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The MiFID II Trading Transformation

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CONTENTS

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"A LOT OF MY PEERS HAVE MOVED TO ELECTRONIC TRADING TO PROVE BEST EX"

~FIXED-INCOME TRADER

ELECTRONIC TRADING IN INTEREST-RATE SWAPS HAS JUMPED FROM 20% IN 2017 TO 36% IN 2018

Executive Summary

We are now just over one year into the great MiFID II trading transformation in Europe. Execution has been unbundled from research, requiring asset managers to focus more on execution quality and brokers, to ensure they have a competitive stand-alone trading business. The lessons of MiFID I informed us to expect an increase in electronic trading for newly covered asset classes, and preliminary data is already showing the beginning of this trend.

Some parts of MiFID II are catalyzing new business models to help traders navigate this new landscape, while other rules are leading to some unintended consequences. The markets have survived this first transitional year of MiFID II, but the dust has by no means settled. Competitive dynamics will continue to drive market structure, as traders experiment with new tools, analytics and business models.

METHODOLOGY

Quantitative data about Europe presented in this paper has been sourced from various Greenwich Associates research studies and from publicly available sources. Market Share Reporter data from Refinitiv was used to source much of the equity data. In addition, Greenwich Associates interviewed 11 buy-side traders in Europe, asking them a series of qualitative questions about the impacts of MiFID II on their trading process.

Introduction

On January 3, 2018, the much-debated, long-awaited MiFID II regulations took effect in Europe. The new rules impose broad changes across the entire spectrum of capital markets products and workflows. While the hot-button issue has been "unbundling" and how investment research is distributed and paid for, MiFID II makes significant changes to the trading landscape as well. Furthermore, while the first incarnation of MiFID focused mainly on equity market structure, MiFID II expands transparency and trading regulations to nearly all other asset classes.

The intent of both sets of regulations is to improve the market for investors. The MiFID II trading regime seeks to enhance pre-trade and post-trade transparency in order to increase competition and provide market participants with a deeper understanding of the liquidity landscape, thereby improving their trading performance. In trade execution, the regulations define how investment firms interact with the market by including rules designed to encourage trading on lit order books and defining how proprietary trading can interact with institutional liquidity.

We are still barely one year into the great MiFID II trading transformation, with much time in the initial months spent enhancing the "minimum viable product solutions" (i.e., imperfect but compliant) that were rushed into production at the end of 2017. But it is already possible to make informed predictions about the evolution of markets in Europe by examining the impact that MiFID I had in equities and by analyzing the emerging trends that can be seen in the data.

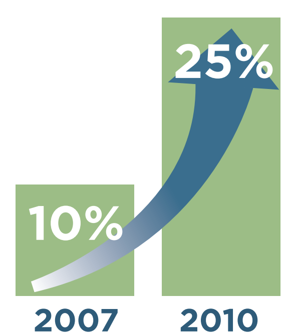
While the hot-button issue has been "unbundling," MiFID II makes significant changes to the trading landscape as well.

The Impact of MiFID I

European cash equity markets had originally been reordered with the first MiFID back in 2007. This initial set of rules specified new requirements around trade transparency and defined the types of venues that could trade equities, including formalizing a rule set for multilateral trading facilities (MTFs) and broker crossing networks (BCNs). In addition, the MiFID I regulations officially defined "best execution" for the first time in European equities, setting a benchmark that investment firms were now obligated to strive for.

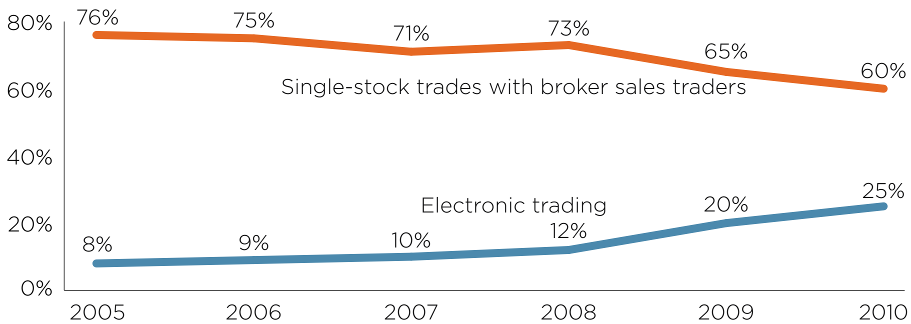
With increased scrutiny on the execution process and liquidity fragmented across a greater number of venues, buy-side traders increased their usage of electronic trading channels. Over the next three years, according to Greenwich Associates data, buy-side usage of e-trading rapidly increased from 10% to 25%.

