# Mapping Cross-Border Margin Requirements

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Abstract. The Financial Crisis of 2007-8 triggered a large-scale overhaul of European and Global Financial Services Regulation. Financial institutions are now subject to more far-reaching and onerous regulation, as well as the prospect of increased regulatory fines. The European Market Infrastructure Regulation ("EMIR") (and parallel regimes in other G20 members countries) is part of this new landscape. With the aim of reducing counterparty and systemic risk, EMIR requires that so called "over-the-counter" derivative transactions are either cleared through a central counterparty, or that the parties (including certain non-financial entities) exchange collateral and undertake other riskmitigating measures. EU entities conducting over-the-counter derivative transactions and their non-EU counterparties must reconcile the EU rules with those that apply in the non-EU counterpart's jurisdiction. The position in any given case will depend on numerous variables including the jurisdiction of the counterparty, the nature of the transaction, the collateral that would be provided and whether and to what extent the EU Commission has determined that the rules in the third country are equivalent to those in the EU. This paper outlines the needs of EU market participants in the context of this complex and evolving regulatory matrix and suggests key areas in which technology solutions may address those needs.

## 1. Background

The Financial Crisis of 2007-8 triggered a far-reaching overhaul of European and Global Financial Services Regulation which, some 10 years later, is still in progress. During that time, banks and other financial institutions have been implementing a greatly increased volume of regulation. At the same time, there has been an upward trend in the quantum of regulatory fines, both in terms of the statutory maxima, and those imposed in practice.

The regulatory initiatives have focussed on key problem areas, in particular: investor protection and transparency, market stability and reduction of counterparty and systemic risk.

One major element of the regulatory initiatives is the European Market Infrastructure Regulation ("EMIR") [1] and the equivalent regimes in other G20 members countries (which resulted from a 2009 G20 Commitment to reduce, among other things, counterparty and systemic risk). EMIR introduces various requirements on entities

that trade in so-called "over-the-counter" or "OTC" derivatives (outlined in more detail below).

While EMIR is aimed primarily at financial institutions, it also impacts certain nonfinancial entities. Many financial entities impacted by the Regulation will have the significant human, operational and financial resource to address compliance with these complex regulations. However, non-financial and smaller financial entities that are within scope may not have adequate resource and may find the regulations to be a barrier (or at least a hurdle) to accessing the international markets.

## 2. What do EMIR and Parallel Regimes Require?

EMIR and the parallel regimes in other G20 countries introduce three main elements. First, a requirement for OTC derivatives to be cleared through a central counterparty. Only derivatives that are significantly commoditised/standardised are required to be centrally cleared.

Second, a requirement for certain risk mitigation measures to be implemented - in particular the exchange of margin - in relation to transactions that are not centrally cleared (typically less standardised transactions) but nonetheless fall within the scope of EMIR. Finally, OTC transactions are required to be reported to trade repositories.

#### 3. What Structural Issues do EU Entities Face?

It is common for entities to rely on the systems and/or information reporting of their trade counterpart in complying with these regulations. However, difficulties can arise because systems and compliance procedures of the delegate are naturally configured to the application of the regulations to the delegate.

For example, the definition of "derivative" may differ between EU and non-EU jurisdictions (and even between EU jurisdictions) with the risk of under- or overreporting if relying only on one of the parties' systems.

Similarly, one party's system is designed to support real-time reporting (as required under the US parallel regime), whereas an EU counterpart may be required to report on an end-of-day basis. This may make effective reliance on one party's system impracticable. For example, under an end-of-day regime, a cancelled trade may not be reported at all but under a real-time system would be reported and a cancellation report filed. Similar differences arise in the context of supplementing trade entry data with valuation and collateral/margin data.

It can be hard for a delegating entity to have good visibility as to the underlying regulatory rationale and assumptions implicit in the system developed by the

counterparty it relies upon. This can create difficulties for delegating entities in validating that the actions taken or data provided by their delegates.

At the same time, there is still a prevalence of bespoke, proprietary data models and schema and collaboration in relation to standardisation of schema and data models is still lagging. This inhibits optimal interoperability between systems both between counterparties and also between clients and various service providers such as compliance consultants, lawyers, accountants, consultants etc.

#### 4. How Can Lynx Help?

As a single, central, maintained knowledgebase, Lynx could act as the "rules layer" that informs a more dynamic data and knowledge driven trading infrastructure across international markets.

Rather than building rigid systems based on a "regulatory snapshot" at build time, systems designed around a knowledge-centric model can be more responsive and dynamic. "Responsive" in the sense that a regulatory change (such as amendment of primary or secondary rules or a new equivalence determination) would require an update to the central knowledge base and only modest re-configuration of the trading and related systems. "Dynamic" in the sense that such a system could "model" the financial and compliance impact of proposed trades in near real time to determine the optimal structure (counterparty, regime selection, type of margin, etc).

Entities relying on their trading counterparties for elements of compliance would be better able to validate the appropriateness of the service they receive from their counterparty by querying the knowledgebase, again in near real time.

A central knowledgebase would help to propagate the use of common schema and ontologies across the industry. This would provide further commercial opportunities for service providers (compliance consultants, lawyers, accountants etc) to develop technology solutions to meet the needs of prospective clients, in particular smaller entities for whom the building of a proprietary system is not justified or within their means.

The evolution of supported common schema also serves to increase transparency for all market participants and supports the development of new functionality such as smart contracts and negotiation (which would further reduce the legal cost of doing business). In this context a strong rules layer compliments the emergence of Blockchain and similar initiatives that (in addition to addressing contractual certainty and settlement risk), also help address data validation type issues that continue to be problematic.

Ultimately, the reduction of costs and increase in transparency would benefit not only enterprise but also citizens who are generally the ultimate end clients of financial entities. It would also assist in the EU's objectives in achieving Capital Markets and Banking Union.

## 5. Thoughts on Functionality

While it is premature to speculate in detail about the technical approach, we set out below some thoughts on the functionality in the context of how users might interact with the knowledgebase.

As a starting point, the knowledgebase could provide a means for entities to quickly determine whether they were in scope of EMIR and/or any third country regimes.

Having established they were in scope, the knowledgebase could (based on submission of the relevant facts) determine which regime or regimes applied to a particular cross-border transaction. For example, it may be that compliance with the third country rules was permitted (in whole or in part) as there was an equivalence determination for the relevant third country.

The next logical step would be to determine exactly what requirements applied. Again this would be based on submission of the relevant supporting facts (which may include data about existing OTC derivative positions and entity static data).

Existing (non-semantic) knowledgebases normally rely on a network of legal experts in relevant jurisdictions to produce a narrative of the relevant laws in their jurisdiction. The creation process is manual, time-consuming and cost intensive. Regular review and updates also require manual input. Therefore, for any knowledgebase to remain up to date requires the continued support of a sponsor with a vested interest.

For a knowledgebase to survive after the initial funding, thought should be given to putting in place a sustainable support structure. This is likely to involve collaboration with professionals, industry bodies and product providers.

On the technical aspect of updates, as many laws are now published in XML, there may be scope to automate the process of identifying when updates are required.

A powerful query functionality and API are likely to be of high importance. In financial trading, time is typically of the essence. Therefore, for any given transaction, it would be useful for trading firms to be able to machine automate the pre-trade analysis and post trade reporting. Therefore, a strong API through which a trading system can query the knowledge base would be of great utility.

Similarly, a strong query engine and API would facilitate a high degree of interoperability with other internal systems (such as Risk, Finance, Treasury, Control Functions etc) as well as providing the ability for senior management to benefit from enhanced analytics.

As for the shared schema, an API would also create a foundation on which commercial solution providers may build solutions.

# 6. Scope

Setting the correct scope for such a use case will be critical. Scope and utility are positively correlated, but the scope must be sufficiently narrow to be within the reach of the Lynx resources. However, to have utility for enterprises, it should address a meaningful segment of required functionality.

We believe there is potential to leverage resources external to Lynx to ensure a good balance between scope and utility. And we believe this approach may be a means of smoothing the process towards self-sufficiency after the Lynx Project. We would be happy to discuss further.

## 7. Conclusion

We believe that a knowledgebase utility would have many advantages for EU companies. For the reasons outlines above, we believe it would provide reduce the cost of compliance, increase transparency and efficiency, provide greater value for participants, their clients and citizens alike. It would provide efficiencies across the industry and give life to new products and business models and would also support the EU's objectives in terms of Capital Markets and Banking Union, all of which would contribute to the EU economy.

### References

[1] Regulation No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories.