Dealing With EU Market Regulation

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1. What is a Third Country Within MiFID?

As the MiFID D-Day gets ever closer, certain aspects of the rules and endless RTSs start to come into sharper focus. Among those is the role, and perhaps plight, of what MiFID calls third-country firms. MiFID defines this category as, "*a firm that would be a credit institution providing investment services or performing investment activities or an investment firm if its head office or registered office were located within the Union*." So this category encompasses a whole bunch of entities.

The Scope Definitions

Thus we need to see what both MiFID and MiFIR say about third-country firms. We begin with MiFID 2, Article 1, which says, "*This Directive shall apply to investment firms, market operators, data reporting services providers, and third-country firms providing investment services or performing investment activities <u>through the establishment of a branch in the Union</u>*." (emphasis added) Because Article 1 singles out third-country firms, and because of the definition in the previous paragraph, we can conclude that this definition of "investment firms" does not apply to firms that have no presence in the EU.

MiFIR has a different approach to third-country firms. Its Article 1(1)(f) applies the regulation to "*provision of investment services or activities by third-country firms following an applicable equivalence decision by the Commission with or <u>without a branch</u>*." (emphasis added) And Article 1(5) says, "*Title VIII of this Regulation applies to third-country firms providing investment services or activities within the Union following an applicable equivalence decision by the Commission with or without a branch*." So we already have an inconsistency to deal with. MiFID says you only achieve the status via a branch in the EU, and MiFIR says, "Not so fast, you have to have regulatory equivalence, but you don't need the branch."

Specific Sections of MiFIR and MiFID

Title VIII of MiFIR is devoted entirely to the regulation of third-country firm, and says "*A third-country firm may provide investment services or perform investment activities with or without any ancillary services to eligible counterparties and to professional clients … established throughout the Union without the establishment of a branch where it is registered in the register of third-country firms kept by ESMA in accordance with Article 47*." Thus MiFIR requires a third-country firm to register with ESMA, and to restrict its dealings in the EU to eligible and professional counterparties.

Article 46 then says, in paragraph 3, "*Where a third-country firm is registered in accordance with this Article, Member States shall not impose any additional requirements on the third-country firm in respect of matters covered by this Regulation or by Directive 2014/65/EU and shall not treat third-country firms more favourably than Union firms*." In other words, once regulatory equivalence has been established, that firm is subject to its home regulations, not MiFID or MiFIR.

Chapter IV of MiFID 2 also covers the actions of third-country firms, but only under the assumption that the firm has established a branch, and spends most of its time going over how branches are authorized. Here, though, the requirement isn't hard and fast. For example, "*A Member State <u>may</u> require that a third-country firm intending to provide investment services or perform investment activities with or without any ancillary services to retail clients or to professional clients within the meaning of Section II of Annex II in its territory establish a branch in that Member State*." (emphasis added) So it appears that

an individual member state could drop that requirement. But there is no clarity on how a third-country firm becomes an investment firm under those conditions, except what's in MiFID.

Interpretations

Given this level of uncertainty, and a few outright contradictions, we should look for some interpretations of the rules. One, from Linklaters, says "MiFID II provides that a Member State may require third country firms to establish a branch in that Member State in order to provide services to retail clients and clients treated as professionals upon request, unless at the exclusive initiative of the client. No equivalence decision by the Commission is required, and no passporting regime is provided for … A third country firm without an EU branch may provide services to ECPs and PCs anywhere in the EU if it has registered with ESMA and the Commission has adopted and not withdrawn an equivalence decision. The firm must also be authorized and supervised in its home country, and cooperation arrangements must be in place between its home country regulator and ESMA. Before providing services, firms must inform EU clients that they are only allowed to provide services to ECPs and PCs and that they are not subject to supervision in the EU." (emphasis added)

According to Norton Rose Fulbright, "The third country regime that is set out in Articles 46 t0 49 of MiFIR and concerns third country firms providing services to per se professional clients and eligible counterparties without the establishment of a branch (but with direct registration with the European Securities and Markets Authority) is unaffected by the HM Treasury consultation document as MiFIR is a directly applicable EU regulation, and the UK has no discretion as to its implementation."

Implications

So third country firms have a choice between two clear and very different paths. If they already have a branch in the EU, or if they establish one there, they can become a full investment firm, with the ability to offer all services to all EU customers. They do, however, become subject to all the MiFID/MiFIR rules, including those that are established by the member states, not just by ESMA. The other option is to rely on a regulatory equivalence finding by ESMA and operate without a branch. As such, they can deal with any eligible counterparty or professional in any member state and in any instrument without being subject to any of MiFID/MiFIR, just subject to their home regulator(s).

Thus there are a few questions that a potential third country firm needs to answer:

1. **How important is our EU business to us?** If that business is critical to our success, then decisions have to be made and actions taken. If it is small as a portion of the overall business, then maybe we can sell it or swap it with some other firm's US business and avoid the headaches.
2. **What is our natural customer set?** Firms that deal primarily with retail customers will gravitate toward the branch path, while those with a primarily institutional clientele will probably opt for the regulatory equivalence.
3. **What is our home regulator's relationship with ESMA?** If your regulator has had a rocky relationship, depending on regulatory concordance may be too risky. And it is probably worth finding out whether the regulator(s) are going for equivalence, and what they think their chances are.

There is one additional choice, of course. Any firm with no presence in the EU at all can decide to deal with EU clients, either retail or professional, without regard to what the EU regulations say. The EU regulators, and probably the European Commission, may not like it, but the firm may be beyond their reach. Whether EU authorities can reach the firm through its home regulator would be a calculated gamble, but one worth taking if the firm decides that it can better serve its customers, including EU customers, by staying outside the EU regulatory net altogether.

In any event, we have yet another example of parochial regulation in a very global market. The end result will always be more expenses for liquidity providers, and lower quality service for customers. As we march toward the effective date of MiFID II, the whole market is looking more and more like a third world country struggling to deal with modern times.

2. The Mystery of Regulatory Equivalence

In the global rush to prepare for MiFID in January of 2018, there is one unsolved mystery lurking just offstage. I'm not Sherlock Holmes, but I've been poking around and I can't seem to solve it.

What the Rules Say

Article 1(1)(f) of MiFIR allows for the "provision of investment services or activities by third-country firms following an applicable equivalence decision by the Commission with or without a branch." And Article 1(5) says, "Title VIII of this Regulation applies to third-country firms providing investment services or activities within the Union following an applicable equivalence decision by the Commission with or without a branch." So there seems to be a whole other kind of investment firm that can operate in the EU, based on regulatory equivalence.

And what is regulatory equivalence? Article 47 of MiFIR says, "The Commission [the EC] may adopt a decision in accordance with the examination procedure referred to in Article 51(2) in relation to a third country stating that the legal and supervisory arrangements of that third country ensure that firms authorised in that third country comply with legally binding prudential and business conduct requirements which have equivalent effect to the requirements set out in this Regulation." And Article 51(2) says, in its entirety, "Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply." So I surmise that the decision to grant regulatory equivalence is to be made by the EC with the help and guidance of the European Securities Committee (ESC).

Finally, Article 46 says, in paragraph 3, "Where a third-country firm is registered in accordance with this Article, Member States shall not impose any additional requirements on the third-country firm in respect of matters covered by this Regulation or by Directive 2014/65/EU and shall not treat third-country firms more favourably than Union firms."

Some Implications

What it all means is that if an third country firm, as defined by the EU regulations, has no branch in the EU, it can deal in all instruments with EU professional customers by abiding with its local regulations and ignoring MiFID/MiFIR – *if and only if* the EC has granted its local regulator regulatory equivalence, apparently without the input of ESMA.

On its face, it appears quite clear that the EC intended that firms who have no presence in the EU would have the ability to do business with professional EU customers in the same way that they did before MiFIR/MiFID2 arrived, as long as their local regulations gave the same protections as the EU's. Given the substantial resources required to conform to the EU regulations, virtually every non-EU institutional investment firm should welcome the possibility of conforming to its home rules, instead of the complex matrix of MiFIR/MiFID2 regulations.

And some of those EU regulations are real minefields. For example, the trading obligation restricts where you can trade equities and certain derivatives that are listed on an EU venue, even if their "home" country isn't in the EU. So a stock in a US company, which happens to be listed on an EU exchange, couldn't be traded on a US dark pool if that pool wasn't deemed equivalent by ESMA, even if both parties to the trade were outside the EU, as long as one side was subject to MiFIR/MiFID2. Another thing, the EU

transaction reporting requirements include the personal ID of the account holder, details not required in US reporting, and apply to instruments not listed in the EU as long as the underlying is. So non-EU firms would have to report to an EU data repository on trades in things like US bank structured notes where the index was, for instance, the DAX.

There are several other issues for non-EU firms in complying with MiFIR/MiFID2, like pre-trade transparency and soft dollars, so we should expect all sorts of investment firms outside the EU to be petitioning their home regulators to arrange for regulatory equivalence.

The Mystery Deepens

The question, of course, is how a non-EU regulator achieves equivalence. Does the ESC or the EC have a documented process? Who initiates it, what evidence must be submitted, who makes the determination, on what grounds, and how long does it take? Unfortunately, I can't find anything on either the EC, ESMA or ESC web sites to answer those questions. So I sent an email to info@esma.europa.eu asking whether any US regulator had initiated efforts to have its legal and regulatory arrangements deemed equivalent.

I heard back from Rodrigo Buenaventura, Head of the Markets Department at ESMA, who wrote, "Article 47 of MiFIR entrusts the equivalence decisions to the European Commission, not to ESMA. ESMA is an EU authority separate and independent from the European Commission. I would encourage you to contact the European Commission (DG FISMA) for any query regarding their equivalence decisions." So I emailed and called the EC DG FISMA, but haven't heard anything yet. The ESC apparently doesn't have an email address or a phone number.

However, one wouldn't necessarily expect the EU regulators to take the lead in granting regulatory equivalence. I would expect the non-EU regulators to petition for it, largely because their charges should be pushing them to do so. So I emailed and called both the SEC and the CFTC, asking whether they had applied for regulatory equivalence, and, if so, what was happening. The SEC won't confirm or deny whether they are pursuing this avenue, but it doesn't sound to me like they are. (That's just my best guess.)

I did hear back from the CFTC, who wrote, "As you note, Article 47 of MiFIR authorizes ESMA to adopt an equivalence decision. It does not, however, prescribe a procedure for a foreign regulatory authority, such as the CFTC, to initiate an effort to have the CFTC's legal and supervisory arrangements deemed equivalent by ESMA. Thus, questions about the status of any such equivalence decision should be directed to ESMA." Thus it appears that the CFTC has had no conversations with the Street about efforts to establish regulatory equivalence for MiFID/MiFIR2 (although there have been plenty of conversations around EMIR), wasn't aware of any such requests and hasn't discussed the matter with the EC or ESMA.

Of course, there is no assurance, or perhaps any expectation, that the ESC or the EC, or any other EU authority that might become involved, would be willing to grant regulatory equivalence to the US. And we have no assurance or perhaps expectation that any US regulator would agree to whatever changes would be required by the EU to achieve it. Except that the EC did go to some effort to provide for it in the regulation, so they must have been serious. The sad thing is, unless I have missed something rather obvious, we may never find out, which should amount to a huge disappointment. It would be humorous, if it weren't so serious. Hopefully, this won't be another case of a golden opportunity lost.

