A-TEAM GROUP

MIFID II HANDBOOK 2018

THIRD EDITION

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SmartStream

Contents

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The post MiFID II world

Welcome to the third edition of A-Team Group's MiFID II handbook, a review of how firms have fared since implementation of the regulation on January 3, 2018, the compliance challenges still to be tackled, and the operational and business benefits of a strategic approach.

The handbook also provides a detailed guide to the data and technology aspects of Markets in Financial Instruments Directive II (MiFID II) and builds on previous editions with additional material on MiFID II in practice and requirements from research unbundling to timestamping and clock synchronisation. Some handy boxes outlining MiFID II and Markets in Financial Instruments Regulation (MiFIR), milestones in their development, and key links to detailed information are also included.

While MiFID II Day One went well with no major incidents, and despite the huge investments and efforts put into compliance before the deadline, the early months of operation have underlined the complexity of the regulation, the need for additional regulatory guidance on some issues, and the shortfalls in achieving the regulation's foundational aims of market transparency and investor protection that must be remedied.

As we have said before, MiFID II compliance is a journey and not a quick fix, so we will continue to provide updates on best practice and changes to regulatory requirements in forthcoming webinars and at our RegTech events in **London** and **New York City** in October and November 2018.

Thanks to our prime sponsor, Thomson Reuters, for supporting the handbook and to all our other sponsors that have shared information on the compliance solutions and services they offer to firms within the scope of MiFID II.

We hope you find this edition of the A-Team MiFID II handbook useful on your journey.

Andrew Delaney
Chief Content Officer
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Foreword

By John Mason, Global Head of Regulatory & Market Structure Strategic Response & Propositions, Thomson Reuters

Markets in Financial Instruments Directive II (MiFID II) went live on January 3, 2018, representing one of the biggest changes in regulatory oversight of financial markets for a decade. Designed to harmonise regulation for investment services and improve investor protection across the European Economic Area, the new rules expand on the original MiFID regulation to achieve a safer, more transparent and more evenly balanced marketplace. But six months on from implementation, has this yet been achieved?

In the race to meet the January deadline, activity reached fever pitch and stress levels soared. Some months down the line, firms are reviewing often tactical MiFID II solutions with a view to building cost-efficient and sustainable compliance systems.

They are also preparing for elements of the regulation that have not yet been implemented, particularly best execution reporting with a deadline at the end of June 2018, Legal Entity Identifiers (LEIs) for counterparties that will come into play in July 2018, and the formalisation of the systematic internaliser regime that will move into action in September 2018. A deferral of requirements around derivates clearing will not bring the regulator's open access clearing concept to the market until July 2020.

Pain points and hiccups in the post-MiFID II market

One of the biggest issues has been that of interpretation. Due to the principles-based approach taken by the regulators to MiFID II, interpretation at the 'bits and bytes' level has been challenging for financial firms. For example, diverse interpretations of the transparency regime have, in some instances, resulted in different timeliness of MiFID II data, which can cause issues of comparability. Issues such as these could require additional guidance from ESMA through 2018 as firms work towards standardising interpretations to achieve comparable data.

Quality of data, and its sourcing and integration, is another challenge, and an issue that many firms may have left to one side in the race to meet the more pressing demands of crossing the compliance line. However, the rules around data could get more stringent, making data quality a rather more urgent priority for firms than it perhaps was before the January deadline.

And of course, the regulation is continually evolving. In May 2018, the European Securities and Markets Authority (ESMA) updated its public register with the latest set of double volume cap (DVC) data under MiFID II, and changed the way it presents the DVC files to facilitate access by national competent authorities (NCAs), market participants and the public in general.

MiFID II introduced the DVC to limit the amount of dark trading in equities allowed under the reference price waiver and the negotiated transaction waiver. This has resulted in more firms moving towards the systematic internaliser (SI) regime, allowing them to deal on their own account by executing client orders outside a regulated market or a multilateral trading facility (MTF), which will have inevitable consequences from a data management perspective.

To ensure wide availability of MiFID II reference data, ESMA introduced the Financial Instruments Reference Data System (FIRDS), a data collection infrastructure established in cooperation with the EU competent NCAs to collect data in an efficient and harmonised manner. FIRDS is designed to cover the entire range of financial instruments within the scope of MiFID II, and is in theory integral to the regulation's transparency drive.

But how successful has it been? FIRDS puts the regulator in the MiFID II operational workflow in a way that has never been done before and there have been early problems in working with the system. Although teething problems are to be expected in such a comprehensive and ambitious system, firms are concerned about incomplete and inaccurate reference data. They are also noting reporting difficulties when using data from the system, including inconsistencies in classification of instruments, a lack of timeliness, and poor data quality. This will improve over time.

Transparency, both pre- and post-trade, is a foundational element of MiFID II, but is incomplete as yet. So far, the general consensus is that in terms of MiFID II's extension into non-equity instruments, the regulation is not yet delivering the levels of transparency initially envisaged. Confusion over the classification of reportable instruments and the definition of 'traded on a trading venue' (TOTV) have caused opacity, while waivers and deferrals have reduced the quantity of post-trade data in the market.

Another part of the transparency drive that has caused many headaches is the area of transaction reporting. In this case, the devil is, as always, in the detail. For MiFID II, firms have the option to submit daily transaction reports to an Approved Reporting Mechanism (ARM) or a National Competent Authority (NCA), if that NCA has built the ability to accept reports. But which do they choose? There are currently issues being reported with both.

That said, these systems will evolve and improve over the coming years, and there is no doubt that the move towards greater transparency will have a beneficial effect on the industry.

Emerging benefits of MiFID II

Despite some bumps in the road in the early months of MiFID II, the regulation is beginning to deliver business and operational benefits. Data sources and datasets generated by MiFID II promise new business opportunities, while a better understanding of data and clients will also foster improved business processes. On the operational front, the overhaul of systems to achieve compliance has streamlined operations and made way to extend automation.

Clients are also benefiting from the best execution practices implemented by MiFID II, with firms required to demonstrate client service, constant monitoring, and underlying support, and clients gaining greater insight into trading.

Going forward, the beneficial impact of MiFID II should increase, delivering not only the regulation's fundamental requirements of greatly improved transparency and investor protection, but also a range of business and operational gains. The systems and processes put in place for MiFID II should also prove beneficial in reaching compliance with future regulations, such as the upcoming Fundamental Review of the Trading Book (FRTB).

In conclusion, MiFID II has brought inevitable implementation issues that the industry must work through in order to execute best practice in a consistent manner. Nonetheless, and despite initial hiccups, the framework is already resulting in material and quantifiable advances both in terms of operational risk and client satisfaction.

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MiFID II regulation

At a Glance

Regulation:
Markets in Financial Instruments Directive II (MiFID II)

Regulatory Regime:
EU

Target Market Segment:
Global financial institutions

Core Requirements:
Order transmission, customer identification, algorithmic trading controls, trade and transaction reporting, transparency

Markets in Financial Instruments Directive II (MiFID II) came into force on January 3, 2018. The regulation extends the remit and scope of its predecessor, the original MiFID that was introduced in 2007, and aims to improve the competitiveness of European markets by creating a single transparent market for investment services and activities, and ensuring harmonised investor protection across Europe .

The regulation amends many previous provisions covering the conduct of business and organisational requirements for providers of investment services, and specifies requirements and organisational rules that must be applied to different types of trading venues. It also makes sweeping changes to the pre- and post-trade transparency of EU financial markets.

MiFID rules that were limited to equities trading on regulated platforms are extended to equity-like and non-equity instruments traded on any trading platform, including multilateral trading facilities (MTFs) and organised trading facilities (OTFs), with a view to ensuring that all trading takes place on regulated platforms. Systematic internalisers that trade OTC derivatives will also be subject to expanded pre- and post-trade transparency obligations.

The regulation includes several new mechanisms, particularly around pre-and post-trade reporting and including the European Securities and Markets Authorities' (ESMA) Financial Instruments Reference Data System (FIRDS), Approved Publication Arrangements (APAs) and Approved Reporting Mechanisms (ARMs).

It also details a framework for market data that includes standards, such as International Securities Identification Numbers (ISINs) to identify securities and, for the first time, OTC derivatives, and Legal Entity Identifiers (LEIs) to identify issuers and counterparties to transactions.

The MiFID II mandate sets aggressive time limits on publishing and reporting pre- and post-trade data. It also introduces controls for algorithmic trading that are designed to provide safeguards and reduce systemic risk, and include regulation of algorithmic traders, including high frequency algorithmic traders, and their market making strategies.

Another key element is the unbundling of research services provided by sell-side institutions to their buy-side clients and execution fees. This clarifies the cost of research, avoids the offer of research as an inducement to trade with the research provider, and lists direct costs as line items, thereby improving transparency.

The regulation's proposal to introduce a consolidated tape that pulls together trade data of financial instruments from regulated markets, MTFs, OTFs and APAs and consolidates the data into a continuous electronic live data stream providing price and volume data per financial instrument has yet to be realised. But a tape is expected to be created, most probably by ESMA, increasing the transparency of investment markets and marking a step change in how market data is distributed.

Since MiFID II went live on January 3, 2018, it has not all been plain sailing and some of the issues resulting from implementation are detailed in this handbook. But on the whole, the industry has made good progress considering the scale of change made by MiFID II regulation and the long journey to complete compliance.

MiFID II in practice - Overview

MiFID II Day 1

While Christmas was cancelled for some MiFID II implementation and operations teams, go live of the regulation went well, albeit with low trading volumes. The absence of disruptive problems was a relief, following predictions that serious issues could result from some firms not being able to complete testing with trading venues and lock down their technology ahead of the January 3, 2018 compliance deadline.

Whatever the outcome of Day 1, market participants subject to MiFID II agreed that it was just that, the first day of fixing things that don't quite work, addressing tactical workarounds, taking a more strategic approach to compliance and planning for scheduled changes and additions that will be made to MiFID II and sister regulation Markets in Financial Instruments Regulation (MiFIR).

The regulatory response

The regulatory response to the first few days of MiFID II in action was similar to that of market participants, although the UK Financial Conduct Authority (FCA) noted data quality issues around transaction reporting and said it is essential for firms to be as accurate as possible on numbers of trades and prices to ensure the fundamental transparency and investor protection aspects of the regulation.

While firms review and renew elements of initial MiFID II implementations that need to be more robust to be sustainable or are too costly to run over the long term, regulators are also reviewing how the regulation is working and considering amendments, particularly around transparency, which has not yet been achieved to the extent envisaged by the European Commission and European Securities and Markets Authority (ESMA).

How long regulators will give firms to develop final solutions that are defensible and will withstand any kind of market test remains to be seen, but it is clear that they will start to look at enforcing MiFID II and perhaps issuing penalties for non-compliance in the second half of 2018.

Market impact

The initial impact on financial markets due to MiFID II structural changes, including the closure of broker crossing networks and establishment of new trading venues, was a rise in orders on lit books, large in scale (LIS) orders performing well, and an upswing in periodic auctions.

New venues, particularly Multilateral Trading Facilities (MTFs) and Organised Trading Facilities (OTFs), are still settling in, raising questions around whether a more complex infrastructure will be helpful to liquidity and fulfil the fundamental aims of MiFID II.

Systematic internalisers

In the run up to the January 3 MiFID II implementation date, the systematic internaliser (SI) regime presented a number of structural and technological challenges. Buy-side firms needed to understand which SIs to trade with and establish connections to them. Meanwhile, sell-side firms needed to decide whether to become an SI and establish reporting to Approved Publication Arrangements (APAs).

Before MiFID II, about 20 firms had registered as SIs on a voluntary basis – ESMA will make SI status mandatory for firms breaching certain volume thresholds in September 2018. Since the regulation came into force, registrations have risen, although there remains no complete list of SIs. Best estimates suggest real numbers of about 70, which will grow over the next few months to nearer 110 to 120, begging the question of where ESMA will set thresholds on August 20, 2018 and how many firms will have to make a formal SI declaration on September 1, 2018.

Last minute changes to the MiFID II mandate

ESMA postpones LEI mandate

While most firms crossed the MiFID II compliance line successfully, in great part due to years of preparation and unprecedented investment in compliance, rollout of the regulation did not go exactly as expected, with ESMA deciding to pull back on the No LEI, No Trade rule less than two weeks before the compliance deadline. In a statement on December 20, 2017, ESMA acknowledged that not all firms would have the required LEIs needed for transaction reporting by January 3, 2018, and postponed the LEI requirement as set out in MiFID II and Markets in Financial Instruments Regulation (MiFIR) for six months to July 3, 2018 with a view to ensuring a smoother introduction of the rules.

