailed enough to improve consistency in how market participants engage with each other while not being so prescriptive that it harms liquidity. It also needs to be able to cater for the huge diversity of FICC markets, in terms of the amount of trading activity and data available, product complexity, unique market structure of individual asset classes and market segments.

This Spotlight Review has highlighted the importance of processes that ensure good data quality, and these should form part of any industry best practice. It is also crucial for individual market participants to dedicate time and resource to this area. Ensuring observability of data through the appropriate use of public data sources, such as electronic trading platforms and post-trade reporting, consensus and evaluated pricing and internal historical databases, is foundational. Moreover, this observed data must reflect the 'real' available liquidity for the relevant market participant and in the right size. It must also pass the reliability test which incorporates the need for robust processes to ensure that data is not stale or erroneous, and that there is proper timestamping and labelling of data. At the time of writing, there is a limited public consensus on the data inputs and processes that should be included in best execution assessments.

Much ground has been covered and progress made in the last decade to promote transparent markets, but it is clear there is more to do to improve data quality and processes to underpin fairer and more effective FICC markets.

End notes

1 Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 Text with EEA relevance, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02014R0600-20200326

2 'Accessing and using wholesale data – Call for input', March 2020 available at www.fca.org.uk/publication/call-for-input/call-for-input-accessing-and-using-wholesale-data.pdf. Readers are advised to refer to the FCA's website for any updates.

3 Regulatory Notice 19-12 'Trade Reporting and Compliance Engine (TRACE)', April 12, 2019 available at www.sec.gov/spotlight/fixed-income-advisory-committee/finra-regulatory-notice-trace-19-12.pdf

4 23 April 2020, available at fmsb.com/wp-content/uploads/2020/04/FMSB-Spotlight-Review-%E2%80%98Emerging-themes-and-challenges-in-algorithmic-trading-and-machine-learning%E2%80%99.pdf

5 Readers are referred to 'EU Capital Markets Recovery Package – COMMISSION STAFF WORKING DOCUMENT' July 2020, available at https://ec.europa.eu/finance/docs/law/200724-proposal-capital-markets-recovery-working-document_en.pdf, and increase block trade liquidity 'MiFID II/MiFIR Review Report No. 1 – On the development in prices for pre- and post-trade data and on the consolidated tape for equity instruments', December 2019, available at www.esma.europa.eu/sites/default/files/library/mifid_ii_mifir_review_report_no_1_on_prices_for_market_data_and_the_equity_ct.pdf

6 RTS 27 https://ec.europa.eu/finance/securities/docs/isd/mifid/rts/160608-rts-27_en.pdf

7 RTS 28 https://ec.europa.eu/finance/securities/docs/isd/mifid/rts/160608-rts-28_en.pdf

8 Supra note 5.

9 'Investment managers still failing to ensure effective oversight of best execution', last updated May 2017, available at www.fca.org.uk/publications/multi-firm-reviews/investment-managers-failing-ensure-effective-oversight

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