3. Border Crossings Under MiFID II

In the first two sections, I addressed some of MiFID's regulations on the provision of investment services to EU customers by firms outside the EU, called "third country firms." While that issue is complicated enough in itself, it actually represents a small fraction of the cross-border concerns that are surfacing as people dig into the MiFID requirements. So, unfortunately, we have to spend some more time in this area.

Understanding the Parameters and Combinations

There are actually three parameters which govern the applicability of various parts of MiFID II. The first is the regulatory venue of the investment firm providing the services. Second is the regulatory venue and status of the customer for the services. And finally there is the regulatory venue of the instrument(s) involved. When we start combining those parameters, we get a pretty wide variety of possibilities.

These parameters in turn affect the requirements contained in both MiFID and MiFIR, and, for good measure, MAR (the market abuse regulation). Among the more important requirements are: the trading obligation, the pre-trade transparency obligation, the post-trade transparency (or transaction reporting) obligation, the best execution obligation, and the obligation to monitor customer activity for market abuse. Some of these obligations appear to be triggered by where the customer is, some by where the firm is, some by the venue of the instrument, and some are just too confusing to call right now.

The Simple Combinations

Let's look at the simplest of the combinations first. We will assume here that any non-EU firm has attained the appropriate third-country status, so that it can deal with EU customers. The first combination is a non-EU firm dealing with a non-EU customer in non-EU instruments. It seems pretty clear that none of the MiFID rules apply, except that we need to be careful with customers that are non-EU subsidiaries of EU entities, where the trade might have a significant impact on the parent or the EU itself.

The other simple combination is an EU firm, an EU customer, and an EU instrument, where all the EU provisions seem to apply. I think we can handle that one okay.

Some Complications

But things immediately start to get more complicated. For example, let's look at an EU firm dealing with and EU customer in a non-EU instrument. Barclays executing a trade for Scottish Widows in US Treasuries, for example. Simple enough, right? One would think that there's no MiFID trading obligation, since the security doesn't trade in the EU…unless somebody in the EU starts a MTF for Treasuries. And, we hope, no reporting obligation. But what about best execution? Since the customer is an EU person, albeit a professional, what best ex obligation does Barclays have? If Barclays is acting a principal in this trade, which is highly likely, does the MiFID best ex apply at all? And, while we might not think that market abuse would be applicable in Treasuries, our friends at Goldman would probably tell us otherwise, based on some recent revelations. So whose market abuse regulations apply, the EU's or the US's – or maybe both. Oh, I almost forgot, what is Barclays' obligation regarding pre-trade transparency. If it did this trade as principal, must it expose the quote it showed the customer to the rest of the EU market, even though the trade was done in its NY office?

Just for fun, let's reverse the parameters. A non-EU firm executing for a non-EU customer, in an EU instrument. UBS Securities LLC (with no presence in the EU) selling a German Bund for a US hedge fund. If the bund is listed in the EU, we assume that the trading obligation applies, as long as UBS can trade on that venue. Except, it isn't UBS the Swiss bank we're talking about, it's UBS Securities LLC, the US securities firm. Let's assume that LLC isn't a member of any of the EU venues where the bond trades, so it would have to use a broker like its Swiss affiliate to execute. Now we need to know whether the trade with the hedge fund was done as principal, with LLC doing a matching trade with its Swiss affiliate. Or was it done as agent, with LLC passing the order through to the EU broker? If so, was it done omnibus, where the executing broker (the Swiss bank) only knows LLC as the selling party, even though the actual seller was the hedge fund? Or was it done on a disclosed basis?

Let's say it was done as agent, under the omnibus arrangement. Clearly the trading obligation applies ... or does it? The selling party, the hedge fund, isn't bound by any MiFID rules, and its agent, LLC, isn't either, since it isn't an "investment firm" as defined by MiFID. Never mind, we'll do the trade on a venue. But the executing broker, who must then file the report, doesn't know who the actual seller is, so part of its reporting requirement can't be satisfied. And do any of the parties owe the hedge fund a best ex report? Oh, and the monitoring for market abuse, who does that? If the original seller is a US person, and the broker who knows its identity isn't subject to MiFID, can anyone be held to the monitoring obligation?

But wait, it turns out that LLC bought the bonds from the hedge fund as principal, so it is the one selling them on the venue. The trade with the hedge fund is totally outside of MiFID and MAR, and totally within the purview of the SEC, except the SEC doesn't regulate trades in EU securities. LLC's trade on the venue is the one now under MiFID. So it doesn't take much imagination to see non-EU customers gravitating to principal trades with US broker-dealers in EU instruments – let somebody else worry about MiFID. And just to complicate it a bit more, let's say that LLC sold the bunds as principal to its EU affiliate, raising the question of whether inter-affiliate trades are covered. I've asked ESMA about this, but haven't heard back yet.

Sorting It All Out

So now, I don't know about you, but I'm pretty confused. With all these moving parts we need some organized way of looking at this. Let's try the matrix below, where the columns labeled Trading, Reporting, Best Ex, Pre Trade and Market abuse indicate whether the MiFID requirements apply. Hopefully, the domicile columns are self-explanatory.

Firm Domicile	Customer Domicile	Instrument Domicile	Trading	Reporting	Best EX	Pre Trade	Market Abuse
Non-EU	Non-EU	Non-EU	No	No	No	No	No
Non-EU	Non-EU	EU	No	?	No	No	?
Non-EU	EU	EU	Yes	Yes	Yes	?	Yes
Non-EU	EU	Non-EU	No	No	No	No	No
EU	EU	EU	Yes	Yes	Yes	Yes	Yes
EU	Non-EU	EU	Yes	Yes	?	Yes	Yes
EU	EU	Non-EU	No	No	?	No	No

There are a few ?s in the matrix, and I'm perfectly prepared to admit that I'm not 100% sure about some of the other answers, so if the regulators would just provide some clarity, we'd all be grateful.

Some Possible Developments

Meanwhile, what can we predict about how this will all shake out?

1. The best execution requirement, which has everybody up in arms, will probably lead to a rise in limit orders, as long as everyone agrees that this part of Article 27 of MiFID II means what it says: "where there is a specific instruction from the client the investment firm shall execute the order following the specific instruction." The open question is whether a limit order in a principal trade which is away from the market (too high on the bid or too low on the offered) is still exempt from the best ex obligation.

2. For non-EU customers who want to avoid some of the MiFID requirements, like intrusive trade reporting, and for non-EU dealers who serve them, there will probably develop a "grey market" of principal trades in EU instruments by two non-EU parties, where MiFID doesn't apply, and where the non-EU dealer then lays the position off with an EU affiliate.

3. As with every other part of MiFID, technology will be the key. OMSs will have to store domicile information about both the customer and the instrument, and will have to apply the appropriate rules, since traders and/or salespeople won't be able to make those determinations on the fly. Who's working on that – are you?

The hordes of migrants moving across the European continent have reminded us recently that crossing EU borders can be a dangerous process. By the middle of next year the world's financial markets may be proving the very same thing.

4. The OTF-SI Decision Process

For any investment firm operating a single-dealer bond or swap ECN in Europe, MiFID II raises a life-altering decision – whether to become an organized trading facility (OTF) or a systematic internalizer (SI). Given the way MiFID II is worded, that choice has far-reaching implications. And, since Article 20 of MiFID says, “Member States shall not allow the operation of an OTF and of a systematic internaliser to take place within the same legal entity,” this is very much an either-or decision.

The OTF

The most important aspect of MiFID’s definition of an OTF is its prohibition against the operator using its own capital in executing trades. Thus the OTF simply becomes an order matching engine, where customers and other dealers can enter bids and offers. Given that structure, the OTF operator has almost no control over the liquidity available on its facility, particularly in periods of high volatility.

Since today’s dealer ECNs are mostly an opportunity for the dealer to corral order flow, becoming an OTF completely disrupts that model. The only trading allowed by an OTF operator is matched principal trading, defined as “a transaction where the facilitator interposes itself between the buyer and the seller … in such a way that it is never exposed to market risk throughout the execution of the transaction, with both sides executed simultaneously, and where the transaction is concluded at a price where the facilitator makes no profit or loss, other than a previously disclosed commission, fee or charge for the transaction.” Otherwise, the OTF operator becomes a mini-exchange operator, reliant on transaction fees for revenue.

The SI

MiFID defines a SI as, “an investment firm which, on an organised, frequent systematic and substantial basis, deals on own account when executing client orders outside a regulated market, an MTF or an OTF without operating a multilateral system,” and further defines frequent systematic basis as, “measured by the number of OTC trades in the financial instrument carried out by the investment firm on own account when executing client orders.” A substantial basis is “measured either by the size of the OTC trading carried out by the investment firm in relation to the total trading of the investment firm in a specific financial instrument or by the size of the OTC trading carried out by the investment firm in relation to the total trading in the Union in a specific financial instrument.”

This definition is somewhat similar to the Volcker Rule (VR) definition of market making, and is equally vague. One thing to note is that the measurement of substantial is based on the ratio of customer-facing trades to all trades, which is one of the VR market-making metrics. So, one obvious first question is whether a national market regulator, or even ESMA, can revoke a firm’s SI status if it doesn’t maintain the frequent systematic and substantial dealing in specific financial instruments, and even whether the SI status applies to particular instruments, classes of instruments, or to the category covered under the OTF definition.

Making the Choice

As firms decide what to do with their ECNs, there are several criteria to consider. Overlaying all the criteria is the understanding that European markets are changing in many ways, only some of which are due to regulation. Two of the impending changes:

- Market volatility – the obvious economic and political split between the northern and southern tiers of Europe will most likely lead to increased market volatility, if not social unrest. In addition, any bond defaults that occur will have unknown ripple effects. Coupled with the long-awaited Fed actions to raise US interest rates, we should expect the next twelve months to be dramatic times in European, and global, markets.
- Market liquidity – as firms monitor their capital and expenses ever more vigilantly, more and more of them decide that being a liquidity provider in all markets under all conditions is not a good business model. Whether they exit the market-making function entirely or restrict it to certain products or customer sets, these actions are drying up liquidity globally. For the buy side, this presents the frightening possibility that they will need the most liquidity exactly when it is the least available.

The Criteria

With those changes in mind, here are some of the criteria firms are considering in making the OTF-SI decision.

What kind of relationship do we have with customers? Over the last ten years trust between the buy side and sell side has been severely damaged. Part of this is due to the natural tension involved in principal transactions, but much of it has been due to some rather unscrupulous actions by many global banks. In the new world, the buy side is very focused on the role their counterparties are playing, so firms currently operating ECNs will have to have a very clear understanding with their customers as to the value they bring to either of these new relationships.

What markets do we want to focus on? This question applies to both products and customer sets. It depends on a host of other questions. What customer sets do we have good relationships with? What countries are we well established in? What markets are our competitors exiting? What products do we have expertise in? What products will have the most activity in the future? Where can we combine offerings to maximize our advantage? All these questions require you to have some view of how the markets will evolve over the next five years, so they are very much a bet on the future.

What kind of risk appetite do we have? Being a liquidity provider in the new Europe is very definitely not for the faint of heart. Everyone who isn't aware of that already will soon be educated in a painful way. As liquidity providers exit more and more markets, spreads will widen and the cost of accessing liquidity will go up. However, even if market-making becomes more profitable, lax risk management will carry a huge burden. In particular, for those who choose to become an SI, commitment to the market through thick and thin will be a regulatory requirement.