Following the passage of MiFID I, e-trading rapidly increased



Source: Greenwich Associates 2007-2010 European Equity Investors Studies

GROWTH IN BUY-SIDE USAGE OF ELECTRONIC TRADING—EUROPEAN CASH EQUITIES



Note: Based on 90 responses in 2005, 88 in 2006, 83 in 2007, 82 in 2008, 83 in 2009, and 77 in 2010.
Source: Greenwich Associates 2005–2010 European Equity Investors Studies

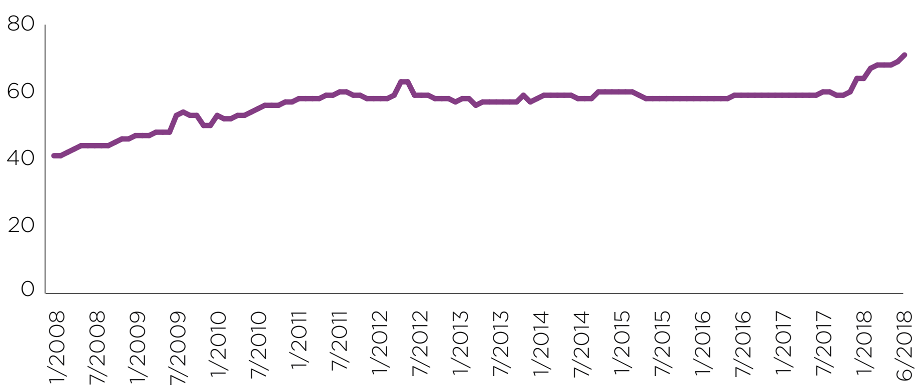
The changes brought about by MiFID I led to an overall improvement in market structure, but in the eyes of the European regulators, it was not without some unintended consequences.

> **"MiFID I was an improvement because there were other pools of liquidity to access."**
> ~*Trader, Institutional asset manager*

> **"Liquidity was accessible—fragmented, but accessible."**
> ~*Trader, Institutional asset manager*

MiFID I led to a dramatic proliferation in execution venues, which increased by over 73% following the implementation.

NUMBER OF EXECUTION VENUES



Source: Market Share Reporter data from Refinitiv

Many of these new venues were dark order books operating as BCNs. The BCN regime prescribed how brokers could cross client flow against proprietary liquidity and other client flow, and thus became an important part of a broker's electronic execution platform.

However, as most large brokers were able to set up a BCN relatively easily, it increased fragmentation and diverted institutional flow away from public markets. With more volume being executed in private, often dark, crossing networks, regulators became concerned that price discovery was being inhibited. At the same time, BCNs were acting as dark pools and mingling proprietary flow with client flow. This led to concerns around transparency and the potential disadvantages for institutional investors.

MiFID II Expansion

To resolve these issues, MiFID II eliminated the BCN venue type, set caps on the amount of dark pool trading that could be conducted under the reference price waiver (whereby execution prices of dark trades are derived from lit markets), and redesigned the systematic internaliser (SI) regime to allow institutional traders to transparently interact with proprietary liquidity.

We can expect to see an increase in e-trading and some venue fragmentation in the asset classes now covered by MiFID II.

MiFID II also brought other asset classes into scope, including fixed income, derivatives and exchange-traded funds (ETFs). Spot FX markets were excluded, but FX derivatives are covered.

By following the playbook for equities market structure after MiFID I, we can expect to see an increase in e-trading and some venue fragmentation in the asset classes now covered by MiFID II—including FX derivatives, fixed income and ETFs.

In addition, the MiFID II pre- and post-trade transparency rules are significantly more stringent. For all transactions in covered instruments, the prevailing price in the market must be checked and recorded prior to executing the deal. Afterward, the trade details such as price and quantity need to be publicly reported via an approved publication arrangement (APA) or other mechanism.

