ISLA INTERNATIONAL SECURITIES LENDING ASSOCIATION

Linklaters

The Future of the Securities Lending Market Advancing the Digital Debate

ISLA White Paper in collaboration with Linklaters

Contents

Foreword

De facto standards are a phenomenon within technology development that are critical to widespread adoption and the introduction of paradigm shifts.

Think about the following examples:

> The two portable visual media wars: VHS vs Betamax and Blu-Ray vs HD DVD. In this case the more commercially attractive (with perhaps a little help from the PlayStation 3 in Blu-ray's case[1]) won out.

> The use of paper over vellum and parchment emerged in the 15th century, because the ink stuck better from the new moveable typesets, and ultimately it was cheaper.[2]

> The QWERTY keyboard, arising from the need to prevent jams in typewriters, was so ubiquitous that attempts to replace the keyboard with more efficient layouts for computers failed.[3]

> Microsoft Windows became the standard operating system for PCs, with its WSYISWG[4] GUI, increasing usability for the non-technical masses and leading to an explosion of the home PC.

> The rise of the USB cable as the ultimate inter-device connection,[5] still more reliable and hardy than a wireless connection, though 5G could change that in the near future.

In all these cases there are common themes leading to adoption:

1. **Price Point** must be acceptable to the wider market (e.g. VHS);
2. **A Killer Application** must be present (e.g. news media/cheap books, in the case of the printing press);
3. **Network Effects** from usage (e.g. USB ports in so many devices); and
4. **Ease of Use** (QWERTY was just more comfortable to trained typists).

Note that I have not mentioned quality; indeed some of these standards are not the most efficient or offer the best quality output but achieve the majority of what a consumer would like at a given price point and with ease of use that is acceptable to the user. It should also be noted that virtually all of these standards are at risk of being largely replaced in the next 10 years, if they haven't been already. That doesn't mean they were/are not useful; in fact they have been world-changing, but the next generation of technology is about to eclipse them. Importantly, in many cases that next level of technology retains the good aspects of the previous technology by building new standards on old, e.g., Kindles are popular in part because they replicate the visual softness of real ink and paper on the eyes.

I do not mention these technologies as some personal trip into nostalgia, but to draw a parallel between these familiar consumer concepts and the financial services industry. There exist some de facto standards already, primarily around settlement and payments – concepts that directly impact the wider retail market. For example, SWIFT, which is undergoing its own standard revolution to ISO20022 format, is the default format for interbank communication of payments and settlement instructions.

The global markets world has fewer, if any, standards of this nature, which describe transactions and lifecycle events in a common, ubiquitous, and universally recognised way. Indeed, even everyday Master Agreement contractual negotiations are very rarely signed at the house standard template stage, but undergo a period of bespoke negotiation, often resulting in the same business outcomes in a subtly different set of legalese. Lack of standardisation in documentation and transaction lifecycles, including across asset classes, will prevent this industry from correctly and fully embracing the current digital revolution that is upon us.

"Digital Transformation" is a term that has been heavily used, certainly over the last year, accelerating as it has through the pandemic, mainly in the remote communication and collaboration spheres. Zoom and Microsoft Teams have become household names and are arguably beating Webex and others as the de facto standard of video communication.[6] However, the initial speed of adoption was tempered by the need for firms to be able to trust in the security of the media channel they choose amongst other things. There was no central body to provide guidance to firms on what, how or when to use these channels.

1 https://en.wikipedia.org/wiki/High-definition_optical_disc_format_war#:~:text=The%20format%20war's%20resolution%20in,PlayStation%203%20video%20game%20console
2 https://worcestercathedrallibrary.wordpress.com/2015/12/14/vellum-vs-paper-the-battle-for-longevity/
3 https://computer.howstuffworks.com/question458.htm
4 What you see is what you get – the familiar graphical user interface (GUI) in which you click on icons to start applications rather than having to type code
5 https://www.wired.co.uk/article/usb-history
6 https://www.forbes.com/sites/rogerdooley/2020/09/30/how-zoom-conquered-video-conferencing/

It is critical that within the securities lending industry any standards we develop are implemented inside an appropriate regulatory and business framework that is also secure. ISLA, along with ISDA and ICMA for their respective markets, are able to support a wide-scale, industry-led forum, for development, discussion, and proliferation of the standards this industry desperately needs in order to be able to continue to compete in a world of shrinking margins, disruptive technology and tighter regulation. Trade Associations, with their mandate to support the industry as a whole, can ensure that upcoming trends, whether it be the ESG agenda, SFDR or a raft of digital regulation, is incorporated into the encoding of best practice developed in collaboration with their members. It has been recognised that close collaboration between the aforementioned associations is also key to delivering front-to-back, cross-asset benefit to our members collectively.

The Common Domain Model ("**CDM**") and Clause Library & Taxonomy initiatives explored in this paper represent the development of those needed standards for the securities lending market. This standard codification allows for our members to compete on products, not on data standards, and financial innovation, not infrastructure. Whilst inevitably, advancements in crypto assets, distributed ledger technology ("**DLT**"), and other FinTech initiatives will likely lead to a complete change in business processes and the lending market as a whole in the next two to five years, I fundamentally believe that the development of these standards now will lead to an easier path to adoption of those technologies. The standards will form the basis of the smart contracts that will become the normal way of doing business, allowing firms to understand easily and quickly what their legal and contractual exposures represent. Regulators will be able to release reporting regulation in the form of code that uses the standards to pull data they require, reducing anomalies between firms. Additionally, standards should allow firms to use more than one DLT or network simultaneously and with ease – plug and play technology at its best – until the de facto DLT standard itself emerges.

The future of capital market digital standards is here and it's very exciting!

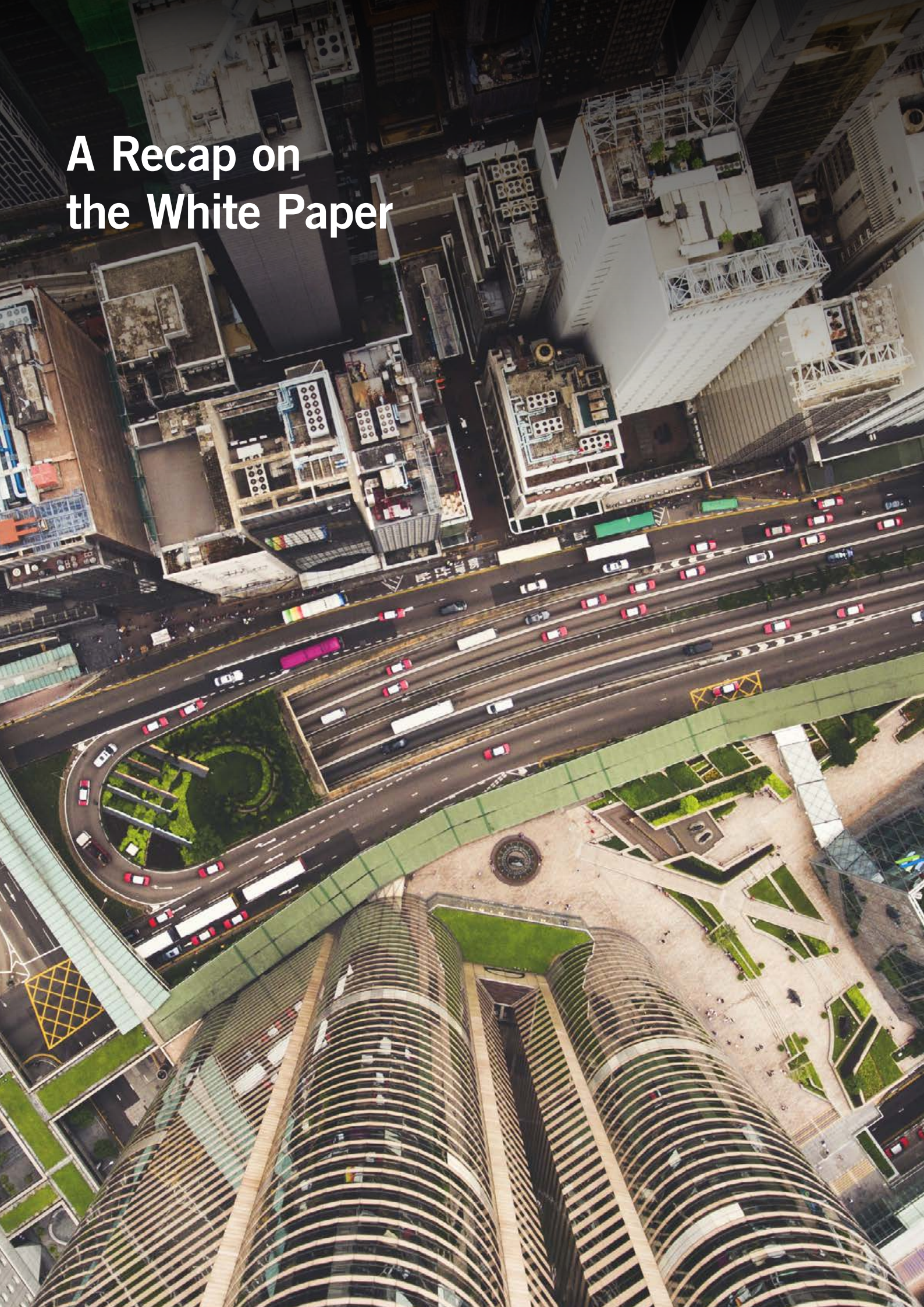
David Shone
Director, Market Infrastructure & Technology
ISLA

THIS IS AN INITIATIVE BEING DRIVEN BY THE MARKET FOR THE MARKET, AND SHOULD NOT BE IGNORED, BUT WELCOMED[7]

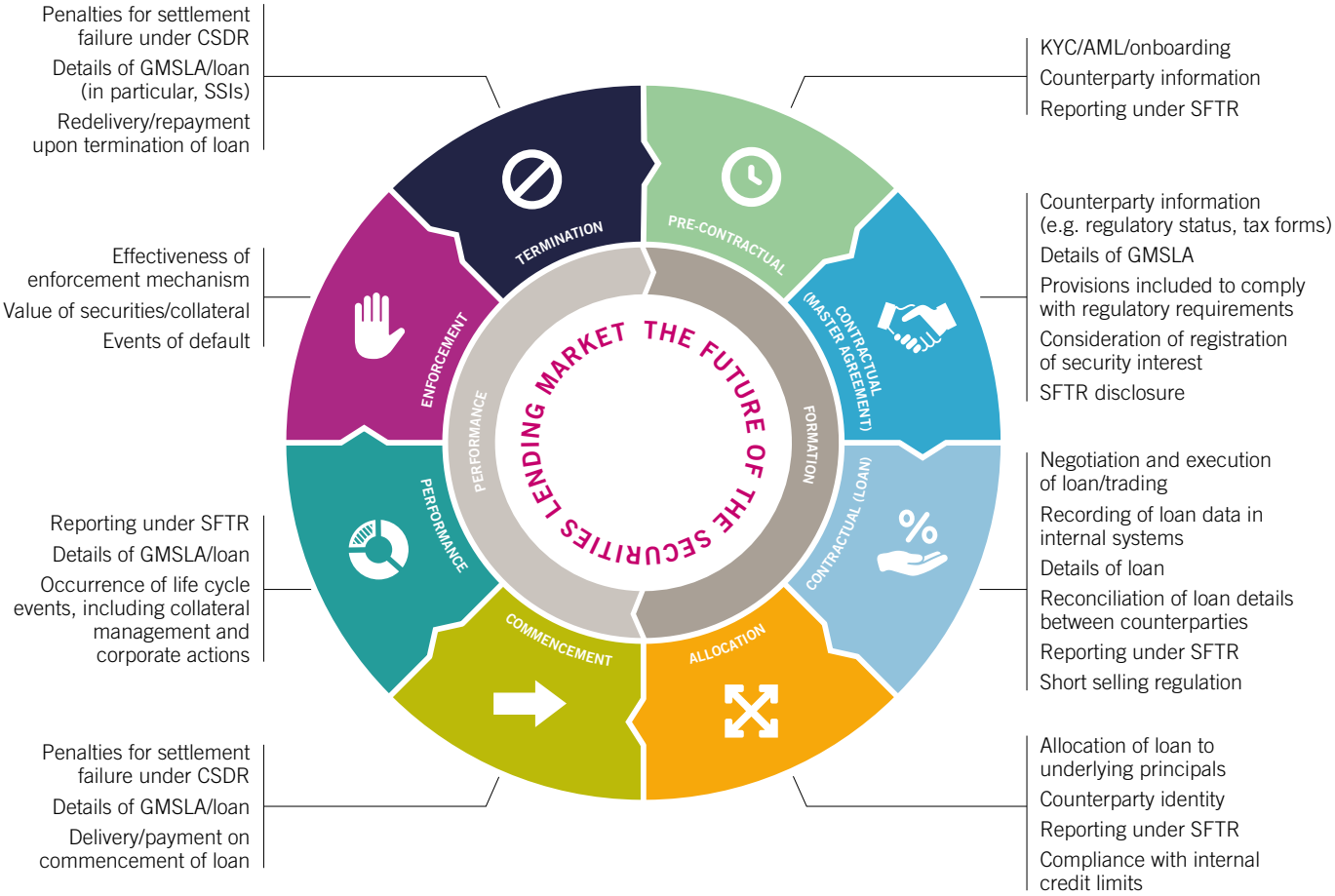
Chris Rayner

7 See more from Chris Rayner in the video of the CDM Showcase held on 1 December 2020: https://www.islaemea.org/videos-and-podcasts/#

A Recap on the White Paper



In September 2019, ISLA and Linklaters LLP published a white paper setting out an "Agenda for Change" (the "**White Paper**"). This identified a vision for the future of the securities lending industry, analysing the key stages in the lifecycle of a securities lending relationship set out below, as well as: (i) key data required and produced in each stage; and (ii) the corresponding regulatory/legal requirements and processes. Since then, work has been underway across the industry to turn parts of that vision into reality. In this paper, contributors from stakeholder firms across the securities lending market reflect on the progress made since the publication of the White Paper and consider the road ahead.