What kind of relationship do we have with our regulators? MiFID says that the regulation of market-makers is a national responsibility, but there is no clear guidance for those regulators as to what constitutes appropriate commitments on the part of either an OTF operator or SI. As a result, making the decision will be heavily dependent on understanding how your local regulator will evaluate your performance. Getting a nasty surprise in the form of a revocation of your status could ruin your whole year.

What is our corporate culture? This criterion may have the most impact on the success of either option. Operating an OTF requires a completely different corporate culture from being a SI. The keys to success as an OTF are attracting both customers and dealers, a mind-set that exchanges are used to but dealers are

not. Making a SI successful requires a culture much more akin to the traditional dealer, but with more regulatory oversight and responsibilities. Whether your corporate culture can adapt quickly to market changes may actually dictate more than which option you choose – it may dictate your success overall.

In the end, the OTF-SI decision comes down to a fork in the road, with a lot depending on which choice you make. Looking down each fork as far as you can is surely the first step, and having some form of roadmap, however blurry, is another step, but there is no doubt that each fork represents a very different set of relationships with customers, competitors, and regulators. Understanding how those relationships are changing, looking at them from a variety of viewpoints, and making a commitment to a new set of relationships are all parts making a successful choice. Which fork will you choose?

5. Coming to Grips with Best Execution Under MiFID 2

Tucked away in Article 27 of MiFID 2 is a potentially disruptive requirement – the "Obligation to execute orders on terms most favourable to the client." I don't know about you, but whenever I see something like "most favourable" in a rule, the voice of my college logics professor starts ringing in my ears. "How do we know that any terms are the most favourable?" But that's the requirement, so it looks like we have to get into Article 27, and the applicable RTSs, in considerable detail.

Let's begin where the article begins, with the requirement that investment firms obtain, "when executing orders, the best possible result for their clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order." Does this language help or hinder our attempts to comply? Unfortunately, the answer is yes. First there are a couple of clarifications – this only applies when an investment firm is dealing with a client, and best execution incorporates any consideration relevant to the quality of the execution.

But we immediately find some uncertainties. What happens when one investment firm, say an asset manager, requests a quote from another investment firm, say a dealer? Is the dealer obligated to quote the best price at which he would do the trade? What if the dealer's quote is the best showing in the market, but not necessarily the best he, or some other dealer, would do? If the asset manager executes on that quote, was there ever an order at all? Did the asset manager get the best possible result for its client? Were the dealers obligated to quote better prices? If the instrument is illiquid, does MiFID require exposing the RFQ to multiple dealers, thus possibly affecting the resulting quotes such that the execution would now be on worse terms?

Perhaps the biggest unanswered question, subsumed in the previous paragraph, is what constitutes an order. In markets where participants are used to trading as principal, and a customer requests a quote, if the customer acts on the quote without countering, does that constitute an order? If, after receiving a quote, the customer counters and the dealer accepts the counter, was the counter an order? If any of these transactions, or any others, for that matter, are not deemed to be orders, is all of Article 27 inapplicable to them?

The answers to all these questions should be in the final proposed RTSs issued by ESMA in late September. Unfortunately, no such luck. The best execution section covers a grand total of five pages (out of 402) has does not actually have any proposed RTSs in it. Instead it discusses some of the commenters' responses, but only to sections 10(a) and 10(b) of the article, and only talks about whether ESMA agreed with the comments.

But Sections 10(a) and 10(b) only cover the obligation to report on the quality of executions, not the requirements for the executions themselves. Those are covered in section 9, which says:

> *9. The Commission shall be empowered to adopt delegated acts ... concerning:*
>
> *(a) the criteria for determining the relative importance of the different factors that...may be taken into account for determining the best possible result taking into account the size and type of order and the retail or professional nature of the client;*

(b) factors that may be taken into account by an investment firm when reviewing its execution arrangements and the circumstances under which changes to such arrangements may be appropriate. In particular, the factors for determining which venues enable investment firms to obtain on a consistent basis the best possible result for executing the client orders;

(c) the nature and extent of the information to be provided to clients on their execution policies, pursuant to paragraph 5.

Neither the final RTSs nor the May, 2014 discussion paper address this critical section, so investment firms are pretty much flying blind when it comes to the executions themselves. And nowhere do the ESMA documents discuss how the execution requirements will be enforced, except via the recordkeeping section. Thus investment firms are left with the following best execution tasks before MiFID 2 becomes effective at the end of 2016:

1. Initiate conversations with your regulators – Since so much of Article 27 is still up in the air, the first step is to engage your regulators in a series of conversations about implementation and enforcement. In many cases the regulators are grappling with the specifics as much as the firms are, so an open discussion will probably pay big dividends.

2. Identify all the business areas that are involved – The term "investment firm" covers a very wide range of activities, from a pure dealer to a pure customer to financial service provider, including activities that only touch markets tangentially. Thus a firm must undertake an exhaustive survey of all its activities in or around financial instruments to make sure that it doesn't miss an area that has a hidden best execution responsibility.

3. Prepare policies and procedures – Some of the P&Ps are cut and dried, such as no compensation of any kind for order flow, but others are very much judgment calls. What counterparties are exempt from the best execution requirements? What constitutes an order? What execution agreements must we have with what counterparties? What monitoring and alert functions must we have to ensure compliance?

4. Review your trading technology – Everyone is acutely aware of the recordkeeping requirement involved in best execution, but compliance will also place significant demands on order management systems, on-boarding systems and trade booking systems. Firms that attack their technology requirements early (and probably often) will be in a better competitive position in early 2017, because they will be able to respond to customer inquiries or take advantage of market opportunities without having to stop and second-guess themselves.

5. Educate traders, salespeople and asset managers – Since MiFID 2 changes many trading practices in many venues, an early and ongoing training program is a necessity. ESMA, among others, has indicated that it will be evolving its regulation and enforcement, so a one-and-done approach the training will leave you vulnerable. Regularly scheduled sessions are the only answer, since the can be abbreviated or canceled if not much is happening at that time.

By now, every market participant is used to the ceaseless march of regulatory change, but the best execution component appears to be among the worst designed and most difficult to get one's arms

around. However, it is coming on us nonetheless. Perhaps we would be allowed to observe that the best place for a best execution requirement was in the drafting of the rule itself.

6. Clash of the Titans: Best Ex and Transparency Collide

In the rather picaresque story of MiFID II, it often looks as if each requirement has had its own wandering life, evolving independently of everything else in the story. Every once in a while, though, two of these monsters meet unexpectedly, and everyone cowers behind cover, waiting for the fight to the finish. Thus it is with pre-trade transparency and best execution.

Pre-Trade Transparency First

So let's look at transparency first. Article 3 of MiFIR requires market-makers to "make public current bid and offer prices and the depth of trading interests at those prices … for different types of trading systems including order-book, quote-driven, hybrid and periodic auction trading systems."

Of course, different instruments trade on different kinds of markets, so we should be mostly concerned with instruments that don't trade on central limit order books (CLOBs), such as bonds, since CLOB bids and offers are public already. The first thing to understand is that bonds can trade one of two ways: on an ECN, called an organized trading facility (OTF) in MiFID, or direct with a market-maker, which is called a systematic internalizer (SI). In the current world, most ECNs or OTC market-makers operate in a request-for-quote (RFQ) world, where dealer bids and offers are only available upon request.

The general interpretation of the rule language (and there is very little clarification in the various technical standards) is that any quote, bid or offer given by a market-maker to a customer must be available to and actionable by everyone, including other market-makers. (As an aside, ESMA was told early on that this interpretation would likely double the market spreads in affected bonds.)

It has been the long-time practice in all principal markets, including bonds, for market-makers to adjust their bids and offers to reflect their relationship with the counterparty; customers that show the dealer a good flow of business get better markets than occasional customers or competitors. It's a way of rewarding loyalty in what is essentially an adversarial marketplace.

The pre-trade transparency rule tosses this practice on its head. Except that the practice won't go away; it will just morph. The expectation is that dealers and customers will evolve a new way of communicating, particularly about off-the-run trades. Instead of asking, "What will you pay for $10,000,000 of this bond?" the customer will say something like, "What do you think I could sell this bond for?"

The dealer, instead of saying, "I'll pay 98.26," will say something like, "I think you could get 98.26, if you made a firm offering." Suppose the customer were to ask, "Will you pay 98.26?" If the dealer responds positively, he has to show that bid to his competitors. Thus the customer must offer at 98.26, and then the dealer can execute without exposing a bid.

Some Implications

Of course, this practice doesn't apply to CLOBs, such as equities or futures, but it will definitely affect OTC markets and any RFQ ECNs. In Europe, where the trading obligation doesn't apply to fixed income, that is the market that will be most affected. Even in this market, though, customers who don't have a relationship with a particular dealer will be shown the same price the dealer would show his competitors. It is only the good customer/dealer relationship that will be impacted.

The first implication is that the trading process will become significantly more cumbersome and time consuming. With everyone going through a language ritual, it will definitely take longer to execute a trade. The second implication is that the buy side is now setting the price instead of the dealer. In off-the-run issues that is a definite change.

Now for Best Execution

And it is in the customer's setting of the trade price that we encounter the conflict with best execution. Article 27 of MiFID II says, "Member States shall require that investment firms take all sufficient steps to obtain, when executing orders, the best possible result for their clients," given all the applicable parameters. This requirement applies to both dealers and asset managers, so the buy side now has a positive obligation to obtain the best execution on customer orders.

But the dealer is unable to give the customer his best price, if that price is better than the dealer would show his competitors. The price he suggests may be the best the dealer would do, but there is no guarantee that the dealer would execute there until the customer makes a firm bid or offer. And there is no guarantee that any particular dealer's quoted price is the best in the market, so the customer may have to go through the same linguistic dance with several dealers, never knowing which one to make a firm bid or offer to.

So we can see that two separate requirements, each perhaps commendable in its own right, will combine to produce a very difficult situation for both customers and dealers. As a result, how this all plays out will depend on how the regulators enforce the rules. If they focus on pre-trade transparency, best execution will probably suffer. If they focus on best execution, transparency will probably suffer. And, if they choose to concentrate on both? Then everyone suffers.

7. Clash of the Titans 2: Best Ex and the Trading Obligation

In an the last section I took a look at an unintended, but very real, conflict between two components of the EU market rule catharsis known as MiFID II/MiFIR: best execution versus pre-trade transparency. Now it's time to look into another conflict – between best ex and the trading obligation. Let's start with the rules themselves.

We already know that Article 27 of MiFID II requires firms to: "take all sufficient steps to obtain, when executing orders, the best possible result for their clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order." And what we recognized right away is that this applies to the execution of orders. If a dealer makes a market to a customer, and the customer executes off that market, there is no order involved. The second factor is that the rule is triggered by where the customer is domiciled.

On the other hand, Article 23 of MiFIR says that firms shall: "ensure the trades it undertakes in shares admitted to trading on a regulated market or traded on a trading venue shall take place on a regulated market, MTF or systematic internaliser, or a third-country trading venue assessed as equivalent." And Article 28 says, in a very convoluted way, that trades in EU listed derivatives between two FCs or an FC and an NFC+ must be traded on a venue, which definition includes OTFs and SIs. Collectively, these requirements are generally called the "trading obligation."

