Catalyst for Change- Current Market Structure Challenges

All parties store trade data in different formats & make lifecycle changes to these records inconsistently

Differences in booking models lead to real world events in those models producing different outcomes:

- Reconciliation breaks
- Valuation differences
- Collateral disputes
- Reporting mismatches
- Operational inefficiency
- Settlement failures
- Barriers to automation

What is the true “truth” at any point in time?
The Common Domain Model (CDM) is a standardised, machine-readable and machine-executable blueprint for how financial products are traded and managed across the transaction lifecycle.

Dimensions of the CDM:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>Definitions of tradeable products qualified by their economic terms</td>
</tr>
<tr>
<td>Event</td>
<td>Data structures to represent the lifecycle events of financial transactions</td>
</tr>
<tr>
<td>Legal Agreement</td>
<td>Digital representation of the legal agreements that govern transactions</td>
</tr>
<tr>
<td>Process</td>
<td>Translates the technical standards that support those industry processes into a standardised machine-readable and machine-executable format</td>
</tr>
<tr>
<td>Reference Data</td>
<td>Reference data components that are specifically needed to model the other dimensions</td>
</tr>
<tr>
<td>Mapping</td>
<td>Mapped to a set of alternative data representations including FIX, FpML, ISO20022</td>
</tr>
</tbody>
</table>

The CDM is **NOT** an application in and of itself, but can be implemented within one *Composability* allows for re-use of components for efficiency.
CDM vs. FpML

While both CDM & FpML are standards, they can and will co-exist

- CDM is not a data format for messaging or storage, it is a logical model describing relationships between pieces of data

- CDM can be expressed in various forms including XML, JSON and other standard formats such as FpML, FIX & ISO20022 for exchange and storage of information

- FpML does not define standards for event and workflow processing, CDM prescribes the validation logic to express these more specifically
Benefits - Consistency of representation

Each party captures and processes the trade and lifecycle in their own different way

Using CDM market participants implement the same code to manage trades throughout lifecycle
Core Benefits

- A mutualised free open-source standardised digital blueprint on how to represent financial transactions, performance and business events.
- Extensible to compose financial instruments by assembling reusable components. Already covers robustly derivative and securities financial transactions.
- Scalable as event-driven model that encapsulates primitive components that will de facto make the fabric of complex business and operational processes.
- Operational and functional to codify the contract mechanics and business logic of legal agreements.
- Unambiguous in digitising functionally complex business and regulatory logic into code.
- Directly approachable as published in both human readable and machine executable languages.
- Implementable across several strategic uses cases in capital markets for better automation and greater consistency e.g. Trade management systems, clearing, digital documentation, collateral managements, regulatory reporting.

Efficiency

- Enhance interoperability, reduce reconciliations and promote straight-through processing

Transparency

- Promote transparency and alignment between regulators and market participants

Accelerated Innovation

- Create an environment for innovation in financial markets
History of the CDM

2016
Sep 2016
ISDA publishes white paper on Future of Derivatives Processing

2017
2017
ISDA Publishes
CDM Design Paper
RFQ for Technology Partner

2018
Jun 2018
Version 1.0 released Conceptual pilot

2019
Mar 2019
CDM 2.0 released Interest Rate and Credit Derivatives Initial Margin CSA Opened access to market

2020
2020
Addition of all IM & VM CSAs FX and Equity derivatives

Nov 2021
Nov 2021
First non-derivatives product class contributed by ISLA: Securities Lending MVP

2021
2021
MoU- ISDA, ICMA, ISLA Enshrine Collaboration on CDM

2022
Feb 2023
CDM migrated to FINOS Open-source community

2023
2023
Q4 2023
CDM 5.0 ETD & Commodity Derivatives ISLA GMMLA Clause Library Further Repo & Bond enhancements

2023
Nov/Dec 2022
First production use: DRR for CFTC reporting CDM 3.0 Further product, event and workflow coverage

2023
Jul 2023
CDM 4.0 ICMA contributes Repos

Increasing momentum through industry contributions
Associations are collaborating towards the same future goal, to benefit the whole industry

- An open-source model mutualises cost of development between TAs and contributing firms while retaining best practice governance
- MoU in 2021 enshrined collaboration publicly
- Working groups were opened to each others’ members
- TAs appointed FINOS to provide a repository with a view to fostering the growth of an open-source community for the CDM, with migration completed early 2023
The scope of contractual products in the current model are summarized below:

- **Interest rate derivatives:**
  - Interest Rate Swaps (incl. cross-currency swaps, non-deliverable swaps, basis swaps, swaps with non-regular periods, ...)
  - Swaptions
  - Caps/floors
  - FRAs
  - OTC Options on Bonds

- **Credit derivatives:**
  - Credit Default Swaps (incl. baskets, tranche, swaps with mortgage and loans underliers, ...)
  - Options on Credit Default Swaps

- **Equity derivatives:**
  - Equity Swaps (TRS, PRS, single name/index/basket, VarSwap, VolSwap, Dispersion, Correlation, Dividend Swap)
  - Options & Forwards

- **Foreign Exchange derivatives:**
  - FX Swap, Forward, NDF, Options

- **Commodity derivatives:**
  - Swaps, options, swaptions

- **Exchange Traded derivatives**
The scope of contractual products and events in the current model are summarized below:

** Securities Lending:**
- Single underlier, cash collateralised, open/term security loan

** Repurchase Agreements:**
- Open Term, Fixed Term, Fixed Rate, Floating Rate

** Events:**
- Allocation, Re-allocation
- Cash, Security transfers, DVP settlement
- Clearing events
- Compression
- Increase and decreases/returns
- Novations- full, partial
- Terminations- full, partial
- Renegotiation
- Reset
- Execution
- Stock Split
- Index Transition
- Determination of corporate action and credit events

The use of common elements allow for representation of multiple types of products and events in the trade workflow with minimal incremental work. Thus, this coverage list does not represent an exhaustive list of all possible combinations of elements or events.
### ISDA Documentation

<table>
<thead>
<tr>
<th>ISDA Documentation</th>
<th>CDM</th>
<th>ISDA Create</th>
<th>ISDA Create/CDM Compatible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INITIAL MARGIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016 ISDA IM CSD (English Law)</td>
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<tr>
<td>2016 ISDA IM CSA (NY Law)</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>2016 ISDA IM CSA (Japanese Law)</td>
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</tr>
<tr>
<td>2018 ISDA IM CSA (NY Law)</td>
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<td>✗</td>
</tr>
<tr>
<td>2018 ISDA IM CSA (Eng Law)</td>
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</tr>
<tr>
<td>2019 ISDA Bank Custodian SA (NY Law)</td>
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</tr>
<tr>
<td>2019 ISDA Bank Custodian SA (Eng Law)</td>
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<td>2019 ISDA Bank Custodian SA Luxembourg Law</td>
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<td>2017 Euroclear CTA (Eng Law)</td>
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<td>2018 Euroclear CTA (Eng Law)</td>
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<tr>
<td>2019 Clearstream CTA</td>
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<tr>
<td>2019 Clearstream SA (Security Provider) (Lux Law)</td>
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<tr>
<td>2019 Clearstream SA (Security Taker) (Lux Law)</td>
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<table>
<thead>
<tr>
<th><strong>VARIATION MARGIN</strong></th>
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<th>ISDA Create</th>
<th>ISDA Create/CDM Compatible</th>
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<tbody>
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<td>2016 ISDA CSA (VM) (Loan - Japanese Law)</td>
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<td>2016 ISDA CSA (VM) (Security Interest - New York Law)</td>
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<tr>
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<td>1994 ISDA Credit Support Annex VM (Security Interest - New York Law)</td>
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<td>1995 ISDA Credit Support Annex VM (Title Transfer - English Law)</td>
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<td>1995 ISDA Credit Support Annex (Security Interest - Japanese Law)</td>
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<tr>
<td>1995 ISDA Credit Support Deed (Security Interest - English Law)</td>
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</table>

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<thead>
<tr>
<th><strong>ISDA MASTER AGREEMENT</strong></th>
<th>CDM</th>
<th>ISDA Create</th>
<th>ISDA Create/CDM Compatible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992 ISDA Master Agreement</td>
<td>See below</td>
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<tr>
<td>2002 ISDA Master Agreement</td>
<td>See below</td>
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</tr>
<tr>
<td>Automatic Early Termination (&quot;AET&quot;)</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>Address for Notices</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Dated as of Date</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Credit Support Provider</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Credit Support Document</td>
<td>✗</td>
<td>✗</td>
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<tr>
<td>Governing Law</td>
<td>✗</td>
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<td>✗</td>
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<tr>
<td>Specified Entity</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Termination Currency</td>
<td>✗</td>
<td>✗</td>
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</tbody>
</table>

*ISLA have also contributed their Clause Library and Taxonomy for the GMSLA 2010/2018*
<table>
<thead>
<tr>
<th>Title/Topic</th>
<th>Chair</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering WG</td>
<td>David Shone, ISDA</td>
<td>- Complete governance updates</td>
<td>- Annual Review of governance and June</td>
<td>- Finalisation Phase 1</td>
<td>- Finalisation Phase 1</td>
</tr>
<tr>
<td>Technical Architecture WG</td>
<td>Chris Rayner, ISLA</td>
<td>- Release build process moves to Github Actions</td>
<td>- Release build process moves to Github Actions</td>
<td>- Ref data list management phase 1</td>
<td>- Ref data list management phase 2</td>
</tr>
<tr>
<td>Contribution Review WG</td>
<td>Rotating, trade associations</td>
<td>- Establish Release management process/bad in resources: Release Manager &amp; Engineer</td>
<td>- Release approval &amp; review</td>
<td>- Release approval &amp; review</td>
<td>- Release approval &amp; review</td>
</tr>
<tr>
<td>Cross-product Modelling</td>
<td>N/A</td>
<td>- Product model changes:</td>
<td>- Product model changes:</td>
<td>- Product model changes:</td>
<td>- Product model changes:</td>
</tr>
<tr>
<td>Collateral WG</td>
<td>Vernon Alden-Smith, ISDA</td>
<td>- Extend TCS model</td>
<td>- Re fuss and simplify collateral qualification from product</td>
<td>- Re fuss and simplify collateral qualification from product</td>
<td>- Re fuss and simplify collateral qualification from product</td>
</tr>
<tr>
<td>Securities Lending WG</td>
<td>Chris Rayner, ISLA</td>
<td>- Migrate to FINOS governance umbrella</td>
<td>- Migrate to FINOS governance umbrella</td>
<td>- Migrate to FINOS governance umbrella</td>
<td>- Migrate to FINOS governance umbrella</td>
</tr>
<tr>
<td>Derivatives Product and Business Event WG</td>
<td>David Shone, ISDA</td>
<td>- Option payout correction (ETD/OTC)</td>
<td>- Product enhancements driven by ORA</td>
<td>- Member modelling proposals</td>
<td>- Member modelling proposals</td>
</tr>
<tr>
<td>Structured Products WG</td>
<td>Jean-Baptiste Zaid, Fragmeno Chain</td>
<td>- Ongoing adoption support &amp; WG prioritised items</td>
<td>- Ongoing adoption support &amp; WG prioritised items</td>
<td>- Ongoing adoption support &amp; WG prioritised items</td>
<td>- Ongoing adoption support &amp; WG prioritised items</td>
</tr>
<tr>
<td>ISDA Repo/Bonds WG</td>
<td>Gabriela Callan, ICMA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Securities Finance Req Reporting?</td>
<td>TBC</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ISDA Legal Agreement WG</td>
<td>Vernon Alden-Smith, ISDA</td>
<td>- Analysis and develop framework for remaining 30 clauses of legacy CSA agreements</td>
<td>- Analysis and develop framework for remaining 30 clauses of legacy CSA agreements</td>
<td>- Complete legacy CSAs in CDM and create test data</td>
<td>- Complete legacy CSAs in CDM and create test data</td>
</tr>
<tr>
<td>ISDA DRR</td>
<td>Eleanor Hsu, ISDA Zabih Akhmed, ISDA</td>
<td>- DRR 4.0 - Ongoing - Current coverage EMIR and ISMA</td>
<td>- DRR 4.0 - Ongoing - Current coverage EMIR and ISMA</td>
<td>- DRR 4.0 - Ongoing - Current coverage EMIR and ISMA</td>
<td>- DRR 4.0 - Ongoing - Current coverage EMIR and ISMA</td>
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</table>
### Roadmap 2024

