Accelerating Open RegTech

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THE LINUX FOUNDATION

A NEW CHAPTER FOR OPEN REGTECH

Welcoming Michael J. Hsu

FINOS Executive Advisor, Regulatory

Acting Comptroller of the Currency, 2021–2025

Administrator of the federal banking system and CEO of the OCC.

Director, FDIC · member, FSOC · chair, FFIEC.

Earlier:

Led GSIB supervision at the Federal Reserve; supervised the large independent investment banks at the SEC; served at the U.S. Treasury during the Global Financial Crisis, and the IMF.

WHY IT MATTERS

A regulator's voice, in the open.

Mike's engagement is scoped around:

- Machine-readable regulation & reporting
- A shared regulatory API protocol
- AI reliability standards across the ecosystem

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Transforming Financial Regulation with Open Source and AI

Michael J. Hsu

Advisor, Researcher, Former Acting Comptroller of the Currency

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OSFF LONDON · CLOSING KEYNOTE

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Transforming Financial Regulation with Open Source and AI

Regulation is analog and compliance is bespoke — and it is straining the system. **We can rebuild the regulatory stack as software. Open source and AI are the way.**

Michael J. Hsu Executive Advisor, FINOS · former Acting Comptroller of the Currency

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THE ARGUMENT

Regulation is analog. We can make it software.

01

Regulation is issued as prose

Authoritative text, open to interpretation — every reader starts from scratch.

02

Compliance is built bespoke

Every firm re-interprets, re-models and re-codes the same rules independently.

03

The operating model strains

Duplicated cost, inconsistent data, and systemic blind spots for supervisors.

The thesis: **Turn the stack into code.** Machine-readable regulation closes the interpretation gap; open source builds the shared layers; AI accelerates the work.

ACT 1 · THE PROBLEM

Each rule x N firms

For every rule, every regulated firm independently interprets it, re-schemas it, and re-codes it. Several costs accrete:

Duplicative rebuilds

Hundreds of teams writing the same compliance logic, in parallel, for the same rules..

Inconsistent data

Interpretations vary, impacting the comparability of the data reaching the regulator.

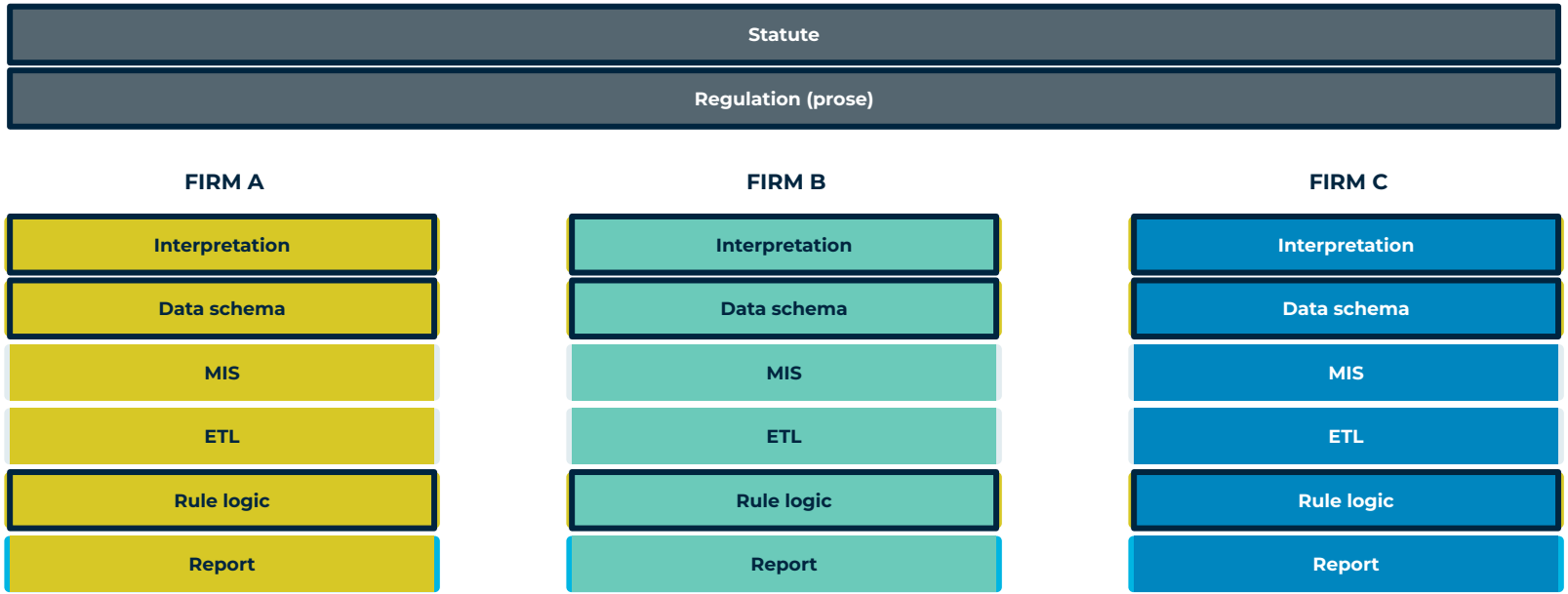
Examiner friction

Bespoke pipelines make supervision slower, more manual, and disproportionately focused on less material issues..

Systemic blind spots

A noisy view across firms — what contributed to 2008.

The reg stack: Reinterpreted and rebuilt at every firm



Boxed layers — interpretation, schema, rule logic — are duplicated and diverge at every firm. **Now multiply that by hundreds of rules and thousands of banks.**

ACT 2 · THE BUILDING BLOCKS

What if the duplicated middle were shared open-source infrastructure?

Built once. Governed in common. Inspectable by everyone.

This is not aspirational. FINOS already builds and ships these shared layers — and they run in production today for derivatives reporting.

ACT 2 · THE BUILDING BLOCKS

Shared data schema + shared rule logic

CDM Common Domain Model → a FINOS project

A machine-executable model of products, trades and lifecycle events — uniting data and process logic in one standard.

Fills the shared DATA SCHEMA

DRR + Rune ISDA Digital Regulatory Reporting

Encodes an agreed interpretation as executable rules on CDM, in the Rune language — one encoding, many regimes (US/EU/UK/JP/AU/SG/HK/CA/CH).

Fills the shared RULE LOGIC

In production now: JPMorganChase uses CDM/DRR as a primary reporting mechanism; JPX runs CDM-based DRR in production parallel (first clearing org globally); EMIR Refit was delivered industry-wide via DRR.

ACT 2 · THE BUILDING BLOCKS

An open suite of tools and infrastructure

Morphir

Business logic as portable, verifiable data (Capital One; Rosetta-to-Morphir).

Legend

Open enterprise modeling — Goldman Sachs' PURE / Alloy.

FDC3

Desktop & cross-firm interoperability — 100k+ installs.

Common Cloud Controls

Consistent, compliant public-cloud controls for FS.