Next we have to determine which of the firms acting as a broker are subject to MiFID/MiFIR. If the firm has no footprint in the EU, it is nominally not subject to these rules; but then ESMA and other EU regulators will take the position that it cannot do business with any EU customers. Whether a non-EU firm chooses to abide by those wishes is an important decision.

Finally, we need to know where the customer and the instrument are domiciled. Customers domiciled in the EU trigger the best ex requirement but not trading; and instruments traded in the EU trigger the trading obligation but not best ex. Everyone clear on all that? Good.

Where they conflict

The most obvious possible conflict between best ex and trading is where a stock is dually listed, and the venue outside the EU isn't assessed as equivalent by ESMA, but has the best price. If a non-EU customer gives a broker subject to these rules a market order in this stock, under EU rules the firm must execute it on the EU venue, no matter where the best price is. However, if an EU customer gives the same order, the broker must violate either the best ex or the trading obligation.

The various rules and RTSs don't offer any guidance on how to resolve this conflict. Some people have tried to read between the lines of the rules, saying that the trading obligation language is more explicit than the best ex language, so trading obligation trumps best ex. Others say their obligation to the customer trumps any rule about where you can trade. Either way, we've clearly found a rock and a hard place for the firm. Which would you rather deal with: an angry customer, or an angry regulator?

Another possible conflict is a firm doing a trade in a derivative listed in the EU with an NFC+ counterparty, where the best price the firm will pay is available in an OTC market outside the EU as well as on the EU venue. If the NFC+ customer is not a member of the trading venue, then the mandated venue

execution is worse by having to pay a commission to trade with the same party it could otherwise trade with net.

Any Solutions?

When we combine this conundrum with a few others, and factor in both the very intrusive transaction reporting requirements and some restrictions on the use of algos, we start to see some distinct benefits to setting up a business completely outside the EU and making yourself available to trade with both EU and non-EU customers. Of course, that strategy carries lots of risks, mostly around how the EU would respond. If the implementation of this European mishmash of regulations prompts not only a Brexit, but a substantial grey market, both in EU instruments and for EU customers, we should expect ESMA and the EC to do something about it.

One obvious avenue is pressuring market regulators outside the EU to enforce the EU rules locally. In the best market traditions, that would probably prompt a, "What have you done for me lately?" response. So a quid-pro-quo solution might emerge. "I'll enforce your rules on my citizens and markets if you enforce mine on yours." It's happened before.

Another alternative is 1) developing internal consistency within the EU rules, and 2) global coordination of market regulation. But we may be waiting a long time for that.

8. And Then There's MAR/MAD

Although a lot of ink has been spilled, and a lot of money spent, on getting ready for MiFID II, there is another regulation out there that is actually more dangerous: the EU's Market Abuse Regulation, or MAR. Along with its sibling, the Market Abuse Directive, or MAD, they pose a double threat to market participants worldwide.

The first threat has to do with timing. Although MiFID II is currently scheduled to go into effect in January 2018, MAR/MAD went into effect in July 2016, although it isn't known how many firms fully comply. Thus, it behooves every market participant to understand these regulations, their applicability and make sure they comply.

The second threat has to do with applicability. MAR says that it applies to any instrument traded on an EU venue, any instrument where the underlying trades on an EU venue, or any benchmark based on instruments traded on an EU venue. Importantly, it purports to apply to any market participant who trades these or who executes orders in them, no matter where the trade was done.

What the Rules Say

MAR/MAD covers two main subjects: insider trading and market manipulation. Let's look at insider trading first.

Insider trading is covered in Chapter 2 of MAR and Article 3 of MAD. They define insider trading as: "where a person possesses inside information and uses that information by acquiring or disposing of, for its own account or for the account of a third party, directly or indirectly, financial instruments to which that information relates. The use of inside information by cancelling or amending an order" is also culpable. That last sentence is very important because it is distinctly different from the SEC's approach, contained in Rule 10b-5. Rule 10b-5 says that trading on what it calls material non-public information is culpable, although CFTC Rule 180 prohibits attempts to manipulate, and MAR/MAD says that even attempting to trade on it is a violation.

MAD says: "that insider dealing, recommending or inducing another person to engage in insider dealing … , constitute criminal offences at least in serious cases and when committed intentionally." Article 4 of MAR says that the monitoring and reporting obligation applies to "investment firms," but doesn't mention third-country firms as defined in MiFID II. Finally, MAR/MAD makes it clear that brokers who execute orders for customers, but don't trade as principal, are responsible for monitoring customer order flow for suspicious activity.

Market manipulation is covered in Article 12 of MAR and Article 5 of MAD. MAR defines manipulation as "entering into a transaction, placing an order to trade or any other behaviour which:

- "gives, or is likely to give, false or misleading signals as to the supply of, demand for, or price of, a financial instrument, a related spot commodity contract or an auctioned product based on emission allowances; or

- "secures, or is likely to secure, the price of one or several financial instruments, a related spot commodity contract or an auctioned product based on emission allowances at an abnormal or artificial level;
- "unless … such transaction, order or behaviour ha[s] been carried out for legitimate reasons, and conform with an accepted market practice."

That's not all it has to say, however. It also lists "any other activity or behavior, … which employs a fictitious device or any other form of deception or contrivance," and "providing false or misleading inputs in relation to a benchmark."

MAD has much the same definition, so at least there is some consistency there. It does call out that, "Member States shall take the necessary measures to ensure that the attempt to commit any of the offences referred to in Article 3(2) to (5) and (7) and Article 5 is punishable as a criminal offence." So the EU regulators are pretty clear that unsuccessful attempts to manipulate the markets are as bad as successful ones. This raises one question, however, since the logic of enforcement has relied on the concept of damage to other market participants: If attempts to manipulate are unsuccessful, one wonders how the regulators will demonstrate damage.

Implications

The first implication is that, as with MiFID and Dodd-Frank, global market participants are facing different, and possibly competing, regulations from different regulators. For example, US persons transacting in EU instruments will be subject to MAR/MAD, while EU persons transacting in US instruments will be subject to SEC or CFTC rules. This is particularly important with insider trading because a recent decision by the US Second Circuit Court of Appeals eliminated insider trading culpability if the tippee (the trader) did not know that the tipper (the insider) was gaining financially from the information. Since no such ruling has been made in the EU, it is reasonable to conclude that comparable surveillance practices in the US and EU will not necessarily turn up comparable infractions, even for identical activities.

The second implication is that surveillance systems need specific patterns and metrics in order to issue alerts, and no such metrics are contained in any of the rules or the accompanying Regulatory Technical Standards (RTSs) issued by ESMA. The RTSs, which are about five times as long as MAR and MAD combined, spend a lot of time talking about allowed procedures such as buy-backs, stabilizations and market soundings, but no time addressing metrics. In fact, all the documents tend to define manipulative behaviors in terms of intent, as opposed to results. That will very likely lead to two possible outcomes: 1) excessive false positives, or 2) a lot of missed manipulations.

A third implication is that the reporting formats are different between the US suspicious activity report (SAR) and the EU suspicious trade or order report (STOR). A field-by-field analysis shows a significant number of fields in the STOR that aren't in a SAR. For example: the name and position of the reporting person, the relationship of the reporter to the subject, the reasons for the suspicion, and the acting capacity of the reporting entity with respect to the subject.

Impacts

For US market participants there are three major impacts of MAR/MAD: surveilling unexecuted orders, preparing STORs, and reconciling US and EU approaches to insider trading.

Since Rule 10b-5 only applies to executed trades, complying with MAR/MAD will require introducing surveillance of unexecuted orders. To begin with, many trading systems either don't keep unexecuted orders, or purge them after a short period. The same applies to dealer and multi-party networks. To the extent that those systems handle EU instruments and the parties are subject to MAR/MAD, order records will have to be retained and monitored.

Those systems that prepare and submit SARs in the US will have to be updated to create and submit STORs. That will mean determining whether the systems even capture the extra data elements identified above, and then the STOR messages will have to be formatted and sent to the appropriate regulator.

Finally, any monitoring and reporting system will need different logic for reporting suspected insider trading in the US and the EU. Since reporting any suspicious behavior on the part of a client carries significant risk to the relationship, investment firms will be walking a tightrope in either domicile.

Hanging over all of these uncertainties is the biggest one – the fact that there are no metrics provided for determining when an activity is suspicious. As a result, firms will be left to grope their way down a dark corridor, trying to find a happy medium between over-reporting and missing an obvious event. Given the threat in MAR of being held criminally liable, it is no wonder that the prospect of implementing these rules by mid-July has left many firms not only unhappy, but downright angry.

9. The EU's Hard Line on Soft Dollars

When the European Parliament passed the Delegated Directive C(2016) 2031 (the DD) under MiFID II in early April, it contained a Chapter V on inducements. Article 13 of that chapter pertains to Inducements in relation to research, which makes major changes to the use of soft dollars by investment managers (IMs). What complicates matters somewhat is that, as in many other areas of regulatory reform, the EU and the US have taken different lines on soft dollars.

Soft Dollars in the US

In the US, the use of soft dollars is regulated by Section 28(e) if the Securities Exchange Act of 1934. This section was passed in 1975, as a result of the end of the fixed commission era, and provides a safe harbor for IMs using trade commissions to pay for services other than brokerage. The SEC has issued several interpretations and guidances on Section 28(e), the last being issued in July of 2006.

The gist of all the guidance is that IMs can use commissions, which are paid by their clients, above the base rate paid for execution services, if and only if, the excess is reasonable payment for research used to benefit the clients. The many updates the SEC issued served to narrow the services for which soft dollars could be used, eliminating any hardware, connectivity, services, or software that don't directly benefit the client or enhance the management of the client's assets.

However, even with all those restrictions, soft dollars have been a significant contributor to the bottom line of many IMs, and an integral and important part of their business.

Soft Dollars in the EU

The DD turns that practice completely on its head. In Article 12 it says, "Investment firms providing investment advice on an independent basis or portfolio management shall not accept non-monetary benefits," which it calls inducements. Then Article 13 says that soft dollar research will "be regarded as an inducement [unless] it is received in return for any of the following:

> (a) direct payments by the investment firm out of its own resources, :
>
> (b) payments from a separate research payment account controlled by the investment firm, provided the following conditions relating to the operation of the account are met:
>
> > (i) the research payment account is funded by a specific research charge to the client;
> >
> > (i) part of establishing a research payment account and agreeing the research charge with their clients, investment firms set and regularly assess a research budget as an internal administrative measure;
> >
> > (iii) the investment firm is held responsible for the research payment account.;
> >
> > (iv) the investment firm regularly assesses the quality of the research purchased based on robust quality criteria and its ability to contribute to better investment decisions."

The research payment account (RPA) has become the number one topic of conversation among IMs in Europe, but it has a significant impact on IMs in the US (or anywhere else that allows soft dollars).

Understanding the Impact on IMs

Initially, most market participants saw this requirement as falling mostly, if not completely, on IMs domiciled in the EU, but that is very much not the case. Various parts of MiFID II are triggered by either the instrument traded or the client served, and this Directive is triggered by the client. Thus it says that any IM serving EU-domiciled clients will have to stop using soft dollars for those clients, but not necessarily for other clients, when the directive goes into force, probably in early 2018.

For traditional IMs, who often do block trades and then allocate them to individual clients, Article 13 creates significant complications. Assuming the IM is using soft dollars for a particular block trade, any allocations to EU clients will require the IM to split their commissions between an execution component and a research component, and the research component must be charged to the RPA. If the IM has used up that client's RPA for the year, it will have to rebate the research component to the client or deduct it from the commission charged, resulting in two different commissions to two clients on the same trade.