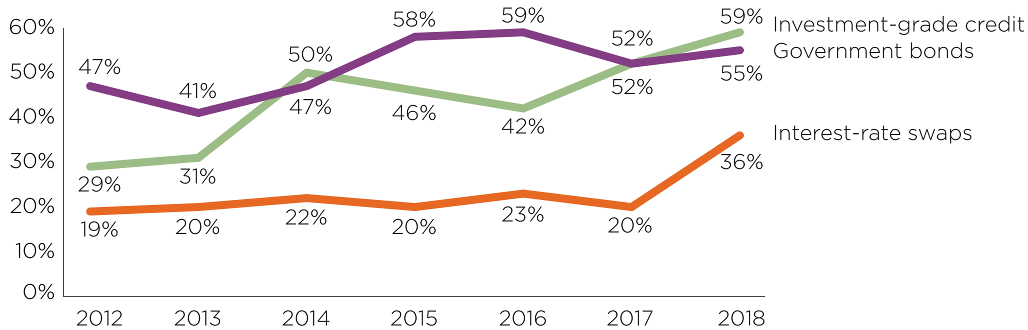
Complying with these reporting requirements when executing OTC is quite onerous, further motivating market participants to shift trading toward electronic venues that naturally facilitate time-stamping and reporting.

> **“MiFID II has increased usage of [electronic trading platforms] because it reports all the pre-trade and post-trade for you.”**
>
> *~Fixed-income trader, Institutional asset manager*

Electronification

We are already starting to see an increase in electronic trading among European buy-side fixed-income traders. E-trading in interest-rate swaps has jumped from 20% in 2017 to 36% in 2018, with more modest gains in government bonds and investment-grade credit.

GROWTH IN ELECTRONIC TRADING—EUROPEAN BUY-SIDE FIXED-INCOME TRADERS



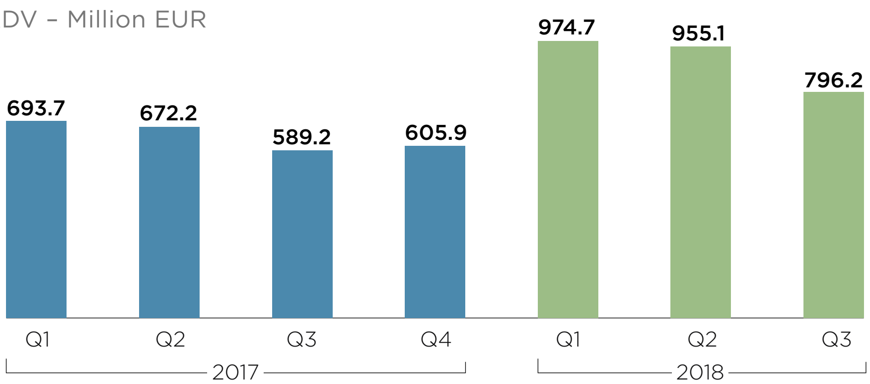
Note: Government bonds: Based on 416 responses in 2013, 406 in 2014, 400 in 2015, 372 in 2016, 361 in 2017, and 334 in 2018.
Interest-rate swaps: Based on 221 responses in 2013, 198 in 2014, 200 in 2015, 180 in 2016, 179 in 2017, and 172 in 2018.
Investment-grade credit: Based on 360 responses in 2013, 331 in 2014, 318 in 2015, 307 in 2016, 282 in 2017, and 271 in 2018.
Source: Greenwich Associates 2012-2018 European Fixed-Income Investors Studies

It is also possible to analyze the publicly reported data from electronic execution venues. Tradeweb, an electronic trading venue, operates an order book for European ETFs, European government bonds and European credit. As such, activity on the platform can be used as a proxy for the broader market.

Although considered by many to be part of the equity asset class, ETFs were excluded from MiFID I. Prior to the implementation of MiFID II, an estimated 80% of all ETF trading occurred OTC. Recent data indicates that e-trading of ETFs through Q3 2018 is already 44% higher than 2017 levels.

EUROPEAN ETF E-TRADING VOLUMES

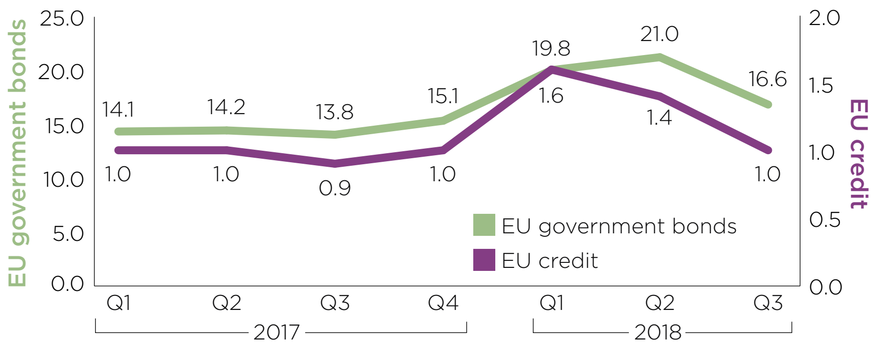
ADV – Million EUR



Source: Tradeweb

Fixed-income markets are also seeing an increase in e-trading, with government bonds showing a 36% increase year-over-year, and corporate bonds showing a 39% increase.

EU GOVERNMENT BONDS AND CREDIT E-TRADING VOLUMES
ADV – Billion USD



Source: Tradeweb

This trend is expected to increase as traders get connected to more electronic venues and continue to adjust their workflow.

> **"RFQ usage will pick up as more and more people move to electronic platforms."**
>
> *~Fixed-income trader, Hedge fund*

> **"A lot of my peers have moved to electronic trading to prove best ex."**
>
> *~Fixed-income trader, Institutional asset manager*

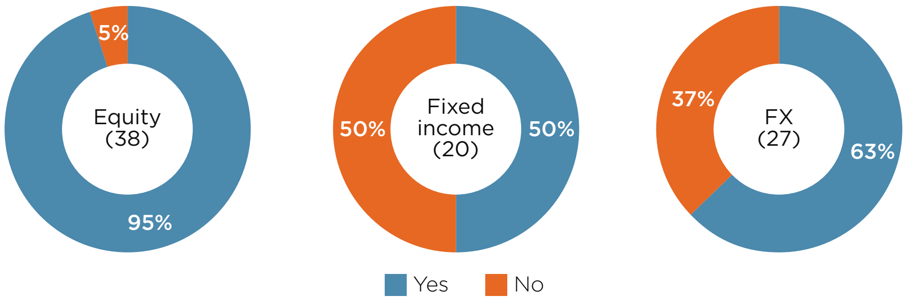
While algorithmic trading has been prevalent for many years in equity markets and to a lesser extent in FX, some traders are expecting it to take off in fixed income also. More traders connecting to electronic platforms increases the liquidity on these venues, making them more amenable to algos that can automatically execute across electronic order books.

> **"Algos are definitely becoming a bigger part of fixed-income trading... What you're seeing is lots of algos are being created by banks to trade smaller size tickets."**
>
> *~Multi-asset trader, Hedge fund*

Best Execution

An expansion of MiFID II and more robust best-execution requirements is leading to increased adoption of transaction cost analysis (TCA). These tools, which help traders measure performance against execution benchmarks, proliferated after MiFID I—95% of European equity traders tell us they now use TCA.

PROPORTION OF TRADING DESKS THAT PERFORM TCA



Note: Based on 85 responses.
Source: Greenwich Associates 2018 Market Structure & Trading Technology Study

Usage is increasing in fixed income and FX, but is still well below the penetration levels we see in equities, at 50% and 63% respectively. With increased focus on best execution and performance, we should expect to see an increase in TCA penetration for non-equity asset classes in the coming years.

> **"TCA will increase… because that's what we're being asked to do by clients, and regulators want to see some proof of best execution. TCA is one of those methods we'll use to show that."**
>
> *~Fixed-income trader, Institutional asset manager*

As TCA usage increases, it will likely lead to further increases in electronic trading. This is because algos can be designed to achieve specific TCA benchmarks. For example, a time-weighted-average-price (TWAP) algo will seek to achieve a TWAP benchmark. In addition, e-trading strategies provide an audit trail that can be seamlessly uploaded to TCA systems.

> **"In terms of MiFID, the TCA reporting is excellent on the back of algos. So we'll happily use the algo to prove best ex."**
>
> *~Fixed-income trader, Institutional asset manager*

Fragmentation

In equities, MiFID I also led to an increase in the number of execution venues. While we are still only a year in to MiFID II, we are already beginning to see this take place in other asset classes. FXall has launched a new MTF for FX derivatives, designed specifically to help clients comply with MiFID II regulations, and is achieving record volumes.

Other firms have also launched new MTFs or organized trading facilities (OTFs) as a direct result of MiFID II, including BGC, GFI, Sunrise Brokers, Aurel BGC, and Integral. In addition, many banks and brokers have launched SIs for asset classes outside of equities.

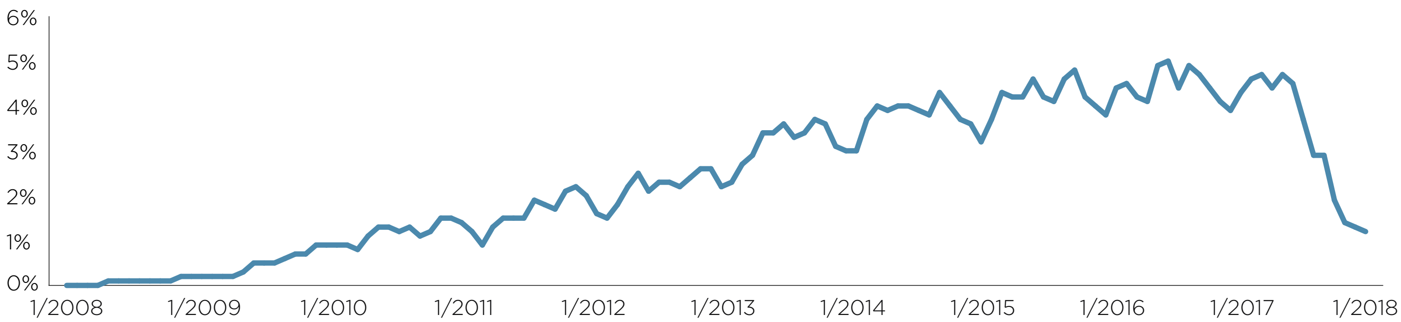
Equities, Round II

Concerned about the level of dark trading occurring in European equity markets and the potential detrimental effect this could have on price and liquidity discovery, MiFID II introduced caps limiting the amount of non-displayed trading that could occur under the reference price waiver (i.e., dark pool trades that leverage price discovery from lit markets). These were set at 4% per stock per venue and 8% per stock marketwide. Prior to implementation of MiFID II, many of the most liquid blue chip stocks in Europe had much higher levels of dark trading—sometimes as much as 15%.

Prior to implementation of MiFID II, many of the most liquid blue chip stocks in Europe had much higher levels of dark trading—sometimes as much as 15%.

Overall, the market level of dark trading based on reference price peaked at about 5% at the end of 2017. The dark pool caps were officially introduced in March, and we see they have had the desired effect—significantly reducing the amount of dark trading via the reference price waiver to about 1%.

DARK TRADING VIA REFERENCE PRICE WAIVER



Source: Market Share Reporter data from Refinitiv

Because the reference price waiver dark pools caps were known well in advance, the industry had time to develop new solutions and enhance existing ones. The main venues are Liquidnet, ITG Posit, Turquoise Plato Block Discovery Service, and Cboe LIS.

There are currently different reporting practices for large-in-scale trades, which makes it difficult to specifically quantify how much trading is executed away from lit order books via this waiver, although industry estimates suggest it could be 15% or even higher.

Based on recent Greenwich Associates research, traders are generally satisfied with how effective large-in-scale waivers (and the new trading offerings built up around them) have been in helping them source dark pool liquidity and countering the effect of the dark pool caps.

LARGE-IN-SCALE WAIVERS HAVE BEEN EFFECTIVE IN GAINING DESIRED DARK POOL LIQUIDITY

Note: Opinions expressed as range of strongly agree, somewhat agree, unsure, somewhat disagree, and strongly disagree. Based on 134 total institutions.
Source: Greenwich Associates 2018 European Equity Investors Study

Systematic Internalisers

With the elimination of BCNs, the systematic internaliser regime has become a major component of the equity execution landscape in Europe. While SIs are typically required to publish lit quotes, they do not have to if they are quoting greater than the standard market size (i.e., larger quotes than usual). This means that a large proportion of SI flow can be executed in the dark—a potential loophole to the dark volume caps. Indeed, published data indicates that SIs have captured a significant portion of the market, with estimates as high as 34%.

SYSTEMATIC INTERNALISERS HAVE BEEN EFFECTIVE AT SOURCING DESIRED LIQUIDITY

Note: Opinions expressed as range of strongly agree, somewhat agree, unsure, somewhat disagree, and strongly disagree. Based on 134 total institutions.
Source: Greenwich Associates 2018 European Equity Investors Study

On balance, European buy-side traders agree that SIs have been beneficial in helping them source liquidity.

Periodic Auctions

Periodic auctions are another new construct to arise in response to MiFID II. Like exchange-operated open and closing auctions, periodic auctions aggregate liquidity during a call phase, when orders are submitted and then run, seeking to maximize the executed quantity. Periodic auctions are considered to be lit trades under MiFID II, as the indicative matched size is published prior to execution.

There is, however, limited transparency around the individual orders submitted. In addition, many venues offer "broker preferencing," meaning that contra orders from the same broker have priority in matching. Brokers can thereby use periodic auctions as a form of internalization engine, allowing them to cross internal flow. Thus, in some ways, periodic auctions are seen as a loophole around the dark volume restrictions and, at the same time, as a quasi-BCN.

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BLOCK LIQUIDITY HAS IMPROVED

Note: Opinions expressed as range of strongly agree, somewhat agree, unsure, somewhat disagree, and strongly disagree. Based on 134 total institutions.
Source: Greenwich Associates 2018 European Equity Investors Study

In general, institutions do feel that innovations like periodic auctions and new block crossing platforms have improved their ability to source block liquidity. So despite all the machinations around the new trading rules, it appears that MiFID II is providing some benefits to the European trading landscape.

What's Next for European Trading

"They'll always change regulations, so I think that's a definite."
~Multi-asset trader, Hedge fund

Differentiation and competition between venues is good for markets, and new pools are satisfying a need in the market.

We are just a year into the MiFID II trading transformation, so the full impact is yet to be felt. It is too soon to contemplate a MiFID III, but regulators may try to tweak the rules in light of how the market has reacted to this experiment. In equities, there have been calls for regulators to recalibrate the double-volume caps on dark pool trading, which are considered too restrictive.

Indeed, these caps have likely led to the growth in periodic auctions and SIs, which was not fully anticipated by the regulators and run counter to the objectives of reducing fragmentation and promoting lit markets. In some ways, SIs and periodic auctions are replacing the old BCN regime; and if flow continues to migrate to these venues, they may suffer the same fate.

However, we must also recognize that differentiation and competition between venues is good for markets, and that these new pools are satisfying a need in the market, as judged by the volume they have attracted and the feedback from buy-side traders.

A more popular initiative may be for regulators to implement a consolidated tape provider (CTP), which does not currently exist. Absent a government-sponsored utility, European equity markets will continue to rely on aggregated tape supplied by third-party providers.

"One of the buy side's biggest issues is getting the CTP in Europe, and that requires the regulator to make it happen."
~Equity trader, Institutional asset manager

Outside of equities, we can expect to see continued increases in e-trading and new venues emerging, hoping to offer traders a better mousetrap. In fixed income, trading is perceived as more difficult, with brokers having to spend more time on administrative documentation of trades and less time on servicing clients. In addition, unbundling has left dealers wary about providing important market color to clients, for fear of falling foul of these rules.

Despite these bumps in the road, change always creates opportunity. We are already seeing this in terms of the new venues in equity trading and the growth of e-trading in fixed income. With or without regulation, the market will react to the new trading landscape as optimally as it can. Every pain point and frustration in the market represents a chance for innovation.

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