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**The Future of the Securities Lending Market:
On the Cusp of Transformation**

ISLA White Paper in collaboration with Linklaters

Contents

Foreword

It has been an incredibly fast three years since ISLA published the first instance of The Future of the Securities Lending Market: An Agenda for Change. That paper considered how technological change, in the form of digitalisation and common data representations, may provide an opportunity and framework to streamline inefficiencies in legacy processes and practices.

Advancing the Digital Debate, the second instalment published in 2021, heralded some of the work that was commencing, with a view to making those standards a reality. In this latest edition of the series, hopefully it is clear that those foundations are being built upon by multiple member firms, with use cases discussed across the lifecycle that was laid out in the very first paper.

Work on both the Common Domain Model (**CDM**) and the ISLA Clause Library & Taxonomy has now progressed to a point where member firms can see opportunities for application. Within, you will find discussions of how trade negotiation workflow can be standardised, increasing interoperability; of how a digitised version of the ISLA Clause Library could assist in automation; and of how these pieces could ultimately be used as building blocks for smart contracts on blockchain ecosystems created by our members. Additionally, the creation of a Master Confirmation Agreement (**MCA**), streamlining structured trade negotiation, also discussed in this paper, has provided the methodology to model evergreen and extendible trades within the CDM, showing how market best practice can successfully interlace with technical standards.

There is acknowledgement of a few areas of the lifecycle that could still do with some attention with a technological focus: streamlining Know Your Client (**KYC**) processes, dealing with Central Securities Depository Regulation (**CSDR**) impacts and how to ensure the next iteration of regulatory reporting could be improved. This serves to remind us that the existing ecosystem supporting the market is complex and the path to change remains a journey.

This year has also seen an increase in our members looking at new business opportunities afforded by digital technology. This shift is seen in this paper, particularly on the benefits to collateralisation, but also in the aforementioned use of CDM as building blocks for smart contracts. ISLA now have a Digital Assets Working Group, that recently announced our intention to expand the Global Master Securities Lending Agreements (**GMSLA**) and there will be further publications looking at this exciting area of industry development. No doubt the next paper in this series will see a closer integration of these themes.

The industry continues to progress along its transformational journey. As we teeter on the cusp of seeing the fundamental building blocks have identifiable use cases, indeed, on the cusp of actual transformation, the next eighteen months should be a very interesting time indeed.

David Shone
Director – Market Infrastructure & Technology, ISLA

Securities Finance and the Common Domain Model: Where are we?

Securities Finance as a sector is far from alone when it comes to the challenge of standardising data and how it is created, held, managed, communicated, processed and understood. Most industries have over the last few decades taken advantage of the huge progression in information technology and data/communication to make their businesses more efficient.

The journey has involved huge investments, mainly from individual institutions or organisations acting alone. In other sectors the challenge for standardisation can be because people feel 'invested' in their own data models and because everyone was told that 'data is the new gold'. In capital markets, changing anything to do with data is expected to cost a lot and cause significant risk. The risks being, firstly that "...the status quo isn't broken, so why fix it?"; and secondly, having to migrate means a potential interim period of supporting, maintaining and paying for duplicate interfaces. Hence, change is commonly kicked down the road or simply runs out of steam.

It must be said, that vendors like Trading Apps have benefited greatly from the lack of data model congruence between institutions. We've developed interfaces and communication capabilities that can handle the vast discrepancies that exist in our clients' ecosystems. It seems at odds, then, that we should be supporting the ISLA CDM project, some might think.

So, in this context, what is this Common Domain Model, or CDM? How can it help? What does it do? It's worth re-iterating what it is (and what it is not) to see where it fits into the securities finance landscape.

First and foremost, the CDM is a form of language (it must be highlighted that the 'D' is for 'Domain' and not 'Data' - an easy mistake). The CDM not only describes all securities finance data objects, e.g., a trade or borrow request, but also the actions that can be performed on them, e.g., a rate change or counter. Furthermore, it describes how those actions are performed, ensuring consistency of outcomes. An interesting aspect of the data structure is that they are defined as shared objects. A trade is therefore not labelled as a borrow or a loan; it is labelled as a securities lending trade with attributes showing a borrowing participant and a lending participant.

What the CDM is not, is a system or platform. You cannot buy a CDM. What you would buy, build, or use as a service, is an application that is CDM compliant; the application would store data objects in CDM format, apply actions to that data using CDM methodology, and interface with other platforms using transfers of CDM format data (or indeed pass parameters to call CDM actions on those platforms).

ISLA has been diligently extending the CDM into Securities Finance, giving regular updates to the ISLA Digital Steering Group and CDM Working Group. From the latter the CDM Trading Working sub-Group was formed earlier in 2022, with the aim of crystallising trade flow specifics using a smaller set of participants (including Trading Apps and others already focused on this area of the lifecycle).

The initial meetings concentrated - with good-natured robustness – on the trade object itself, complementing and helping validate the model as it stood thus far in the main project stream. Attention then quickly turned to how the group could make practical progress versus its mandate, and in what areas. One of the first questions asked was "Where does the CDM fit into the current securities finance ecosystem?". Bearing in mind that the current ecosystem as it (largely) stands, consists of participants having trade negotiation / trade booking / books & records and settlement functional layers in a silo, connecting at each layer through a common area to other participants directly or via 3rd parties.

This brought to mind the evergreen joke: a lost driver asks for directions and gets the response, "Well, if you need to get to there, I wouldn't start from here". Which wasn't helpful. Indeed, in an ideal world the CDM would have existed from the beginning. Data and its transformations would be stored and executed consistently within each participant's silo, so that when that data had to face the outside world, it would be consistent (in structure and calculation methodology) with a counterparty or third parties' records.

But the reality is that it is the common area (it's in the name to be fair) between participants' silos where the CDM has its contemporarily appropriate place. The CDM should exist as a transformation and mapping interface layer, translating internal system language into a language that is universally understood. The Trade Working Group is therefore currently tackling the top layer of this common area, looking at trade negotiation between participants, designing trade proposals / counters / rejections etc, leading to agreed trade executions.

Hopefully the 'why' this work is important, and the benefits the CDM brings should be obvious to all: if securities finance speaks a common language, the market becomes more efficient. Friction and errors are reduced or eliminated, barriers to progression (and to new participants) are lowered. Operating efficiency increases. Costs are reduced. The whole market benefits from the introduction of platforms and services that are judged on the functionality and differentiation they bring, not by which existing systems they integrate to.

Coming back to our thoughts as a vendor, of course we fully support the development of an industry standard CDM. With a CDM in place, and in particular a standardised trading workflow, securities finance participants can enjoy a step towards seamless interoperability. This goal is at the core of Trading Apps' purpose. We believe it will make our products much more accessible to the market and easier to implement, as the heavy work of communicating efficiently and accurately is reduced.