What to do?

For a non-EU IM, this brings up several questions, and a few possible answers.

First, does the IM have any EU clients? For this purpose the domicile of a collective, such as a mutual fund, is determined by where it is headquartered, not by whether it has any EU-domiciled shareholders. If no EU clients, then none of this applies.

Second, because this DD is part of MiFID II, there is the question of whether an IM that has no presence in the EU, but has EU clients, is even subject to it. MiFID II has a category called "third country firms," which comprises non-EU firms serving EU clients or transacting in EU instruments. Membership in that category can involve dealing with retail clients, in which case all of the EU rules, including the DD, apply.

Alternatively, if the IM has only institutional clients (called professional and eligible in MiFID-speak), then, if the IM's home regulator achieves regulatory equivalence with ESMA, the IM follows its home regulations and not the DD. However, since the SEC rules are so different from the EU's, I am dubious whether the SEC would receive regulatory equivalence on this matter.

Finally, on this point, the IM could determine unilaterally that, since it is completely outside the EU, it can ignore any EU rules. One can safely assume that ESMA, and any other EU regulator, would take a dim view of this, but the IM could take the risk of whether the EU would be able to enforce any of its rules on a purely external entity.

Third, if the IM determines that it is subject to the DD, it then needs to determine whether it will apply the EU soft dollar rules to all its customers, or only to its EU customers. If it plans to apply separate rules to the different classes of customers, it will need the technology to split the commissions for EU customers into the two components, and then ensure that 1) the total commissions are the same for both classes of customers, and 2) the RPA for every customer is sufficient to cover each year's research component.

The status of being a global investment manager, able to serve a global client set in global investments, has had a certain cachet in the past. IMs are now rethinking the value of that status in light of increased costs and risks. The EU approach to soft dollars has added another layer of complication to that decision matrix.

10. Clash of the Titans 3: Best Ex and Unbundling

As we get closer to the effective date of MiFID II/MiFIR, we keep finding pieces of the puzzle that don't fit together, no matter how hard we push on them. The latest of these conflicts is between the unbundling requirement and the best execution requirement. Although a lot has been written and said recently about the impact of unbundling on both the asset management and research businesses, not much has been said about how those changes, and the rule itself, will impact an asset manager's requirement to get the best possible execution for its customers. So we have to take a look at that.

The Rule Language

Best Execution

As usual, I will begin with what the rules actually say about both topics. As has been discussed ad nauseum before, Article 27 of MiFID II requires that an investment firm, including an asset manager, obtain "when executing orders, the best possible result for their clients taking into account price, *costs*, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order." As a clarification, it also says, "the best possible result shall be determined in terms of the total consideration, representing the price of the financial instrument *and the costs relating to execution*, which shall include all expenses incurred by the client which are directly relating to the execution of the order, including execution venue fees, clearing and settlement fees and any other fees paid to third parties involved in the execution of the order."

So is it clear from this language that the amount of commission charged is a factor in determining best execution? If so, without regard to the unbundling rule, this would say that a client's ability to execute an order at a lower commission than the current asset manager is incurring would put the current asset manager in violation of the best ex requirement. In other words, the asset manager's responsibility to negotiate the best possible result for its client should include the commission the client pays to the executing broker.

But is that what it means? Perhaps we could get some clarification from ESMA? So far, not much luck with the ESMA RTSs or Q&As, but the UK's Financial Conduct Authority (FCA), in a July 2014 Thematic Review, lists under costs to be controlled by investment firms, "Explicit external costs which include *commissions*... Explicit external costs are clearly subject to the best execution obligation." That may clear things up for the UK, but Brexit also may mean that it won't apply to MiFID II after that. So we may still be pretty much in the dark as to whether ESMA regards commissions as part of their best ex calculation.

Unbundling

The Delegated Directive's language has been hashed and rehashed in a variety of venues, but for our purposes Article 12 says, "Investment firms providing investment advice on an independent basis or portfolio management shall not accept non-monetary benefits," which it calls inducements. Then Article 13 says that soft dollar research will "be regarded as an inducement [unless] it is received in return for any of the following:

(a) direct payments by the investment firm out of its own resources, :

(b) payments from a separate research payment account [RPA] controlled by the investment firm," with a set of stipulations on how the RPA works.

Putting Them Together

The important question here is whether the money paid out through the RPA constitutes "expenses incurred by the client which are directly relating to the execution of the order." If so, does that mean they are covered under the best ex requirement? That leads us to a bunch of other questions:

<u>If Manager A pays for research out of its P&L, and Manager B uses the RPA, has Manager B automatically violated best ex?</u> If best ex requires the manager to give its customer the *best possible execution*, and execution costs are part of that calculation, does adding in some research costs to the execution costs (no matter how it is done) mean that the resulting execution is by definition not the best possible?

<u>Does it matter to the previous question whether the RPA is deemed to be part of the execution costs?</u> Since the best ex rule language specifically refers to costs "which are directly relating to the execution of the order," does taking the position that the RPA is not directly related to the execution make any difference? For example, if the RPA payments only occur when a trade happens and are calculated based on the size of the trade, and perhaps based on the execution commission, are they de facto directly related to the execution, no matter what the asset manager says?

<u>How does all this play out in principal trades, where there is no commission?</u> Market participants are waking up to the probability that unbundling applies to principal trading, where there are no commissions. There is currently considerable discussion about whether the bid/asked spreads asset managers encounter in principal trades for their clients constitute some form of commission. This question is colored somewhat by ESMA's apparent position that the spread on a riskless principal trade constitutes some form of commission, but that is absolutely *not* the same as the market spread. And if the asset manager knowingly accepts a wider market spread in order to pay for research, it has automatically violated best ex.

<u>Does best execution trump unbundling every time?</u> If we accept that the best ex requirement, as it applies to asset managers, includes any expense directly connected to the execution, then it is hard not to conclude that any client payments for any research used by the asset manager always violate best ex, unless every asset manager agreed to have the clients pay, so that the clients had no alternative. But that would assuredly require collusion among asset managers.

<u>Will market evolution render this whole discussion moot?</u> Whatever the EU rules say, and however they compare with rules in other jurisdictions, there are market forces at work that may override all of them. If active asset management continues to generally underperform passive, and asset management expense ratios continue under tremendous pressure, we should expect the clients of active managers to take a very sharp razor to every expense category, including execution expenses. Asset managers who expect clients to pay for research to supplement their own expertise should expect some very difficult performance reviews. Even in the principal trading area, we should expect clients to begin homing in on the implied costs of market spreads. So, having answered all the previous questions about the rules, we might find that this last one actually controls the outcome.

11. The SFTR Rears its Ugly Head

In the never-ending stream of market regulations coming from the EU, the one that has been overlooked, like a bear in hibernation, is the Securities Financing Transaction Regulation (SFTR), or Regulation (EU) 2015/2365. Its implementation may be a little further off than MiFID or MAR, but soon enough it will wake up and rear its ugly head.

The Scope

Article 2 of the regulation says it applies to:

> *"(a) a counterparty to an SFT that is established:*
>
> *(i) in the Union, including all its branches irrespective of where they are located;*
>
> *(ii) in a third country, if the SFT is concluded in the course of the operations of a branch in the Union of that counterparty;*
>
> *(b) management companies of undertakings for collective investment in transferable securities (UCITS) and UCITS investment companies in accordance with Directive 2009/65/EC;*
>
> *(c) managers of alternative investment funds (AIFMs) authorised in accordance with Directive 2011/61/EU;"*

The tricky parts of that statement are (b) and (c), because they apply to anyone managing a UCITS or an EU alternative fund, no matter where they are located or whether they have a branch in the EU. Thus American or other non-EU asset managers (AMs) will have to comply with this regulation for any repos or securities lending done on behalf of EU mutual or alternative funds. Interestingly, the scope does not appear to include financings AMs might do for EU-based pension funds.

The scope also applies to counterparties engaging in reuse of the collateral, defined as "*the use by a receiving counterparty, in its own name and on its own account or on the account of another counterparty, including any natural person, of financial instruments received under a collateral arrangement."*

What it Requires

As we might expect, the first requirement is for reporting: *"Counterparties to SFTs shall report the details of any SFT they have concluded, as well as any modification or termination thereof, to a trade repository."* It should come as no surprise to us that both sides, if they are in scope, have to report the same trade. Apparently the dismal experience that ESMA has had with the dual reporting of derivatives trades didn't serve to warn the European Parliament or the EC not to try it again.

Once we know that dual reporting is required our immediate next question should be how the transaction is identified. The fact that two parties to the same derivatives trade often assign different trade IDs should have alerted folks not to make the same mistake again, but that is being left up to ESMA, which must submit draft technical standards by Jan 13, 2017. The mandate in the regulation says nothing about a transaction identifier, only about "*the principal amount; the currency; the assets used as collateral and*

their type, quality, and value; the method used to provide collateral; whether collateral is available for reuse; in cases where the collateral is distinguishable from other assets, whether it has been reused; any substitution of the collateral; the repurchase rate, lending fee or margin lending rate; any haircut; the value date; the maturity date; the first callable date; and the market segment." This is in addition to identification of the parties, including any beneficiaries.

The next question will obviously be – what happens to that information? Here the regulation applies the confidentiality provision of EMIR to this data, which provision says that "*A trade repository shall ensure the confidentiality, integrity and protection of the information received*."

A Few Wrinkles

Chapter IV of the regulation addresses "Transparency Towards Investors," and contains this language, "*UCITS management companies, UCITS investment companies, and AIFMs shall inform investors on the use they make of SFTs and total return swaps*." There is an annex that lists what information managers must provide, which includes, among other items:

> *"The amount of securities and commodities on loan as a proportion of total lendable assets defined as excluding cash and cash equivalents;*
>
> *Ten largest collateral issuers across all SFTs and total return swaps (break down of volumes of the collateral securities and commodities received per issuer's name);*
>
> *Top 10 counterparties of each type of SFTs and total return swaps separately (Name of counterparty and gross volume of outstanding transactions).*"
>
> Also, extensive information about the types of collateral, the safekeeping arrangements, and the return and cost for each type of SFT.

There is also Chapter V, on the Transparency of Reuse, which has this language: "*where a counterparty to a collateral arrangement is established in a third country and the account of the counterparty providing the collateral is maintained in and subject to the law of a third country, the reuse shall be evidenced either by a transfer from the account of the providing counterparty or by other appropriate means*." All clear on that? Good.

Looking it in the Face

To be sure, the biggest impact of the SFTR will fall on the unsuspecting asset manager, as it has seemed to for many EU regulations. In particular, AMs that have UCITSs along with other kinds of clients will have some of the same "mixed use" problems we see in MiFID and MAR. If that AM does large reverse repos on its cash management desk, which it then allocates to various portfolios, it will have to differentiate the portfolios subject to the SFTR from other portfolios. If its counterparty in the repo is also a reporting entity, it will have to coordinate the reporting of that portion of the transaction to a trade repository. If its counterparty isn't subject to the SFTR, it will have to report for itself. As with EMIR, it can delegate its reporting, but it remains responsible for reporting accuracy.

Once that is ready to go, the AM has to confront the UCITS's reporting requirement to its shareholders. Since most funds don't have a robust technology arm, this responsibility will very likely fall on the AM.

