GDF & ISDA WORKING GROUPS · INDUSTRY SANDBOX POWERED BY OWNERA

Unlocking Collateral Mobility With Tokenized Money Market Funds

Findings from two industry reports - the UK & EU TMMF Working Group (2025) and the U.S. Tokenized MMF Working Group (2026) - assessing the legal, regulatory and operational case for TMMFs as institutional collateral, proven in a live industry sandbox.

300+ participants in the U.S. working group

190+ firms convened across both regions

48 firms in the U.S. industry sandbox

3 near-production sandbox simulations

WHY NOW

Margin Demands Are Rising. Tokenization Is Ready.

Post-crisis margin regimes require more collateral, in the right place, at the right time — while tokenized real-world assets scale rapidly and U.S. regulatory clarity improves.

$8.4B
tokenized RWA assets under management by May 2026 — up **298% since 2024**

$1.6T
non-cleared initial and variation margin collected at year-end 2025

51.7%
of collateral received for non-cleared derivatives is now non-cash — cash at its lowest share on record

$423.5B
required initial margin posted to major CCPs for cleared rates and CDS

THE FRICTION

From Redemption Cycles to Direct Pledge

Today, meeting a margin call with MMF holdings means redeeming shares for cash — a multi-step workflow that loses yield, adds operational risk, and strains liquidity in volatile markets, as the 2020 "dash for cash" and 2022 LDI crisis showed.

TODAY — TRADITIONAL MMF COLLATERAL

1. Margin call received → **2.** Redeem MMF shares → **3.** Await cash settlement → **4.** Wire cash to counterparty → **5.** Custodian sweeps cash back into MMF

Hours to days · yield forgone · operational and liquidity risk at every step

WITH TMMFS — TOKENIZED COLLATERAL

1. Margin call received → **2.** Pledge or transfer TMMF shares directly — no redemption, no cash leg → **3.** Settled & controllable in minutes

Minutes · yield preserved · intraday margining, substitution and permitted re-use

ADOPTION OUTLOOK

The Market Expects TMMFs Before the End of 2027

Plan to launch TMMFs by end of 2027 — 66%

Expect to accept TMMFs as collateral by end of 2027 — 44%

View current MMF collateral processes as efficient — 33%

Source: ValueExchange survey data, cited in the U.S. TMMF Working Group report (2026)

LEGAL & REGULATORY ASSESSMENT

Three Models. Ten Dimensions. Broadly Workable.

Tokenization does not recharacterize the asset — the token is simply the record of ownership. The U.S. working group assessed three tokenization models, aligned to the SEC-CFTC Digital Asset Taxonomy, across ten legal and regulatory dimensions.

Digital Native

The DLT ledger *is* the authoritative record — the issuer or transfer agent records MMF share ownership directly on-chain.

Digital Twin

Off-chain books and records remain authoritative; the on-chain token mirrors that record as a synchronized ledger.

Custodial / Intermediated

A bank, broker or securities intermediary custodies the shares, with its books maintained on, or updated from, DLT.

Workable in 8 of 10 dimensions

All three models fit within established legal, contractual or regulatory frameworks - covering UCC Articles 8, 9 and 12, transfer-agent recordkeeping on DLT, uncleared IM (CFTC and prudential), uncleared VM, and repo & securities lending collateral.

Two dimensions flagged

Cleared VM: MMFs are explicitly excluded - a potentially significant impediment. **Uncleared IM (SEC):** no explicit guidance; tokenized securities are assumed to be treated as their non-tokenized equivalents.

In the UK & EU: relative legal certainty exists for TMMFs posted as bilateral variation margin under an English-law ISDA CSA, with Luxembourg offering statutory frameworks for digitally native shares. Ireland and Luxembourg together host over 80% of Europe's MMFs and cross-border funds.

PROVEN IN THE SANDBOX

From Theory to Demonstrably Practical

The GDF Industry Sandbox, powered by Ownera, ran three simulations of increasing complexity with leading institutions — State Street, BlackRock, Citi, Fidelity, Invesco, BBH, Standard Chartered, U.S. Bank, ICE and CME among them — across multiple custodians, chains and data providers.

SIMULATION 1

Bilateral Uncleared VM

Multi-token, cross-custodial VM pledges with dispute handling and haircut mechanics.

SIMULATION 2

Cleared IM Cascade

CCP-to-FCM-to-client cascade, DvD substitution of cash for TMMFs at the CCP, and intraday cash re-use across two CCPs.

SIMULATION 3

Uncleared IM (UMR)

Code-enforced third-party segregation via smart contract, and tri-party segregation governance on tokenized rails.

What the simulations demonstrated

- ✓ Settlement completed in **minutes**, not the conventional cycle
- ✓ Collateral optimized and substituted on **live market data**; freed cash instantly re-usable across CCP obligations
- ✓ Existing margin and collateral platforms **remained in place** — tokenization as an efficiency layer, not a replacement
- ✓ Pledges settled across **multiple custodians and chains** in single workflows
- ✓ IM segregated two ways - **enforced in code** and governed by an independent **tri-party agent**
- ✓ The **router layer** delivered interoperability with zero bilateral integrations and no common chain required

INDUSTRY RECOMMENDATIONS

Four Steps to Enable TMMFs as Collateral

1. **Clarify legal recognition** of TMMFs under U.S. commercial law and collateral documentation.
2. **Promote interoperable infrastructure** connecting tokenized fund records with existing collateral, custody and margin systems via open standards.
3. **Facilitate TMMF use** within existing U.S. eligible-collateral regimes wherever the underlying MMFs are already acceptable.
4. **Support market adoption** through controlled production testing, standardized eligibility criteria and issuer participation.

CALL TO ACTION

Move From Near-Production Simulation to Live On-Market Production

Assess where TMMFs deliver the clearest value in your collateral workflows, identify business owners and governance paths, engage counterparties and issuers, and build a near-term adoption roadmap on shared open infrastructure.

Sources: "Unlocking Capital with U.S. Tokenized Money Market Funds for Collateral Mobility" (GDF & ISDA, 2026) and the UK & EU TMMF Working Group report (GDF, 2025). GDF Industry Sandbox powered by Ownera. For thought leadership; not legal, regulatory or investment advice.

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