<table>
<thead>
<tr>
<th>Title/Topic</th>
<th>Chair</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adoption Support Framework</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td>- Onboard shared documentation resource - Model Documentation: Securities Landing Use Cases</td>
<td>- Model documentation: Pre-trade securities landing user guide</td>
<td>- Model documentation: GMSLA user guide</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td>- All agreed governance updated on FINOS website</td>
<td>- Addition of recorded demos</td>
<td>- Consistency and accuracy exercise website/github</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Support material</strong></td>
<td>- Consistently branded overviews - Collateral getting started guide - Training course development - Tiered overviews - Business case templates - Reference implementations</td>
<td>- Expand getting started guides to other use cases - Develop certification/award system?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ISDA Extensions to CDM

**Legal Agreement/documentation** – including market master agreements, definitions, contract, etc.

**Product** – the product model

**Observable** - asset & event (e.g. credit event) – basic building blocks to construct products

**Base** - common elements: date & time, static data etc.

**Reporting** – including models for derivatives reg reporting

**Event** – including workflow & position

**ISDA Licences**

CDM under open source license at FINOS

ISDA has created two extensions to the core CDM: DRR and ISDA Foundations
Use Cases
Collateral - Today’s Challenge

Guidelines outlined under BCBS/IOSCO and Basel III were translated by each regulatory regime spearheading collateral management as a key function in capital markets for both bilateral and cleared OTC. Compliance has increased processing volumes significantly and will continue to do so, the need for automation in collateral management processing. The industry is faced with many challenges which has led to fragmented implementations and operational inefficiencies.

INDUSTRY PARTICIPANTS

- Lack of industry standards - Every industry participant left to implement their own version
- Loss of inter-operability between solutions
- Pervasive reconciliation issues and other operational inefficiencies
ISDA COMMON DOMAIN MODEL (CDM)

COLLATERAL DOCUMENTATION SUPPORTED

Q1/Q2 2020 Modelling of all IM including New Generation documents and elections found to negotiate in ISDA Create. 
Request an ISDA Create Demo

Q3 2020 Additional Variation Margin(VM) Documentation

Now CDM offers digital representation of 30 Collateral documents covering over 100 unique election structures

Access to the ISDA CDM portal

INITIAL MARGIN DOCUMENTS
Published 2016 – 2019

ISDA X 10
ISDA Clearstream X 7
ISDA Euroclear X 8

VARIATION MARGIN DOCUMENTS
Published 2016
ISDA Publications X 5
Collateral- Benefits of CDM Standard Documentation

Use Cases and Benefits

- Fewer Reconciliations, Translations
- Shorter Processes
- Reduced Negotiation Timeframes
- Improved Onboarding
- Decreased Settlement Risks
- Cost Effective
- Secure transfer of information
- Mitigates Margin Disputes
- STP from Negotiation to Settlement
- Produces Clean Auditable Data
- Facilitates Digitizing Legacy Data
- Matching counterparty
- Standards for Eligibility Data
- Advance Optimization Processing
- Improved Custodian Services and Interoperability
- Advanced processing of Contract Amendments

Institutions can exchange CDM Standard for Documents including Eligibility Data to drive Collateral Processes

Standard Representation Promotes Interoperability, Transfer of Clean Data and STP

Standard CSA data output via ISDACreateAPI

IM CSA Negotiated between parties
Challenges are observed today with constructing, negotiating and expressing ECS, many of these originate from lack of common data standards and the inability to connect process events.

- Observation of different regulations, agreeing on compatible eligible assets
- Challenges of collateral identity and categorization
- Understanding Asset economic identity to apply regulatory haircuts and confirm eligibility
- No common standards in place for representation of key features
- Currently no data standard used within documentation to describe the elements for eligible collateral – *many versions observed:*

<table>
<thead>
<tr>
<th>Item of Eligible Collateral (IV) and Eligible Counterpart</th>
<th>The respect of Party A’s posting obligation</th>
<th>The respect of Party B’s posting obligation</th>
<th>Collateral Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ] 5%</td>
</tr>
<tr>
<td>(B)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ] 5%</td>
</tr>
<tr>
<td>(C)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ] 5%</td>
</tr>
<tr>
<td>(D)</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ] 5%</td>
</tr>
</tbody>
</table>

**[FX Reserve Percentage]**
- In respect of Party A’s posting obligation: 10% of the Eligible Collateral (EI) is denominated in the Transaction Currency specified with respect to Party B as per the preamble to this Annex A (in which case, 0%).
- In respect of Party B’s posting obligation: 10% of the Eligible Collateral (EI) is denominated in the Transaction Currency specified with respect to Party A as per the preamble to this Annex A (in which case, 0%).

**[Termination Currency]²**
- In respect to Party A: [ ]
- In respect to Party B: [ ]

In addition to the calculation pursuant to Section 1.4, the impact of early termination is assessed by a Transaction Operator where there are two different Parties.

### Eligible Collateral

The following items: (i) will qualify as “Eligible Collateral” for Party A and Party B; and (ii) are identified by the appropriate ICAD codes, as defined in the Collateral Annexes: Definitions. Percentage shown in the Valuation Percentage applicable to the indicated combination of ICAD and Remaining Maturity.

<table>
<thead>
<tr>
<th>ICAD Code</th>
<th>Remaining Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICAD code</td>
<td>One (1) year or under</td>
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<tr>
<td>CA-GOV</td>
<td>94%</td>
</tr>
<tr>
<td>CA-TBLL</td>
<td>94%</td>
</tr>
<tr>
<td>CA-RGND</td>
<td>94%</td>
</tr>
<tr>
<td>CA-RB</td>
<td>94%</td>
</tr>
<tr>
<td>CA-FOV</td>
<td>94%</td>
</tr>
<tr>
<td>US-TBLL</td>
<td>94%</td>
</tr>
<tr>
<td>US-TBND</td>
<td>94%</td>
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</table>

**Eligibility criteria**

<table>
<thead>
<tr>
<th>Item</th>
<th>Field</th>
<th>Type</th>
<th>Data</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Source</td>
<td>Party</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Counterparty 1</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Source</td>
<td>Party</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>Source</td>
<td>Party</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Haircut criteria**

<table>
<thead>
<tr>
<th>Item</th>
<th>Field</th>
<th>Type</th>
<th>Data</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Source</td>
<td>ICAD</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Concentration limits**

<table>
<thead>
<tr>
<th>Item</th>
<th>Field</th>
<th>Type</th>
<th>Data</th>
<th>Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Source</td>
<td>ICAD</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Collateral- Eligible Collateral Schedules

CDM Digital structure KEY data points:

- Issuer Criteria
- Asset Type
- Asset/ Product Identifier
- Concentration Limits/Wrong Way Risk
- Maturity Type/Range
- Agency Rating
- Valuation Percentage Haircut

- Options to apply Concentration Limits by:
  - Issuer
  - Product
  - Country of Origin
  - Currency
  - Agency Ratings
  - By Percentage or Value

- Original Maturity
- Remaining Maturity
- From issuance
- Period Range (Lower & Upper)

- Rating is flexible to be provided for:
  - Asset/ Product
  - ISSUER
  - SOVEREIGN
  - Reference Agency
  - Multiple Agency
  - Rating
  - Mismatch Specify (Lowest/Highest/ Agency override)

- Source ID-(ISIN/ CUSIP)
- Taxonomy (ICAD / ISO-CFI)

- Security
  - Cash
  - Commodity
  - Other

- Debt
- Equity
- Fund
- Warrant
- Certificate
- Letter of Credit
- Other

- Country of Origin
- Sovereign/Central Bank
- Quasi Government
- Corporate
- Regional Government
- Funds
- Special Purpose Vehicles
- Denominated Currency

- Denominated Currency
- Security
- Country of Origin
- Quasi Government
- Corporate
- Regional Government
- Funds
- Special Purpose Vehicles
- Denominated Currency

- Regulatory Haircut
- FX Haircut
- Margin Percentage
- Additional H/C
Collateral- Structure to define Asset Types and Identify Issuers

ISDA CDM will offer the flexibility to identify collateral asset types, with particular focus on securities, as most common form found in collateral schedules. However, this can be extended to cover many other assets.

With the functional flexibility to capture detail of its identity including specific issuer name and use of common identifiers.

Other issuer types include:
- Sovereign Central Banks
- Corporate
- Supranational Debt
- SPV and Funds
CDM offers standard data references points required for many industry forms of ECS. The structure enables consistent expression of data with the ability to apply various include/exclude rules and complex concentration limits. ISDA has demonstrated translation of several ECS provided by members into digital output.
Collateral- Eligible Collateral Schedules

An Eligible Collateral Schedule is represented in the CDM through the specification of criteria that can be used to “filter” whether a piece of collateral is eligible or not.