Introductory Remarks

from Philip Winter (Citigroup Global Markets Limited), as current Chair of the ISLA Digital Steering Group

As the current Chair of the ISLA Digital Steering Group (the "**Group**"), I have been asked by ISLA to contribute a few remarks regarding the Group.[8]

As its membership knows, ISLA has been exploring the potential of digitalisation within the securities lending market for several years and it was approximately 18 months ago that ISLA and Linklaters LLP published the White Paper. To further focus on this important subject, the Group was established in May 2020 to consider and take forward the topics that were discussed in the White Paper, including related regulatory consultations, issuing discussion papers, and the concept and potential development of a CDM to aid digitalisation. Furthermore, aided by the recent addition of David Shone as Director of Market Infrastructure and Technology for ISLA, the Group has a broad mandate to consider potential developments relating to the digital landscape within the securities lending market. The Group is a forum for ISLA's members to discuss all aspects of technology including AI, machine learning and blockchain, and encourages all interested persons to raise points, questions, and potential solutions with the Group.

As of the end of 2020, the Group's numbers have increased[9] to well in excess of 100 participants from over 50 firms, including 20 primes/borrowers, 15 lenders, 9 technology firms, 5 legal firms, 2 trade associations and a tri-party agent. Within the Group there is a wide range of roles and expertise, with legal, technology, product development, trading, and operations roles all represented. In under a year, two sub-groups working within the Group have also been set up: the CDM Working Group ("**CDM WG**") and the Clause Library & Taxonomy Working Group ("**CLT WG**"). At the time of writing, these sub-groups are also expanding their membership and at last count the CDM WG had 38 attendees from 26 different firms and the CLT WG had 83 attendees from 39 different firms. The two sub-groups represent participation by a wide variety of ISLA's membership and they bring together subject matter knowledge in technology, legal frameworks, and operations.

Regarding the CLT WG, while it is certain that firms will continue to require some customisation and negotiation of contractual provisions, it also seems clear that the potential adoption within the securities lending market of new digital technology could be severely hampered without a certain level of standardisation of contractual arrangements across ISLA documentation, and, in particular, the GMSLA. The CLT WG has been established to enable the required level of customisation to continue in a digital landscape whilst creating an opportunity to make the negotiation process more streamlined and efficient.

8 The views expressed here are mine and do not necessarily represent Citi's views.

9 ISLA Digital Steering Group Minutes January 2021.

If you are an ISLA member and interested in joining the ISLA Digital Steering Group, the Clause Library & Taxonomy Subgroup, or the CDM Working Group please sign up here: https://www.islaemea.org/working-groups/

For non-members who wish to become a member please go here: https://www.islaemea.org/become-a-member/.

Regarding the CDM WG, the benefits of a common digital representation of events and actions in the lifecycle of a securities lending transaction have been acknowledged within the securities lending market, and the success of the initial CDM pilot in 2020 was a testament to the involvement of a number of different firms (including technology companies and vendors) in the CDM WG at that time. Without that collaboration and common appreciation, it would be challenging to make progress and receive wide adoption.

Concurrently, another critical milestone was the joint commitment last summer from eight trade associations, including ISLA, ISDA and ICMA, to work in alignment in defining and promoting development across their membership in three core areas: Standardisation, Digitisation and Distribution.[10] Indeed, continued co-ordination with the other trade associations will become increasingly important over the next couple of years as the CDM concept matures and potentially rolls out across different financial product types. It is clear that cross-product standardisation and interoperability will be the key to the success of digitalisation.

So, looking at the year ahead, the Group is to continue its focus on extending the CDM and completion of the Clause Library & Taxonomy for the core GMSLA. In addition, the Group discussed a number of regulatory digital consultations last year, including the European Commission consultation on "a new digital finance strategy for Europe/FinTech action plan"[11] and the Bank of England's "Transforming data collection from the UK financial sector".[12] Looking forward, a digital regulation agenda and alignment is likely to be an increasing focus for the Group as well. Beyond that, the role, for example, of distributed ledger technology, blockchain, and the tokenisation of collateral are all second-order opportunities that could exist for the securities lending market once the foundations of digital standardisation have been laid.

The securities lending market has been evolving at considerable speed in recent years, with the majority of transactions now involving a high level of automation. The level of reporting and post-trade capabilities has also moved at pace in the last two to three years. Market participants and firms have benefited from these steps, allowing firms to handle higher volumes with increased efficiencies. However, the digitalisation journey is really just beginning and as an industry we are starting to see a clearer path forward, towards the true potential that digitalisation can provide. My experience of being Chair of the Group, so far, is that there is an appetite for change and a willingness to collaborate and embrace and work towards the needed level of digital standardisation.

Philip Winter
Chair
ISLA Digital Steering Group

10 https://www.islaemea.org/news/joint-associations-digital-future-letter/

11 https://ec.europa.eu/info/consultations/finance-2020-digital-finance-strategy_en

12 https://www.bankofengland.co.uk/paper/2020/transforming-data-collection-from-the-uk-financial-sector

Clause Library & Taxonomy

The drive to automation, with the efficiencies and increased capabilities offered by its adoption, has immeasurable benefits for the securities lending market. However, the pace of change continues to be constrained by the "old school" analogue approach to documentation – the quintessential contractual obligations representing securities financing transactions and the basis of the relationships between market participants.

Since the White Paper was published some 18 months ago, a crucial step has been taken, enabling the digitalisation of the GMSLA architecture through the development of a Clause Library & Taxonomy, and the onward benefits through optimisation of resources such as capital, collateral and liquidity, operational management and regulatory reporting. The successful proof of concept (running from September to December 2020) has been followed by the initiation of a project to complete the Clause Library & Taxonomy for the remaining GMSLA documentation clauses in 2021.[13]

It is all too easy to get carried away with the hype of AI and machine learning, negotiation platforms and LegalTech tooling that supposedly mean that the contract lifecycle can already be fully automated, with minimal dependence on documentation and legal departments. However, reality has been shown to quickly bite, reducing the promise to little more than simple word searches and first drafts of documentation that still require significant manual review, and a data-view of what has been agreed between parties remains sadly elusive or unusable by those impacted by the contractual terms.

The GMSLA Clause Library & Taxonomy is the foundational springboard to unlock and accelerate the path towards the re-imagined future-state industry operating model. It is the industry-agreed legal agreement data standard to unlock the barriers to the digital vision of the future by focusing on three key areas:

1. Clause definitions;
2. Clause variants; and
3. Model clause wording.

The clause definitions provide a common understanding of what is meant by a particular clause, what its scope is, and, often more importantly, what it is not. This can be critical in areas such as rights of use of collateral that might be addressed across multiple agreement clauses.

The clause taxonomy enumerates, by business outcomes, the clause variants in respect of each of the (now defined) clauses in the agreement. This allows a common way of framing the results of contractual wording; the key to managing the business processes that flow from contractual wording. Automation of those business processes can be linked to the individual agreement and the relevant clause. Resource optimisation, operational management, and regulatory reporting no longer need to look to the analogue form of documentation but can directly refer to the variants and variables of clauses defined in the Clause Library & Taxonomy. We have a means of training AI systems to assist us to review legacy documentation portfolios in a consistent manner; however, a technically correct but inconsistent teacher is problematic in the digital world, without the human intuition to understand the nuances of the intended business outcome. This will, in due course, address the false dawn of LegalTech tools that many are experiencing. Data analytics of the contractual obligations contained in our documentation portfolios will follow.

The unfortunate variations and house styles of agreement drafting that have emerged over the last two decades have served little purpose when they achieve the same business outcome. Whilst bespoke wording may be needed in certain circumstances, when used without real reason it creates a number of problems.

The introduction of even the most minor variation in a clause significantly complicates and undermines the move towards greater automation. The Clause Library & Taxonomy, built for each of the clause variants needed by the industry going forward, provides model wording to achieve the intended business outcome in a manner that is standardised in form – across where it is positioned in the Schedule, its style and wording. This stops the bleeding, creating an environment where LegalTech can better flourish and empower the industry.

We are, however, only at the start of this journey by laying down these foundational building blocks, having only addressed seven clauses of the circa 50 clauses present in the GMSLA documentation. A formal legal agreement data model also needs to be developed, with both this and the events, conditions and rights detailed in the clauses to be supported by representation in the CDM. Thoughtful and continued governance of the design through to implementation will lead to consistency across documentation and software platforms (such as collateral management systems reliant on documentation terms), whilst ensuring the right balance is achieved between flexibility, and the consistency and integrity of the solution. Adoption is key to help drive the network effect benefits to assist the industry as a whole, requiring engagement from firms for us to embrace the digital vision set out in the White Paper. **It is within the gift of the membership to unlock the potential of automation, but that opportunity is reliant on our willingness to embrace change.**

Akber Datoo
CEO and Founder
D2 Legal Technology

13 https://www.islaemea.org/regulation-and-policy/digital-fintech/document-digitisation/

The Delivery of a Digital Future through an Electronic Documentation Platform

Change was the core theme of the White Paper published by ISLA and Linklaters in September 2019, announcing "An Agenda for Change". No-one, however, could have predicted the profound change that lay in the months ahead, with the onset of the global pandemic. As in many other industries, the securities lending market has very suddenly had to come to terms with the immediate impact of a physically distanced world. Working practices have changed and, in many cases, it seems likely to be irreversible.[14] For legal processes in highly complex and interlinked financial markets, this change has underscored the relative ineffectiveness of the paper-based contract to meet today's needs for seamless user experience, automation, structured data and system interoperability.

The White Paper broke down the securities lending market into eight stages: Pre-Contractual, Contractual (Master Agreement), Contractual (Loan), Allocation, Commencement, Performance, Enforcement and Termination. For the Contractual (Master Agreement) stage, the paper contemplated further standardisation of the GMSLA, which has led to ISLA's Clause Library & Taxonomy Project (discussed in more detail in Clause Library and Taxonomy) as well as a vision that saw negotiation and execution of legal documentation taking place on an electronic platform. What is even clearer today is that an electronic documentation platform is at the core of the delivery of the digital future the industry is calling for.[15]

The key features of a documentation platform and the benefits it generates for users tracks the four main stages of the contracting process:

1. Generate
Providing a simple interface for selecting and drafting clauses (and variants of them) based on the ISLA Clause Library & Taxonomy to create common starting places (precedents) for negotiations while still allowing tailoring for a particular institution or negotiation, as necessary.

A documentation platform cuts out the need for writing out or copying text from elsewhere and will reduce time spent and the risk posed by unintentional deviations when generating draft documents.

2. Negotiate
Allowing entities to deliver and negotiate multiple documents to one or more counterparties simultaneously and automatically reconcile both standard elections and bespoke provisions exchanged, flag the differences and incorporate any approvals needed.

Using a documentation platform accessible by multiple members (and teams) in an institution which is flexible to allow the institution's workflow (including approvals) to be built in will allow easy collaboration between colleagues. It will also allow for real-time tracking of issues lists with counterparties. The combination streamlines the negotiation process and produces further time efficiencies.

3. Execute
Allowing entities to manage and log approvals needed and automatically generate execution versions and execute the document.

Using a documentation platform for approving the final form and then managing the execution also promotes easy collaboration and an easy execution process, particularly with e-signing.

4. Data Capture
Using a documentation platform means that an enormous amount of data can be automatically captured at source, rather than having to be transposed or recorded manually. When it comes to legal terms, this can include which variant of a standard clause has been used, the number of occasions a deviation from a default template position is required and a cross-relationship analysis as to the range of documents in which a particular clause appears. This digital contractual data can be operationalised through the use of APIs for the wider benefit of the business.

In addition, by providing a complete record of user activity, approvals and negotiation history, a documentation platform creates an audit pack. Access to management data in a consistent and automated way, in realtime, will streamline internal reporting and management.

The accurate capture of electronic data at the point of creation that can be accessed by participants (legal and wider) in realtime, and fed without further human input into automated processes and systems is another key benefit of an electronic documentation platform.

14 At the end of January 2021, 36% of adults in the UK were working from home exclusively - Coronavirus and the social impacts on behaviours during different lockdown periods, Great Britain - Office for National Statistics (ons.gov.uk)

15 Joint Association Letter on a Digital Future for Financial Markets, 29 July 2020: https://www.islaemea.org/news/joint-associations-digital-future-letter/

This final key feature, **Data Capture**, also flows into the other stages of the securities lending market (Commencement, Performance, Enforcement and Termination) which all require inputs from the relationship (GMSLA) level. This amplifies the benefits of a documentation platform. The electronic legal and commercial data that is captured can be translated into a CDM-compatible form so that it can flow into trading, operational and risk management systems benefiting the Commencement and Performance stage of the securities lending market transaction cycle (see further discussion of CDM in Retrospective & Forward Look on CDM Development, The Future of the CDM and CDM: The Not-So-Secret Ingredient). This is not currently possible without human interaction with paper contracts. Storing data from completed negotiations in a standardised digital form means it can be pulled for a variety of uses. This could help with future regulatory change projects (the Enforcement stage) or answering questions deriving from market conditions (the Termination stage).

The delivery of this change need not require significant work or time because Clause Library & Taxonomy platform technology is already available. The derivatives market recently deployed the output of its clause library project for the ISDA Master Agreement onto ISDA Create,[16] part of the CreateIQ documentation platform which enables users to generate and negotiate a broad range of documents in one place.

The use of a documentation platform for the GMSLA and other securities lending documents is therefore a very achievable goal and represents a significant milestone on the road to the digital future of the securities lending market.

Deepak Sitlani
Partner
Linklaters LLP

IT IS CRITICAL AS AN INDUSTRY THAT WE ARE LEADERS IN DIGITALISATION, NOT FOLLOWERS[17]