Mostly the CDM will be a good thing, but inevitably some will think they've lost an edge because their competition will take a step forward. However, participants should be judged on their speed of operation, the depth and quality of their supply, their pricing. The 'language' participants speak should not be something that gives competitive edge.
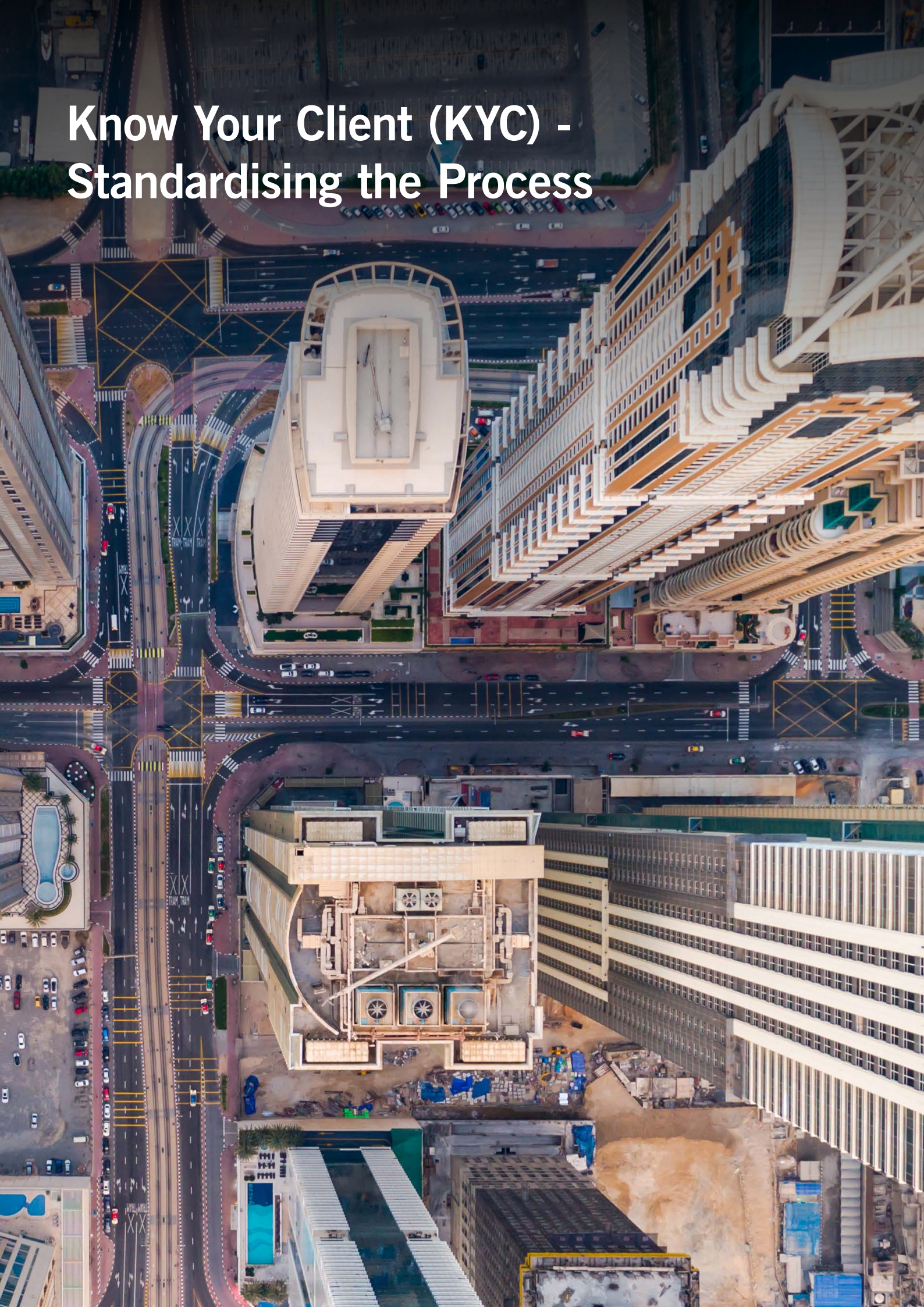
Matthew Phillips
COO & Head of Delivery, TradingApps

Den Leonard
COA, TradingApps

Know Your Client (KYC) - Standardising the Process

Not Your Parents' KYC

In Roman times, the term 'decimate' was used to describe a rather gruesome practice where military units who 'underperformed' in battle were forced to randomly select one in ten of their members for execution – often at the hands of their fellow unit members. We no longer use 'decimate' in this way. Rather, we use it to describe devastation or destruction, usually to an order of magnitude greater than one tenth. Linguists refer to this phenomenon as semantic drift.

We have seen a similar drift in the use of Know Your Client or KYC. Originally, KYC was simply an exercise in checking certain data when an account was set up – a one-way data flow from client to dealer followed by a review. Now, KYC is a state of being, a process that encompasses onboarding, credit, tax, and operations in an ongoing effort to keep data fresh. This is partly thanks to increasingly frequent shocks: what previously qualified as a once-a-decade market or regulatory event, now seems to be almost annual. So we might quote Inigo Montoya from the Princess Bride when the topic of KYC comes up – "you keep using that word; I do not think it means what you think it means.''

KYC is Now Fast & Furious

Prior to Dodd-Frank, most KYC functions were siloed within a bank by asset class and relied heavily on bilateral emails. The last decade witnessed an alphabet soup of regulatory regimes (EMIR, FATCA, CRS, SFTR) and geopolitical events (Brexit, Russia Sanctions). With each successive event, banks moved towards a more centralised KYC function across asset classes and jurisdictions.

And yet this wave largely passed by securities lending, primarily due to idiosyncrasies unique to the industry. This has a cost, which can be seen in the respective experiences of new regulations for derivatives vs securities lending. While recognising the differences in data collected prior to transaction reporting for Dodd-Frank Rewrite vs SFTR, the derivatives industry was able to leverage centralised and standardised counterparty data sets while the securities lending industry could not.

As a result, the cost of data collection was upwards of five times greater per client in preparation for SFTR. If SFTR were an anomaly, this would be an unfortunate one-off. SFTR is not an anomaly but rather a harbinger of the 'new normal' of frequent regulatory and market change. As such, centralisation and standardisation are the only sustainable paths forward.

The Best Defense is a Good Offense

The change required need not be a dreary catch-up with what other asset classes have done. Nor is it merely a defensive crouch in anticipation of more regulation. It is instead a business opportunity for all – lenders, borrowers, service providers – to gain efficiencies and generate incremental revenue.