Asset Type – is used to specify criteria related to the nature of the asset, such as its type (cash, equity, debt, etc), country of origin or denominated currency

Issuer Type – is used to specify criteria related to the issuer of the asset, such the type of issuer (government, corporate, etc), specific issuer name, or agency rating

Treatment – is used to specify the valuation percentage, any concentration limits and whether the criteria specify inclusion or exclusion conditions

The combination of these terms allows a wide variety of eligible collateral types to be represented and can be applied across industry use cases for OTC, Securities Lending, Repo, Cleared and ETD.

Solving problems for Global Banks, Custodians, Data Providers, Vendors and connecting solutions.

Standard data for Eligible Collateral information facilitates DLT, Smart Contract and technology to be built to add further efficiencies to processes
REGnosys on behalf of ISDA have developed a user interface (UI) this allows you to create CDM Eligible Collateral schedule information using drop down functions. The user can create, import, share or inspect in CDM JSON and view in a tabular format. The Object Builder will be contributed to FINOS in 2023.

The UI can be used for predefined common eligibility profiles to import and edit and producing industry compatible consumable data output. The current UI gives the user the ability to also validate and construct many version of eligible collateral as CDM data and has the scope to be development further and built into services for use cases beyond collateral.
Commitment to CDM-Collateral Integration: Digital Documentation

**ISDA create**

2021/22 – Technical Integration work with ISDA Create completed, and CDM standard format IM documentation available via Create API

2019–2023 – Continued support and input on CDM Collateral related representations
Focus – VM & IM CSA, CSD and IM CTA, ISDA Master. Support CDM build for Legacy VM CSA
Q3 2024 – Analysis phase

**acadia**

2021/22 – Workshops to assess compatibility, first-stage mapping and analysis for IM CSA
H2 2023 – Development in COBRA for CDM IM CSA ingestion to COLLINE
Q1 2024 – Expected release to clients for CDM compatibility (IM CSA)
Q2 2024 – Exchanges with clients will begin in Q2 2024 to discuss potential deployment of the CDM connector

**MUREX**

2023 – Mapping for CDM IM CSA coverage completed to deliver integration into Murex (CDM vs MX.3) First version of CDM agreement import available (without eligibility schedule and legacy fields)
2024 – Extend upon IM CSA CDM availability with mapping for Legacy CSAs once delivered to CDM

**Vermeg**

2023 – Representation mapping and analysis for supporting selected CSA types feed in CDM format completed. Focus shifted to ECS for H1 2024
H2 2024 – Continue analysis and mapping to prepare for ingestion status. Potential to connect to service providers able to support CDM

2022 – Mapping to CDM IM CSA representation completed and validated using test data
2023 – Testing import/export using data uploader tool; version 1 competed
2024 – Extend document coverage to Legacy VM

**CloudMargin**

2023 – CDM for representing IM, VM, Legacy CSA and Master Agreement data
2022/23 – Investigation into ability to round trip CDM data between Lyncs and ISDA Create for IM CSA
2024 – Ensure compatibility of CDM with internal model for Legacy VM CSA inc complex clauses. Production status/timeline dependent on clients interested in using CDM

**Logical Construct**

For more questions on CDM and Collateral related initiatives, please reach out to: valdensmith@isda.org.
Commitment to CDM-Collateral Integration: Eligible Collateral

**2019-2023** – Continued support and input on CDM Collateral related representations

**Focus** – Eligible Collateral and concentration attributes (in legacy/regulatory CSA/CTA docs and Triparty ECS). Ability to compare and reconcile eligible collateral and concentration representations from any CMS or Collateral service providers

**Q3 2024** – Analysis phase

**2022/23** – Continued support, input to workshops and contribution to CDM Eligible Collateral terms/conditions

**2024** – Analysis for integration and model mapping of collateral eligibility terms, and pilot test with connecting client for POC.

**For Calypso Solution:**

**Focus** – Redesign eligibility framework to extend clients options to include a CDM compliant version

**2024** – Analysis for CDM Eligible Collateral model started

**Focus:**

Integrated CDM collateral data into FIA Tech’s Databank collateral schema, allowing for interoperability for end users consuming this data

**H1/2024:** Establish mappings between FIA Tech’s collateral schema and corresponding fields in CDM; FIA Tech to produce new file format which integrates CDM mappings daily

**Focus:**

Integrated CDM collateral data into FIA Tech’s Databank collateral schema, allowing for interoperability for end users consuming this data

**H1/2024:** Establish mappings between FIA Tech’s collateral schema and corresponding fields in CDM; FIA Tech to produce new file format which integrates CDM mappings daily

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Data to support the Collateral Margin Call process and its related components for Collateral Balance, Collateral Positions and Exposure are now represented in the CDM.