In the improbable event that a fund has more than one AM, they would have to coordinate the reporting to shareholders.

Right now, with all there is to do to comply with MAR and MiFID, AMs will probably put the SFTR on the back burner. But they can't forget about it completely. You don't want to wake up some morning to see this hungry bear staring at you.

12. The Impending Arrival of PRIIPs

In November of 2014 the EC published Regulation (EU) 1286/2014, commonly known as PRIIPs which stands for packaged retail and insurance-based investment products. It is due to go live 31 December, 2016. As with most other EU regulations, everything depends on the definitions and scope, and there is no recognition in the rule of any other venues or their requirements. As usual, we'll start by looking at the rule language.

What the Rule Says

To begin with, Article 2 says, "This Regulation shall apply to PRIIP manufacturers and persons advising on, or selling, PRIIPs." So what are PRIIPs? Article 3 says " an investment ... where, regardless of the legal form of the investment, the amount repayable to the retail investor is subject to fluctuations because of exposure to reference values or to the performance of one or more assets which are not directly purchased by the retail investor," and "an insurance product which offers a maturity or surrender value and where that maturity or surrender value is wholly or partially exposed, directly or indirectly, to market fluctuations." The general consensus is that this definition includes mutual funds, whole life policies, structured products and structured deposits. There is also the view that it includes NDFs.

That definition is fairly clear, but the next section refers to a PRIIP manufacturer, with no further clarification of what constitutes manufacturing, except that it includes anyone who changes certain parameters of the product, such as the risk/reward parameters. It also identifies a "person selling a PRIIP" as separate from a manufacturer.

Article 5 requires that "Before a PRIIP is made available to retail investors, the PRIIP manufacturer shall draw up for that product a key information document [KID] in accordance with the requirements of this Regulation and shall publish the document on its website." It also indicates that "Any Member State may require the ex ante notification of the key information document by the PRIIP manufacturer or the person selling a PRIIP to the competent authority." And Article 13 requires that "A person advising on, or selling, a PRIIP shall provide retail investors with the key information document in good time before those retail investors are bound by any contract or offer relating to that PRIIP." Finally, Article 6 says "The key information document shall be a stand-alone document, clearly separate from marketing materials."

Then there is some extensive discussion of what has to be in the KID. Among the requirements:

> "its objectives and the means for achieving them, in particular whether the objectives are achieved by means of direct or indirect exposure to the underlying investment assets, including a description of the underlying instruments or reference values, including a specification of the markets the PRIIP invests in, including, where applicable, specific environmental or social objectives targeted by the product, as well as how the return is determined;
>
> a description of the type of retail investor to whom the PRIIP is intended to be marketed, in particular in terms of the ability to bear investment loss and the investment horizon;
>
> the risk-reward profile comprising [among others] the following elements:

a summary risk indicator;

the possible maximum loss of invested capital;

appropriate performance scenarios, and the assumptions made to produce them;

where applicable, information on conditions for returns to retail investors or built-in performance caps; and

a statement that the tax legislation of the retail investor's home Member State may have an impact on the actual payout."

In addition, there are requirements for scenarios of default by the manufacturer, a listing of costs, including any early redemption penalties, and a requirement for customer complaint channels.

Applicability

By now we should all be asking the first regulatory question, "What is the applicability?" Since the definition of a PRIIP has no jurisdictional component, the rule appears to apply to any product under the definition that is sold to EU retail investors, no matter where it originates or is itself regulated. So structured products or mutual funds issued in, say, the US and regulated by US regulators would be subject to this rule if they were sold to EU retail customers.

A couple of other applicability questions. Since the obligation to prepare the KID falls on the manufacturer, does that definition include both the issuer of the instrument and any underwriter? And, since the rule requires the delivery of the KID "by the PRIIP manufacturer or the person selling a PRIIP to the competent authority for PRIIPs marketed in that Member State," it would appear that the seller is responsible for delivering the KID in a geographies where the issuer or underwriter has no presence. That obviously raises the question of who is responsible if a manufacturer has no knowledge of where the sellers are operating, and thus no recognition of a KID requirement for a particular jurisdiction.

Implications

The rule seems to apply to a wide variety of investment products, among them hedge funds and fund-of-funds, private equity partnerships, certain FX forwards, and most derivatives, including exchange traded. In that last category, there is the question of whether the exchange (or perhaps the clearing house) is the manufacturer. If so, it generally has no idea who entered into the exchange transaction, and will thus need assurances, or perhaps indemnifications, from those who solicit and/or execute orders in those products. In any event, someone would be responsible for generating the KID for such products, and we don't have a lot of volunteers for that job at the moment.

Another implication is the rule's requirement that:

> "The key information document shall be drawn up as a short document written in a concise manner and of a maximum of three sides of A4-sized paper when printed, which promotes comparability. It shall:

(a) be presented and laid out in a way that is easy to read, using characters of readable size;

(b) focus on the key information that retail investors need;

(c) be clearly expressed and written in language and a style that communicate in a way that facilitates the understanding of the information, in particular, in language that is clear, succinct and comprehensible."

So you have three pages to explain to an unsophisticated investor all the characteristics of the product, no matter how complicated, including all the parameters outlined above.

Manufacturers and distributors of PRIIPs outside the EU have some extra steps in order to get ready for 31/12/2016.

1. They have to identify whether any of their distribution channels would ever sell their product to an EU retail customer. If derivatives exchanges are deemed to be manufacturers, they will have to rely on introducing or executing brokers for this information, and will have to get agreement from those brokers not to solicit in the EU if no KID is being prepared.

2. If they are selling to EU retail accounts, whether directly or through a channel, they will have to prepare KIDs in every language where the products might be offered. Then they will have to ensure that all their channels distribute the KID to every regulator and prospective customer. In all likelihood, any selling agreements will have to include language indemnifying the manufacturer if a sales channel does not make the required distribution.

3. Since this rule covers banking and insurance products as well as capital market products, banks and their subsidiaries will be affected both as manufacturers of some products and distributors of others. Thus a complete inventory of all affected products and channels is the first step.

In the never-ending march of EU regulatory changes, PRIIPs will take their place, right behind MAR/ MAD and right before MiFID II/MiFIR. There's no rest for the weary!

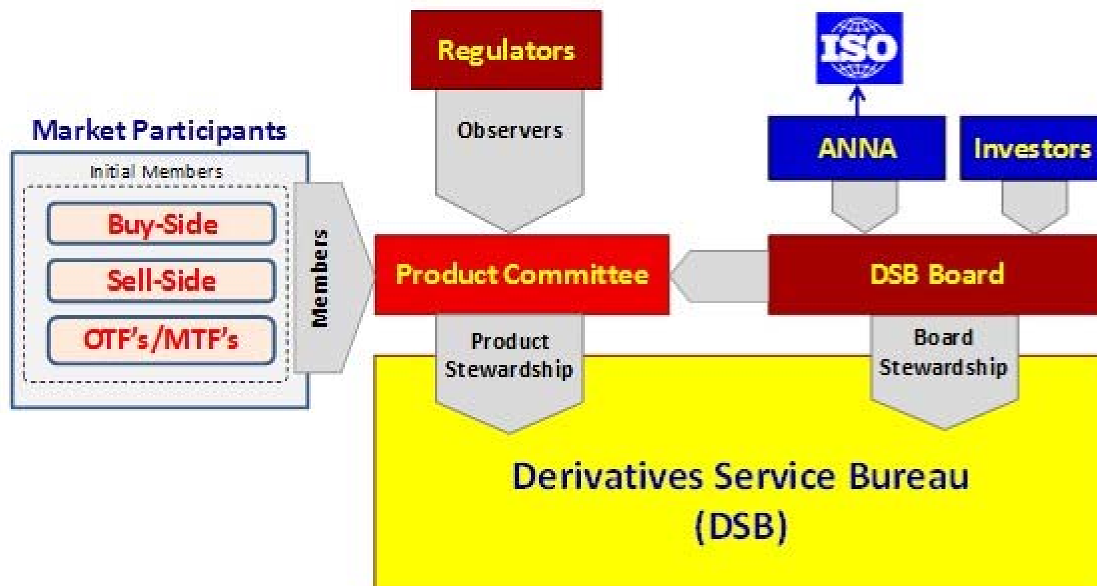
13. ANNA Tackles ISINs for Derivatives

One of the MiFID II requirements that has caused a certain amount of concern is the assignment of ISINs to OTC derivatives traded on an EU venue (including by an SI). On its face, this requirement raises one flag, since the S in ISIN stands for securities, not swaps. So right off the bat there are questions about applying a security identifier to a non-security. Additionally, the organization responsible for issuance is ANNA, which stands for the Association of National Numbering Agencies, a tip-off that the implementation of ISINs for derivatives may not be a globally smooth process. So it's time to take a close look at how ANNA is tackling the ISIN for derivatives question.

The Organizational Structure

To deal with this requirement, ANNA has formed the Derivatives Service Bureau, or DSB, which it describes as "a fully automated generator of International Securities Identification Numbers (ISINs) for OTC derivatives." ANNA indicates that the DSB is designed to afford, "near-realtime allocation of ISINs upon application by a user. Its underlying technology platform handles multiple taxonomies of definitions and descriptive data for OTC derivatives. User access to the numbering services can be through a web interface or direct integrations to users' front-office systems for trading and order management." You can sign up to participate in the UAT at the link above.

ANNA additionally says, "Created by ANNA as a subsidiary Special Purpose Vehicle, the DSB will be governed by a board of directors alongside an industry Product Committee that determines the specifications for ISINs representing a broad range of derivative types, as well as maintaining the technical integrity of the ISIN. The proposed structure of the DSB is illustrated in the graphic below."



The ISIN Process for Derivatives

Before we look at the issuance process for derivatives, we should understand that process for securities. In the US, for example, a representative of the securities issuer goes to www.cusip.com, then to the Request an Identifier page and then:

1. Selects the appropriate application from the page for the type of security.
2. Fills in the form selected for the Offering, providing:
    a. Issuer and issue information;
    b. Contact and billing information. (CUSIPs aren't free, you know.)
3. Attaches any supporting document(s) directly to the CUSIP Request Form under the section "Offering Documents".
4. Clicks the 'Submit' button to send the request to CGS for processing.
5. Upon completion of the CUSIP assignment, an electronic confirmation containing the CUSIP is emailed.

Because of the many differences between securities and derivatives, the derivatives ISIN issuance process, which is still being worked out, as far as I can tell, will be different. To begin with, instead of the various national bodies issuing a number, which is rolled up to the ISIN, the DSB will issue ISINs directly.

Let's look at some other differences.

Issuance trigger – Since the regulation applies to derivatives traded on an EU venue, those derivatives not traded on one of those venues would presumably not need an ISIN under EU rules. And, in some ways, each derivative transaction is a unique instrument. So the first thing we need to understand is what defines a derivative listing on the EU venue? For example, in rate swaps is the listing defined simply by expiration date and index? If so, any swap that is subsequently created with those same parameters is already listed, and should already have an ISIN. Thus the issuance trigger would appear to be the listing of a derivative on a venue, or its first trade by a SI. Any subsequent trades in functionally equivalent swaps should use the existing ISIN, not create a new one.