Our experience has shown that the average time to onboard an account (i.e. complete the initial KYC process) drops dramatically when centralised tools are used in derivatives, FX, and fixed income. For example, in the last quarter, the average dealer using no centralised tools could complete less than 10% of the client requests received, with each account taking an average of almost 80 days to open. In contrast, the average dealer using centralised tools completed about 90% of client requests and took 15 days to onboard an account. In any environment, this time represents not just a cost burden but also foregone revenue. This is more pronounced in securities lending where time not lending / borrowing is time not earning fees.

Dealers / borrowers also benefit from greater transparency. A central system could list not just borrower documentation but inventory information, credit ratings, ESG scores, and more. This would allow a borrower to prioritise KYC on new accounts that meet specific priorities.

In addition to higher revenue, the agent lenders derive added benefits from centralisation. First, a central system allows them better control over who sees what documentation. Data and documents can be masked or grouped in packages with limited access rights. For example, front office traders could have access only to some data while others like credit or tax would only have access to what is relevant to them. And throughout the process, the lender could see what documentation is required from each borrower, where

the account is in the process (i.e. credit review, tax form validation, etc.), and how long each borrower takes. This gives lenders visibility into what best practice looks like across the industry.

Keep Calm & Carry On

Despite effectively having the same KYC process over the last decade +, the securities lending industry has proven remarkably resilient in the face of large regulatory change and highly volatile markets. But as the saying goes: past performance is no guarantee of future results. Particularly if that 'future' is known to be materially different from today.

The horizon is crowded with changes that will materially impact securities lending markets. T+1 settlement, **Basel** III capital requirements, the growing importance of corporate actions – these should not be viewed merely as risks to be mitigated through extra costs. They also represent opportunities. More than a decade ago, the Agent Lending Disclosure initiative held out the promise of a more automated, end-to-end process. This promise has remained unfulfilled due to the lack of this 'first mile' of pre-trade standardisation for KYC and post-trade maintenance of sufficiently comprehensive data sets. If the industry acts now, it could make this promise a reality.

Lansing Gatrell
Managing Director, Regulatory and Compliance, S&P Global Market Intelligence

Using documentation to drive change

On 10 November 2021 ISLA published the Master Confirmation Annex (**MCA**). The MCA provides a standard framework and a set of terms which market participants can use to streamline the process for various transaction types (such as evergreens and extendables) being documented under the Global Master Securities Lending Agreement (GMSLA).

Aside from standardising provisions for transaction types, the MCA also represents a demonstration of a document that has been designed with a different way of working in mind. We explore in this article the MCA and the potential for drafting legal documents (as demonstrated in the MCA) to enable greater automation in the securities lending market.

What is the MCA?

The MCA is intended to be used to document certain 'non-standard' transaction types which are fairly common in practice. The project was initiated because firms sought to use their own pro forma documentation for these transactions, with each form drafted differently but broadly intended to achieve the same economic result. This was seen as an impediment to quickly and efficiently agreeing these loans with agent lenders and others.

The types of transaction covered by the MCA are broadly:

i.   trades with a particular tenor, for example, fixed-term loans, evergreen loans (where the loan automatically rolls forward unless either party gives notice to terminate) and extendable loans (where one or both parties have the right to give notice to extend the term of the loan); and

ii. trades with a certain specified size, for example, loans for a fixed amount (where the lender agrees to lend out securities to the borrower with a value of a certain pre-agreed amount) and reverse stock loans (where the borrower posts cash collateral of a fixed amount, and the loaned securities must have a market value of at least that cash collateral at all times).

A particular loan will normally set out a combination of tenor and size, for example a loan for a fixed amount that is also a fixed-term loan or evergreen loan.

In terms of architecture, the MCA sets out standard provisions for the various transaction types, and then a market participant can document the terms of a specific Transaction by completing the Confirmation. There should be no need to modify or negotiate the terms of the MCA at all.

As the MCA is standardised, only the first page of the MCA has anything for the parties to complete, or any options to choose from. The first option is that the parties document a transaction by executing a Confirmation which incorporates the MCA.

The second option is for the parties to sign the MCA up-front, and then for each transaction to be documented using a Confirmation which will be subject to and form part of the MCA. The Confirmation will be in the form set out at the back of the MCA. The Confirmation will be issued by one party to the other but, in line with existing market practice, it is not envisaged to be signed. Instead, if the receiving party disagrees with anything in the Confirmation, it should raise this with the sending party. To avoid a battle of the forms, the MCA enables the parties to elect which party will send out each Confirmation that is subject to the MCA.

How the MCA was developed with an eye to the future

Mindful of ISLA's stated desire to deliver documentation digitally[1] the MCA was drafted in a way that is compatible with automated production and online negotiation on an electronic documentation platform. This means that:

> the MCA and the related Confirmations can be drafted in an automated way, ie. with tick boxes and fields to populate key terms;

> the MCA and the related Confirmations can be negotiated online, with online capture of approvals and the negotiation itself;

> if needed, the MCA and the related Confirmations can be executed online with no need for printing and wet ink signatures; and

> the data in the MCA and Confirmation can be captured at the same time as creating the document.

What does this mean?

> **For drafting:** commercial, legal and credit choices can be made in a quick and standardised way. This in turn means that those in the front office can effectively draft the Confirmation simply by populating the trade details into the platform. No more manual drafting, saving time for legal teams.

> **For negotiations:** no more to-ing and fro-ing over email with blacklined documents and all internal approvals and negotiations can be captured online.

> **For data capture:** valuable legal and commercial data can be instantaneously exported in both a human and machine-readable format through an API from the platform. No more manual data transposition. This data could be used to run reports on risk and exposure, provide analysis on how to improve the contracting process, or link to other systems to automate actions that need to be taken following execution. The benefits of this digitisation will likely grow as the capital markets industry-wide "Common Domain Model" becomes more widely adopted – making the exchange of data between systems and institutions simpler and aligned – lowering integration costs.

The MCA and forms of Confirmation are available on CreateiQ, Linklaters' proprietary contract management platform which is currently used by over 250 institutions.

An electronic form MCA and Confirmation would – if combined with smart contract technology – provide a further milestone on the road to automating securities lending transactions, such as the automated transfer of both loan securities and collateral securities.

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THE MCA AND FORMS OF CONFIRMATION ARE AVAILABLE ON CREATEIQ, LINKLATERS' PROPRIETARY CONTRACT MANAGEMENT PLATFORM WHICH IS CURRENTLY USED BY OVER 250 INSTITUTIONS.

1   See ISLA & Linklaters Publish a Joint Paper on Digitalisation & the Securities Lending Market – ISLA (islaemea.org)
The Future of the Securities Lending Market |Advancing the Digital Debate – ISLA Thought Leadership (islaemea.org)

Integrating the ISLA Clause Library & Taxonomy with the CDM
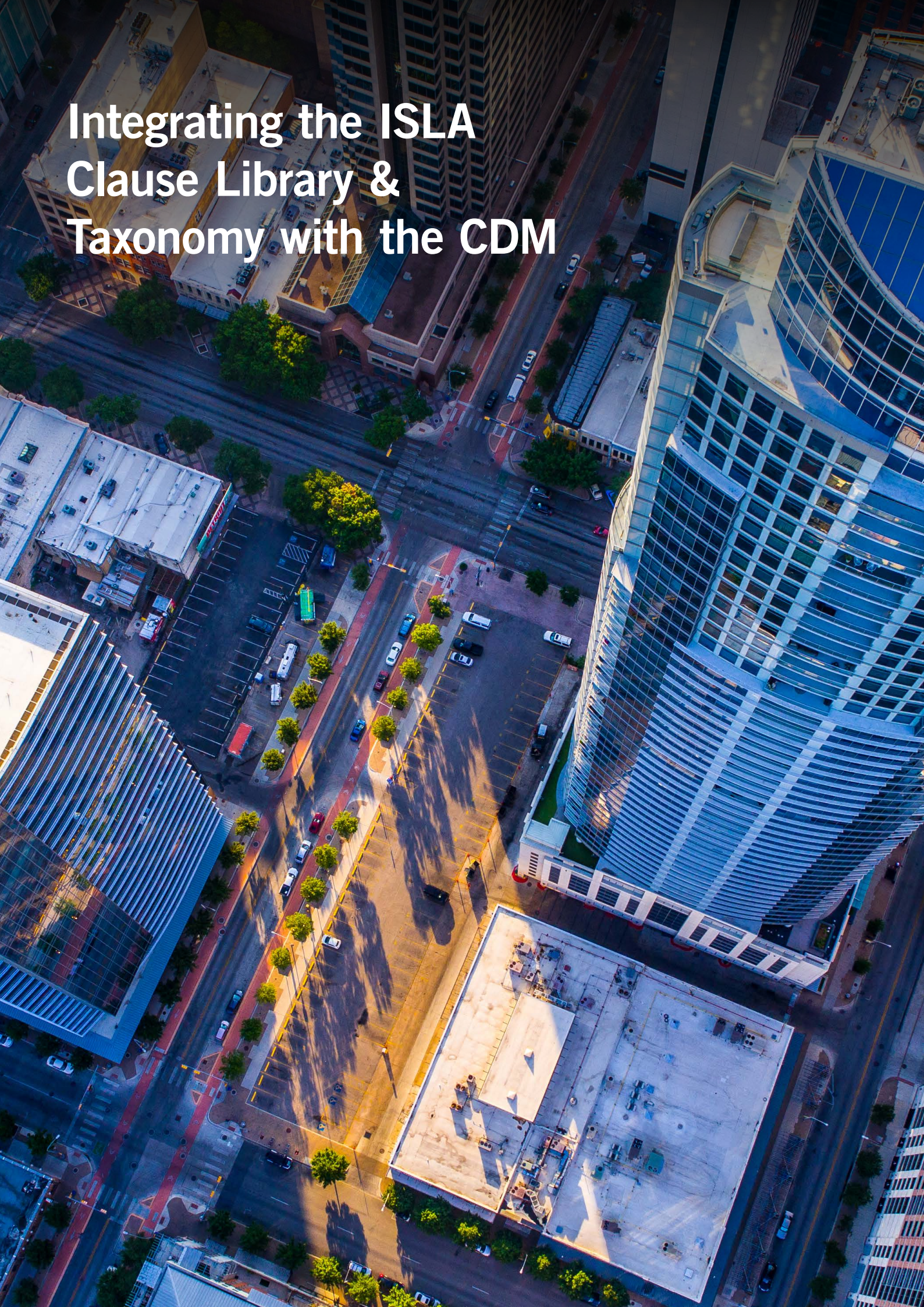
It's hard to have escaped noticing that since the first Agenda for Change, ISLA have been leading two primary initiatives to digitise securities lending:

i.   the common domain model, or CDM, representing standardised encoded definitions of transactions and events in the lifecycle of a securities loan; and

ii. the development of a clause library and taxonomy, distilling the variants in legalese found amongst the securities lending community's versions of the GMSLA into standardised, specific and recognisable business outcomes.

By themselves these initiatives are important, but by bringing them together there is an opportunity to introduce benefit greater than the sum of the parts. So how do we get there?

Traditionally in the tangible human, user-based world that we live in today, there are hard paper documents, or soft copies in the format of a commercial word processing software application, that are used to contract between entities. There are usually set clauses that both parties prefer their own individual wording style of, leading to needless negotiation between those parties.

Stepping further into a more digitised world, there are increasing numbers of software providers that digitise these versions into a structure digital database representation, keeping track of clauses and which variants are being used, allowing for negotiations including comparison. However, they do not necessarily have digitalised business outcomes allowing for true comparison of the business intent of both parties.

The ISLA Clause Library and Taxonomy allows software to store and identify the digitalised business outcomes of each clause variant and translate this to words, in the user interface, or ultimately to a paper copy, if needed. It is a genuine **babel fish** for the security lending industry.

In parallel, the CDM work that has been done has focused on defining the product and transaction mechanics of a security loan: underlying security, quality and type of collateral, duration and a reference to the GMSLA under which that transaction has been agreed. Some elementary functions have also been developed: execution, allocation, returns and billing for these simple lifecycle events. The product suite was expanded to evergreens and extendibles in 2022. These remain however relatively fundamental elements, with the power of these standard representations requiring further unlocking to be of full value to users of the model.

Combining efforts should see an iteration of the CDM containing a legal agreement codified in the same language as that product definition. The product would no longer simply have a label, and date, for the GMSLA it is signed under, but link fully to a completely digital representation of the document down to the individual clauses, with their business outcomes stored explicitly.

This allows events or functions within the CDM, such as a corporate action, default events or collateral substitutions can use the digitally recorded detail, of the GMSLA associated with the securities loan, in order to determine the outcome of any particular event.

In the example shown here, the corporate action event requires as inputs: a transaction or multiple transactions, across multiple counterparties; some reference data associated with the event such as record date; and finally the relevant clause, or more specifically the business outcome of the clause, of the GMSLAs, for each transaction, which will differ per counterpart. Thus the legal agreement informs the functional behaviour, determining what the post-event transaction state for all transactions impacted by the event, based on the legal agreement. For instance, this might result in an automatic early termination of the trades.

We would have effectively built, at this point, the building blocks for a smart contract BUT not just any smart contract. It would be a smart contract backed up by industry-agreed legal and technical standards, encapsulating an automated version of best practice in code.