A foundational structure to support the data required for the margin call process including:

- Standard margin call action labels
- Base details for margin call data types and attributes to support unique features for issuance and response
- Collateral positions and ability to list collateral assets for responding to margin demands and for information purposes
- Collateral balance data requirements and aggregate values for margin call data and reporting
Collateral- Margin Call connection to other CDM components

1. **Legal Agreement (CSA)**
   - Minimum Transfer
   - Threshold
   - Base Currency
   - IA Amount
   - Margin Approach
   - Rounding

2. **Exposure IMOr VM**
   - VM Trade Population MTM
   - IM Amount (Simm or Grid)
   - IM Breakdown by Product Silo

3. **MARGIN Delivery or ReturnAmount Function**
4. **MARGINCALL INSTRUCTION**
   - Instruction Type
   - Base Data Required
   - Issuance Data
   - Response Data

5. **MARGINCALL AGREEMENT**
   - Agreed Amount
   - CollateralDetails
   - Settlement Details

6. **CollateralBalance**
   - Type – (Full, Settled, In Transit)
   - Haircut (Pre or Post)
   - Denominated Currency
   - Base Currency

7. **Digital Regulatory Reporting**

8. **Collateral Movement Updates**

9. **SETTLEMENT**
   - Bilateral
   - Custody

10. **COMMON DOMAIN MODEL**
2023/2024 - CDM Collateral Initiatives
Objectives:

- Documentation
  Extensions: 1995
  VM CSA
  ISDA Master Agreement
  Amendment

- Support Adoption of CDM
  Documentation and ECS
  into Production
  Environments of External
  Platforms

- Validate CDM Data
  Structure for Margin Call
  Issuance and Response
  Standards

- Collaboration with other
  Trade Associations to
  extend CDM
  Repo and Securities
  Lending Collateral
  Process

- Engage with Members
  for Support and
  Adoption
Digital Regulatory Reporting

Trade Reporting Rule Implementation Today

Industry firms currently build based on individual rule interpretations

- Inconsistent & Inefficient implementations
  - Each industry participant implements based on individual interpretation of rules and guidance.
  - Loss of inter-operability between solutions
  - Reconciliation issues
  - Operational inefficiencies

Regulatory Text

Data Field Mappings Tables

Graphs and Spreadsheets of Trading Scenarios
Digital Regulatory Reporting

Trade Reporting Rule Implementation Using the DRR

- A digitized representation of trade reporting rules and industry practices based on a mutualized industry interpretation.
- DRR turns trade reporting rules into machine-executable, open-access code.
- Digitized fields can be used for submission to TRs.
- DRR is reusable and scalable for global jurisdictions or rule changes.
- DRR can facilitate UPI or ISO 20022 implementation.
Digital Regulatory Reporting

Trade Reporting Rule Implementation Using the DRR

- **Mutualize regulatory reporting compliance effort**
  - Rule interpretations and compliance effort is spread across the industry

- **Gives you an unambiguous rule interpretation**
  - Reflects rules, guidance and industry best practices in an unambiguous way within the DRR model

- **DRR is open-access and increases transparency**
  - The DRR will be accessible to regulators and market participants

- **Defines core regulatory reporting ruleset only once**
  - Thereafter, only incremental efforts are required to extend the DRR model to other jurisdictions and future changes to reporting rules
  - And such updates will be delivered through centralized DRR model changes

- **Significant resource and cost savings**
  - Through the mutualized effort, firms leveraging DRR using the CDM will reap significant compliance, reporting and implementation project savings
Integrating CDM and Legal Agreements

Legal Agmt
- Auto Early Term wording
- Aggregation wording
- Corp Action wording
- ……

Clause Library & Taxonomy
2-way translation UI <-> database

Structured Digital Document
Current document software capability

Future document software capability

Machine Read/Create

Legal Agmt
- Auto Early Term variant 1 wording
- Aggregation variant 5 wording
- Corp Action variant 3 wording
- ……

Encode

CDM Legal Agreement
- Version
- Auto Early Term variant 1 business outcome
- Aggregation variant 5 business outcome
- Corp Action variant 3
- ……

Component in legal agreement informs functional behaviour

CDM Event Function
Current document software capability

Future document software capability

Mandatory Corp Action
- Input transaction
- Input ref data
- Input legal agreement
- Transformation function
- ……

Securities loan
- Quantity
- Security
- Collateral Type
- Duration
- Legal Agreement
- ……

Hard Copy or Unstructured Soft Copy

Human user-based world

Digital computer-based world

Future Development Work
Further Use Cases: Ecosystem

CDM presents opportunities to interact with entire ecosystem of other applications and standards provided by trade bodies.
Further Use Cases: Smart contract technology support

**Use case:** Aid the consistent and robust implementation of smart derivatives contracts applications and related upcoming technologies

- Many collateral processes such as:
  - The valuation of exposure and margin requirements;
  - Assessing collateral eligibility;
  - Exchange and return of collateral assets,
  - use conditional logic and could benefit from increased automation.

- This example provides an illustration of a potential smart derivatives contract construct that is designed to automate certain aspects of the collateral management process.

*Illustrative*
<table>
<thead>
<tr>
<th>Further Use Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration with CRIF standard for FRTB, SIMM, and SA-CVA reporting</td>
</tr>
<tr>
<td>Transcribe legally prescribed functional clauses from ISDA Def into machine readable and human readable codified functions</td>
</tr>
<tr>
<td>Facilitate more efficient re-use of data e.g. data template for large volume of increases of an Equity portfolio swap</td>
</tr>
<tr>
<td>Set a standard for the efficient digitalisation of collateral related margin process</td>
</tr>
<tr>
<td>Assert and mutualise the standardised encoding and capacity for implementation of legal clauses supporting the life cycle events of derivative transactions.</td>
</tr>
<tr>
<td>Express the CCP clearing handbook book that regulates the registration and clearing of a transaction into a machine readable and executable code that can be automatically generated.</td>
</tr>
<tr>
<td>Support more consistent implementation of market infrastructures processes such as clearing in tally with upcoming new innovative technologies (DLT, Cloud, Smart Contract, etc)</td>
</tr>
<tr>
<td>Match and store consistent trade representations that feed in “real time” FO trading systems using DLT and detect inconsistencies if any.</td>
</tr>
<tr>
<td>Aid the standardized representation of SSIs</td>
</tr>
</tbody>
</table>
Get Involved
How to get involved- Community Structure

**Steering WG (SWG)**
- Defines and monitors overall roadmap, setting annual priorities
- Decides support for resourcing initiatives proposed by TAWG, CRWG or DWGs
- Approves new FINOS WGs
- Decides matters of Governance & Operating Model for FINOS CDM WGs
- Final release approval
- Monthly

**Contribution Review Working Group (CRWG)**
- Assembles releases
- Initial release proposal approval
- Arbitrates disputes arising from DWG contributions
- Guardians and enforcers of design principles and guidelines
- Triage and facilitates long-dated PRs and Issues
- Fortnightly, with sub-groups as required

**Technology Architecture WG (TAWG)**
- Defines and works on items related to technical aspects and architecture e.g. language distributions, packaging, libraries, serialization, reference data architecture, integration with other data standards
- Interacts with CRWG like a DWG
- Monthly, with sub-groups as required

**Domain WGs (DWGs)**
- Modelling, design and execution of work items within their domain scope
- Contributions compliant with guidelines and consistency across CDM
- Updates on/feeds domain based work items and plans into overall roadmap set by steering
- Meets around every 2 weeks as needed

**List of DWGs & their Scope as at Mar 24:**
- **Collateral** - Collateral schedules & processes
- **Repo & Bonds** - Repo & bond products
- **Securities Lending** - Securities Lending
- **Derivatives Products and Business Events (DBPE)** - Derivatives products of a non-structured/exotic nature
- **Structured Products** - Structured & Exotic Derivatives
- **DRR Peer Review** - Digital Regulatory Reporting (Derivatives regimes)
- **ISDA Legal Agreements** - ISDA Legal Agreement modelling
How to get involved

Info hub for FINOS including user documentation downloadable distributions:  
Homepage | Common Domain Model (finos.org)
The Common Domain Model is brought to you by: