Digital representation of transactions: CDM for repo and bonds

By **Gabriel Callsen**

F Digital transformation is a theme that cuts across all ICMA members' activities in primary, secondary, repo and collateral, and sustainability markets. Common standards play a critical role in enabling electronification, fostering innovation, promoting market efficiency and generating cost savings. The Common Domain Model (CDM), as a digital standard for trade processing, enables market participants' IT systems to speak the same language.

In July 2021, ICMA completed the first phase of the CDM for repo and bonds in partnership with REGnosys, a technology firm. The project delivered an extension of ISDA's CDM which enables market participants to process the execution, clearing and settlement of a repo transaction, and capture the key data points required for settlement of a bond transaction consistently in their IT systems.

International capital markets have proved to be resilient during the COVID-19 pandemic, marked by record issuance volumes and further digitisation of processes in the context of working from home. That said, there is always scope to make significant improvements to operational efficiency in a fragmented ecosystem comprising 20 electronic repo trading solutions and more than 200 applications for collateral management, liquidity monitoring, corporate actions and ancillary activities, according to ICMA's latest mapping exercise.

Onboarding technology solutions, connecting the "digital pipes" and normalising transaction data from multiple software vendor firms comes at a cost. Once a repo trade is agreed, the transaction is processed in a number of different IT systems during its lifecycle, from booking and risk management, to reconciliations, settlement and regulatory reporting, amongst others. This increases not only the risk of errors, but requires substantial resources to mitigate those risks.

Transaction details are shared in different shapes and forms between counterparts and infrastructure providers during the lifecycle of a transaction. A widely used electronic messaging protocol for fixed-income trading, and increasingly so for repo, is FIX (Financial Information Exchange). SWIFT is an established standard for post-trade messaging in relation to settlement of securities and payments, while FpML (financial product mark-up language) is predominantly used for OTC derivatives. ISO 20022 is a data standard which is often mandated by regulators for regulatory reporting.

As a standardised data model, the CDM has been designed to capture transaction details in a data structure that is consistent across repo and bonds, securities lending and OTC derivatives. Importantly, the CDM seeks to facilitate the translation of existing messaging protocols and data standards and consolidate the transaction data into a single view, providing the connecting tissue between different applications.

Explanations of repo-specific concepts such as the pricing (repo) rate and margin ratio have been embedded into the CDM to facilitate implementation and promote best practices. As a result, market participants and vendor firms are not required to interpret and programme lifecycle events and processes into their IT systems individually.

Innovation is a key topic on the digitisation agenda. Indeed, in recent years, we have observed a continuous increase in the number of bond transactions based on distributed ledger technology. ICMA's tracker currently references over 80 announcements. A common challenge is the lack of common standards and protocols which is considered a key impediment to the adoption of new technologies and emergence of a new ecosystem, notwithstanding legal and regulatory challenges. The CDM lays the foundation for such applications where, for instance, computer nodes in a DLT network could use the CDM to exchange and validate transaction data based on a standardised model.

CDM: A common language for trade processing

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ISO 20022 · FIX · APIs · CDM · XML · Eg DLT, Cloud · FpML
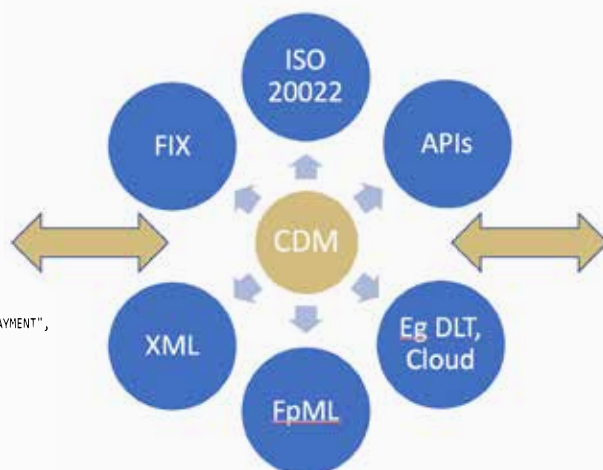
Each party uses the CDM as a "common denominator" or a "common language" to process repo and bond, securities lending and derivatives transactions.

The CDM is a joint initiative between ICMA, ISDA and ISLA. The Memorandum of Understanding (MoU) signed on 2 August between the three associations marks an important milestone. It establishes a framework for closer collaboration as well as a path for joint governance and arrangements for CDM components that are generic and those that pertain to a specific market segment.

The CDM is aimed at market stakeholders, including banks, investors, issuers, market infrastructures and software vendor firms. Upgrading existing systems as part of a digital transformation strategy, building new infrastructure in emerging or frontier markets, or developing new business models and services are some of the implementation scenarios for the CDM.

To realise the benefits of the CDM, adoption is key. Implementation is expected to be a medium-term process embedded in a broader digital transformation strategy.

We would like to invite our members to:

• watch the event recording of the CDM in action;

• encourage colleagues in IT and data modelling functions to register here, contact us for access and explore the CDM;

• share their feedback on CDM functionalities, scope and potential future extensions.

ICMA is considering next steps based on the recent survey amongst the ERCC community and members' desire for interoperability between vendor solutions, notably in primary bond markets. The CDM for repo and bonds marks the beginning of a journey towards further digitisation and we invite our members to shape our digital future jointly.

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