WE WOULD HAVE EFFECTIVELY BUILT, AT THIS POINT, THE BUILDING BLOCKS FOR A SMART CONTRACT BUT NOT JUST ANY SMART CONTRACT.

Additionally, integrating the ISLA Clause Library with the CDM enables true interaction between the documentation software that exists today and the CDM itself. Imagine a world in which, when you have negotiated your GMSLA with your counterparty, the software creates the standardised version of your systems, cascading down to client onboarding, collateral and trading systems, ensuring cohesion across your internal ecosystem. Equally if all you have is the CDM representation of a signed document you should be able to use that representation to recreate the digital database version of that document, and then subsequently the physical document, all within any software that has the ability to talk to the CDM. True plug and play with documentation software will be possible.

Powerful new use cases could also build on this integration. It can be extrapolated that at some point functions could be built that use the standardised digital version of the GMSLA, along with relevant reference data, to monitor and track netting requirements and suitability automatically, for instance. No doubt there are other examples of innovative use cases that will be possible with these underlying fundamentals that haven't yet been identified.

At the time of writing ISLA are in the process of setting up a working group of documentation focused technology service providers dedicated to integrating the fundamental work done in these two streams and making the above possible for members. Contact us for more information if you're interested. It is time to bring our foundational work together into an industry accepted, standardised methodology for representing smart contracts, allowing the securities lending industry to automate itself, digitalise and meet the future head on.
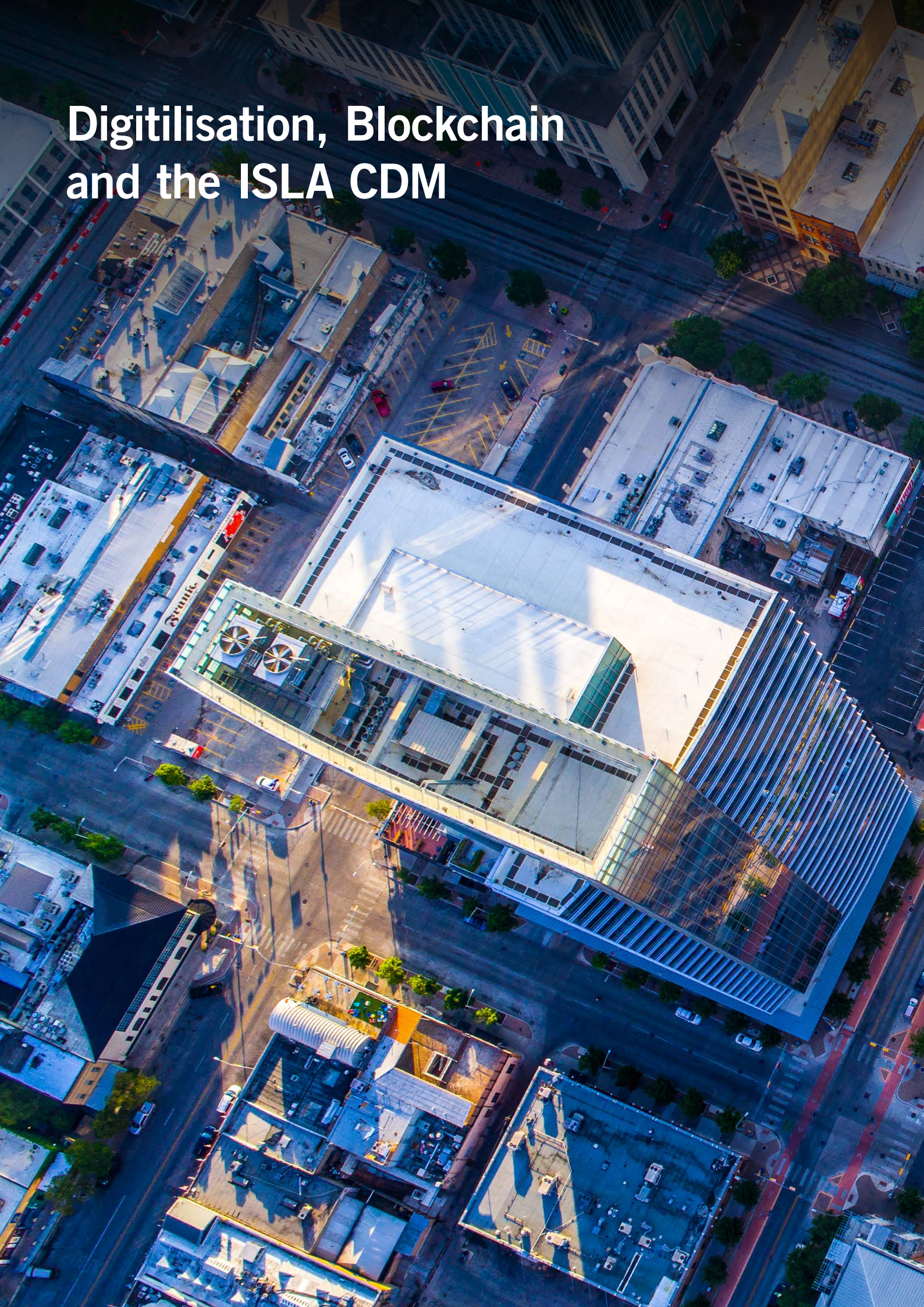
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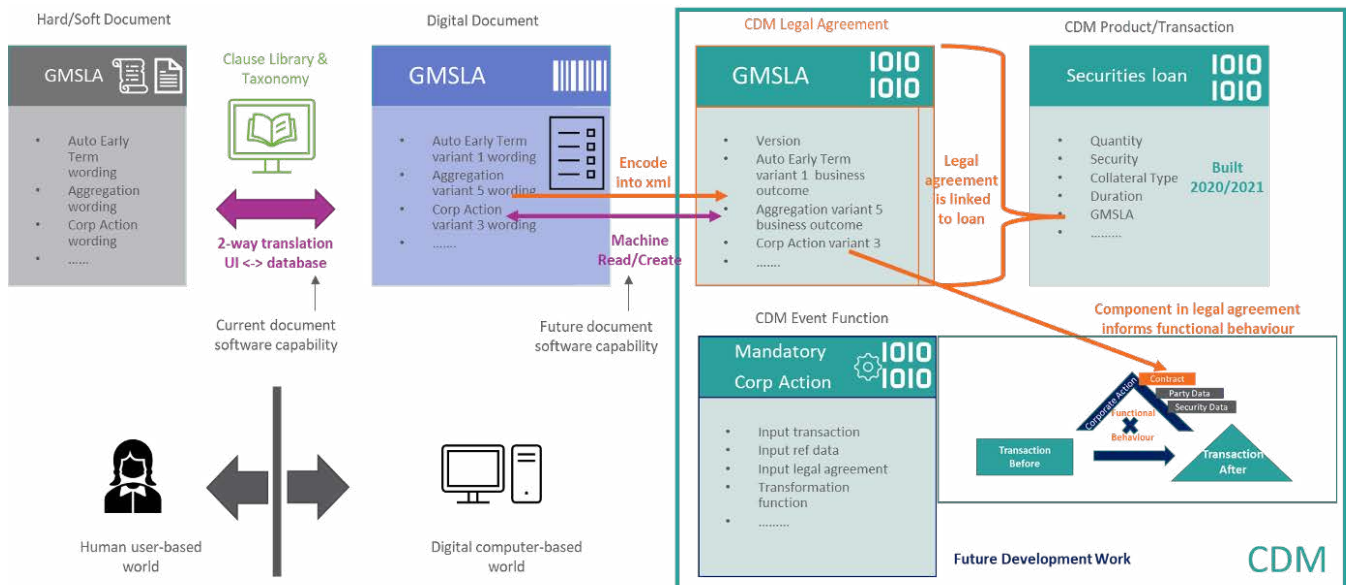
Digitilisation, Blockchain and the ISLA CDM