Perspective

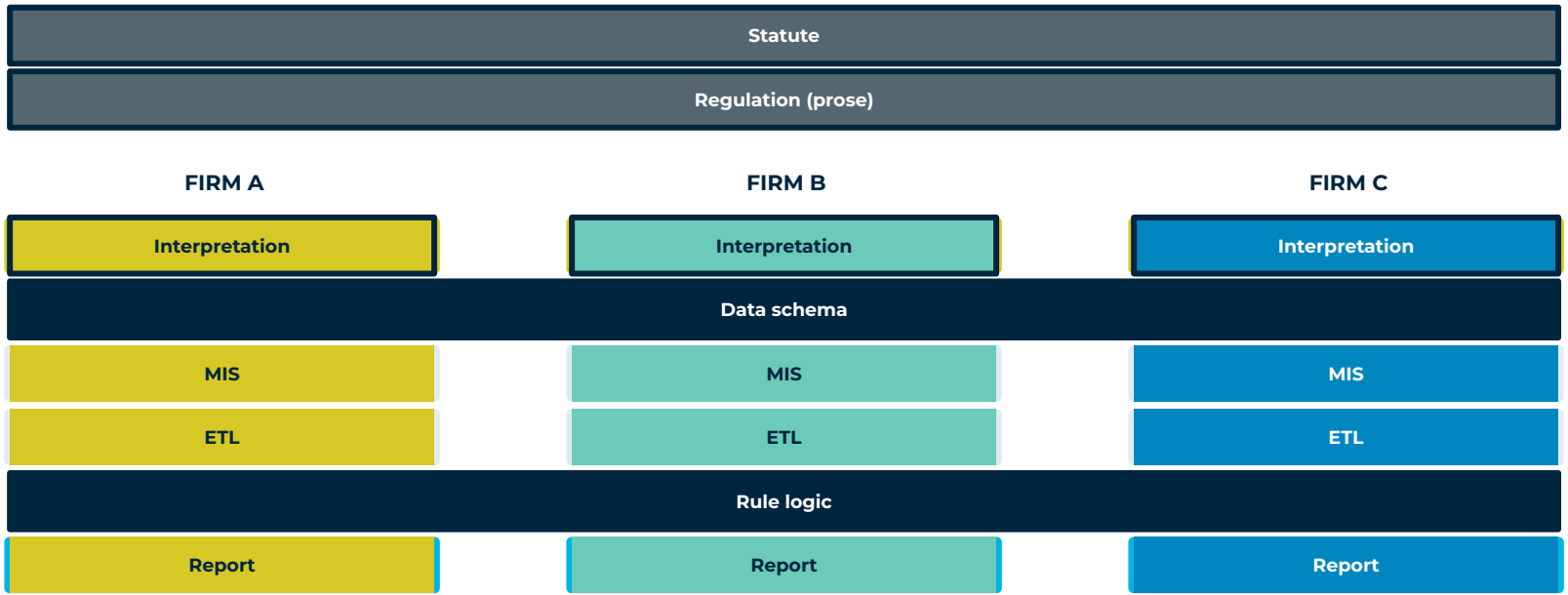
Real-time analytics and visualization.

Open Source Readiness

How regulated firms adopt and contribute safely.

Data → logic → controls → desktop. The same open governance runs end-to-end — so the layers compose.

Schema + rule logic: Standardized and shared



Progress: The schema and rule logic now are shared and live out in the open. **But interpretation is still done independently at every firm**

Shared schema and rules, notwithstanding, every firm still interprets the regulation first.

Even DRR's *industry-agreed interpretation* is a repeated, heroic coordination effort.

ACT 3 · THE MISSING LAYER

What if regulations were issued as code?

Policy-as-code / machine-readable regulation.

The regulator publishes rules in structured, executable form alongside the prose — a “clear box”: authoritative, unambiguous, versioned.

The public sector is beginning to move in this direction:

- EU Commission machine-readable reporting (MRER) pilot
- Bank of England / PRA “Future of Banking Data” — FINOS responded
- Regulators under pressure to streamline — a 1–2 year window

THE NEUTRAL VENUE

FINOS Regulation Innovation SIG / Open RegTech

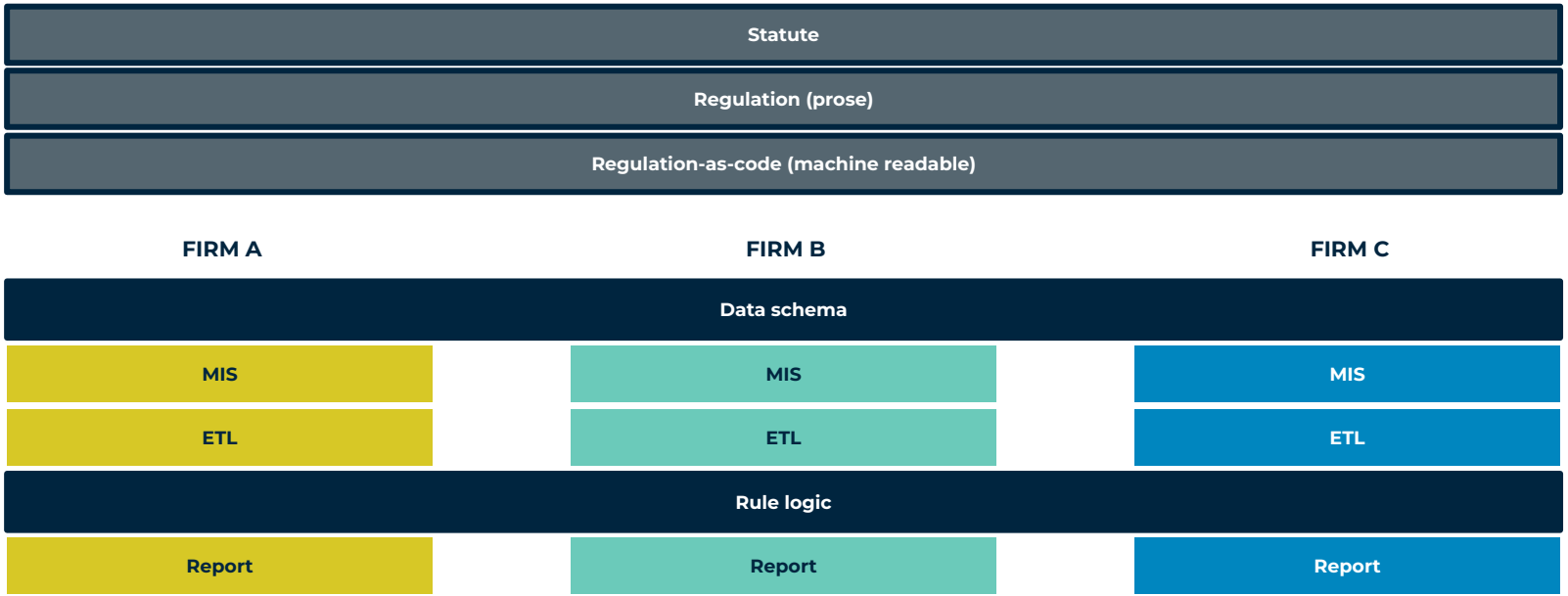
Where industry and regulators converge in the open — no fee, no membership required to participate.

Rebooted for 2026 under Mike's advisory.

FINOS response to the PRA: finos.org/blog/finos-response-to-pra-discussion-paper-future-of-banking-data

ACT 3 · THE MISSING LAYER

Regulator-issued code: Eliminates the interpretation gap



Interpretation variance — eliminated. Only the firm-specific last mile remains.

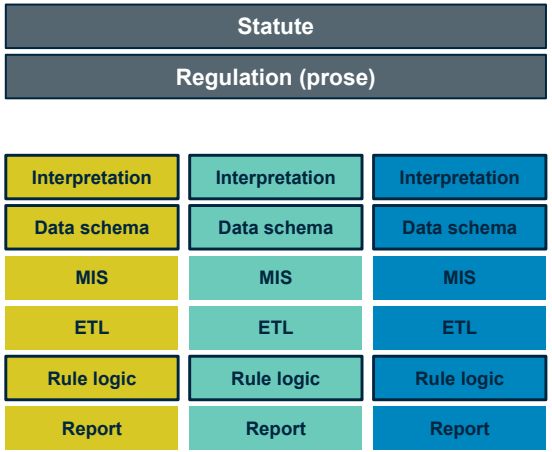
From Duplication to Shared Infrastructure

How open-source standards and regulator-issued code collapse the duplicated compliance stack

ACT 1 · THE PROBLEM

Reinterpreted & rebuilt at every firm

Every bank builds the stack independently

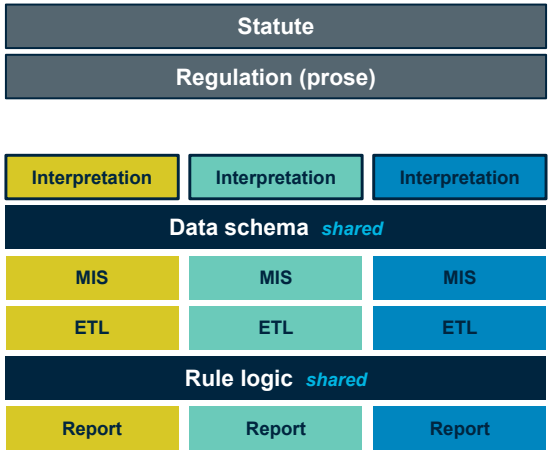


Boxed layers — interpretation, schema, rule logic — are duplicated and diverge at every firm. Now multiply by hundreds of rules and thousands of banks.

ACT 2 · THE BUILDING BLOCKS

Schema + rule logic: standardized & shared

Shared data schema & rule logic replace duplicated layers

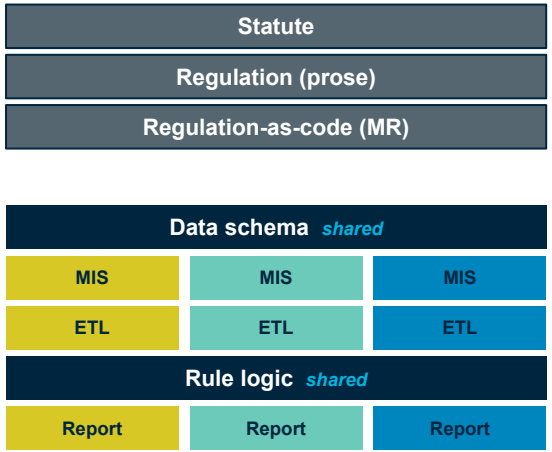


Schema and rule logic are now shared and live in the open. But interpretation is still done independently at every firm.

ACT 3 · THE MISSING LAYER

Regulator-issued code closes the gap

Interpretation gap closed by the regulator



Interpretation variance — eliminated. **Only the firm-specific last mile remains, as it should..**

ACT 4 · AI AS ACCELERANT

These efforts have been highly labor intensive. AI allows us to be more ambitious

Drafting interpretations · mapping legacy data to CDM · generating and translating rules · regression-testing.

Machine to machine. Take people out where machines are better — give humans more space where judgment matters.

THE PAYOFF

Two moves multiply the value

Broaden the shared blocks — and let regulators publish the missing layer as code

MOVE 1 · FINOS MEMBERS (ACT 2)

Widen the building blocks

Extend the proven CDM + DRR pattern beyond derivatives:

- Liquidity — FR 2052a / PRA110
- Capital
- Counterparty credit risk

Build schema + rule logic once, reuse across regimes

MOVE 2 · REGULATORS (ACT 3)

Publish the missing layer

Ship regulations + reporting instructions as code:

- Regulation-as-code
- Machine-readable reporting instructions
- Born-digital rules — no rework

No interpretation gap to open — one executable rulebook

FOR FIRMS
Lower cost, faster compliance, less divergence

FOR REGULATORS
Consistent, comparable, near-real-time data

FOR THE SYSTEM
Lower risk; human effort freed for judgment

The payoff compounds: every new domain in code and every rule born machine-readable extends the same shared, AI-accelerated stack.

ACT 5 · FROM VISION TO ACTION

Three pilots the community can start now

FINOS Members

Pilot 1 — Ride the streamlining wave by expanding CDM/DRR

Extend CDM/DRR to machine-readable derivatives & post-trade reporting as the FCA streamlining concludes (CP25/32; transparency rules live). Lowest risk — builds on JPMC / JPX in production.

Deepens +Open-Source Standards

Regulators

Pilot 2 — Pilot and adopt policy-as-code by default

Work with regulators so every new rule ships machine-readable and executable from day one — born digital, no interpretation gap to open.

Opens +Machine-Readable Regulation

Together

Pilot 3 — Look back and level up

Convert existing high-burden regimes — e.g., liquidity (FR 2052a / PR110) and AML — into code. Highest cost, hardest, and most valuable proof beyond derivatives.

Stretches the stack to new domains

THE CALL TO ACTION

Banks: PIck your spot and contribute — leading a workstream, driving adoption, building tools

Regulators: Pick a pilot. Engage with the Regulation Innovation SIG — no fee, no membership.

Builders: Build on CDM, Rune and Morphir. Aim AI at the open standards.

Get Involved

finos.org/open-regtech

We can transform regulation and compliance into software with code.

Open source and AI are the way. The only thing left to do is do it.

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