Application responsibility – Given that trigger, it would be logical to assume that the venue or SI would have the primary responsibility to apply for an ISIN. Once it is issued, one would additionally assume that the venue or SI would supply the ISIN to anyone who trades on that venue. This raises the question of what happens when an existing swap is introduced to trading on a venue. Presumably, the venue would inform any current holders of the swap that it now has an ISIN. Also, if a SI trades a listed swap OTC, will the SI have to check with the DSB to determine if an ISIN exists?

ISIN applicability – By the same token, the ISIN requirement appears to apply only to trades and instruments subject to ESMA, which raises some additional questions. Do two non-EU counterparties doing a trade in a swap that may be listed on an EU venue have to:1) verify if the swap is listed in the EU, 2) verify if an ISIN already exists, 3) use it if it does exist, or 4) apply for one if it doesn't? If two non-EU counterparties do a swap trade where the ISIN exists in the EU but they don't use it, how would the EU authorities know about it?

Issuance integrity – Since the same derivative could be listed on several venues, how will the DSB ensure that there is only one ISIN per derivative? The first step in ensuring integrity is to make sure that the application identifies the derivative with sufficient granularity. For example, is it sufficient to identify a fixed-float IRS by maturity date and floating index, or do we need to know the rate reset dates? Is it sufficient to identify a CDS as simply cash settlement, or do we need to know any assumed recovery rate? Getting this part wrong would mean that we could have either one ISIN assigned to many quite different derivatives, or many ISINs for what is the same instrument. I ran a simple test in the UAT environment, attempting to create a new ISIN using parameters identical to an existing one, and the DSB sent me the existing ISIN every time.

Derivative ISIN makeup – CUSIPs, and many other national security identifiers, have a specified structure, where various positions in the ID have a set significance, such as identifying instrument type or issuer. According to the ANNA-DSB technical team, "The ISIN structure is such that there is no relationship between the identified instrument and the code itself." And, according to the web site, "For ISINs of OTC derivatives, which will be allocated by a single global numbering agency, the initial two digits will use a custom "EZ" code. The ISIN will be generated on a de novo basis, with no reference to previous or other codes." For processing systems designed to decipher instrument characteristics from the ISIN, this may be a setback.

Moving Forward

Whatever questions I might have, or perhaps you might have, the requirement for swaps ISINs doesn't appear to be going away, so the whole process needs to move forward. The DSB has a channel for communications with folks like us: technical.support@ANNA-DSB.com. I have written to ask them several questions, and they have always been responsive, so it's a good resource. In addition, there are several documents available on their web site, such as the ANNA-DSB Technology and Operations Consultation Paper FINAL REPORT (February 2017), and the DSB Questions and Answers (March 2017), so you can read up, in your copious free time. Meanwhile, I encourage you to register for the DSB UAT, check out the sample ISINs they have created, and maybe create a few yourself. After all, we want ANNA to be a success, don't we?

14. Across Time and Space: MiFID, MAR, Dodd-Frank and Universal Time

One of the market teapots that is having its own fair share of thunder and lightning is the rather arcane area of time in the markets. In particular, the deceptively complex question of, "What time is it, really?" As we shall see, answering that can be a fraught and expensive proposition.

Understanding the Basics

The importance of time and time synchronization is based almost entirely on the automated nature of markets and especially of market participants. In the olden days, when humans routed orders to exchanges or OTC market-makers, trading was slower, volumes were lower, and precise timing wasn't very important. With people making decisions all along the order path, at people-speed, it didn't matter so much exactly when every step of the process happened.

Today, many of the trades executed in the myriad of markets for every type of instrument are done completely by algorithms. Both the buyer and seller, both the liquidity maker and the taker, increasingly turn the executions over to technology, so the norm is now to have bots trading with bots. And the trend will only become more pronounced.

What Time Means

Thus the new markets are all about time. In addition, the timekeepers all operate behind the scenes, but we now need to have answers to such questions as:

- When, exactly, did the order go in?
- When, exactly, was the bid or offer made?
- When, exactly, did the execution occur?

In particular, time affects the quality of execution: as in:

- What was the market when your order went in?
- How long did it take your order to get in?
- When did your order trade?
- What happened in the market between when your order went in and the execution?

And time is critical in detecting market abuse. For example:

- Spoofing - How long were orders available for execution?
- Painting the Close - How much before the close was a trade done?
- Wash Trading - How long between offsetting trades?
- Painting the Tape - How long between trades between market-makers?

So it shouldn't surprise us that the worlds market regulators are suddenly concerned about the accuracy and synchronization of the clocks that answer all of these questions.

What the Regulators Say

In Europe

The first place to look is in Europe, where we must leaf through MiFIR, MiFID 2, MAR and MAD. In all of those pages, we find one reference to clocks – Article 50 of MiFID 2, which requires that "ESMA

shall develop draft regulatory technical standards to specify the level of accuracy" of business clocks. On July 6th ESMA published the required Delegated Regulation and its Annex. The reg requires clocks to sync with Coordinated Universal Time (UTC), while its Annex sets out the level of accuracy.

Before we look at the requirements, though, we have to ask the inevitable questions of applicability. To whom or to what instruments does this apply? The answer is that it applies to "Operators of trading venues and their members or participants." We already know what venues mean in MiFID-speak: RMs, MTFs, OTFs, and SIs, and we can surmise what is meant by members, but who are participants? Here the Delegated Regulation specifies, "Persons having access to regulated markets or MTFs" but not "users who only access the trading venues via direct electronic access," and apparently not those who access OTFs or SIs. That looked helpful until the part about electronic access, and it then seemed to fall apart. So is an asset manager who executes a trade on a venue through a broker a market participant? What about a customer that has direct market access? I don't know, but I'm sure ESMA will clear it all up for us before January, 2018.

Enough stalling, though, it's time to find out what the regulations require, and it's all in one small table:

Gateway-to-gateway latency time of the trading system	**Maximum divergence from UTC**	**Granularity of the timestamp**
> 1 millisecond	1 millisecond	1 millisecond or better
=< 1 millisecond	100 microseconds	1 microsecond or better

First, ESMA specifies both the granularity of system clocks and the divergence from UTC. If the trading system has a gateway-to-gateway latency of greater than 1 millisecond, the system clock must be within 1 millisecond of UTC time, and must keep time to within 1 millisecond or better. For systems with a latency of 1 millisecond or less, the clock must be within 100 microseconds of UTC, kept to 1 microsecond. One other note, voice trading systems that do not allow algorithms have a 1 second requirement. And what is latency? "Gateway to gateway latency shall be the time measured from the moment a message is received by an outer gateway of the trading venue's system, sent through the order submission protocol, processed by the matching engine, and then sent back until an acknowledgement is sent from the gateway." So latency appears to encompass execution, not just receipt and acknowledgement.

In the US

To begin with, Dodd-Frank itself says nothing about clock synchronization. In addition, the CFTC has no rules about it either, although it was discussed at CFTC meetings in 2012, 2013, 2014 and 2015.On the other hand, FINRA, acting on behalf of the SEC, issued Regulatory Notice 16-23 last July, which does address timing and synchronization. It is effective in Feb 2017 for systems that capture time in milliseconds or finer; in Feb 2018 for systems that don't; firms will have six months from the effective date to comply; and all its requirements are contained in FINRA Rule 4590.

So let's look at FINRA Rule 4590.

- Question #1: Whom does it apply to? "Each member" of FINRA.
- Question #2: What clocks have to be synchronized? "Business clocks, including computer system clocks and mechanical time stamping devices, that are used for purposes of recording the date and time of any [reportable] event."
- Question #3: What time must they be synchronized to? "The National Institute of Standards' (NIST) atomic clock," which timing experts tell me is equivalent to UTC.
- Question #4: What is the synchronization requirement? "Business clocks... must be synchronized ... within a one second tolerance of the National Institute of Standards' (NIST) atomic clock, except that computer system clocks that are used to record events in NMS securities, including standardized options, and OTC Equity Securities ..., must be synchronized within a 50-millisecond tolerance of the NIST clock."

In addition, the SEC adopted Rule 613 in 2012, requiring the creation of a plan for the Consolidated Audit Trail (CAT). In November, the plan was approved, saying in Section 6.8, "Each Participant shall: (i) other than such Business Clocks used solely for Manual Order Events, synchronize its Business Clocks at a minimum to within 100 microseconds of the time maintained by the National Institute of Standards and Technology, consistent with industry standards; (ii) other than such Business Clocks used solely for Manual Order Events or the time of allocation on Allocation Reports, through its Compliance Rule, require its Industry Members to: (A) synchronize their respective Business Clocks at a minimum to within fifty (50) milliseconds of the time maintained by the National Institute of Standards and Technology, and maintain such a synchronization."

Time Across Space

So, as with every other market rule we are dealing with, we have to compare how each jurisdiction approaches what is a global issue. Let's start with applicability. In the EU the rules apply to venues, and their members and participants, although it's not clear to me, at least, what constitutes a participant for this purpose. Also, there is no indication that the EU rules apply only to trades done on EU venues. The US rule only applies to FINRA members. So a FINRA member that is also a member of an EU venue appears to be subject to both rules.

In the EU the divergence and granularity standards are driven by the processing speed of the venue's systems, which may be another argument for Brad Kastuyama's slower-is-better market. In the US the divergence is driven by the instrument – faster for NMS and slower for the rest. And just for a little more confusion, the EU rules cover both divergence and granularity, the FINRA rules only cover divergence, CAT covers both and the CFTC has nothing. And there are different tolerances. Fortunately, it does look like UTC and NIST time are essentially the same.

Before we completely throw our hands up, though, let's think practically for a minute. To begin with, there is a point of granularity below which we cannot go. For instance, it actually takes some time to perform market actions, and it actually takes some time to measure and record time. So, even though the time experts can speak in picoseconds, you don't have to. Finally, what we're really after here is fairness in the markets – so that everyone has a fair chance to get an execution, and we can reliably detect market

abuse. How granular do we have to get to ensure those? Give me a minute and I'll get back to you on that.

15. The GDPR in a Hacker's World

The recent global hack attack using algorithms apparently stolen from the NSA should focus our attention on the safety of the electronic information floating around the world's capital markets. The risks have been exacerbated by some recent regulatory changes, among them the requirement in MiFID II that a customer's sensitive personal information be included in orders where the trading venue is the transaction reporter. So it might give us some comfort that the EU has issued REGULATION (EU) 2016/679, the Global Data Protection Requirement (GDPR), due to go into effect in May of 2018. But should it? We'll have to look at the rule and see.

Applicability

As we should know by now, the first question is always applicability. Whom does the rule apply to and when? Fortunately, there is Article 2 of the GDPR, titled "Material scope." Unfortunately, the language in this section is not very clear about the whom. It says, "This Regulation applies to the processing of personal data wholly or partly by automated means and to the processing other than by automated means of personal data which form part of a filing system or are intended to form part of a filing system." The rule does not apply to processing "in the course of an activity which falls outside the scope of Union law." So do transactions done by a non-EU investment firm in a non-EU instrument with an expat EU person fall outside the scope of EU law? And if not, how would the rule be enforced in that case? I'm sure you can come up with some other questions.

On the other hand, the rule is explicit in limiting its scope to information about natural persons, when it says in Article 4 that "'personal data' means any information relating to an identified or identifiable natural person ('data subject')." And it defines processing as "any operation or set of operations which is performed on personal data or on sets of personal data." Thus it is a safe conclusion that the GDPR applies to anyone who processes the personal data of an EU natural person, no matter where the processor or the data itself is located.

In addition the GDPR differentiates between a processor, who "processes personal data on behalf of the controller," and a controller, who "alone or jointly with others, determines the purposes and means of the processing of personal data."

Requirements

Once we are comfortable (or not) about who and what, we can go on to what the processor has to do. Article 5 lists some principles about various things, but the most interesting for our purposes is the requirement that the data be "processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures ('integrity and confidentiality')."

The next mention of protection is in Article 25, "Data protection by design and by default." which requires the controller of the data to "implement appropriate technical and organisational measures ... which are designed to implement data-protection principles ... in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect

the rights of data subjects." However, this requirement, "Tak[es] into account the state of the art, the cost of implementation and the nature, scope, context and purposes of processing as well as the risks of varying likelihood and severity for rights and freedoms of natural persons posed by the processing." So the requirement may not be as ironclad as one would like. There is one other requirement: collecting "only personal data which are necessary for each specific purpose,"

Article 32 addresses "Security of processing," and, with the same caveats as above, requires "appropriate technical and organisational measures to ensure a level of security appropriate to the risk," and lists a set of measures including, among others, pseudonymisation, encryption and testing. Articles 33 and 34 address data breaches, and require notification to the appropriate authority within 72 hours and to the subject "without undue delay," which timeframe is not further defined. However, the notification to the subject isn't required if: 1) the data has been rendered unrecognizable, 2) the controller deems that "high risk to the rights and freedoms of data subjects" is unlikely, and 3) notification "would involve disproportionate effort." I'm sure just knowing that makes everyone more comfortable.

Article 37 requires a data protection officer (DPO), but only in certain cases, where "(a) the processing is carried out by a public authority or body; (b) the core activities of the controller or the processor ... require regular and systematic monitoring of data subjects on a large scale; or ... (c) processing on a large scale of ... data pursuant to [certain social categories] and personal data relating to criminal convictions and offences." So the DPO requirement is anything but universal.

Article 45 allows personal data to be transferred out of the EU without special permissions "where the Commission has decided that the third country, a territory or one or more specified sectors within that third country, or the international organisation in question ensures an adequate level of protection." There is a short list of required factors in the EC's decision. However, given the EC's lack of action on the MiFID II regulatory equivalence provision, I wouldn't hold my breath for this finding.

Article 46 covers transfers without an Article 45 decision, and allows such transfers "only if the controller or processor has provided appropriate safeguards, and on condition that enforceable data subject rights and effective legal remedies for data subjects are available." Article 47 lists some of the conditions for these transfers, among them: "the rights of data subjects ... including... the right to lodge a complaint with the competent supervisory authority and before the competent courts of the Member ..., and to obtain redress and, where appropriate, compensation for a breach of the binding corporate rules."

Finally, Article 79 says, "each data subject shall have the right to an effective judicial remedy where he or she considers that his or her rights under this Regulation have been infringed as a result of the processing of his or her personal data in non-compliance with this Regulation," and Article 82 says, "Any person who has suffered material or non-material damage as a result of an infringement of this Regulation shall have the right to receive compensation from the controller or processor for the damage suffered."

The Hacker's World

So how does all this stack up against the big bad world of data security in the financial markets? To understand that, we need to take a short, if scary, trip into hackerland. Imagine yourself on the second floor of a nondescript cinder block building in Russia or North Korea. In a large, spare room are two

clusters of desks, each desk with multiple computer screens, not unlike how trading rooms looked before the bots took over and emptied the desks. Here every desk is occupied.

One cluster is quite active, with people typing rapidly and murmuring to each other, and the other cluster is more subdued, with the operators staring at their screens and only typing occasionally. Every once in a while, this group has a slight celebration. The talkative group are working on the new hacks, testing them against their own firewalls, comparing results, and fine-tuning their code. The subdued ones are running the hacks that have been released onto the unsuspecting world, making slight adjustments based on the firewalls they find, and announcing to all when they gain an access.

Gaining access to a network doesn't always mean access to sensitive data, but all too often it does. Given that experienced data security pros acknowledge that they have to be successful 100% of the time while the hackers need to succeed only 1% of the time, the idea that there will never be another intrusion doesn't seem realistic. Even anonymizing the customer data leaves it vulnerable to the theft of the key(s). As hackers concentrate more and more on the lower level code, we should expect more and more events like the recent NSA-based attack, and the apparent cooling of relations between the US and its EU allies doesn't bode well for international cooperation in this area. When even a top national security agency is hacked, things have moved well past generalized warnings.

So, will the GDPR be a significant step forward in the production of customer data? Given its vague language on several points, and the complex and rapidly moving technology of both hacking and defense, it doesn't appear so. Any firm that is not already fully compliant with the rule's language would have been considered woefully negligent long before the rule was issued. That makes the GDPR a little like a parent telling a teenager to look both ways before crossing the street. A well-meant reminder, of course, but it should be completely unnecessary. What we really need is high level, sophisticated cooperation between the world's security agencies and financial institutions, and the GDPR, as an EU-only rule, is probably a step in the wrong direction.

16. Dealing with it All: The Role of the OMS

It goes without saying, I suppose, that financial markets regulation has always been something of a conundrum – the markets have always been global, to a greater or lesser degree, and regulations have always been national or regional. But it does seem that today more than ever the problem is exacerbated. After the financial panic of 2008-09, every regulator and every government seemed to embark on a market reregulation binge, and managed to do it without much regard for what everyone else was doing.

As a result, everyone in the markets – venues, dealers, brokers, asset managers and clearing houses – is facing a regulatory crossword puzzle, with some significant penalties for getting any of the words wrong. Many of the challenges start with the applicability of the rules. There are actually three parameters which govern that applicability. The first is the regulatory venue of the investment firm or firms. Second is the regulatory venue and status of any customer for the services. And finally there is the regulatory venue of the instrument(s) involved. When we start combining those parameters, we get a dizzying array of possibilities.

These parameters in turn affect the requirements contained in the new EU regulations: MiFID II/MiFIR, and MAR/MAD, as well as regulations in other major market venues, like the US, Canada and Australia. Among the more important EU requirements are: the trading obligation, the transaction reporting obligation, the pre-trade transparency obligation, the post-trade transparency obligation, the best execution obligation, and the obligation to monitor customer activity for market abuse. Some of these obligations appear to be triggered by where the customer is, some by where the firm is, some by the venue of the instrument, and some may actually be in conflict.

Of course, other market regulators have their own versions of these requirements, so let's look at some simple combinations first. The first is a firm dealing with a customer in instruments, all of which are domiciled in the same jurisdiction. It seems pretty clear whose rules apply, except that we need to be careful if one of the parties is a subsidiary of a foreign parent, where the trade might have a significant impact on the parent or its regulator.

The First Complication

But if we start changing things, it quickly gets more complicated, so we will need to look at some "simple" examples. For instance, let's look at an EU firm dealing with and EU customer in a non-EU instrument. Barclays executing a trade for Scottish Widows in a US stock, for example. Simple enough, right? One would think that there's no MiFID trading obligation, unless somebody in the EU also lists that stock. And, we hope, no EU reporting obligation. But what about best execution? Since the customer is an EU person, albeit a professional, what best ex obligation does Barclays have? If Barclays is acting a principal in this trade, does the MiFID best ex apply at all? And, whose market abuse regulations apply, the EU's or the US's – or maybe both? Oh, I almost forgot, what is Barclays' obligation regarding pre-trade transparency? If it did this trade as principal, must it expose the quote it showed the customer to the rest of the EU market, even though the trade was done in its NY office?

The Second Complication

Just for fun, let's reverse the parameters. A non-EU firm executing for a non-EU customer, in an EU instrument. Deutsche Bank Securities, Inc (a SEC-registered broker/dealer with no presence in the EU) selling a German Bund for a US hedge fund. To begin with, even if the bund is listed in the EU, the MiFID trading obligation doesn't apply to fixed income. But we need to know whether the trade with the hedge fund was done as principal, with DBSI doing a matching trade with its German affiliate. Or was it done as agent, with DBSI passing the order through to an EU broker for execution? If as agent, was it done omnibus, where the executing broker (perhaps its Swiss parent) only knows DBSI as the selling party, even though the actual seller was the hedge fund? Or was it done on a disclosed basis?

Let's say it was done as agent, under the omnibus arrangement. The selling party, the hedge fund, isn't bound by any MiFID rules, and its agent, DBSI, isn't either, since it isn't an "investment firm" as defined by MiFID. But who must then file the trade report with the EU repository, since that is required for trades in EU instruments, but neither party to the trade is in the EU? Oh, and the monitoring for market abuse, who does that? If the original seller is a US person, and the broker who knows its identity isn't subject to MiFID, can anyone be held to the monitoring obligation?

But wait, it turns out that DBSI bought the bonds from the hedge fund as principal. The trade with the hedge fund is totally outside of MiFID and MAR, and totally within the purview of the SEC, except that the SEC doesn't regulate trades in EU securities. And ESMA is very much of the opinion that this trade is subject to MAR. Does DBSI's trade laying off the position fall under MiFID? And just to complicate it a bit more, let's say that DBSI sold the bunds as principal to its EU affiliate, raising the question of whether inter-affiliate trades are covered, and by which regulator.

Finding Solutions

The first step in finding a solution is determining the applicability of these requirements for any trade. We can begin with a matrix, so let's look at one for the EU rules.

Firm Domicile	Customer Domicile	Instrument Domicile	Trading*	Reporting	Best Ex	Pre-Trade	Post-Trade	Market Abuse
Non-EU	Non-EU	Non-EU	No	No	No	No	No	No
Non-EU	Non-EU	EU	Yes	Yes	No	Yes	Yes	Yes
Non-EU	EU	EU	Yes	Yes	Yes	Yes	Yes	Yes
Non-EU	EU	Non-EU	No	No	Yes	No	No	No
EU	EU	EU	Yes	Yes	Yes	Yes	Yes	Yes
EU	Non-EU	EU	Yes	Yes	No	Yes	Yes	Yes
EU	EU	Non-EU	No	No	Yes	No	No	No
* For equities and certain swaps trades, but not for FI or FX								

You can see, I'm sure, how complicated the decision tree becomes. To top it off, some of these cells are our best guess. For example, do a non-EU firm and a non-EU customer, doing a trade in an EU listed equity, have to trade that on an EU exchange? If they don't trade there, what recourse would an EU regulator have, since both parties are outside its jurisdiction?

CMA recognized that applying this matrix manually is not practical, so we set about determining the logic necessary for an order management system (OMS) to make these applicability determinations on the fly. Here is just the first part of the EU applicability logic:

1. Is the customer/counterparty an EU-domiciled person?
2. Is the instrument domiciled in the EU?
3. If both 1 and 2 are no, MiFID doesn't apply.
    4a. Move to the matrix for the customer/counterparty domicile.
4. If 1 is yes, EU best execution rules apply.
5. If 1 is no and 2 is yes, has the customer/counterparty agreed to reporting its data in the EU?
6. If 5 is yes, do we have their data for reporting?
    6a. If 6 is no, input their data before processing the trade.
7. If 5 is no, we cannot process the trade.

There is obviously a lot more logic beyond just this, and additional functions to be performed whenever one of the rules is found applicable, but this functionality is the first step. We have contacted the vendors of most of the major OMSs globally to find out how much of this capability they currently support, and have not found any that do. We have also asked about plans to build this into their products in time for MiFID's start date of January 2018. We are still compiling our findings, and would be happy to share them with readers upon request.