1 The DLT evolution: From tokenisation to native digital assets and smart contracts

Digital Ledger Technology (**DLT**) and Digitalisation are two mega trends in the financial industry and beyond. They have led relatively separated lives for some time, but are converging, with some saying, that Blockchain now is just one facet of digitalisation.

We are seeing more digital assets and digitalisation of processes as well as more focus on institutional DLT based assets. Crypto is going institutional. Where two trends merge or converge, there is a serious chance for the development of a new super trend. When will this new super trend take off? Now, timing is always the most difficult part of a trade, but one thing is for sure, given that most financial assets have an average maturity of between 5 – 7

years, once the trend takes off, it could ignite exponential market growth in a very short timeframe.

Most of the current use cases or proofs of concepts (**POCs**) have been in the area of assets or asset generation. We have seen tokenisation of existing financial and non-financial assets, but only few native and digital DLT based assets for institutional investors. Given that many jurisdictions have not been forthcoming with laws and regulation for native DLT based assets, this is hardly surprising. Consequently, many of the native DLT based assets created were private placements. It is actually here, where in many cases the convergence of DLT technology and digitalisation was most prominent, because for many private

placements digitisation was probably 85 – 90% of the workload, whereas DLT was the icing on the cake. Digitalisation of the value chain of private placements already offered many benefits like more transparency, atomic and real-time settlement, information at your fingertips, etc. DLT within this framework ensures common network protocols, enabling seamless transfer of title, up-to-date information and interconnectivity between the different participants of the network. However, given the fragmentation of these markets, and given that DLT works best for large de-centralised networks, it is obvious why DLT has had only a limited impact up to now.

2 What smart contracts could be good for

This could be changing next year when the EU DLT pilot[1] goes live. While we have seen some issuance of digital assets and some tokenisation of existing assets. The pilot will offer, for the first time an institutional wrapper for trading these decentralised assets off the standard CSD – dominated post – trade world, in a regulated market. Consequently, the EU DLT pilot makes it more attractive to issue DLT instruments and assets by allowing not only existing but also new market infrastructure providers to offer their trading and settlement capacities. The DLT based assets should most likely come in the form of decentralised, digital bearer bonds.

Bearer bonds are the main financial asset in financial markets as of today. Hence, here DLT would, for the first time, tap into large, institutional markets, large liquidity pools and diverse pools of established investors and issuers.

Tokenisation of traditional assets

Digital native private placements

Digital native IHS / Bearer Bonds

Smart Contracts (Securities lending, derivatives, repo, cash payments, etc.)

Once this happens, we will embark on the next stage of the evolution in financial markets, namely, the need to define and trade smart contracts. Smart contracts in the DLT can be anything. As my IT guru always likes to point out: These are neither smart nor contracts in the legal sense. These programs do not need intermediaries to ensure integrity when the contracts are executed.

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1 https://www.esma.europa.eu/press-news/esma-news/esma-publishes-report-dlt-pilot-regime

When you do a securities lending transaction on a DLT based network, the smart contract could govern the following:

> checking that the loan securities / collateral securities are readily available;

> blocking the loan security in question, until the counterparty has instructed as well;

> ensuring that, once both parties to the transaction have agreed, the transaction is executed;

> substitution of a transaction because of a life – cycle event;

> margining of the transaction;

> close the transaction upon receipt of closing instructions (with an open transaction). Or re-delivery of the securities in terms of trades.

Of course, the smart contract could also govern the fee payments. In addition, cash is probably one of the most promising fields for smart contracts. However, at the current juncture, there is, with some exceptions and often only within the issuing banking networks, no DLT cash readily available.

3 Why the CDM is a natural starting point for DLT – based smart contracts

The ISLA Common Domain Model (**CDM**) is probably the most promising idea to experiment with smart contracts in an institutional setting. This is due to DLT cash not being available now. In addition, for these smart contracts to flourish there is a strong requirement for market standardisation. Again, here, the CDM comes into play.

If you create a smart contract in a DLT – environment, you cannot know for sure whether the contract is legally enforceable. You may safeguard the contract with some external legal opinions, and perhaps there are many transactions already executed based on this contract, but if the contract is legally enforceable, you only know for sure if something went wrong and the contract withstood the tests of the court proceedings. This is a hard lesson currently learned by many investors in the crypto space. Legal enforceability is a feature that most smart contracts will be lacking by definition and it is here, where the CDM offers the most value. When you transact native DLT bearer bond securities lending transactions, based on the CDM model, you have a nearly 100% certainty that the transaction will hold up in court. In addition, you will know for sure how to deal with such an asset and this particular transaction type with respect to settlement, market – usances, balance sheet impact, etc.

So the way forward could be in a transaction, where the legal wrapper for the underlying financial instrument is well-known (eg a DLT based – bearer bond meeting the CDM). This would allow for a significant reduction in complexity and would allow issuers, investors, traders and developers to focus their efforts on the implementation of the DLT -part, without the need to re-create the socio-economic complexity that market participants got used to and developed over many decades.

In a nutshell, whereas a large part of decentralised finance is about re-creating a financial market that we already have, the CDM would bridge the old and the new world that could open a much faster way to the introduction and implementation of DLT in an institutional setting that market participants know very well.

Michael Cyrus
Head of Collateral Trading and FX, Dekabank

Tokenisation as a Force for Good with Collateral

Like everything else, there are many different approaches to Tokenisation but all with one thing in common – the undeniable benefits of blockchain technology. The most quoted examples are:

> **Speed** – instantaneous transfers;

> **24/7 Operations** – tokenised assets can be utilised even outside market trading hours;

> **Risk Mitigation** – no settlement fails, reduced operational, credit and counterparty risk.