Andy Dyson

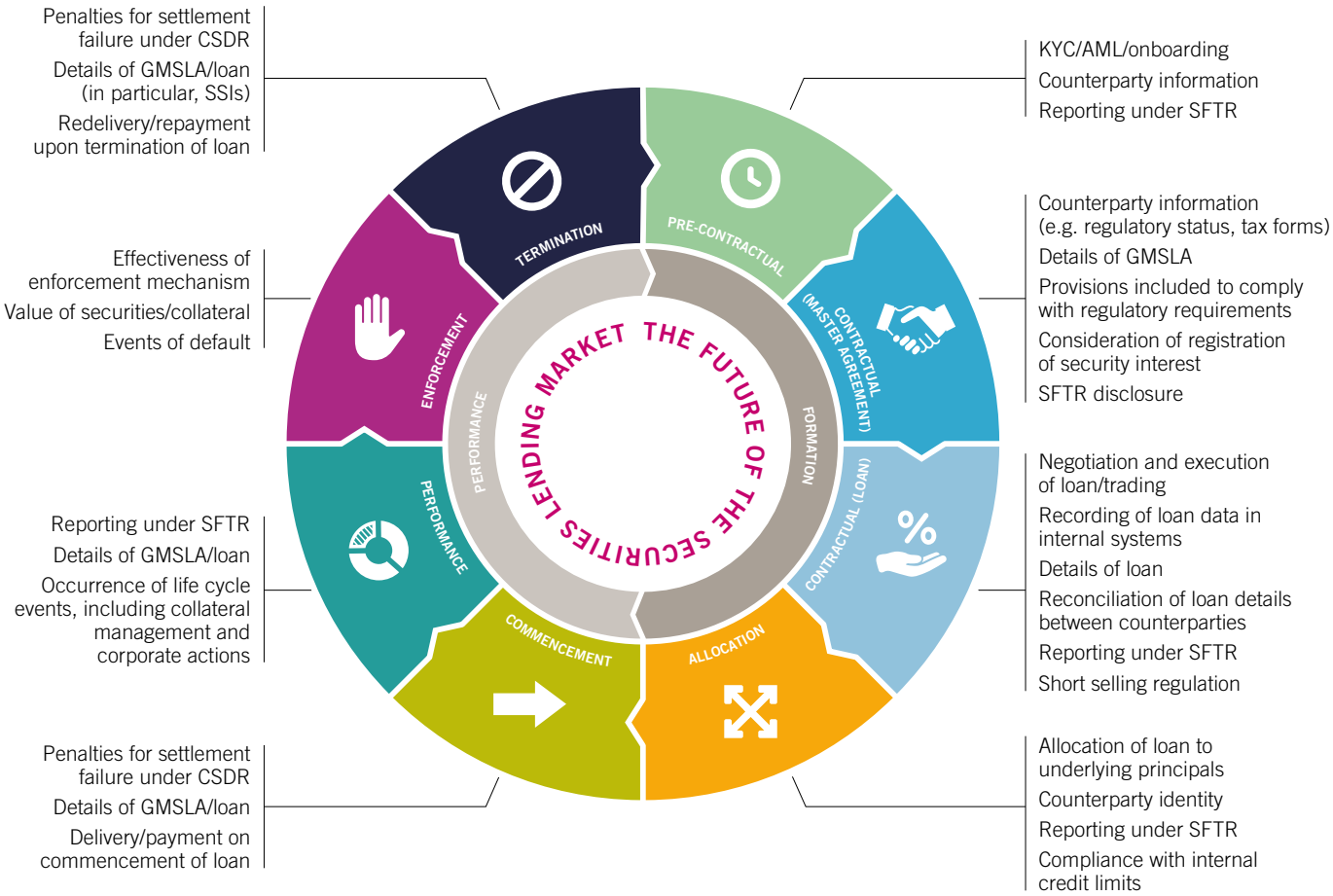
16 https://www.isda.org/2021/01/21/isda-master-agreement-and-isda-clause-library-added-to-isda-create/

17 See more from Andy Dyson in the video of the CDM Showcase held on 1 December 2020: https://www.islaemea.org/videos-and-podcasts/#

Retrospective & Forward Look on CDM Development

In 2019, the White Paper identified that the securities lending market was on a potentially unsustainable trajectory. Increasing volume and complexity in the market was bringing increased cost and risk. Action taken to date on standardised legal frameworks, industry-led guides and best practices had harmonised certain areas. However, inefficiencies and fragmentation remained. The paper therefore laid out a vision for an automated, streamlined and interconnected market leveraging a CDM to achieve a common data representation as the foundation for the development of solutions that bring scale and efficiency to future-proof the market.

During the second half of 2020, a proof-of-concept development of the CDM, based on a ring-fenced use case specific to securities lending, was undertaken. This extension of the ISDA CDM demonstrated how the vision laid out in the White Paper could be achieved to solve real-life problem statements associated with key stages in the lifecycle of a securities lending transaction.



The proof-of-concept focused on three stages of the lifecycle: (1) Contractual (Loan); (2) Allocation; and (3) Commencement. Issues that market participants currently face were outlined in the White Paper. These issues, as well as ISLA CDM Working Group participation, informed design decisions with the following results.

Stage 1: Contractual (Loan) – Execution of Loan

Two key deliverables facilitated the delivery of this core component. Firstly, the product model in the ISDA CDM was extended to represent the main features of a securities lending transaction, following the key design principle of the CDM of having a composable product model assembled with reusable components. In practice, this meant that many existing concepts and elements could be used in the design, demonstrating that convergence of data models across the derivatives and securities finance markets is a realistic, forward-looking goal.

With the product model defined, the CDM event model was then used to define the execution of a security loan. The event model describes how a product, once defined, can be associated with other key transaction information such as counterparties, quantities, prices and a UTI.

With a common process model and data model defined, a strategic pathway can now be envisaged for resolving a number of the issues raised in the White Paper. As stated in the paper, a specified data standard in a prescribed data format has the potential to significantly reduce the risk of failing to comply with regulatory reporting requirements. It can also reduce substantial costs taken within institutions associated with the manual actions required to resolve trade matching exceptions.

The true potential in this piece of the lifecycle will be the integration of the work done on the Clause Library & Taxonomy in digital form. This will allow for the automation of lifecycle events based on actual legally executed documentation, reducing operational risk at times of stress in the market.

Stage 2: Allocation – Of Loan to Underlying Principals

The proof-of-concept also defined an approach for standardising data formats and standards required for notifying borrowers once an agent lender has allocated a transaction. Utilising a standard set of instructions, the CDM event model was used to define a functional approach for processing allocations. The required set of information is clearly defined and can be used by the agent lender to process allocations or as an output to pass on to the borrower.

Allocation, and notifying the borrower of the details of the allocation on a timely basis, has been identified as a prerequisite for timely reporting as well as reducing operational, liquidity and legal risks.

Stage 3: Commencement – Delivery/Payment on Commencement of Loan

Finally, the proof-of-concept defined an approach for automating delivery flows based on standardised data captured at the execution of the loan. The product and event model defined in the first stage of the proof-of-concept captures the necessary information required to deliver the loaned securities. A functional approach was defined in the CDM model to extract this information and create an instruction for the transfer required at commencement. The settlement of this transfer can then be linked to the securities lending transaction to create the transparency required on the stages of the lifecycle of the loan.

Showcase Event

The progress achieved in the first phase of the development of the CDM for the securities lending market was demonstrated to members at the ISLA CDM Showcase event on 4 December 2020. A practical demonstration of the three components described above was achieved through the collaboration of three vendors, EquiLend, FIS, and Pirum. Through execution of a security loan on EquiLend's NGT platform, passing it on for allocation on FIS' GlobalOne platform, and finally reconciliation on Pirum's Core Service, all utilising the CDM data standard. The event demonstrated that the CDM is a standard that industry participants can adopt without needing significant technology investment, and one that promotes standardisation and interoperability.

Call to Action

Having demonstrated in a short period of time that the CDM is a realistic, deliverable initiative for the securities lending industry, ISLA plans to continue investing through a second phase that will deliver a minimum viable product for adoption by market participants. ISLA Digital Steering Group members have also indicated that they are committed to investing in the process.[18]

The next phase of the initiative looks to extend the product model and event model further to support additional formation and performance-related security lending lifecycle events such as re-allocation, termination and re-delivery and billing.

Conclusion

The White Paper described an ambitious vision for the securities lending market with the development of the CDM at the core of a strategy to bring automation to a market where processes and systems are proving increasingly cost and time intensive. A proof-of-concept has demonstrated this ambitious vision is deliverable within the timelines proposed, and that the approach can bring the standardisation and automation required to deliver real business benefits and drive change around both operating and cost models.

Nigel Cobb
Senior Data Modeller
REGNOSYS

What is achievable in the next 2-5 years?

Steps the industry could take in order to yield significant benefits over the next two to five years could include:

> Creation of an open-source community governed by the trade associations, allowing members to contribute useful extensions

> Development of CDM-native technology platforms connecting front-to back lifecycle events and resulting in regulatory reporting

18 ISLA Digital Steering Group Survey November 2020: 53% of participants indicated that a budget for further investment in the CDM was already secured, or that a compelling case for investment existed.

The Future of the CDM

Some things in life always generate split opinions. Whether you love it or hate it, **the CDM is earning its place in the market as our digital requirements evolve**. The interest generated in 2020 by the ISLA pilot and ISLA CDM Showcase has fuelled the fire, but what exactly is the CDM and what can it do for your business? Will we see it being adopted across the industry and, if so, when?

The CDM provides a standardised way to describe financial transactions and products. With this standardisation comes a myriad of benefits including reduced trading risks, reduced breaks, consistent validation, easier interfacing, and increased automation; all of which lead to reduced costs.

Understanding CDM

Originally created for ISDA, the CDM is being actively extended by ISLA and its members to include securities lending functionality. Indeed, the groundwork has already been laid for ISLA to model the basic lifecycle of a stock loan through the CDM this year. The evolution of the CDM is not set to stop there though. High-level discussions have already started about the prospect of modelling repo products. It is encouraging to see the industry associations working in tandem on this initiative and ICMA has also joined the party and others, no doubt, will also join in time. Broad and consistent standards adoption will ultimately yield savings and efficiency gains across markets.

Lowering Costs with CDM

As the model keeps improving, so do the benefits it can offer. We have already seen how much effort was involved in the ongoing SFTR and CSDR initiatives and the cost impacts across the industry are significant in a time of tightening spreads and declining revenues. Had the CDM already been around and adopted, the effort and cost of SFTR and CSDR would have been significantly lower. This has been demonstrated by ISDA's use of the CDM as a tool to help to validate new regulations. Adopting the CDM will make subsequent regulatory pushes for transparency less onerous. Consistent canonical data structures and processes will reduce friction within firms as well as supporting external flows. As a software vendor, FIS and our clients should feel the benefits very quickly, as it will reduce the amount of interface work that we need to undertake and assist in the consolidation of data across silos.

Another key benefit would be the standardisation within the CDM of collateral schedules. This would greatly improve the scope for optimisation of inventory and collateral across cleared, tri-party and bilateral relationships. Overall, the CDM will inevitably lower costs and help remove redundant processes such as reconciliations and break resolutions, fails management and so forth. The structures defined by the CDM will also help facilitate the use of blockchain in securities finance, as DLT relies upon a backbone of consistent and standardised data and processes that are needed for smart contracts. It would be rather more problematic for the industry to move to a DLT-based future without the common starting point of the CDM.

Since the ISLA CDM Showcase, we have engaged with a number of existing and prospective clients about the potential of the CDM. Overall, we have received positive feedback. The prevailing view is supportive, with the caveat that many see little scope for first-mover advantage. This is an example where the industry will need to come together to drive progress. Indeed, a few are sceptical about whether the CDM will see the widespread adoption that it promises. "It is not in bankers' DNA to play nicely together" was a quote we received that sums up the issue very well, and with good reason.

A Look Ahead

Protecting competitive advantage has always been at the forefront of every market participant's mind, so historically the sharing of data formats or standards has been somewhat taboo. As we move towards more automated trading and heavier regulatory requirements, the ability to share data is rapidly becoming mandatory rather than auxiliary.

Just as we have seen the market evolve to accommodate these requirements, will we also see an evolution of "bankers' DNA"? We think the ISLA CDM pilot has proved that we already have. A decade ago, you would have struggled to put together a working group with such a broad cross-section of market players, especially when the goal was to create something so altruistic.

Realistically, the marketplace may not see any tangible benefit from the CDM for a year or two.

Expectations for the CDM are running high, but it will take time to model the complexities of our business. The three-year head start that we have due to the work already done by ISDA means that initial forays into the usage of the CDM can be undertaken internally, and here at FIS we are prioritising our approach to implementation and utilisation of the model for the future.

It is a long-term investment, and one that we are happy to make.

Chris Rayner
Software Engineer Specialist
FIS Global

Regulatory Data Collection

Strong and secure data foundations are a prerequisite for all successful organisations. Financial services are no different. For firms, and increasingly consumers, having trusted data readily available helps save time, enables better choices and achieves goals. It can therefore support the development of a trusted market and financial system.

For the Bank and PRA, data collections from firms are a critical ingredient of those data foundations. Without high-quality collections, the ability to identify risks and harms, design good policy, and take action in a timely and targeted fashion is severely affected.

But regulators, and the systems we oversee, are changing. Technological advances and automation mean that more data than ever before is being created and captured. **Simultaneously, participants across the financial system, including regulatory authorities, expect more high-quality, timely data to guide them in their decision making.**

These changes have put strains on the current data collection process, and on the current data foundations within the financial sector. They have increased costs, highlighted inefficiencies, and meant systems and processes are being used in ways their designers never envisioned.

Our Data Collection Review

To decide how to respond to these changes, throughout 2020, the Bank carried out a review of data collection. The review's aim was to shape the evolution of reporting over the next 5-10 years. The review took place via more than 260 internal and external events, with over 130 organisations, including ISLA and many of its members, and through receipt and review of over 60 written responses to a discussion paper the Bank published.[19]

The review found that, to transform data collection, the industry needs to transform how it manages data, and the Bank needs to transform how it collects data. In particular, the review identified three key reforms that need to take place:

1. **Defining and adopting common data standards** that identify and describe data in a consistent way throughout the financial sector. These common standards should be open and accessible for use by all who need them, and will bring benefits well beyond reporting.
2. **Modernising reporting instructions to improve how reporting instructions** are written, interpreted and implemented. There are a range of steps this will involve, from setting up better Q&A processes to potentially rewriting instructions as code.
3. **Integrating reporting** to move to a more streamlined, efficient approach to data collection. This reform includes making data collection more consistent across domains, sectors and jurisdictions, and designing each step in the data collection process with the end-to-end process in mind.

Delivering Common Data Standards

Perhaps the most valuable reform to deliver is common data standards. That is because common data standards can strengthen the data foundations of the whole financial sector, and not just improve reporting.

The review uncovered four key needs for the development and adoption of common data standards. Firstly, that standards should be defined at the most granular level possible. For financial services, the core of financial data are financial contracts and systems that manage and carry out processes defined by those contracts. These core contract standards can provide the building blocks of further standards, such as standards for risk data. Secondly, that detailed standards development requires a lot of industry expertise. Regulators alone are not equipped to develop such standards. Thirdly, that the financial sector needs international standards – not UK standards. UK-based entities in the financial sector own and interact with foreign entities and vice versa.

These first three needs suggest industry involvement will be crucial to the delivery of common data standards. And finally, perhaps the biggest challenge to delivering data standards is adoption. The benefit of standards is likely to depend a lot on how widely they are used and ensuring high upfront costs can be overcome. Therefore, to meet this final need, the Bank intends to play a key role in standards adoption.

Review Next Steps

To make progress on delivering common data standards, and other reforms, the Bank and FCA are setting up a transformation programme. That programme will be run in collaboration with the industry. The programme will kick-off in the second quarter of this year. There is an invite to any party with an interest in transforming data collection to email: datacollectionDP@bankofengland.co.uk to find out how to get involved.

Alongside the transformation programme, there is a need to work with other initiatives with common cause. Some of these initiatives will be orchestrated by the Bank, like the Post-Trade Practitioner's panel.[20] But other initiatives, like the CDM project, will be industry-led. Regardless of who leads them, these programmes, and the reforms they hope to deliver, will build some of the soft infrastructure for the digital age, with value throughout the financial system.

The Bank published a Data Collection Transformation Plan[21] on 23 February 2021 outlining the vision and next steps for the review.

Angus Moir
Senior Manager,
Data Collection Transformation
Bank of England

19 https://www.bankofengland.co.uk/paper/2020/transforming-data-collection-from-the-uk-financial-sector

20 https://www.bankofengland.co.uk/report/2020/the-future-of-post-trade

21 https://www.bankofengland.co.uk/paper/2021/transforming-data-collection-from-the-uk-financial-sector-a-plan-for-2021-and-beyond

CDM: The Not-So-Secret Ingredient

The CDM has the potential to be transformational across many of the existing processes within lenders, agents and borrowers, especially when combined with new product offerings. It is akin to the real-time translation products being rolled out by a number of large and small technology companies.[22] Two people can connect, converse, disagree, debate and communicate even when the words leaving the mouths of the individuals are in completely different languages. Some may have the view that the CDM should be the common language and, within the analogy above, require all languages to be replaced by a single, universally spoken one. However, the CDM (certainly in its earlier stages) in its integration with existing systems is much better seen as a tool used to help translate what is being described into something commonly understood, which can then be utilised by all manner of internal and external products.

Single Source of Truth

There are an increasing number of technology companies looking to provide solutions within the securities lending space, based on a shared, distributed source of truth.[23] Each firm has at least one trading system, multiple post-trade technologies, as well as several technology vendors to support their securities lending business. The ultimate goal of the next generation of solutions is to build out a single ledger containing one version of a trade and updating that as the trade lifecycle evolves. This would remove much of the reconciliation activity which goes on, both between *and* within securities lending firms, increasing efficiency and making the process for managing securities lending trades unrecognisable compared to the current state.

However, in order to achieve this 'perfect' state there are mountains which need to be moved. As the ISDA white paper "*Collaboration and Standardization Opportunities in Derivatives and SFT Markets*"[24] states at the outset, efforts both within and between firms to standardise processes and functions are key to increase margins and profitability. This white paper also clearly outlines the challenges to achieve the desired level of standardisation and digitisation, not least aligning legal frameworks across different actors in the market but also how to manage existing books of business which need to be migrated to the new standard.

Challenges aside, the combined push of new technology and the work of ISLA, in mutualising the industry's resources, will produce an industry-recognised CDM which will maximise the benefits to be gained from distributed solutions. Without a common model which provides data and functional representations of processes which are shared across the marketplace, multiple models which are unable to communicate effectively with each other will proliferate and the potential gains of distributed ledgers will be lost. This would be a naturally limiting factor that could impede the take up of new technology solutions where improved efficiencies are not significant enough to warrant a change in approach.

From A to C…DM

The question is now: how can the industry move towards a model which will support short-term and longer-term changes, which at its heart incorporates systemic changes in how technology underpins the securities financing market?

First, there should be engagement and discourse around how best to build the CDM, including all actors in the securities lending space. ISLA's CDM Working Group provides the forum for this to occur. Agreement on the core fundamentals needs to work for lenders, borrowers, CCPs and many others involved in the management of trades and their associated collateral. SFTR provides a great historical reference point for any firms wishing to understand the complexities of simply agreeing the basic features of a securities lending transaction. ISLA's SFTR Steering Committee provides a perfect precedent of how firms and individuals can come together to create consensus and be led by associations towards a common goal.

Secondly, firms should look inwardly to understand what the CDM means to their business and technology stack. As firms look at their architecture and understand their strategic direction, the incorporation of the CDM either through changes to core systems, or through the utilisation of a "translation layer", should factor into their discussions. It is evident that the vendors who service the securities lending market are engaged with the CDM work; indeed, a number were actively involved in the ISLA CDM Showcase. To be able to rationalise the connectivity and simplify the messaging to the multiple vendors who support the market represents a key benefit to firms who use and maintain links to more than one vendor system.

Finally, firms should look to the benefits that a CDM can offer for the future, not just in the nuts and bolts of a trading or post-trade system. This forms part of the "Digital Vision for Securities Lending" which ISLA is championing. The work to create a Clause Library & Taxonomy in tandem with the various other aspects of the CDM will support smart contracts, cross-market standardisation and ultimately enable use of digital ledger technology to its fullest extent and avoid the creation of cottage industries using future technology.

Thomas Pikett
Vice President, Agency Securities Lending
JP Morgan[25]

22 https://eu.usatoday.com/story/tech/2020/02/05/translation-tech-solutions-language-barriers-google-translate-interpreter/4596091002/

23 https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/technology/lu-token-assets-securities-tomorrow.pdf

24 https://www.isda.org/2020/10/05/collaboration-and-standardization-opportunities-in-derivatives-and-sft-markets/