In the meantime, it downsized the mandate and permitted:

- Investment firms to transact for a non-LEI-holding client on the basis that before they execute they receive the necessary LEI application documentation from the client, so the firm can apply on the client's behalf
- Trading venues to report their own LEI codes instead of LEI codes of non-EU issuers which do not have their own LEI codes.

Despite postponement of the MiFID II requirement for every party to have an LEI in order to trade, the Global LEI Foundation that manages LEI issuance notes a surge of activity in the months before MiFID II and MiFIR, which also requires LEIs, went live. Growth continued, but slowed, after ESMA announced the temporary postponement and an uptick in uptake is expected towards July 3, 2018.

At the height of activity in the run up to MiFID II, daily issuance of LEIs reached 10,000.

While that level of activity has reduced considerably, issuance is four times what is was around this time a year ago. This is a positive development for the LEI, but problems still remain around the large numbers of LEIs that have not been renewed as required on an annual basis.

Despite issuance of nearly 1.2 million LEIs to date, there are also concerns about entities within the scope of MiFID II that have yet to apply for an identifier. Some firms are finding it difficult to convince their counterparties of the criticality of LEIs, others are struggling with non-EU clients that are not familiar with MiFID II, but do need an LEI if transacting with an EU firm. Come July 3, 2018, any reluctance to obtain an LEI is likely to reduce rapidly as the No LEI, No Trade rule gets back on track.

One unintended consequence of the MiFID II LEI mandate is that it will be possible, for the first time, to get a pretty accurate insight into how many legal entities there are in Europe.

Exchanges win extensions

An eleventh hour amendment to MiFID II around derivatives clearing extended the reporting deadline for exchanges and their clearing houses. The regulation changes the rules around derivatives clearing, allowing open access for derivatives clearing and permitting investors to clear

Venues with deadline extensions

- Eurex Deutschland
- Eurex Clearing
- Euronext Amsterdam
- Euronext Brussels
- Euronext Lisbon
- Euronext Paris
- ICE Clear Europe
- ICE Endex Markets
- ICE Futures Europe
- LME Clear
- London Metal Exchange
- Nasdaq Clearing

Source: www.esma.europa.eu/sites/default/files/library/esma70-155-4809_list_of_access_exemptions_art.54.pdf

derivatives contracts via clearing houses that are not owned by the exchange on which the trades concerned took place. MiFID II text allowed venues and clearing houses to petition regulators for a postponement until July 2020 to enforce the open access rules, which is what most of the EU-based exchanges have done. This provides a short-term solution for derivatives clearing, described by the FCA as a means of ensuring 'orderly functioning' of the clearing market is maintained, but also a hangover for clearing houses that must address complexities around clear by the 2020 deadline.

The German regulator, BaFin, was an early mover in granting a 30-month extension to Eurex, the futures exchange owned by Deutsche Börse. The FCA followed with a last-minute reprieve for a number of ICE futures exchanges as well as the London Metal Exchange and Nasdaq Clearing.

On January 3, 2018, it stated: "Having taken into account the risks resulting from the application of the access rights under Article 36 as regards exchange-traded derivatives to the orderly functioning of the trading venues referred to above, as required by MiFIR, the FCA has decided to agree a transitional arrangement for those entities."

On March 26, 2018, ESMA published a list of 12 trading venues and central counterparties that had received extensions.

The end of the beginning

We are now at the end of the beginning of MiFID II implementation. There is still plenty of remediation work to do and there will be changes to be made depending on the EC and ESMA's review of how the regulation is panning out.

That said and considering the extent of MiFID II, the biggest financial market reform in over a decade, the early months of the regulation have gone relatively smoothly, without catastrophe and with ongoing commitment by the financial industry.

MiFID II in practice - Update

The months since MiFID II implementation have been, for many firms, a time to review tactical compliance solutions and temporary work-arounds, and start to renew elements of their systems to reduce the costs of trading that have been increased by the unbundling of research and execution fees, improve trade performance through optimal venue selection, and develop a robust and sustainable response to the regulation.

Firms are also addressing issues around regulatory requirements that have come into force since January 3, 2018, including double volume caps (DVCs), RTS 28 best execution reports, and the outcomes of ESMA's first bond liquidity assessments.

Supporting the forthcoming Systematic Internaliser regime, the SmartStream RDU and a group of Approved Publication Arrangements (APAs) have developed a utility to help trading firms identify SIs.

On the business front, firms are considering not only how to optimise and industrialise MiFID II systems, but also beginning to investigate how they can use new data sources and datasets generated by MiFID II to advantage.

Double volume caps

After delaying publication of double volume cap data just after go live of MiFID II and MiFIR on the basis of poor quality data from exchanges, ESMA published initial DVC trading volumes and calculations in early March.

The purpose of the DVC mechanism is to limit the amount of trading under certain equity waivers to ensure the use of waivers does not harm price formation for equity instruments. More specifically, the DVC limits the amount of dark trading under the reference price waiver and the negotiated transaction waiver. If more than 4% of stocks are traded in a dark pool on any trading venue, or 8% across all trading venues, over the previous 12 months, then dark pool trading in those stocks is suspended for six months.

The first DVC calculations published by ESMA on March 7, 2018 covered the reporting period from January 1, 2017 to December 31, 2017. Based on the calculations, two caps put a limit on dark trading in equity and equity-like instruments. In January 2018, 17 instruments exceeded the 4% cap and 10 in February 2018, while 727 instruments passed the 8% cap in January and 633 in February.

On May 8, 2018, ESMA published an update of DVC data and calculations for the period of April 1, 2017 to March 31, 2018. These show 58 equities breaching the 8% cap and 10 equities breaching the 4% cap. Trading under the waivers for all new instruments in breach of the thresholds will be suspended from May 14, 2018 to November 14, 2018. The instruments for which caps already existed from previous periods will continue to be suspended.

National Competent Authorities (NCAs) must suspend the use of waivers for financial instruments where the caps are exceeded for six months, within two working days. This means trading under the waivers for all news instruments published on May 8, 2018 and in breach of the thresholds will be suspended from May 14, 2018 to November 14, 2018. Instruments already capped in previous periods will continue to be suspended, explaining the relatively low number of breaches in the May 8, 2018 update compared to the March 7, 2018 numbers.

While the ultimate aim of the DVC is to increase growth in block trading, periodic auctions, and SI trading, an unintended consequence is that some companies are caught up in the DVC rules and will have their shares suspended from trading in dark pools for six months.

An unanswered question is what will happen when the first wave of six-month suspensions is lifted. Will trading firms aim to stay below the thresholds or will caps and suspensions become an inherent aspect of the MiFID II regime?

RTS 28 best execution reports

MiFID II regulatory technical standard (RTS) 28 requires investment firms to publish, on an annual basis and monitor throughout the year, their five largest trading venues, including systematic internalisers, market makers or other liquidity providers.

The deadline for initial reporting was April 30, 2018, and while this could be done on a 'best effort' basis this year, regulators indicated that their expectations were high. As with most deadlines, many firms left reporting to the last minute, but the initial process went largely well with no backlash from regulators.

Looking forward, however, the numbers of these reports could become an issue, with firms with a number of different types of clients trading a number of different asset classes on different venues required to make up to 220 reports.

Bond liquidity system

ESMA published its first liquidity assessment for bonds subject to the pre- and post-trade requirements of MiFID II and MiFIR on May 2, 2018. Its assessment for the first quarter of 2018 found 220 bonds, out of 71,000 that were assessed, to be sufficiently liquid to be subject to MiFID II's real-time transparency requirements. The liquidity assessment for bonds is based on a quarterly assessment of quantitative liquidity criteria, such as the daily average trading activity and number of days traded per quarter. Liquid bonds are listed in ESMA's Financial Instruments Transparency System (FITRS).

The liquidity assessment for bonds is based on a quarterly assessment of quantitative liquidity criteria, such as the daily average trading activity and number of days traded per quarter. The quality of the assessment depends on the data submitted to ESMA, which in the first quarter of 2018 is not complete for most instruments. These data completeness and quality issues result in a lower than expected number of liquid instruments being identified.

ESMA will update its bond market liquidity assessments quarterly, although additional data and corrections submitted may result in further updates within each quarter, all of which will be published in FITRS, which will be applicable to liquid bonds the day after publication.

The transparency requirements for bonds deemed liquid on May 2, 2018 today apply from May 16, 2018 to August 15, 2018, the date from which the next quarterly assessment due to be published on August 1, 2018, will become applicable.

Meantime, ESMA, in cooperation with National Competent Authorities (NCAs), will work on the data quality issues identified and a more robust publication process.

Systematic Internaliser (SI) Registry

Identifying a gap in the MiFID II reporting framework, the SmartStream Reference Data Utility (RDU) has collaborated with a group of Approved Publication Arrangements (APAs) to deliver a centralised Systematic Internaliser Registry. Last year, ESMA said it would not publish a list of SIs before the January 3, 2018 MiFID II compliance deadline and did not expect to publish ISIN to SI relationships before the end of 2018, causing the gap in reporting.

The SI Registry allows SIs to register financial instruments for which they are providing SI services in the registry through their APA. This is important as industry participants must identify whether trading counterparties are SIs for the financial instruments they are trading so that they can determine which counterparty must report the trade.

MiFID II requirements specify that if one counterparty to a trade is an SI, the SI reports, whether it is the buyer or seller. If both counterparties are SIs, the seller reports. If neither counterparty is an SI, the seller reports

APAs collaborating with the SmartStream RDU include Deutsche Börse, Bloomberg, NEX Regulatory Reporting, TRADEcho, Tradeweb and Trax. The registry has been available to all APAs and SIs since the MiFID II compliance deadline and, to date, towards 60 SIs have signed up, a number which is expected to increase to the full set of SIs as new APAs join the registry.

The selection of the SmartStream RDU to operate the registry will make SI data more broadly available to all market participants, including traders that are not SIs. This should help trading firms meet post-trade transparency obligations and allow buy-side firms to identify upfront whether they or their selected brokers will be required to report a trade. By making broker selections based on whether they are an SI, trading firms can avoid some of MiFID II's reporting obligations.

The SmartStream RDU acts as a SI data consolidator and distributor on behalf of the APA group, with APAs collecting data from SI customers and passing it on for consolidation to the SmartStream RDU, which then delivers a single set of SI data to APAs. The SI registry has been well received in the market as a mechanism for investment managers to identify which firms are SIs before they trade.

MiFID II in practice - Ongoing requirements

While many MiFID II requirements are already in play, some will be enforced this year and others in later years. Key forthcoming events include:

Regulatory technical standard (RTS) 27 reporting: RTS 27 is at the heart of best execution. It outlines the reporting requirements for execution venues – including regulated markets, multilateral trading facilities (MTFs), organised trading facilities (OTFs), systematic internalisers (SIs), market makers and other liquidity providers – to evidence that they have taken 'all sufficient steps' to obtain the best possible result for the client when executing orders.

Executing venues must make data relating to the quality of execution of all transactions at their venue available to the public, at no change, on a quarterly basis. Reports must include details about price, costs, speed and likelihood of execution for individual financial instruments.

RTS 27 reports cover fixed quarters with three months to produce the reports. First quarter results from January to March 2018 must be reported by June 30, 2018.

Introduction of the Legal Entity Identifier (LEI): Weeks before go live, the European Securities and Markets Authority's (ESMA) delayed the use of LEIs in Markets in Financial Instruments Regulation (MiFIR) transaction reporting by six months.

Organisations subject to MiFIR's transaction reporting obligations need to ensure that any counterparty eligible for an LEI has one before a transaction in a financial instrument subject to the regulation is executed on their behalf.

The LEI deadline for all counterparties is July 3, 2018. No LEI, No Trade.

Systematic internaliser (SI) thresholds and declarations: While numerous firms have registered as

SIs on a voluntary basis, making themselves subject to MiFID II obligations covering pre-trade transparency, quote and trade matching, best execution reporting, and reference data reporting, the MiFID II requirement to determine which firms must operate as SIs will be made in September.

On August 20, 2018, ESMA will publish information on the total number and volume of transactions executed in the European Union for the first time, covering the period from January 3, 2018 to June 30, 2018. SI thresholds will be based on this data.

On September 1, 2018, SIs must make their first assessment of whether they meet or exceed the thresholds, which will determine their SI status.

Subsequent assessments must be made on a quarterly basis, following EMSA publication of SI denominator data on the first calendar day of February, May, August and November.

Commodities and derivatives markets: A late amendment to MiFID II extended the compliance deadline for exchanges and their clearing houses to meet the regulation's clearing requirements for commodities and derivatives by 30 months.

Venues and clearing houses must have open access for commodities and derivatives clearing as specified by MiFID II in place by July 2020.

MiFID II in practice - Opportunities of compliance

As our industry navigates the uncharted waters of post-MiFID II implementation, firms are making operational gains and looking longer term at the opportunities presented by new data sources and datasets generated by the regulation.

Operational gains

The initial benefits of MiFID II result from the need to review and renew technology systems and consider their scalability either in the run up to compliance for the strategically minded or post implementation for those that took a more tactical approach to getting across the line.

Whatever the approach, MiFID II has motivated firms to clean up static data, reconsider vendor data services, and get a better and more holistic understanding of their data.

Moving up the chain and with a better understanding of data, firms are well placed to streamline their processes, extend automation and reduce manual intervention, particularly in the execution of non-equity instruments. They can also press on with digital transformation and innovate trading with the addition of emerging technologies such as predictive analytics and machine learning.

By driving increased operational efficiency, MiFID II should, in the longer term, contain costs at a manageable level while opening doors to new business prospects.

Business benefits

The new data sources and data sets generated by MiFID II mechanisms and processes offer considerable potential in terms of improved front-office analytics based on data that has not previously been captured, business opportunities afforded by combining existing and new datasets, and the ability to reuse MiFID II data for compliance with other regulations, particularly the forthcoming and complex Fundamental Review of the Trading Book (FRTB).

From a trading perspective, strategies and algorithms can benefit from new data, the data can be used to improve alpha generation, and pre- and post-trade data can provide greater insight and better price formation.

Best execution and best execution monitoring can be used to demonstrate both immediate client service and a persistent level of service that can differentiate firms in the market and help them sustain close customer relationships.

Finally, the MiFID II push towards improved data quality and standards such as the Legal Entity Identifier (LEI) should support not only the fundamental aims of MiFID II to increase market transparency and ensure investor protection, but also establish a base for better regulation and business going forward.

Derivative Trading Requirements

The derivatives trading requirements of Markets in Financial Instruments Directive II (MiFID II) are set out in an accompanying regulation, Markets in Financial Instruments Regulation (MiFIR). MiFIR rules are interpreted and implemented by the European Securities and Markets Authority (ESMA). At the heart of MiFIR's intent to increase market transparency and integrity is the requirement for investment firms trading in over-the-counter (OTC) liquid derivatives to do so on organised venues.

MiFIR's pre-requisite for derivatives contracts to trade on a venue is that the contracts are cleared through a central counterparty and deemed sufficiently liquid. MiFIR's trading obligation is also linked to a similar clearing obligation set out in European Market Infrastructure Regulation (EMIR). The MiFIR trading obligation requires a determination about derivatives subject to the EMIR clearing obligation as to what kind of venue they must trade on.

The venues include regulated markets, multilateral trading facilities (MTFs), organised trading facilities (OTFs) or equivalent trading venues. OTFs are a new category of venue devised under MiFID II and MiFIR. They are multilateral systems that allow multiple third-party buying and selling interests to interact and produce contracts for different kinds of financial products including derivatives.

Trading Venues

- Regulated markets
- Multilateral trading facilities (MTFs)
- Organised trading facilities (OTFs)

MiFIR sets two tests to determine the trading obligation: a venue test and a liquidity test. The venue test requires a class of derivatives to be traded on at least one qualifying or admissible trading venue. The liquidity test determines whether a derivative is ‘sufficiently liquid’ and whether there is enough third-party buying and selling interest.

Transactions subject to the trading obligation are those conducted between financial counterparties as defined in EMIR, and those conducted between non-financial counterparties when rolling average speculative positions over 30 working days exceed the clearing threshold.

High Frequency Trading Rules

MiFID II revises the definition of high-frequency algorithmic trading and sets a new requirement for registration to trade using high-frequency algorithmic trading techniques based on German regulator Bafin’s existing definitions.

As part of the new definition of high-frequency algorithmic trading, two exemptions included in MiFID I will be removed: the exemption of dealing for one’s own account for commodity derivatives, emission allowances or related derivatives; and the exemption allowing companies to trade commodity derivatives on their own accounts if that trading activity is not their main business. The European Commission defines ‘ancillary activity’ as depending on what extent the activity can be measured as reducing risks related to commercial activity or treasury financing activity, or the capital used by this trading activity.

MiFID II also defines high-

Significant MiFID II Milestones

October 26, 2012:
European Parliament approves MiFID II

May 13, 2014:
EU Council adopts Level 1 text

July 2, 2014:
MiFID II enters into force

September 28, 2015:
ESMA publishes final report on Regulatory Technical and Implementing Standards

February 10, 2016:
European Commission proposes one-year delay

June 7, 2016:
European Parliament confirms delay

November 10, 2016:
ESMA issues draft Regulatory Technical Standards for package orders

July 3, 2017:
Deadline for EU countries to implement directive in local legislation

January 3, 2018:
Compliance deadline

Key Links:

Text:
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0065

Timeframe:
https://www.esma.europa.eu/policy-rules/mifid-ii-and-mifir

frequency algorithmic trading as a technique used to execute large numbers of transactions in seconds or fractions of seconds by using infrastructure to minimise latency; or a system determination of order initiation, generation, routing or execution without human intervention on individual trades or orders.

Firms designated as using a high-frequency algorithmic trading technique on one EU venue will be treated as though they are doing the same on all EU trading venues.

Organised Trading Facilities (OTFs)

As mentioned above, MiFID II and MiFIR establish a new type of trading venue, organised trading facilities (OTFs). OTFs are a third type of multilateral trading system in which multiple buying and selling interests can interact to make contracts. The other two types are multilateral trading facilities (MTFs) and regulated markets. OTFs are distinct under MiFID II, however, because they are used only for bonds, structured finance products, emission allowances or derivatives. Regulated market operators may operate OTFs.

OTFs have other unique traits, among them: the execution of orders on a discretionary basis; the ability to facilitate negotiation between clients; a ban on operators trading against their proprietary capital; and a ban on acting as a systematic internaliser (SI) or connecting with a SI.

Discretionary execution of orders on an OTF can occur on two different levels: either when deciding to place or retract an order, or when deciding not to match a specific client order with another available order. OTF operators may decide if, when and how much of two orders they want to match on their system.

OTFs that are facilitating negotiations between clients do have certain duties to honour when conducting such business, including acting in the clients' best interests, providing best execution of trades, and meeting order handling standards.

While MiFID II bans OTFs from trading against their proprietary capital, there are exceptions for sovereign debt instruments with no liquid markets, and for matched principal trading in bonds, structured finance products, emission allowances and derivatives that are not subject to the EMIR clearing obligation.

The restriction of OTFs from systematic internalisation or connection with SIs extends

to any connection with other OTFs to interact on orders. OTFs may engage market makers, but those firms must not be linked to the OTF operator under the MiFID II definition of their functions and restrictions.

Multilateral Trading Facilities (MTFs)

Unlike OTFs, provisions for MTFs were already made in MiFID I. MiFID II does make some changes in MTF guidelines to better align their activities with those permitted for regulated markets, particularly when those markets and MTFs are similar in size. The stated goal of these changes is to ensure fair and orderly trading, efficient execution of orders and publication of rules that are not discriminatory.

Another change for MTFs under MiFID II is requiring a capability to identify and manage conflicts of interest, including the use of systems to recognise and mitigate resulting operational risks and the management of technical operations of systems accordingly.

Under the EU's Market Abuse Regulation (MAR) – which took effect in 2016 and makes reference to rules and guidelines that also appear in MiFID II or are the basis for MiFID II provisions – some other new requirements for MTF access are specified. These include making MTF access publicly available and non-discriminatory; having arrangements to make sure MTF systems function appropriately; setting contingency plans for disruptions; and making arrangements to manage conflicts of interest.

MAR also contains provisions specific to MTF functions, including having at least three active members or users, risk management requirements and having adequate financial resources. The provisions also require publication of execution quality data, and restriction of proprietary trading by the MTF operator. MAR also sets obligations for trading suspensions on MTFs, requiring MTFs to suspend or remove financial instruments indicated in MiFID II.

All parts of MAR that relate to MiFID II took effect concurrently with MiFID II on January 3, 2018.

Systematic Internalisers

While systematic internalisers (SIs) are technically not trading venues, and are actually counterparties, MiFID II and MIFIR do contain provisions addressing or affecting the way SIs operate.

MiFID II makes two key changes to the systematic internaliser (SI) regime. The first relates to the expansion of the instruments included, while the second governs pre-trade transparency requirements for trading bonds and derivatives through SIs.

MiFID II opens up SIs to handle equity-like instruments, such as depositary receipts, certificates and exchange-traded funds, as well as non-equity instruments such as bonds, derivatives, emission allowances and structured finance products.

SIs are also subject to provisions of MiFIR, such as the obligation to make firm public quotes and disclose identification thresholds.

Overall, SIs may, as ESMA has stated, update quotes at any time, and may execute orders at a better price than the streaming quote. Yet SIs are not obliged to publish firm quotes for instruments that fall below a liquidity threshold set by national authorities in keeping with MiFIR. SIs may also set transparent limits on how many transactions they will undertake in response to a given quote. MiFIR also requires that SIs publish quotes publicly in a way that is easily accessible to other market participants 'on a reasonable commercial basis'.

In February 2017, ESMA alerted the European Commission to a possible loophole whereby investment firms operating broker-crossing networks may seek to set up networks of SIs to circumvent MiFID II obligations; in particular, the requirement for investment firms operating internal matching systems and executing client orders on a multilateral basis to be authorised as trading venues, and the trading obligation for shares.

In a letter covering these concerns, ESMA asked the Commission to consider whether there is a need for the Commission to take action to address the issue, such as clarifying certain MiFID II definitions.

Trading infrastructure

Algorithmic Trading

While Markets in Financial Instruments Directive I (MiFID I) did not specifically address issues relating to algorithmic and high-frequency trading (HFT), MiFID II does so by setting out how algorithmic trading is to be conducted in European markets. This is an attempt to prevent a repetition of the infamous Flash Crash of 2010.

MiFID II introduces a form of licensing for proprietary trading firms and others engaging in algorithmic trading and HFT that requires them to implement pre-trade risk controls – including kill switches – to rein in automated trading models. Firms using algorithms are required to identify them for monitoring. Regulated markets and other execution venues (MTFs and OTFs) are required to introduce their own measures to lessen the impact of flawed algorithms.

MiFID II introduces strict definitions of algorithmic and HFT, outlining those trading strategies that are subject to supervisory oversight and setting in place rules on governance, trading software and risk management.

Algorithmic trading and HFT are defined in Articles 4(1)(39) and 4(1)(40) of MiFID II, respectively. Algorithmic trading is defined as any trade that occurs in which a 'computer algorithm automatically decides the individual parameters of orders such as whether to initiate the order, the timing, price, or quantity of the order' or how to deal with the order post-trade, using limited or no human intervention.

Under MiFID II, an algorithmic trade 'does not include any system that is only used for the purpose of routing orders to one or more trading venues or for the processing of orders involving no determination of any trading parameters or for the confirmation of orders or the post-trade processing of executed transactions'. In other words, the regulation does not apply to smart order routing systems that solely determine the venues where an order is to be executed while keeping the remainder of the parameters of the order the same.

High-frequency algorithmic trading, on the other hand, is characterised by infrastructure used to reduce latency, including at least one of the following facilities for algorithmic order input: co-location, proximity, or high-speed direct electronic access (DEA). It also covers instances when a system determines an order's initiation, generation, routing or execution without a level of human intervention for an individual trade or order, and a high intraday message rate that can include orders, quotes and cancellations.

Since the 2010 Flash Crash, concerned policymakers and regulators have examined the manner in which algorithmic traders have interacted with the market through their withdrawal from making markets during times of high market volatility.

In response to these concerns, MiFID II lists a multitude of requirements, some more stringent than others, for firms involved in algorithmic trading and intending to undertake a market making strategy.

One major requirement is that algorithms should undergo testing, and thus facilities are required for such testing. Trading venues should be able to identify the orders, algorithms and people who initiated the orders within an algorithmic trade, pointing to the need for tagging of algorithmic trading models.

High-frequency algorithmic trading firms are required to save time-sequenced records of their algorithmic trading activities and each trading algorithm used for at least five years. This translates into the need for accurate time-stamping, algorithm tagging and extensive records retention.

Firms are expected to develop a written agreement with a trading venue declaring their intent to involve themselves in market making and their market making responsibilities. Firms also have to build sufficient systems and controls to ensure the fulfillment of their obligations as specified under the agreement.

Regulators will be looking to see that firms have risk controls in place to meet MiFID II's requirements and that firms can demonstrate evidence of more responsible trading behaviour

Regulators will be looking to see that firms have risk controls in place to meet MiFID II's requirements and that firms can demonstrate evidence of more responsible trading behaviour. Firms that participate in HFT have to store approved forms to present to regulators upon request, and each form should contain accurate and time-sequenced records of all the orders placed by the firm.

Firms that use algorithmic trading should have system and risk controls to ensure that their trading systems can operate under stress, are subject to appropriate thresholds, and can prevent incorrect orders from executing or other events that might distort the market. Systems should not be used for practices that could be construed as market abuse, and regulators expect that firms will inform them of whether they are using algorithmic trading strategies.

MiFID II does not specify whether firms will need to disclose the entirety of their algorithms regularly to regulators, but regulators are permitted to demand more information regarding the strategies firms have in place in order to gain an accurate picture of their risk controls.

MiFID II addresses the practice of Direct Exchange Access (DEA), where a broker allows a non-member client to use its trading code to send orders directly (electronically) to a trading venue. Specifically, it requires brokers to check that trading venues have appropriate systems and controls in place to ensure client orders do not exceed pre-defined trading and credit thresholds. It also requires monitoring of DEA to prevent market abuse.

Firms are further required to inform their national regulatory authority and any trading venue to which they grant DEA that they are providing this service. The authority can require the firm to disclose information on the systems and controls it has in place to monitor and control its DEA.

From a trader's perspective, MiFID II's algorithmic trading sections may be onerous, but they can also be helpful in creating a push within organisations to establish stress testing measures and improved infrastructure. Systems should limit the ratio of unexecuted orders to transactions. With regards to this ratio, the directive's Regulatory Technical Standards (RTS) provide a method to calculate the ratio either by the total number of orders or the total volume as an alternative to setting a maximum ratio. Other requirements include a gradual slowing of the order flow, and regulation of minimum tick sizes for price volatility.

MiFID II's algorithmic trading provision is expected to have the most sizeable impact on firms that are presently just outside the scope of its regulation. However, this does not change the fact that the directive will profoundly change the manner in which HFTs and algorithmic traders operate.

Best Execution

MiFID II's best execution requirement, enshrined in Article 27 of the directive, is an 'obligation to execute orders on terms most favourable to the client'. Despite the simplistic language used in the legislation, there are more complex insights to be gleaned.

Best execution existed under the MiFID I regime, but under

MiFID II it will evolve to encompass more categories of financial instruments. Firms are responsible for the annual disclosure of which five execution venues they most frequently use for each subclass of financial instrument they trade. Last but not least, there is an expanded monitoring obligation for execution quality in which trading venues must publish related data without charge.

The terms of MiFID I are not nearly as binding as those of MiFID II in terms of enforcing best execution. MiFID I states that firms should take 'all reasonable steps' to give their clients the best possible results, while MiFID II states that firms should take 'all sufficient steps'. Under MiFID I, firms' best execution policies are typically followed in a manner that best serves the client, taking into account the variables of price, cost, speed, the likelihood of execution and settlement, and size of the order.

MiFID II Article 27 further specifies and updates standards established under MiFID I that apply to professional clients. The majority of the changes introduced for investment firms refer to executing client orders.

Trading venues under MiFID II are required to publish data concerning execution quality without charge once a year at a minimum. This information should include details regarding the location of the order, price, cost and the likelihood of execution for individual financial instruments.

Firms should take these variables into account when attempting to achieve best execution for clients and should gain the informed consent of clients before initiating the execution of the order – clients should understand the expenses and related charges that will be incurred and the risk involved in transactions. Consent granted from clients can be general blanket consent, or confined to a specific transaction. Proposed investment strategies should be well known to the client.

Firms disclosing their top five execution venues for the previous year based on trading volumes must also disclose data covering the quality of execution of transactions at each venue. This transaction information will be split between retail client flows and professional client flows. Investment firms under the MiFID II regime are not permitted to receive 'any remuneration, discount or non-monetary benefit for routing client orders' to a trading or execution venue which could produce conflicts.

There are extensive updates on commissions and fees, and on this matter MiFID II states that the amount charged to a client for supplying an investment service should not also apply for the purpose of choosing which execution venues should be added to the firm's execution policy. Firms cannot discriminate against execution venues by use of commissions or fees. For example, a firm cannot create differences in cost to the client in choosing a particular venue if it does not cost the firm more to execute orders through selected venues.

Firms disclosing their top five execution venues for the previous year based on trading volumes must also disclose data covering the quality of execution of transactions at each venue

Three terms that the best execution section of the directive introduces are passive, active, and directed orders, and it is important to distinguish between them. A passive order is an order that enters an order book providing liquidity, an active order is an order that takes on liquidity, and a directed order is an order in which the execution venue is chosen by the client pre-execution. Under MiFID II requirements, firms must publish data including the percentage of client orders executed on specific execution venues. This information should be expressed in quantities of passive, active, or directed orders.

Regulators have enhanced roles in trading as a result of these updates, and trading venues have to disclose more information for transparency purposes. The public is entitled to information relating to the quality of execution of each venue's transactions and the scope of publishing obligations will apply to orders that have been executed in the EU or third-country execution venues. Firms should monitor the extent to which their execution policies are effectual and identify key areas where they can improve.

If firms make any relevant changes to their execution policies, clients should be notified immediately. If regulators or clients ask whether firms are executing orders in compliance with firms' own execution policies, firms must be able to demonstrate to the appropriate regulatory authorities that they are doing so.

In order to satisfy regulators, firms should be able to list the time, price, value of the trade, venue location and date of the transaction in their records. Any information relevant to the execution process should be included in a disclosure report.

Communications Recording

MiFID II includes provisions governing the recording of trading-related electronic and voice communications. The requirements go beyond earlier regulations, introducing prescriptive rules about recording, storing and accessing all voice and electronic communications – including mobile communications – that may pertain to a transaction. This is broader than earlier requirements to record and store communications that resulted in a trade.

The European Securities and Markets Authority's (ESMA) latest clarification on this issue – in a Q&A published in July 2017 – states: "Internal telephone conversations and electronic communications that 'are intended to result in transactions' or 'relate to' the reception and transmission of orders, execution of orders on behalf of clients and dealing on own account are subject to the MiFID II Article 16(7) recording requirement."

In line with other requirements of the regulation, recording applies across all asset classes. Recording from mobile devices includes voice, text messaging and any phone- or tablet-based instant or other messaging application used in trading-related conversations, such as chat, email, Bloomberg Messaging, WhatsApp or Skype.

Regulators require firms to store and archive records so that they can be easily accessed in response to regulatory enquiries to reconstruct trading communications. Records must be kept for five years or up to seven years if requested by a competent authority. MiFID II also specifies a timestamp granularity for voice-based trading of one second, with a maximum divergence from the benchmark Coordinated Universal Time (UTC) of one second. Firms need to ensure this level of recording across all voice channels used in trading and client conversations.

Dark Pools

Double volume caps (DVCs) on dark pool trading that are established under MiFID II are considered controversial by the marketplace due to their restrictive measures.

As outlined in Article 5 of MiFIR, the DVC introduces a pair of transparency waivers – the Negotiated Trade Waiver (NTW) and the Reference Price Waiver (RPW). These waivers will have an extensive impact, most notably a venue cap of 4% and a global cap of 8% on usage of the NTW and RPW. Trading stocks categorised under the NTW as liquid fall under the cap calculation.

This means any stock that is liquid falls within the scope of the regulation and the liquid market follows suit. Trades amounting to more than Large in Scale (LIS) in size can be disclosed using the LIS waiver to avoid inclusion in the cap calculation. The NTW will no longer cover automated trading. These propositions have been criticised for their potential to raise execution costs as a result of raising the veil that covers dark pools and for a lack of clarity on the application of DVCs.

In contrast to a public stock exchange, a dark pool is not readily accessible to the investing public, nor is it transparent, meaning that the size and the price of the orders are not visible to the participants in a trade. This lack of transparency makes dark pools appear predatory to high frequency traders and can incite conflicts of interest. When information about a trade is so scarce even to those who participated in the trade, the actions that can be taken within the scope of the trade become limited.

MiFID II DVC limits are set on a monthly basis and are divided into two parts in order to increase transparency within dark pools. The venue cap of 4%

applies to the total volume of dark trading of an instrument traded in the EU, while the global cap of 8% applies to all anonymous trading of instruments operating under one or both waivers in the EU.

To distinguish, the first cap is calculated on a venue by venue basis, while the second cap is calculated across all venues operating under one or both of the waivers in designated waiver facilities. The DVC caps the amount of trading that occurs under systems that match orders through a trading methodology based on which price is chosen according to a reference price, and in the case of negotiated transactions involving liquid instruments caps trading as set out in Article 4 (1) (b) of MiFIR.

In creating these caps, the European Commission meant to confirm that price formation is not unnecessarily harmed as a direct result of the introduction of waivers to encourage pre-trade transparency. The penalty for firms exceeding either of these caps is a ban on trading using an NTW and RPW in a specific instrument in any dark pool for a time span of six months.

There are multiple concerns regarding this aspect of the regulation: blue chip stocks are expected to receive the brunt of the DVC's impact, there may be higher transaction costs for firms feeling pressure to execute smaller and more frequent orders, and more transparency may result in diminished liquidity. The enforcement of the DVCs is carried out by ESMA and regulators supervise pools according to trading volumes under the waivers.

To prepare for this part of the regulation, firms invested in initiatives to continue block trading in a dark environment while circumventing the caps. Some examples of these initiatives include the Plato Partnership, a dark pool project launched by asset managers and broker dealers, the introduction of intraday auctions by the London Stock Exchange (LSE), and the BATS Chi-X periodic auction book model.

Perhaps the most important introduction is in the German market, where a market model called Xetra Volume Discovery is expected to gain momentum. Xetra Volume Discovery's model takes transparent and non-transparent trading and integrates the methods to enable volume orders. Through integrating lit and dark trading, Xetra Volume Discovery overcomes a crucial problem shared by most venues, a lack of initial critical mass.

Firms have considered alternative methods of prolonging the dark pool era, even if they are more transparent

It is imperative that firms recognise that regulators are watchful of attempts to sidestep regulation. One option that has been considered is to trade over-the-counter (OTC). Under MiFID II, there are limits on trading OTC, but traders could move to OTC venues from regulated venues, a contingency that regulators did not intend. Regulators want OTC trading to move to regulated venues.

Firms have considered other alternative methods of prolonging the dark pool era, even if it is more transparent. They have examined the effects of trading in lit books and aggregating order volumes to reach LIS thresholds.

ESMA measures volume caps against a 12-month rolling period, publishing monthly updates. It is empowered by MiFIR to collect information that it deems necessary and to calculate actual traded volumes before publishing its findings. Firms, on the other hand, should publish information on a timely basis and in an accurate manner, or risk suspension of a waiver.

Firms are expected to submit their first reports to regulatory authorities in line with the

January 3, 2018 compliance deadline of MiFID II and should include data from the previous 12 months. All data about on-venue trading volumes per financial instrument was expected to be sourced from consolidated tape providers (CTPs) and would not need to be aggregated from multiple venues' trading volumes. To date, no CTPs have emerged, suggesting the task of creating a tape will fall back on ESMA.

ESMA publishes updates on a monthly basis once a month, or twice in the event that an initial calculation amounts to above 3.75% per trading venue or above 7.75% per overall trading venues. Traders fear this means that dark pool trading volumes will decrease significantly to fall below these caps.

Systematic Internalisation

MiFID I introduced the concept of systematic internalisers (SIs). Under MiFID II, SIs are subject to extended transparency requirements and regulation across a wider variety of instruments.

MiFID II updates to the SI regime will have several market impacts. MiFID II does not allow the operation of an OTF and SI within the same legal entity. The formal definition of an SI, which has not changed significantly under MiFID II, distinguishes an SI as a counterparty rather than a trading venue

MiFID II defines an SI as a firm that deals on its own account by executing client orders on instruments outside the scope of regulated markets or MTFs and does so on 'an organised, frequent, and systematic basis'. An SI matches client orders against its own books, which meant only a few large investment firms established SIs under MiFID I.

Firms do not need regulatory authorisation to carry out systematic internalisation, but they must apply for an SI licence if they cross quantitative thresholds.

Under MiFID II Article 27, the new SI regime expands to include equity-like and non-equity like instruments, encourage more SI quote publication for greater pre-trade transparency, and bolster best execution.

Article 27 also specifies that firms must notify their national competent authority if they decide to initiate or halt SI activity. The statement of intent to initiate SI activity must include the financial instruments for which the firm will be an SI. Regulators keep a list of daily transactions, average daily turnover and free float. Trades including liquid and illiquid shares must be made public post-execution within a three-minute time span, and market data must be published to clients at a reasonable cost on a non-discriminatory basis.

While MiFID II outlines extensive pre-trade transparency requirements, it also states that SIs are not required to publish firm quotes, execute client orders, and give access to their quotes in relation to equity transactions exceeding standard market size and non-equity transactions above the size adhering to the instrument. An SI may limit the number of transactions a client can make. Other post-trade information that must be disclosed includes the price, volume and time of the conclusion of a transaction.

MiFID II updates to the SI regime have several market impacts. MiFID II does not allow the operation of an OTF and SI within the same legal entity. The formal definition of an SI, which has not changed significantly under MiFID II, distinguishes an SI as a counterparty rather than a trading venue. This means an SI is a facility in which third-party market participants cannot interact as they would with a trading venue. An SI always operates against a single investment firm with a single dealer platform. In contrast, a trading venue involves a multi-dealer platform, with multiple dealers competing for a single instrument.

There are quantitative thresholds attached to SIs, with each threshold creating a numerical value for a 'frequent, systematic, and substantial' basis that will be calculated through two methods. For the frequent or systematic basis, the calculation entails measuring the quantity of OTC trades of a specific financial instrument executed by an investment firm on its own account. For the substantial basis, the calculation is performed through either the amount of OTC trading done by an investment firm compared to the total trading of the investment firm in a specified financial instrument, or by the amount of OTC trading executed by the investment firm in comparison to total trading in the EU of a certain financial instrument.

Key dates

January 3, 2018:
Investment firms could opt in to the SI regime for all financial instruments from January 3, 2018 as a means of complying, for example, with the trading obligation for shares

August 20, 2018:
ESMA will publish information on the total number and volume of transactions executed in the EU for the first time by August 20, 2018, covering the period from January 3, 2018 to June 30, 2018

September 1, 2018:
Investment firms must undertake their first assessment by September 1, 2018 and where appropriate comply with SI obligations

Quarterly updates:
For subsequent assessments, ESMA will publish data by the first calendar day of February, May, August and November. Investment firms are expected to perform calculations and comply with the SI regime by the fifteenth calendar day of these months

The thresholds create a more objective environment for determining whether a firm is an SI and whether a firm can acquire an SI licence.

As for using the threshold as an objective standard of whether an SI should be allowed a compliance delay, ESMA makes several propositions depending on how a newly issued instrument is classified. For example, if an equity or equity-like instrument has historical data covering a period of at least three months, or if a non-equity instrument has historical data covering a period of at least six weeks, then an SI qualifies for a delay to comply with MiFID II SI regulations.

Most firms under MiFID II will receive recognition as SIs, although many would prefer to be defined as broker crossing networks (BCNs), which do not have to meet the pre-trade transparency obligations of their SI counterparts. But as new rules exclude BCNs from the market, firms are looking for ways to change the thresholds to curtail increased trading costs. Some firms are considering moving from a lit market to a dark market to provide 'dark crossing services', but firms are wary of this option due to a lack of control of who enters a dark pool.

MiFID II also puts further restrictions on market makers. A market maker must be designated by a regulated market and act within the bounds of that market's practice. An SI, in contrast, does not necessitate designation and can make its own trading rules so long as they comply with MiFID II standards. Market makers will not be exempt from transparency rules as each SI will have to disclose 'the best bid and offer by price of each market maker'.

In Article 44 of the best execution rules, MiFID II states that a market maker, an SI, or any other liquidity provider qualifies as an execution venue and must comply with best execution requirements. Market makers will share the burden with SIs in providing clients with best execution.

Distinguishing a firm as an SI will be less difficult under MiFID II than under MiFID I, so providing adequate rationale to clients should a firm choose to become an SI will be an important task. There are advantages to becoming an SI, although they are not readily apparent from a market making perspective. While the regulatory environment presented by Article 27 may appear daunting, it presents an opportunity too, the ability to engage in regulated proprietary trading.

Timestamping

MiFID II introduced rigorous new requirements for timestamping and clock synchronisation, forcing firms to overhaul existing technology and implement new systems to comply.

Article 50 of MiFID II requires all trading venues (and their members and participants) to record the date and time of any reportable event using an accurate time source. Under the annex to Regulatory Technical Standard 25 (RTS 25), firms must synchronise the business clocks they use to record this information with Coordinated Universal Time (UTC). This can be done using atomic clocks or through UTC disseminated by a GPS satellite system, provided that any offset from UTC is accounted for and removed from the timestamp.

Firms must be able to prove a system of traceability to UTC, with compliance reviewed annually, and be able to identify the exact point within the system where a timestamp is applied. The regulation stipulates a maximum divergence from UTC of either one millisecond or 100 microseconds, with the tightest timeframe applied to firms using high frequency algorithmic trading techniques.

RTS 25 notes that this is essential 'for conducting cross-venue monitoring of orders and detecting instances of market abuse, and allows for a clearer comparison between the transaction and the market conditions prevailing at the time of their execution'.

A member of, or a participant in, a trading venue has different obligations to a trading venue. While operators of trading venues must use timestamps accurate up to 100 microseconds if their gateway-to-gateway latency is under 1 millisecond, High frequency trading (HFT) market participants must meet the 100 microsecond standard. Algorithmic, but not HFT, participants, need a clock accurate to 1 millisecond due to the sheer volumes they trade.

Regulators believe timestamping will allow them to identify the sequence of events within a trade in cases where market manipulation may have occurred or when execution has gone awry

Manual trading and voice trading have a timestamp speed of 1 second, with a divergence limit of 1 second. Members of a trading venue are required to have an equivalent standard of accuracy to the trading venue in the system that they use to connect to the venue. This requirement is designed to create a fairer marketplace.

The regulation's scope encompasses trading venues and their members and participants, and applies to reportable events that take place on a trading venue, although it exempts OTC transactions.

Regulators believe timestamping will allow them to identify the sequence of events within a trade in cases where market manipulation may have occurred or when execution has gone awry. While regulators want more visibility into monitoring and time synchronisation, regulatory standards are driving firms to consider more precise time distribution protocols across networks for timestamps.

Clock Synchronisation

Clock synchronisation is crucial to ensuring that trading firms release data at precisely the same time. Should even a small selection of market participants receive data early, they will gain a large advantage. Whether the data was released intentionally or unintentionally, trading venues that issue data early are exposed to large regulatory fines.

Clocks typically go out of sync with one another, or experience ‘clock drift’, when there are hardware errors in timing instruments or when there is interference to the signal derived from the grandmaster clock. A microsecond level timing signal disseminated by a grandmaster clock to subordinate clocks usually uses GPS-based signalling through an antenna placed on a building with a clear view of the sky.

The grandmaster signal is then distributed through a hardware-based server to timestamp packets to high accuracy. Due to the hardware, there can be delays in delivery of data and firms must take these delays into consideration when synchronising clocks to UTC.

Options for time distribution protocols include the Network Time Protocol (NTP), Pulse Per Second (PPS) and Precision Time Protocol (PTP). These protocols are used within a hierarchy, placing the GPS antenna or the high-quality timing service at the top, and distributing the signal to the PPS, which then distributes the signal to systems which need the highest quality timing, or to PTP grandmasters or lower-stratum NTP servers.

The PTP grandmasters and NTP servers then distribute the signal over the network to a larger set of systems. Firms tend to favour PTP hardware, which is able to synchronise clocks within a network to an accuracy of nanoseconds, but at a large expense. This expense means PTP hardware can be outside the budget of smaller firms.

Software implementations of PTP can achieve accuracy on a scale of microseconds, but they are less accurate than MiFID II requirements. These requirements state that there must be a minimum synchronisation standard of no more than +/-100 microsecond variance in UTC time for trading gateways within the scope of all European trading venues. The lenience for divergence varies from venue to venue based on gateway-to-gateway latency time and the types of trading activities, members and participants involved. For example, a member operating an algorithmic trading strategy within a slow trading venue will have to maintain microsecond timestamps despite the requirement for a trading venue to adhere to a millisecond standard.

Research unbundling

As part of its transparency and investor protection framework, MiFID II unbundles research and execution fees. This requires investment firms to make explicit payments for research in order to demonstrate that research services are not being offered by sell-side firms as an inducement to trade.

The regulatory obligation makes significant changes to former requirements around research, posing significant challenges for both sell-side and buy-side firms. Sell-side firms must not induce clients to trade by bundling research within their execution services and must review and identify services provided that could be categorised as research and would require payment.

Sell-side and independent research providers must also assess how best to price their research. Firms can charge clients a regular payment for advisory services including charges for research, charge fixed amounts for pieces of research, or explicitly price research into the bid offer spread or commission and charge until an agreed cap has been reached. The end game for sell-side firms is that they must provide clients with unbundled costs of trading, separately identifying and charging for execution, research and other advisory services.

For buy-side firms that must make explicit payments for research, the aim is to get the best quality research, efficiently, and maximise the use of this and in-house research. Knowing how research is used can help firms measure its value and relevance, aid discussions with sell-side firms and demonstrate that research contributes to better investment decisions and is therefore not an inducement.

The technology implications of research unbundling mean sell-side firms need systems that provide reporting showing unbundled costs of research and execution services. They may also need to provide cumulative cost reporting to the buy-side on a regular or annual basis. Buy-side firms need disclosure solutions that demonstrate to regulators and clients that they are not being induced to trade.

Highly regarded large sell-side research providers and small niche providers should be weathering the changes of research unbundling well, as the former continue to offer valuable services sought by buy-side firms, and the latter

The end game for sell-side firms is that they must provide clients with unbundled costs of trading, separately identifying and charging for execution, research and other advisory services

continue to provide specialist research that larger firms may not have the specific expertise to deliver. Mid-tier research providers are most likely to be experiencing the need to differentiate their approaches if they are to run profitable research services.

While the challenges of unbundling are significant, they do deliver on MiFID II's foundational aims of transparency and investor protection. They also provide opportunities as sell-side and independent research providers can sell products directly to clients and create a new revenue stream.

Reporting and transparency

MiFIR Overview

Markets in Financial Instruments Regulation (MiFIR) is an EU regulation associated with the Markets in Financial Instruments Directive II (MiFID II) that aims to harmonise the trading of securities and improve investor protection across the EU.

While MiFID II focuses on market infrastructure, MiFIR builds out transaction reporting requirements by setting out a number of new reporting obligations, and complements the directive's commitment to trading data transparency.

Under MiFIR, instruments that must be reported include all derivatives admitted to regulated markets, including currently exempt commodity, foreign exchange and interest rate derivatives, all instruments on multilateral trading facilities (MTFs) and organised trading facilities (OTFs), and all instruments that could change the value of instruments trading on any of these venues.

The regulation adds a number of fields to transaction reports, including fields designed to help spot short-selling traders, and trader and algorithm fields designed to identify the individual or program executing a transaction.

A decision on a standard reporting format for MiFIR has been made, with a publication from the European Securities and Markets Authority (ESMA) stipulating that transactions must be reported using the ISO 20022 formatting standard. Firms need to accommodate this standard, which is used to submit data from all stages of order execution to relevant regulatory authorities.

From a trader's perspective, MiFIR has extensive implications for disclosure practices. Relevant data to include in a report might involve the bid and offer prices and the extent to which the parties invested in the trade, the volume and time of the trade execution, and any noted systemic issues.

The public and regulatory authorities must be made aware of this information on instruments such as equities, over-the-counter (OTC) and exchange-traded derivatives (ETD) on a continuous basis for transparency purposes. MiFIR does have exemptions relating mainly to the volume of a trade. For example, there are exemptions on regulating block trades and trades exceeding a specific size regarding certain instruments.

Like MiFID II, MiFIR mandates data transparency. Most of its transparency requirements are around post-trade data processes, but it does cover some pre-trade transparency requirements,

At a Glance

Regulation:
Markets in Financial Instruments Regulation (MiFIR)

Regulatory Regime:
EU

Target Market Segment:
Global financial institutions

Core Requirements:
Pre- and post-trade data transparency, transaction reporting

Significant Milestones

October 20, 2011:
European Commission publishes draft proposals for a directive and regulation to revise MiFID

October 26, 2012:
European Parliament approves MiFID II/MiFIR

May 13, 2014:
Council of the EU adopts Level 1 text

July 2, 2014:
MiFIR enters into force

January 3, 2018:
Compliance deadline

Key Links:

Text:
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0600

such as equal access to trading opportunities data. The regulation's post-trade transparency requirements call for alterations to the trading environment as data such as prices, quotes, execution times and volumes must be published publically. The extension of transaction reporting to additional asset classes means firms must submit more information to regulatory authorities.

Provisions in MiFIR aimed at reducing disruptive trading, speculative activity and systemic risk mean firms need to be aware of rules covering these issues that are in place in the markets in which they operate, not least because of the powers given to regulators and venue managers to interfere should rules be violated.

Commodity derivatives, in particular, face significant scrutiny under MiFIR and are subject to new position limits, transparency requirements and measures to reduce price volatility. These requirements are designed to give regulators greater oversight and authority in the market.

Transparency

Markets in Financial Instruments Directive II (MiFID II) and its companion regulation Markets in Financial Instruments Regulation (MiFIR) are intended to improve transparency for regulators of financial markets. MiFID II and MiFIR transparency requirements include pre-trade and post-trade disclosure of order details, and transaction reporting that includes identifying reference and post-trade data.

MiFIR extends pre-trade transparency rules from MiFID I to apply to:

- Depository receipts and

exchange-traded funds
- Certificates and similar instruments trading on a venue
- Bonds and structured products trading on a regulated market or with a published prospectus
- Emission allowances and derivatives.

MiFID II and MiFIR together extend pre-trade transparency obligations to organised trading facilities (OTFs), regulated markets and multilateral trading facilities (MTFs). They also permit 'carve outs' to allow for deferral of pre-trade data. Authorities may waive obligations to publicise pre-trade information for block trades, actionable indications of interest large enough to expose liquidity providers to undue risk, derivatives not subject to trading obligations, and other instruments without a liquid market.

MiFID II and MiFIR extend post-trade transparency obligations to make price, volume and time of transactions available to all trading venues, although block trade information disclosure may be deferred by authorities.

MiFID II and MiFIR together extend pre-trade transparency obligations to organised trading facilities (OTFs), regulated markets and multilateral trading facilities (MTFs). They also permit 'carve outs' to allow for deferral of pre-trade data

The directive and regulation broadly require transaction reporting to relevant authorities by the end of the next working day. This is applicable to all instruments traded on a venue, including underlying instruments or indexes of a basket of instruments – even if those have been traded outside the venue. Transaction reports by investment firms must identify both clients and traders or algorithms responsible for an investment decision and its execution. These reports must be submitted through the venue where the transaction occurred, an Approved Reporting Mechanism (ARM) or a trade repository subject to EMIR.

Transaction and Trade Reporting

MiFID I introduced a harmonised transaction reporting regime throughout the EU for the first time. MiFID II expands on this regime by introducing new transaction reporting requirements including identification of waivers for large orders, illiquid instruments, short selling and commodity derivatives.

In addition, while MiFID I reporting applied to trading on regulated markets, MiFID II reporting includes any instruments trading on any venue throughout the EU, as well as underlying instruments that are traded. This includes over-the-counter (OTC) transactions of these instruments, as well as any index or basket of instruments that contains any single instrument traded on

Approved Publication Arrangements

APAs include:

- Abide Financial from NEX Regulatory Reporting
- Bats Trading
- Bloomberg Data Reporting Services
- Deutsche Boerse
- TradECHO from London Stock Exchange/Boat Services
- TP ICAP
- Tradeweb from Thomson Reuters
- Xtrakter from Trax

Approved Reporting Mechanisms

ARMs include:

- Crest from Euroclear
- Trax
- Unavista from London Stock Exchange
- Getco from Getco Europe
- TransacPort from Abide Financial
- Toms from Bloomberg
- Track from Nasdaq

Key Links:

https://www.esma.europa.eu/document/guidelines-transaction-reporting-reference-data-order-record-keeping-and-clock any EU venue. Trading venues now include MTFs, OTFs which serve OTC derivatives, and regulated markets.

MiFID II defines transactions as including acquisition, disposal or modification of a reportable financial instrument. This can include simultaneous acquisitions and disposals without actual changes in beneficial ownership. The definition excludes securities financial transactions such as stock lending or repurchase agreements, post-trade assignments and novations in derivatives, portfolio compressions, instruments resulting from pre-determined contract terms or mandatory events that exclude investment decisions, and changes in index composition.

For pre-trade transparency, firms must report order data to Approved Publication Arrangements (APAs), which must make pre-trade information available to the public on a reasonable commercial basis and ensure non-discriminatory access. The information must then be made available free of charge 15 minutes after publication.

Firms are also required to report post-trade information – price, volume and time of execution – for all transactions they conduct to their chosen APAs in near real time. Finally, firms are required to file post-trade transaction reports to ARMs, such as those operated by Euroclear, TRAX, London Stock Exchange/Unavista, Getco Europe, Abide Financial and Bloomberg. These transaction reports are more detailed and involve a broader set of data fields to be delivered within a T+1 reporting period.

MiFID II's trade and transaction reporting expands on MiFID I by introducing an exemption for investment managers transmitting orders to brokers for execution, under the condition that the transmission includes details of the trade, clients involved and designation of any short sales. Firms will have to report either directly to regulators or through ARMs.

The fields and information required as part of MiFID II reporting increase significantly, reaching at least 81 in number, up from 23 under MiFID I. Only 13 of the original 23 fields will proceed unchanged. New fields include algorithm identification codes, natural person identifiers and trader identification codes. Foreign exchange, interest rates and commodity derivatives will be added to the instruments covered by the directive.

The Legal Entity Identifier (LEI) will replace BIC or internal codes in reporting under MiFID II. Also, execution transparency demands of MiFID II will require details about investment decision makers, short sales flags, pre-trade transparency waivers, and algorithms being used.

Lastly, parties to a trade must be identified in new ways under MiFID II, including two-letter nationality codes, and codes indicating committees, traders and algorithms making trading decisions, plus algorithms executing transactions. MiFID II requires indicators of waivers, short sales and commodity derivatives. The algorithmic trading controls included in MiFID II are designed to regulate algorithmic traders, including high-frequency algorithmic traders, and their market-making strategies.

ESMA FIRDS

The Financial Instruments Reference Data System (FIRDS) is a data collection system set up by the European Securities and Markets Authority (ESMA) in cooperation with EU national competent authorities (NCAs) to collect and publish reference data efficiently and in a harmonised way across the EU. The system went live on July 17, 2017, ahead of the January 3, 2018 MiFID II compliance deadline.

The system covers all financial instruments within the scope of MiFID II and is a requirement of MiFIR, under which trading venues and

Key Links:

FIRDS Transparency System:
https://www.esma.europa.eu/sites/default/files/library/esma65-8-5240_firds_download_and_use_of_full_and_delta_transparency_results_files.pdf

FIRDS Reference Data System:
https://www.esma.europa.eu/document/firds-reference-data-reporting-instructions

systematic internalisers must submit instrument reference data in a uniform format to NCAs.

These authorities are then required to transmit the data to ESMA, which publish the data on its website for public access and provides it to NCAs in downloadable files. Some NCAs have delegated the task of collecting data directly from trading venues and systematic internalisers to ESMA.

FIRDS generates four types of files:

- A full reference data file of data received from NCAs, regulated markets, multilateral trading facilities, organised trading facilities and system internalisers before the applicable cut-off time
- A delta reference data file, containing all differences between the current day full file and the previous day full file, listing instrument additions, terminations, modifications and instruments terminated but reported late
- An invalid records reference data file containing all records that are not part of the full file anymore, including instruments that are no longer valid
- Feedback files that provide the data contributors with feedback on the reference data they sent to ESMA as well as reminders.

FIRDS links data feeds between ESMA, NCAs and about 300 trading venues across the EU. The data is not only published by ESMA, but is also used for purposes such as the calculation of transparency and liquidity thresholds, and position reporting of commodity derivatives.

ESMA suggests a one-stop-shop approach to publishing reference data on financial instruments and transparency parameters that provide economies of scale and lower costs for the industry.

Financial Instrument Classification

The classification of financial instruments (CFI) within the scope of MiFID II is based on the International Organisation for Standardisation's ISO 10962 standard. The CFI code was initially published in 1997 to address problems such as the lack of a consistent and uniform approach to grouping financial instruments, and use of similar terminology for instruments with significantly different features in different countries.

The decision by the European Securities and Markets Authority (ESMA) to use CFI codes for instrument classification required ISO to update the standard to meet MiFID II requirements. A further ESMA decision means CFI codes can only be allocated by the Association of National Numbering Agencies (ANNA) in the context of MiFID II.

CFI codes are important to the transparency and reporting aspects of the regulation and allow regulators to identify specific instrument groups. The International Securities Identification Number (ISIN), allocated by a country's National Numbering Agency (NNA), provides a code that uniquely identifies securities under MiFID II, but does not support classification.

The structure of the CFI is based on data that is defined when a financial instrument is issued and remains unchanged during the instrument's lifetime. It consists of six alphabetical characters: the first character indicates category, such as equities or futures; the second indicates specific groups within each category, such as ordinary shares and preferred shares in equities; and the third to sixth

CFI Code

The CFI code is based on data that is defined when a financial instrument is issued and remains unchanged during the instrument's lifetime. It consists of six alphabetical characters covering instrument category, groups within each category and important attributes for each category.

characters indicate the most important attributes for each category, for example voting rights, ownership restrictions and payment status for equities.

The CFI is also key to MiFIR liquidity requirements, which cover most asset classes. In this instance, classification is required to decipher whether instruments are liquid enough to fall within the regulation's pre-trade and post-trade transparency rules.

Taking bonds as an example, ESMA defines a liquid market as a bond that has an average nominal value traded of at least e100,000, has an average of two trades per day, and trades on at least 80% of available trading days. Using an instrument-by-instrument approach for liquidity classification that assesses each bond against the liquid market definition determines the applicability of transparency rules. Illiquid instruments are generally exempt from pre-trade and post-trade transparency reporting requirements.

Updated CFI codes meeting the requirements of the regulation and directive have been issued on a global basis since July 1, 2017.

OTC Derivatives

Markets in Financial Instruments Regulation (MiFIR) introduces controls around the over-the-counter (OTC) market including a requirement for OTC derivatives to be traded on regulated markets, multilateral trading facilities (MTFs) or organised trading facilities (OTFs). The mandate also includes a requirement for OTC derivatives to carry identifiers that can be used in transaction reporting.

Key Dates

October 2, 2017:
DSB ISIN allocation platform goes live

October 2018:
Fee model review

In September 2015, after much industry debate and despite resistance on the grounds of workability from pockets of market participants, European regulators selected the International Organisation for Standardisation's (ISO) International Securities Identification Number (ISIN) to identify OTC derivatives. As the issuer of ISINs for securities, the Association of National Numbering Agencies (ANNA) decided to issue the identifiers for OTC derivatives and in October 2016 set up the ANNA Derivates Service Bureau (DSB).

The DSB platform is an extension of the automated allocation engine developed by ANNA with Etrading Software for ISINs and is designed to provide near real-time allocation of ISINs for OTC derivatives and generate additional attributes including Classification of Financial Instrument (CFI) codes and Financial Instrument Short Name (FISN) standard values.

Other players behind the DSB are BearingPoint as consultancy advisor, Amazon Web Services (AWS) as cloud services provider and Datapipe as service provision provider.

Market participants must register to use the service, which provides access including FIX connectivity and a web interface, and went live with ISIN allocation for OTC derivates in October

2017. A tiered fee model has been established and will be re-evaluated in October 2018 after one year of production activity.

The Legal Entity Identifier

The Legal Entity Identifier (LEI) is a requirement of MiFIR. It was initially slated to come into play as a counterparty and issuer identifier - No LEI, No Trade - on the MiFID II January 3, 2018 deadline, but was delayed by six months to July 9, 2018, on the basis that the market was not ready to meet the MiFID II requirement.

The LEI is a free-to-use standard entity identifier that uniquely identifies parties to financial transactions. Its development, and that of the global LEI system that supports its widespread use, was mandated by the G20 in 2011 in the wake of the 2008 financial crisis and in the hope of averting further similar crises.

The identifier is designed to help regulators measure and monitor systemic risk by identifying parties to financial transactions quickly and consistently, and obtaining an accurate view of their global exposures. Some market participants are also using the LEI to improve risk management within their own organisations.

The initial regulatory drivers behind LEI adoption were Dodd-Frank and European Market Infrastructure Regulation (EMIR), which required firms within their scope to use LEIs for trade reporting. The requirement to use the LEI in MiFIR transaction reporting is expected to increase

The LEI

The LEI is a standard and free-to-use entity identifier designed to work within the global LEI system to help regulators stem systemic risk. It is gaining traction as regulations including MiFID II mandate its use and adopters find entity data management use cases for it beyond regulatory trade reporting.

LEI Statistics

- Towards 1.2 million LEIs issued worldwide
- 30 Local Operating Units
- US GMEI Utility leads with 33% of issuance

Data Management Challenges

- Sourcing data
- Multiple identifiers
- Data quality
- High data volumes
- Transaction reporting

Solutions

- Strategic approach
- Management buy-in
- Data centralisation
- Consolidated data feeds
- Data quality tools
- Data governance

adoption of the identifier and further improve industry understanding of legal entities operating in financial services markets. As a code in a global data system, the LEI enables legal entities that are parties to transactions to be identified in any jurisdiction.

Organisations that are subject to MiFIR's transaction reporting obligations need to ensure that any client eligible for an LEI has one before a transaction in a financial instrument subject to the regulation is executed on their behalf. These financial instruments include shares, bonds, collective investment schemes, derivatives and emission allowances.

LEI reference data includes business card information, although the Global LEI Foundation (GLEIF) is working to add hierarchy and ultimate parent data to the identifier. LEIs can be obtained from organisations accredited by the GLEIF as authorised Local Operating Units (LOUs) for the global allocation of LEIs. European LOUs include the London Stock Exchange, Institut National de la Statistique et des Etudes Economiques, and WM Datenservice. In the US, the Global Market Entity Identifier (GMEI) Utility operated by DTCC dominates LEI allocation. Many other jurisdictions with regulated financial markets have also established LOUs.

LEIs must be renewed on an annual basis by providing any updated information on the entity to the LOU, which then verifies the reference data attached to the identifier.

Personal Identifiers

The LEI was not designed for use by individuals and cannot be used by individuals within the scope of MiFID II and MiFIR. Instead, individuals, whether they are clients, decision makers or traders, must be identified using a national identifier. In the UK, National Insurance Numbers will be used to identify individuals. Other jurisdictions are expected to use passport numbers, national or personal identity numbers, or tax numbers.

Data Management and Workflow

The scale and complexity of MiFID II requires a strategic approach to data management that tackles challenges such as sourcing required data, managing multiple identifiers and meeting trade and transaction reporting obligations, while delivering operational and business benefits from compliance.

While data management for MiFID II and MiFIR remains challenging, with problems including sourcing required data, managing high volumes of data, working with poor quality data, managing multiple identifiers and getting reporting right, a strategic approach to data management can address these challenges and should begin with the breakdown of data siloes and creation of a centralised repository of required reference data. There is also need for strong data governance, good data quality and agility to respond to regulatory changes.

Sourcing and managing new regulatory data is a substantial challenge, with organisations

Data Reporting Service Providers

- Approved Publication Arrangement (APA)
- Approved Reporting Mechanism (ARM)
- Consolidated Tape Provider (CTP)

required to source a wide range of market and reference data including mandated data standards such as LEIs, Market Identifier Codes (MICs), ISINs, CFI codes and currency codes.

They must also source and manage new product data published by ESMA and national regulators. This data is essential to electronic trading platforms and trader desktops and must be integrated with existing datasets in the trading workflow.

Real-time data is also part of the MiFID II mix, requiring organisations to identify useful real-time data, and source and integrate it in trading and trade reporting workflows, including reports to Approved Publication Arrangements (APAs). At the other end of the spectrum, employee data is necessary for transaction reporting.

The new data requirements are designed to help firms comply with the key elements of MiFID II and MiFIR: best execution; pre-trade transparency as a systematic internaliser; post-trade transparency; and transaction reporting. As part of compliance, firms need to publish a significant number of reports, both privately to regulators and more publicly to the wider market. This require the capture, formatting and enrichment of large volumes of data that can then be published to the right destination in the right timeframe.

Firms that take a strategic and holistic approach to the regulatory agenda and implementation of MiFID II and MiFIR, rather than a tactical and piecemeal approach, will not only benefit from more streamlined regulatory compliance, but also access to new business opportunities based on an improved view and better understanding of their data.

Data Publishing and the Consolidated Tape

In line with MiFIR transparency requirements, investment firms must disclose pre-trade and post-trade details of orders submitted to, and transactions conducted on, a trading venue, be it a regulated market, or MTF or OTF. Under the regulation's provisions, firms can publish their own trade reports to the market, but it is expected that most will report through an APA.

APAs are a new category of Data Reporting Service Providers (DRSPs) and are designed to publish trade reports on behalf of investment firms.

Article 20 of MiFIR states that 'investment firms which, either on own account or on behalf of clients, conclude transactions in shares, depositary receipts, exchange traded funds, certificates and other similar financial instruments traded on a trading venue, shall make public the volume and price of those transactions and the time at which they were concluded. That information shall be made public through an APA'.

Article 21 covers a similar obligation on investment firms in relation to bonds, structured finance products, emission allowances and derivatives traded on a trading venue.

The information that the APA makes public must include the:

- Identifier of the financial instrument
- Price at which the transaction was concluded
- Volume of the transaction
- Time of the transaction
- Time the transaction was reported
- Code of the trading venue the transaction was executed on, or where the transaction was executed via a systematic internaliser the code SI or otherwise the code OTC
- And, if applicable, an indicator that the transaction was subject to specific conditions.

Benefits of Centralisation

- Streamlined compliance process
- Improved data quality
- Data consistency
- Timely data
- Business opportunities

The APA must have policies and arrangements in place to publish this information in as close to real time as is technically possible. The information is supposed to be made available free of charge 15 minutes after the APA first publishes it.

As well as disseminating trade data to the market, MiFIR requires APAs to send the data to a consolidated tape provider, another new category of DRSPs. The consolidated tape is intended to include trade reports for shares, depositary receipts, exchange traded funds, certificates and other similar financial instruments and was due to be in production from January 3, 2018.

To date, there is no indication of any organisations stepping forward to operate a consolidated tape under MiFIR, suggesting that the task could fall to ESMA.

Data Centralisation

The extent and complexity of reference and market data management for MiFID II and MiFIR requires data siloes to be broken down and data to be centralised. This will provide support for compliance with other regulations that are aligned with MiFID II, ease the burden of data management, and improve data accuracy, consistency and timeliness.

Regulations closely aligned with MiFID II and MiFIR, and having some overlap, include European Market Infrastructure Regulation (EMIR) and Market Abuse Regulation (MAR), although there can be value in taking a harmonised approach to data management for other regulations such as Dodd-Frank and Capital Requirements Directive IV (CRD IV).

By taking a harmonised approach to data and workflow to facilitate compliance with multiple regulations, implementation of individual regulations can be more efficient and avoid duplication of effort in overlapping areas.

For example, MiFIR reporting requirements can be aligned with MAR to minimise duplication, improve efficiency and reduce operational risk. Similarly, MiFID II can be aligned with Packaged Retail and Insurance-based Investment Products (PRIIPs) as the regulations have commonalities in the scope of financial instruments covered, requirements for generic information on products, and risk disclosure.

As well as providing an improved response to regulatory compliance requirements, data centralisation allows organisations to achieve data management benefits. For example, a coordinated regulatory programme based on centralised data can enable consistent reporting to regulators, but also feed consistent data back into the enterprise. Cost savings can also be achieved by identifying duplicate data and processes, and it may be possible to reduce the number of data sources required to meet regulatory and business needs.

Data sourcing

Sourcing the unprecedented volume of data required by MiFID II and MiFIR is no mean feat. Much of the data comes from existing internal systems, such as client, trading and banking systems, but a significant volume flows from external sources.

The challenges here are sourcing market data and standard data such as Legal Entity Identifiers (LEIs), Classification of Financial Instruments (CFI) codes, and Market Identifier Codes (MICs). ISINs to identify OTC derivatives can be a challenge and personal data elusive.

To achieve internal data sourcing, the short-term aim is to interface systems, some of which are likely to be

Data Quality Challenges

- Legacy systems
- Data silos
- Manual processes
- Spreadsheets
- Additional data
- New data types

Solutions

- Centralised data
- Strong governance
- Automation
- Cloud technology
- Machine learning
- Cognitive solutions

siloed. Longer-term, a central data hub managed internally or by a third-party provider will significantly improve internal data sourcing for MiFID II requirements such as transaction reporting.

A single golden source of external data is unlikely to emerge, although large data vendors have developed services covering most MiFID II and MiFIR data requirements, including standard data.

LEIs can be acquired from data vendors or directly from LEI issuers within the global LEI system. Similarly, ISINs for OTC derivatives can be acquired through data services or directly from the Association of National Numbering Agency's Derivatives Service Bureau (ANNA DSB), which was set up after the European Securities and Markets Authority (ESMA) mandated use of the ISIN for all instrument identification under MiFID II. The DSB also generates additional attributes including CFI codes and Financial Instrument Short Name (FISN) ISO standard values.

Data quality

The scale and scope of MiFID II present a significant data quality challenge, but also a turning point for firms with legacy and siloed back-end systems that can be a barrier to seamless regulatory reporting.

While extended asset coverage, additional trading venues and demanding trade reporting requirements have

dominated the conversation on MiFID II, the need to improve data quality at the heart of the reporting process is equally important. Data quality is an issue for many firms, driven by legacy and siloed systems that cause problems such as an inability to access timely, consistent and complete data, poor position reconciliation and inaccurate reporting. Manual workarounds and dependency on spreadsheets further muddy the water.

In terms of MiFID II, a shortfall in data quality means MiFID II trade reporting agencies, Approved Publication Arrangements (APAs) and Approved Reporting Mechanisms (ARMs), send back failed trades based on faulty data, firms pay the price of manual reconciliation, and regulators may take a tough stance on non-compliance.

Many firms have responded to MiFID II by centralising data on a single platform, increasing automation and taking a strategic approach to data management for regulatory compliance. This should ease the problems of data quality by providing a central repository of golden copy data that is consistent, accurate, complete and well maintained. A strong data governance foundation is also essential to sustaining quality.

Technology solutions that can improve data quality include cloud technology, machine learning and cognitive data management systems provided by traditional data management vendors and fintech companies focussing on agile data management. These solutions tend to be highly automated, include data quality standards and major on managing exceptions and integrating new data.

Technology solutions

Overview

The scope and scale of Markets in Financial Instruments Directive II (MiFID II) and Markets in Financial Instruments Regulation (MiFIR) make it improbable that a single solutions vendor can fulfil the complete compliance requirements of all firms that must adhere to the regulations. That said, sizeable solutions and services vendors have pulled together and extended their data management and trading capabilities to meet many MiFID II obligations, while smaller providers offer less comprehensive coverage, but equally important solutions that often address key pain points of implementation.

This section of the handbook provides a brief outline of MiFID II requirements and potential technology solutions.

Systematic Internalisation

Firms operating as systematic internalisers (SIs) under MiFID II need to establish several elements of functionality. They need an order-matching engine to report trades to an appropriate Approved Publication Arrangement (APA), publish quotes and react to requests for quotes. The order-matching engine must also link to elements of trading systems that support SI required market making and quoting functions.

To execute on the quoting and reporting requirements of the SI rules, SIs need to integrate a client order management function to ensure all necessary information is captured for reconciliation purposes. From a technology standpoint, SI solutions need speed and accuracy to publish and adjust quotes in fast market conditions.

Pre- and Post-Trade Reporting

The transparency requirements running through pre- and post-trade reporting require firms to operate internal reporting mechanisms with easy access to all required datasets. The datasets must include details of the trade, as well as high-quality reference data describing the assets and counterparties involved in the transaction, in order to deliver pre-trade reports to designated APAs and post-trade reports to Approved Reporting Mechanisms (ARMs).

Firms have opted to adapt existing trade reporting platforms to meet the extended requirements of MiFID II. Alternatively, and particularly as the MiFID II compliance deadline closes in, they have opted to use third-party vendor solutions offering transparency services including pre- and post-trade reporting.

The reference data utility model also supports MiFID II pre-trade and post-trade reporting by gathering required data from multiple sources and creating an aggregated and enriched data feed that meets its participants' requirements.

Transaction Reporting

Transaction reporting under MiFID II/MiFIR requires price, volume, time of trade and reference characteristics of all data points, as well as codes mandated by MiFID II for instruments and entities. The data needs to be structured and validated before it is delivered to an ARM for onward reporting to regulators or for direct reporting to regulators.

There are a number of solution options for transaction reporting. Firms may have opted to extend existing reporting platforms by enhancing internal data models to ensure data fields required are available and can be linked to required data sources. Interfaces to ARMs or regulators must also be built. Vendor enterprise software solutions take this approach, typically adding logic for MiFID II reporting to order or execution management systems and interfaces to ARMs.

Regulatory reporting platforms operated by third-party service providers have also been extended to support MiFID II transaction reporting. These ease the internal burden of managing regulatory change and fulfil transaction reporting in line with MiFID II – and any changes to the regulation – on behalf of user firms. An example here is a service that detects a firm's trades and transactions that are within the scope of MiFID II, aggregates and validates all necessary data, and submits relevant data to ARMs.

The reference data utility model also supports MiFID II transaction reporting by gathering required data from multiple sources and creating an aggregated and enriched data feed that meets the transaction reporting needs of its participants.

Best Execution

To demonstrate proof of best execution and ensure trades adhere to published best execution policies, firms need a timestamping solution as well as the ability to store order and transaction data throughout the trade lifecycle for a period of up to seven years. The storage requirement is designed to support regulatory calls for trade reconstruction.

To collect, normalise, analyse and present such large volumes of data, firms need a tick database with advanced analytic tools. A tick database using time series technology is preferable to more rigid relational database technology as it more easily supports functions including high precision timestamping and time ordered querying. A time series database also offers greater flexibility to support changing storage requirements.

Best execution measurement services use functionality such as continuous evaluated pricing to provide a trade-by-trade measure of relative execution quality. These measures can be used as a pre-trade screen for proposed trade prices or as the basis of a post-trade review.

Clock Synchronisation

MiFID II timestamping obligations involve synchronising clocks that measure activity on all internal systems in the trading process. This provides a compliant trading architecture with accuracy throughout the full order lifecycle: from trading application to market access gateway to exchange gateway to matching engine and back. Trading firms and venues need to design time synchronisation capabilities at the one millisecond level as a bare minimum to comply with the regulation's timestamping requirements.

Trading Communications

MiFID II extends voice recording requirements with a focus on mobile voice and messaging communications. While some firms aim to comply with mobile communication requirements by using 'manage by policy' strategies that limit or ban the use of mobile devices by traders, these strategies fail to recognise the growing value and potential competitive advantage of mobile communication.

Large firms with existing fixed line surveillance systems tend to prefer onsite solutions and have typically extended these to cover mobile communications. Smaller firms with fewer resources often favour cloud-based solutions, but whatever the medium, the technological solution needs to be able to record all messages across systems, store messages in a secure and durable way, and allow flexible access to meet regulatory requirements to retrieve data.

An in-network mobile device management (MDM) platform – in preference to an application layer – achieves these needs and can provide the functionality and flexibility needed to integrate more mobile devices, add mobile communication applications, and sustain competitive advantage.

Research Unbundling

The MiFID II requirement to unbundle research services from execution services has generated desktop application and cloud-based solutions. Despite different delivery mechanisms, these solutions offer similar functionality in terms of communication between buy-side firms and sell-side research suppliers, and the ability to support Commission Sharing Arrangements (CSAs) and Research Payment Accounts (RPAs).

One emerging cloud-based platform curates research from independent providers and allows users to consume the research by paying a per user subscription. The platform operates dynamically to make all research available to all users in real time, but does not include investment bank research, thus meeting the unbundling requirements of MiFID II.

Operational approaches

Overview

Aside from setting out requirements for trading activity, the structure of trading facilities, transparency of market information and standards for reporting, MiFID II also includes provisions covering corporate governance, management practices and remuneration practices.

Management Bodies

MiFID II sets requirements for management bodies of investment firms, regulated markets and data reporting services providers to commit sufficient time and possess enough knowledge, skills and experience to understand their firm's actions and risks. The directive also refers to a need for diversity, at least in some qualifications, so that management bodies or boards will hear independent opinions and critical challenges to 'group think'.

Investment firm management bodies define, approve and supervise how their firm is organised to provide investment services. This organisation includes corporate governance arrangements. Specifically, MiFID II requires firms to consider these areas with respect to their management bodies:

- Personnel skills, knowledge and expertise
- Resources, procedures and arrangements to provide services and activities.

Management bodies must also be supported by adequate access to information and documents for decision making. To fulfill this part of the directive, firms have to ensure that business delivers quality information to management.

Corporate Governance

MiFID II includes corporate governance requirements previously set out in the Capital Requirements Directive IV (CRD IV), which took effect at the start of 2014.

Under CRD IV, investment firm management body members must hold no more than one executive directorship and two non-executive directorships at one time; or no more than four non-executive directorships at one time. MiFID II does allow authorities to permit one more non-executive directorship in addition to those specified under CRD IV's limits.

Directorships in non-profit organisations or charities do not count toward these totals. The rationale for these limits on the numbers of directorships is to ensure that board members have enough time to adequately perform their oversight role in the firm.

Product Governance

Aside from corporate governance, MiFID II sets governance policies for investment products. The first level of these policies includes the institution of product review processes to ensure consistency with the needs of the firm's target markets. Product distributors must also provide access to key information about their products.

The second level of these policies includes new requirements on product governance and product approval processes to ensure whatever financial instruments are offered or recommended are in the best interest of the clients. The intent of these policies is to strengthen compliance, in keeping with European Securities and Markets Authority (ESMA) compliance guidelines published in December 2012. These policies also require that any significant compliance risk that is detected be reported directly to management.

ESMA has offered guidance about MiFID II requirements for designers of investment products, including the following points:

- Set procedures and arrangements to manage conflicts of interest during the design of products
- Ensure governance covers oversight of product design, and that management bodies take more interest in this activity
- Train staff on characteristics and risks of products before they are built
- Identify the target market for a product and specify the type of client whose needs the product will meet
- Analyse scenarios of outcomes of the product being made available in the market.

In addition, MiFID II reinforces past requirements concerning costs and charges for investment products, including costs and charges for investment and related services. Costs and charges that must be disclosed include the cost of advice, the cost of financial instruments, and details of any third-party payments. All costs and charges should be aggregated so the client understands overall cost and cumulative effects on investment return.

Remuneration

ESMA put remuneration policies in place as part of MiFID I, and issued a statement in 2013 that those policies would be the basis for MiFID II's requirements on remuneration.

MiFID II sets certain principles for the policies that management bodies create concerning remuneration of staff who provide services to clients, which include:

- Encouraging responsible business conduct by the firm
- Ensuring the fair treatment of clients
- Avoiding conflicts of interest in relationships with clients.

To amplify these points, MiFID II also states that remuneration policies should be defined under internal procedures that account for clients' interests, so those interests are not compromised by the firm's remuneration practices. There should not be any incentives for staff to favour their own interests or the firm's interests over the interests of clients.

The directive also requires management to get advice from compliance staff before approving remuneration policies, and that firm management approve remuneration policies, with senior management taking responsibility for compliance with those policies.

Title Transfer Collateral

ESMA guidance under MiFID II concerning title transfer collateral arrangements (TTCAs) advises that TTCAs be restricted in use with non-retail clients, especially when there is no connection between the TTCA and the client's obligation to the firm, when the amount of client funds or assets subject to a TTCA exceeds the client's obligation, and when firms make client assets subject to TTCAs without considering the clients' obligation to the firm.

Firms must also be able to demonstrate appropriateness of TTCAs, which means having a strong link between the need for the TTCA and the client's liability. This is greater than the standard of appropriateness for execution-only business. Firms must also disclose the risks of TTCAs to clients.

Outlook

A whole new world

On January 3, 2018, the world's financial eyes were on Europe as it implemented Markets in Financial Instruments Directive II (MiFID II) and Markets in Financial Instruments Regulation (MiFIR), regulations designed to transform the region's capital markets by increasing transparency and ensuring investor protection.

MiFID II operations got off to a good start at most organisations subject to the regulation, although there is still plenty to do this year as firms review tactical approaches, renew compliance systems to make them more cost efficient, and take a more strategic stance that will help them garner the business and operational benefits of the new regime.

Looking beyond this year, MiFID II and regulations that follow will be a catalyst for the adoption of regtech including predictive analytics, machine learning, artificial intelligence and natural language processing. This will not only ease compliance, but also create as yet unknown market opportunities that could reinvigorate business, raise margins and change the profile of capital markets for the better.

Global interest in MiFID II suggests a possible, and much needed, move towards a level of regulatory standardisation across all jurisdictions. While this is immensely ambitious, it is not without hope. Regulations covering many major financial markets, including the US, Hong Kong, Japan, Canada and Australia, are similar in concept, but enforced in different ways to fine tune local activity.

MiFID II leads the regulatory world in areas such as research unbundling, best execution and investor protection. Could it be the blueprint for global harmonisation?

Possibly, but that will depend on how market structure changes envisioned in MiFID II actually pan out and whether they ultimately benefit end investors and the European economy as a whole.

Glossary

ANNA – Association of National Numbering Agencies

ANNA DSB – ANNA Derivatives Service Bureau, issues ISINs for OTC derivatives

APA – Approved Publishing Arrangement, an organisation offering publication of order data on a commercial basis

ARM – Approved Reporting Mechanism, an organisation to which firms must submit transaction reporting

BCN – Broker crossing network, a system operated by an investment firm that matches client orders internally

CFI – Classification of financial instruments

DEA – Direct electronic access, an arrangement where a member, participant or client of a trading venue permits a person to use its trading code to electronically transmit orders directly to the trading venue

DRSP – Data reporting service providers

DVCs – Double volume caps, NTW – negotiated trade waiver, RPW – reference price waiver, double volume caps aim to limit trading in dark pools by introducing a cap on the use of the NTW and RPW waivers

EMIR – European Market Infrastructure Regulation

ESMA – European Securities and Markets Authority, an EU authority that works to promote investor protection and stable and orderly financial markets

FIRDS – Financial Instruments Reference Data System, a data collection system designed to collect and publish reference data across the EU

GLEIF – Global LEI Foundation, operator of the global LEI system

GPS – Global Positioning System, a satellite-based navigation system used for clock synchronisation

HFT – High frequency trading, a program trading platform using complex algorithms and powerful computers to transact a large number of orders at very fast speeds

ISIN – International Securities Identification Number that uniquely identifies a financial security

ISO – International Organisation for Standardisation that develops international standards

KYC – Know Your Customer, the process companies must go through to identify and understand clients before conducting financial business with them

LEI – Legal Entity Identifier, an identifier designed to provide unique entity identification in financial transactions

LIS – Large in scale, orders meeting thresholds set in MiFID II

LOU – Local operating unit of the global LEI system issuing LEIs

MAR – Market Abuse Regulation

MiFID II – Markets in Financial Instruments Directive II

MiFIR – Markets in Financial Instruments Regulation

MIC – Market Identifier Code, a code used to identify stock markets and other trading exchanges

MTF – multilateral trading facility, a non-exchange European financial trading market that brings together multiple buying and selling interests in financial instruments

OTC – Over-the-counter or off-exchange trading between two parties without the supervision of an exchange

OTF – Organised trading facility, a European financial trading market focused on non-equity instruments that brings together buying and selling interests in financial instruments

RTS – Regulatory Technical Standards setting out how investment firms must fulfil elements of a regulation

SI – systematic internaliser, an investment firm that on an organised, frequent and systematic basis, deals on own account by executing client orders outside a regulated market or a multilateral trading facility

T+1 – Settlement data of security transactions, transaction plus one day

UTC – Coordinated Universal Time, the world standard for time