However, these are just scratching the surface of the potential impacts of tokenisation to Collateral arrangements.

The way I see it, adoption will take place in 3 broad phases, with intrinsic growth within each phase:

Phase 1) – Efficiencies in existing collateral flows

Phase 2) – New asset types & markets as collateral – releasing of trapped assets

> Liquid Assets like EM equities become viable as collateral

> Illiquid assets like Gold and Real Estate become viable as collateral through fractionalisation.

Phase 3) – New Opportunities and collateral flows

If we represent this graphically it would look something like a stepped arrow with some milestone jumps in adoption and volumes as we move from one phase to the next, driven by increased trust and acceptability in tokenisation and associated technologies.

Right now the institutions that are exploring tokenisation in collateral transactions are the innovators and early adopters, and what is sometimes overlooked is the fact that in any collateral exchange there is a provider and a receiver of collateral. The early adopters are predominantly collateral providers, which means that we have a dependency on more collateral receivers getting comfortable before large scale adoption is seen. This phase 1 in the tokenisation drive is forcing the
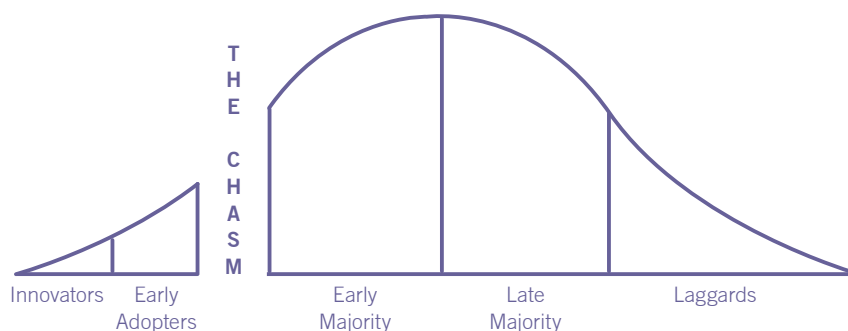
new technology into existing trade flows and operating models to avoid market disruption and ease adoption.

Tokenisation is a force for good and the first phase is proving this amongst the early adopters, by delivering significant efficiencies in collateral transfers – reduced costs, 24/7 use, risk reduction, increased mobility and utility. We are now hitting "the Chasm" where regulation is putting its arms around DLT and digital assets, legal opinions are being sought and the institutional financial market is familiarising itself with these new technologies. This will result in a heightened level of trust in tokenisation and the related smart contracts, which in turn will bridge the chasm and drive mainstream adoption into phase 2.

Trust is key to adoption here, particularly for collateral arrangements where enforceability is paramount, so initially all tokenisation solutions will operate within a private permissioned blockchain, which eliminates most security concerns. However, such private permissioned networks restrict the benefits of blockchain because they are centralised, and as we enter phase 2 and trust grows, then tokenisation solutions will move into a more decentralised structure, enabling further benefits of blockchain to be realised. At this stage, reconciliation becomes a thing of the past, with real-time synchronous updates on each node of the ledger, providing certainty of ownership and total transparency for all participants.

Now we have trusted, decentralised networks providing tokenised collateral solutions and almost any asset can be tokenised and used as collateral, assuming the provider can find someone to take it. This is where there may well be an

inflection point. Tokenisation of a traditional asset in the form of a representation of ownership on a ledger, achieves many efficiencies over today's collateral flows but what it does not do is improve the liquidity in the underlying asset. Mobility and Utility are improved but Liquidity is not, because in an event of default the receiver still needs to sell the underlying asset to realise the collateral value.

How can tokenisation make an illiquid asset more liquid and potentially usable as collateral? Fractionalisation is a word I am sure many of you have heard, and at its core it is a simple concept. Take an illiquid asset, tokenise it into multiple tokens and create a secondary market in those tokens. Once a sufficient level of liquidity has ben achieved in the secondary market such tokenised asset fractions will become suitable for use as collateral, opening up a whole new financing opportunity. Of course for such fractionalisation to work efficiently you will need large scale market makers to support the liquidity in the secondary markets.

By this stage we have significant cross over between Traditional Finance ("**TradFi**") and Decentralised Finance ("**DeFi**"), and wide scale adoption of DLT. Tokenisation is commonplace in collateral arrangements with a robust legal and regulatory framework. But this is not the end state, and the force of tokenisation will drive our industry further, bringing new participants and new opportunities. Crypto custodians and digital prime brokers will be looking to take tokenised assets as collateral, avoiding settlement and asset servicing headaches, whilst giving their clients the option of leveraging assets in a traditional portfolio. Hedge

Funds will be looking to finance their crypto positions with banks and broker dealers, using structures that avoid the collateral receiver having to take the crypto onto balance sheet even in the event of default.

My message is that tokenisation is good, very good, for the collateral world, both from a provider and receiver perspective, as well as a global market stability view. Its potential will only be fully realised once we have majority adoption, and the speed to hit critical mass will very much depend on our financial regulators and the ability to create a transparent risk-based taxonomy of digital assets operating within an effective global regulatory framework.

There is a sea of change coming to securities financing and tokenisation will be one of the first waves hitting us. Will you be surfing that wave or just let it crash into you?

If you are interested in what JP Morgan is doing in this space please don´t hesitate to contact me.

Paul Pirie
Luxembourg Head of Product and Digital Strategy, JP Morgan

THE WAY I SEE IT IS THAT ADOPTION WILL TAKE PLACE IN 3 BROAD PHASES, WITH INTRINSIC GROWTH WITHIN EACH PHASE.

CDM: The future of DRR & CSDR

In our day to day lives, we spend little time thinking about the long evolution basic functions have undergone to reach their present state.

The measure of time for instance, is a good example of something that has been a constant consideration for humanity. From the sun's rising to the sun's setting, measuring its procession, to the one o'clock guns used around the world by mariners to synchronise their clocks to today's Coordinated Universal Time (**UTC**) published through the internet. Our current state makes it difficult to imagine what life and work must have been like before today's time technology existed. Future evolutions will probably seem as baffling to us as the mobile phone is to people born in the first half of the 20th century.

Of course, time measurement is just one area of technical evolution which, through a constant process of problem solving and bright ideas, has been refined to the point we find ourselves today. Financial markets share many attributes with time measurement, not least because timing is a critical aspect of financial market operation and whereas time measurement had the Longitude Rewards, markets can be made more profitable with better time management.