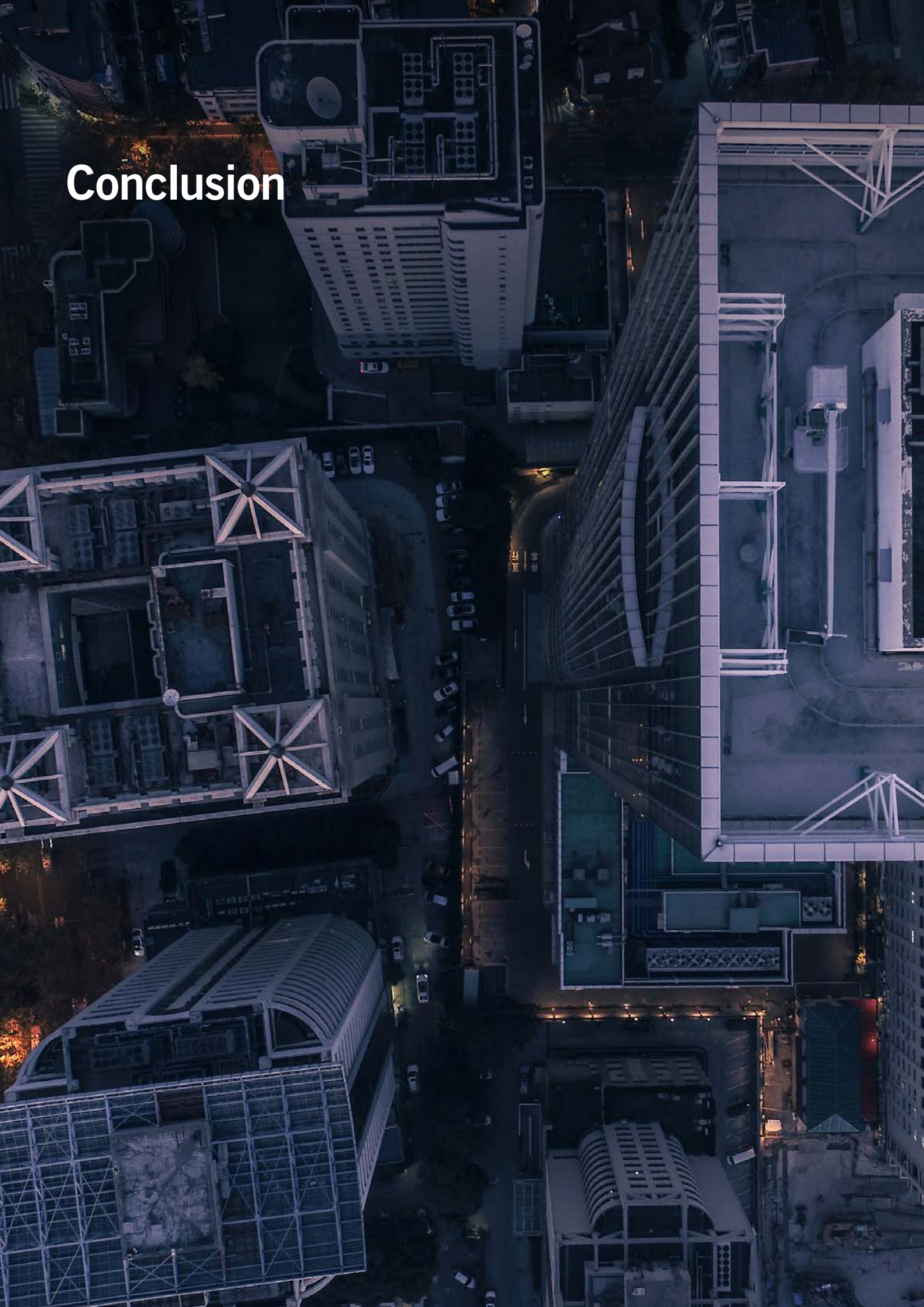
25 The views expressed here are mine and do not necessarily represent JPM's views.

THE TIME [FOR DIGITAL CHANGE] IS NOW. THIS DECADE WILL SEE ADOPTION OF BLOCKCHAIN AND CDM TECHNOLOGIES[26]

Adrian Dale

26 See more from Adrian Dale in the video of the CDM Showcase held on 1 December 2020: https://www.islaemea.org/videos-and-podcasts/#

Conclusion



This paper provides many compelling reasons for a transformation of our market, drawing on the recent and ongoing shared experience of regulatory imperative-driven market standards, common domains, distributed ledgers and, by no means least, the regulatory acknowledgment of digital standards underpinning future reporting. These points are well made, and so they should be, considering how long the technology has been available, their virtues admired and aspired to.

More than a decade ago, the financial crisis taught many lessons through its impromptu stress test. Regulators realised the lack of transparency, legal departments were inundated with questions about the staggering array of bespoke legal agreements, operations departments went into margin call overdrive and, for years after, technical analysts untangled the report data. Just this year, twelve years on, phase IV of SFTR addressed regulatory transparency. It would be naïve to think that is the end of the transparency drive. Coincidently, published articles unveiling securities lending ESG will be ten years old this year too.

What about the legal agreements and collateral management? The number of bespoke legal agreements has probably increased. The ability to process collateral has certainly improved. But have we solved the challenges, met our aspirations, or have we only provided a proverbial crutch to a broken leg? In 2020, SFTR working groups were still challenged by Agency Lending Disclosure (ALD), the process of an agent lender disclosing the underlying lender to a borrower, with its S+1 disclosure and non-standard counterparty approvals. To some degree SFTR has helped this disclosure process, but disclosure still occurs after the trade is struck, raising issues of credit worthiness that should be addressed earlier. Interoperability between different vendor platforms or counterparts was also discussed in the SFTR debate, still a barrier for some in determining who they could trade with. Settlement efficiency could be viewed as a measure of progress, and whilst it is no doubt better than it was a decade ago, it is certainly not solved. If it were, the impending CSDR settlement penalties with fines for non-settlement would not have triggered the intense and prolonged debate about intra-day liquidty and settlement efficiency. It is well worth mentioning that market participants aren't the only ones looking at market efficiency; so are central bank task forces. This last fact raises the question of why a market wouldn't fix itself first rather than waiting for imposed regulation. For example, consider what would have happened to SFTR if the market had CDM ten years ago.

The 'a solution without a problem' phrase has locked in the closet multiple legacy challenges, and the agenda for change opens that door with the mutualised gift of consensus-driven open-source building blocks.

That brings us back to this paper, which offers a next evolutionary step in the development of our market. That step includes not only solutions to legacy challenges, but it also provides the answer to tomorrow's questions by making them obsolete. We should ask ourselves two further questions, what is different about it this time and why now? To the first question, the answer this paper provides is that these solutions do not come with a commercial tag, but through the mutualisation of aspiration that trade associations provide. The answer to the second question is that, although some of these technologies have been available since the financial crisis, like they say, timing is everything. Multiple associations are coming together to provide the building blocks and regulators are going to impose fines on inefficiency and will also soon ask for more transparency.

Today, many questions are being raised in consultations and discussion papers, triggering debates that pull on the threads of firms operating models. Each thread being pulled is connected to many more, some of them being past 'solutions' which now dictate system development and possibly business strategy. Maintaining a tail-wags-the-dog model comes with a price tag, which will at some point become unsustainable.

THIS TYPE OF WORK CANNOT EXIST IN A TECHNOLOGY BUBBLE; IT HAS TO HAVE RELEVANCE TO THE REAL WORLD[27]

Andy Dyson

Adrian Dale
Head of Regulation & Market Practice
ISLA

27 See more from Andy Dyson in the video of the CDM Showcase held on 1 December 2020: https://www.islaemea.org/videos-and-podcasts/#

Glossary

"**AI**" means artificial intelligence.

The "**Bank**" means the Bank of England.

"**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.

"**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.

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

"**FCA**" means the United Kingdom Financial Conduct Authority.

"**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.

The "**Group**" means the ISLA Digital Steering Group.

"**ICMA**" means the International Capital Market Association.

"**ISDA**" means the International Swaps and Derivatives Association, Inc.

"**ISLA CDM Showcase**" refers to the demonstration of CDM in a securities lending transaction to ISLA members on 4 December 2020.

"**PRA**" means the United Kingdom Prudential Regulation Authority.

"**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.

"**UTI**" means Unique Transaction Identifier.

"**White Paper**" means the white paper published by ISLA and Linklaters in September 2019, announcing "An Agenda for Change".

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About ISLA

Who are we?

International Securities Lending Association (ISLA) is a leading 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 155 firms, includes institutional investors, asset managers, custodial banks, prime brokers and service providers.

What do we do?

Working closely with the global industry as well as regulators and policy makers, ISLA advocates the importance of securities lending to the broader financial services industry. ISLA supports the development of a safe and efficient framework for the industry, by playing a pivotal role in promoting market best practice, amongst other things. ISLA sponsors the Global Market Securities Lending Agreement (GMSLA) and the annual enforceability review in over 65 jurisdictions globally.

How do we do it?

Through member working groups, industry guidance, consultations and first-class events and education, ISLA helps to steer the direction of the industry and is one of its most influential voices on the European and global stage.

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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