With the development of the technologies like distributed ledgers, there is a sense that the operation of our markets is on the cusp of a widespread adoption that will have profound impacts. The impacts look likely to yield many positives, such as transparency, accuracy, certainty and of course reducing the time taken to undertake procedures that currently restrict the harmonisation and timeliness of settlement.

There is another consideration however, and that is the untangling of the regulatory landscape created to manage and observe markets. This landscape has added considerable complexity but the technology being discussed offers solutions to this too. To highlight this complexity, consider the overlap created where adherence to one regulation puts firms in a position where adherence to another regulation creates a conflict. We have seen examples of this when considering overlaps between BASEL, SFTR and SFDR for example. There are probably more examples but exploring those interference patterns are not the intention of this article. Instead, imagine a situation where a regulation can be modelled and compared to other regulations for any given financial activity. Results of such modelling would indicate whether there were overlaps, or perhaps the data being sought by regulation can be inferred. Any of you that have worked on pools of data will immediately recognise the benefits of standardisation and how elusive they remain.

This brings me to my first point, the challenges to be faced today are no different from the ones 30 years ago, in some cases the only thing that has changed is the volume and speed of the activity. We still reconcile transactions, which used to be done via 'call-back' is now done on vendor platforms, but in some cases we are still unclear who the counterparty may be (i.e. undisclosed lenders). The work being undertaken by ISLA seeks to find a consensus between market participants on both the data required and the function that should be applied to result in a given outcome. This is at the core of the Common Domain Model (**CDM**) which could be described as an encoding of Best Practice. The adoption of this standard approach has numerous benefits which fundamentally address the legacy challenges we are discuss today.

In more practical terms, our expectation is that firms will adopt the CDM within their architecture or operating model, which will improve both their communication internally and externally, with the expression of transaction life cycles then being more easily consumed. The medium in which that communication takes place is another story as it will likely introduce the widespread adoption of Distributed Ledger Technology (**DLT**) architecture. At that future point we could start developing processes that not only

improve the operation of markets but also the transparency for supervisory bodies. Those supervisory bodies will then be able to monitor live activity and many have already concluded this within discussions around the European Union's CSDR DLT pilot. Within that work, the question has been asked about the regulator being a Node on the DLT, which would better support their supervision of their respective markets. We also note the work undertaken by the FCA and Bank of England on Digital Regulatory Reporting (**DRR**), which used the CDM to validate regulatory text. This approach is also being investigated by the European Commission and ESMA in their current study on Unlocking the potential of machine readable and executable reporting (**MRER**).

Returning to the day-to-day activity within the scope of CSDR, over the past few years ISLA has been working with member firms on improving settlement efficiency through Best Practices. Across the financial markets where this penalty applies, the unsurprising cause of a penalty is insufficient securities, related cash or collateral. However, securities lending markets have a variety of specific use cases where settlement rates are influenced by relatively banal data points like Standard Settlement Instructions (SSI), choreography of collateral or delays in sale notifications. With a programmatic approach to the trade and collateral ecosphere, built on standard data models and functions, many of these issues will be eradicated. We could therefore imagine, with widespread adoption of the tools described here, a question being asked in the future of "what is a settlement fail?"

Although there may still be doubters about the digitised future state or the now widely accepted benefits it brings, with regulators from different significant jurisdictions working towards a digitised operating model, that debate may now be moot. Therefore, we should consider the destination as now set and so focus our collective energy on the journey. For those who think the timing still isn't right, consider a quote from Jack Welch (CEO of GE) "Change before you have to."

Adrian Dale
Head of Regulation, Digital & Market Practice, ISLA

Glossary

"**Basel**" means the Basel Framework, an amalgamated set of global prudential standards developed by the Basel Committee on Banking Supervision (BCBS).

"**CDM**" means a common domain model, a data representation of transaction features, events and processes, common to and used by a market or industry as a whole.

"**CRD**" means the Capital Requirements Directive IV (CRD IV), an EU legislative package that contains prudential rules for banks, building societies and investment firms, and is intended to implement the Basel III agreement in the EU.

"**CSDR**" means the Central Securities Depository Regulation: Regulation (EU) No 909/2014 of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories.

"**DLT**" means distributed ledger technology.

"**Dodd-Frank**" means CFTC reporting, covering the reporting of all OTC derivative trading activity, a response to the 2008 financial crisis

"**DRR**" means Digital Regulatory Reporting, the concept of reporting using machine readable code

"**EMIR**" means the European Market Infrastructure Regulation: Regulation (EU) No 648/2012 of 4 July 2012.

"**ESG**" means environmental, social, and governance.

"**FATCA**" means the Foreign Account Tax Compliance Act (2010) which requires all non-U.S. foreign financial institutions (FFIs) to search their records for customers with indicia of a connection to the U.S.

"**GMSLA**" means the Global Market Securities Lending Agreement, which for securities lending transacted under a title transfer arrangement may be based on the ISLA version published in 2000 or 2010 and for securities lending transacted using a pledge of collateral is based on the ISLA version published in 2010.

"**KYC**" means 'Know Your Client'.

"**SFDR**" means the Stainable Finance Disclosure Regulation: Regulation (EU) 2019/2088 of 27 November 2019.

"**SFTR**" means the Securities Financing Transactions Regulation: Regulation (EU) 2015/2365 of 25 November 2015.

"**MCA**" means Master Confirmation Agreement

"**POCs**" means proofs of concepts

"**TradFi**" means Traditional Finance

"**DeFi**" means Decentralised Finance

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About ISLA

The International Securities Lending Association (**ISLA**) is a leading non-profit industry association, representing the common interests of securities lending and financing market participants across Europe, Middle East and Africa. Its geographically diverse membership of over 190 firms includes institutional investors, asset managers, custodial banks, prime brokers and service providers.

Working closely with the industry, as well as national, regional, and global regulators and policy makers, ISLA advocates for, amongst other things, the importance of securities lending to the broader financial services industry. It supports both the Global Master Securities Lending Agreements (**GMSLA**) legal framework, including the Title Transfer and Securities Interest over Collateral variants, as well as the periodical enforceability and security enforcement across global jurisdictions.

Through member working groups, industry guidance, consultations and first-class events, ISLA plays a pivotal role in the creation and promotion of market best practices and processes, thought leadership, standards for legal frameworks, and securities lending guides and related documents.

About Linklaters

Linklaters is a leading global law firm, supporting and investing in the future of our clients wherever they do business. We combine legal expertise with a collaborative and innovative approach to help clients navigate constantly evolving markets and regulatory environments, pursuing opportunities and managing risk worldwide.

Our 5,400 people, of which almost half are lawyers, are located across 30 offices in 20 countries. In order to offer our clients the highest quality advice, our lawyers across three divisions; Corporate, Dispute Resolution and Finance and Projects, specialise in industry sectors as well as practice areas.

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