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NOTE FROM THE EDITOR-IN-CHIEF

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Welcome to the 13th edition of the International Journal of Blockchain Law (IJBL), where we explore a diverse array of blockchain and crypto-related developments across the European Union, the United Kingdom, the United States, and India.

To begin, we're delighted to welcome Dave Hirsch as the newest member of the IJBL editorial board. Dave is a partner at McGuireWoods (Washington, D.C.), a GBBC member law firm, where he advises clients on legal matters involving cybersecurity and crypto assets. Before joining McGuireWoods, Dave led the Crypto Assets and Cyber Unit (CACU) at the U.S. Securities and Exchange Commission's Division of Enforcement.

This edition opens with an insightful piece by Dr. Max Bernt, European Managing Director & Global Head of Regulatory Affairs at Taxbit (Austria). Max examines the OECD's Crypto-Asset Reporting Framework (CARF), adopted in 2023, which sets a new international standard for reporting crypto-asset transactions. The CARF aims to enhance transparency through the annual exchange of information on crypto transactions among participating jurisdictions.

Next, Ignacio Ferrer-Bonsoms, President of the Blockchain Arbitration & Commerce Society (Spain), investigates the practical benefits of arbitration-backed smart contracts.

He demonstrates how arbitration can provide an added layer of security in cases of disputes over compliance with contractual terms embedded in smart contract code. Parties can turn to specialized arbitration tribunals to resolve conflicts efficiently and enforceably across borders.

Manoj Ramia of Digital Asset Holdings, LLC (United States) offers a holistic view of the evolution of digital asset policymaking. As the divide between traditional finance (TradFi) and decentralized finance (DeFi) continues to narrow, a unified financial market is emerging. This shift calls for an integrated approach to policy and regulation. Manoj's analysis of tokenized real-world securities is particularly compelling, highlighting how such instruments confer distinct legal rights to token holders compared to holders of the underlying assets.

It's remarkable how timing sometimes aligns perfectly. I'm pleased to share a white paper co-authored by my colleagues at Deutsche Bank London and Clifford Chance London. This paper sheds light on the intersection of artificial intelligence (AI) and distributed ledger technology (DLT), offering practical implementation strategies, real-world use cases, and legal considerations. It's a valuable resource for organizations seeking to harness AI's analytical capabilities alongside DLT's robust infrastructure to drive innovation.

I'm proud to have contributed to this paper, which addresses key legal, commercial, and technical challenges in this emerging space. A link to the full white paper is included in this edition.

We then turn to Gage Raju-Salicki, Associate at Norton Rose Fulbright LLP (United States), who outlines the key provisions of the GENIUS Act - recently signed into law by the President of the United States. This landmark stablecoin legislation defines payments stablecoins and who is regulated under these provisions.

In contrast, Medha Srivastava, General Counsel at Hashed, and Shasank Konger, Legal Associate at the same firm, provide a compelling look at the Indian market. They highlight that, in contrast with jurisdictions such as the European Union and the United States, India lacks a formal legal framework for stablecoins. As a result, India is outsourcing regulatory development to foreign entities, allowing offshore organizations to shape the infrastructure and standards relied upon by Indian users. Their article proposes what a tailored stablecoin framework for India might entail and outlines key considerations for regulators.

Finally, we close this edition with a link to the recording of GBBC's 8th annual Blockchain Central UNGA 2025 conference, held alongside the 80th Session of the United Nations General Assembly at the UNJSPF offices in New York City. I encourage readers to watch the panel discussion titled "Capital Markets Risk Mitigation Framework: Why It's Important," which brings together financial market infrastructures, globally systemically important banks, multilateral development banks, and leading Layer-1 protocol teams.

The panel explores why risk mitigation frameworks are vital for secure and sustainable digital asset adoption and how they help build trust and institutional readiness across the capital markets ecosystem.

Happy reading!

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ARTICLE I

ENTERING A NEW ERA OF FINANCIAL COMPLIANCE FOR DIGITAL ASSETS

UNDERSTANDING THE IMPACT OF THE OECD'S CRYPTO-ASSET REPORTING FRAMEWORK (CARF)

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INTRODUCTION

Over the past fifteen years, Bitcoin and other digital assets have not only gained institutional adoption but also attracted increasing regulatory attention – albeit for different reasons. In the U.S., until not long ago, the Securities and Exchange Commission (SEC) had leaned heavily on a "law–by–enforcement" approach, while the European Union enacted the Markets in Crypto–Assets Regulation (MiCA), the first comprehensive regulatory framework for crypto–assets globally. In parallel, the recent passage of the GENIUS Act in the U.S. has established a clearer regulatory basis for stablecoins and digital asset infrastructure at the federal level – similar in ambition to MiCA, albeit with a distinct focus.

These measures underscore a growing recognition that digital assets require bespoke regulatory treatment. But while financial services regulation continues to diverge across jurisdictions, international tax transparency and anti–money laundering (AML) measures are beginning to converge – especially under the umbrella of international standard–setting bodies.

Notably, the Financial Action Task Force (FATF) was the first international standard–setting body introducing global definitions for "Virtual Assets" and "Virtual Asset Service Providers" (now often termed Crypto–Asset Service Providers, or CASPs), establishing a baseline for cross–border financial compliance almost 10 years ago. Around the same time, more and more countries started to realize that they were losing out on significant taxable gains, in many cases because of the non–existence of any tax–relevant information available from individuals trading crypto (and, of course, the fundamental lack of clarity for the tax–treatment of crypto–assets overall).

Similar to what had been done under FATF in AML–related matters, within the Organization for Economic Co–operation and Development (OECD) it was thus decided to initiate a comprehensive review of the existing Standard for Automatic Exchange of Financial Account Information in Tax Matters. This Standard, initially adopted in 2014, calls on jurisdictions to obtain information from their financial institutions and automatically exchange that information with other participating jurisdictions annually.

As a result, the OECD initiated the work on the Crypto–Asset Reporting Framework (CARF) and a set of amendments to the Common Reporting Standard (CRS), along with associated Commentaries and exchange of information frameworks (collectively often referred to as the International Standards for Automatic Exchange of Information in Tax Matters), which were finally adopted and published by end of 2023 (OECD 2023).[1]

Together, these instruments under the OECD's framework establish a globally harmonized regime for the Automatic Exchange of Information (AEOI), aimed at enhancing transparency across the digital asset landscape. They span the full spectrum of digital assets – including, among others, crypto–assets, tokenized instruments, crypto derivatives, non–fungible tokens (NFTs), stablecoins, and central bank digital currencies (CBDCs). While not intended to determine individual tax liability, these frameworks serve as critical mechanisms for data collection, regulatory enforcement, and systemic risk assessment in the evolving global financial ecosystem.

THE CRYPTO–ASSET REPORTING FRAMEWORK (CARF)

At a time when digital assets have become integral to global markets, the CARF marks the first coordinated global effort to extend tax transparency principles into this new financial domain. Much like the CRS and FATCA regimes for traditional financial institutions, the CARF requires crypto–asset service providers – including exchanges, brokers, and other similar intermediaries – to identify their customers, collect tax–relevant information, track transaction data, and report this information to tax authorities for automatic international exchange.

Importantly, the CARF does not address how countries tax crypto–assets, define taxable events, or determine gains and losses. Its purpose is not to harmonize the substantive tax treatment of digital assets, but rather to ensure transparency around the movement and ownership of such assets – particularly off–chain transactions (i.e. internal transaction ledgers of crypto platforms), which until now have largely remained opaque to regulators. By bringing these internal ledgers into view, the CARF represents a transformational shift in how information is gathered and exchanged globally, creating visibility that extends well beyond tax administration and into areas such as financial crime prevention and enforcement.

Because CARF operates as an international reporting standard, participating jurisdictions are required to transpose its provisions into domestic law – as the European Union has done through its eighth amendment to the Directive on Administrative Cooperation in the field of taxation (commonly referred to as DAC8). To date, 69 jurisdictions have formally committed to implementation, with additional countries – particularly existing CRS participant jurisdictions – expected to follow in the near term.[2]

ASSETS AND TRANSACTIONS IN SCOPE

For the purposes of the CARF, crypto–assets cover any digital representation of value that relies on a cryptographically secured distributed ledger or a similar technology to validate and secure transactions, also including stablecoins that do not meet e–money criteria, derivatives issued in the form of a crypto–asset, other tokenized products and certain non–fungible tokens (NFTs).

1 International Standards for Automatic Exchange of Information in Tax Matters: Crypto–Asset Reporting Framework and 2023 update to the Common Reporting Standard, OECD Publishing, Paris, https://doi.org/10.1787/896d79d1–en.

2 A regularly updated list of participating jurisdictions can be accessed via the OECD website, here: https://web-archive.oecd.org/tax/transparency/documents/commitments-carf.pdf.

The definition includes a reference to "*similar technology*" to ensure it can include emerging new technologies that operate in a functionally similar manner to crypto–assets and raise similar financial or tax–related risks.

The definition of "Relevant Crypto–Assets" (i.e. crypto–assets that give rise to reporting obligations) excludes from reporting requirements certain categories of crypto–assets that pose limited tax compliance risks. Notably, Crypto–assets which cannot be used for payment or investment purposes are out of scope. In addition, Central Bank Digital Currency and Specified Electronic Money Products (i.e. "true stablecoins") are also excluded, as these are to be reported under the expanded CRS.[3] However, contrary to the EU framework – where Electronic Money Tokens (EMTs) are clearly defined and regulated under MiCA – there is, as of now, no clear evidence of any Specified Electronic Money Products (SEMPs) in existence. This is largely due to the remaining uncertainty around the regulatory thresholds and conditions required for full redeemability at par and at any time, which are core definitional criteria for SEMPs. Consequently, it appears that most, if not all, stablecoins currently in existence will be reportable under CARF rather than CRS.

Under the CARF, reportable service providers are required to report customer–level information on the acquisition, disposal, and transfer of crypto–assets. This obligation to report under the CARF applies to any entities or individuals that, as a business, provide services effectuating exchange transactions in crypto assets for or on behalf of customers with a relevant nexus to the jurisdiction implementing the CARF. The definition covers, among others, exchanges, brokers, crypto–ATM providers, as well as other service providers offering relevant services around relevant crypto–assets, including staking and lending.

3 Amendments to the CRS bring within its scope certain electronic money products and Central Bank Digital Currencies.

Reportable transactions under CARF include:

- Exchanges between crypto–assets and fiat currencies
- Exchanges between crypto–assets
- Retail payment transactions exceeding $50,000 in value
- Transfers of crypto–assets to self–hosted wallets

While the above scope is intentionally broad, many RCASPs that also offer custodial services may find themselves subject not only to the CARF but also to the amended CRS. This is because, under the new CRS, crypto-assets are generally classified as "Financial Assets", meaning that certain custody or investment arrangements involving crypto-assets could fall within the traditional financial reporting framework.

However, the OECD's latest CRS-related FAQs[4] clarify an important distinction: ordinary "spot" custody of coins or tokens—where a service provider merely safeguards clients' crypto-assets or private keys—does not give rise to a "Custodial Account" under the CRS. Likewise, under the CARF, pure custody services that do not involve effectuating exchange or transfer transactions are not reportable. In contrast, derivative holdings of crypto-assets for clients, such as futures, forwards, or options, do qualify as Financial Assets under the CRS and may therefore trigger CRS reporting obligations. At the same time, any exchange or transfer transactions carried out by an RCASP on behalf of its clients fall squarely within the scope of the CARF.

In practical terms, this means pure spot custody involving only the safekeeping of digital assets is not reportable under either framework. Exchange or transfer services are reportable under the CARF, while derivative holdings of crypto-assets may give rise to CRS custodial account obligations.

4 The CRS-related Frequently Asked Questions (Last updated July 2025) can be accessed here: https://www.oecd.org/content/dam/oecd/en/topics/policy-issues/tax-transparency-and-international-co-operation/crs-related-faqs.pdf

This clarification resolves what had previously been a source of uncertainty between the broad definition of Financial Assets under the revised CRS and the OECD's interpretative guidance. It establishes a clearer delineation between the two frameworks, in which the CARF captures active, transaction-based services in the crypto-asset economy, while the CRS continues to apply to traditional financial instruments and derivative exposures linked to those assets.

Building on this distinction, it is important to note that the operational mechanics of the CARF also differ fundamentally from those of the CRS. Whereas the CRS is centred on account-based information, the CARF introduces a transaction-based reporting architecture.

Though reporting under the CARF is conducted on an aggregated annual basis, CASPs are required to track and monitor each transaction individually – not only to calculate accurate annual totals but also to satisfy audit and verification requirements. This represents a fundamental shift from the account–based reporting model under the CRS to a transaction–based reporting schema, significantly increasing both the operational and technical burden on service providers, including with respect to accurate asset valuation at the time of each transaction.

WHAT ABOUT NON–CUSTODIAL PLATFORMS AND DEFI?

Among the most significant clarifications in the recent CARF FAQs is the treatment of non–custodial platforms and decentralized finance (DeFi).[5] **While the CARF itself does not extend to a fully decentralized environment, including peer–to–peer transactions, a persistent misconception remains that holding "non–custodial" status automatically exempts an entity from reporting obligations.** To address this, the OECD has clarified that the decisive criterion is not the existence of custody, but rather whether an individual or entity exercises "control or sufficient influence" (COSI) over a platform through which relevant transactions are effectuated.

While the concept of COSI remains subject to further clarification, the OECD and national authorities have pointed to several indicators – many drawn from the AML context – that may give rise to such influence, including:

- Holding administrative or upgrade keys
- Participating in governance structures (e.g., DAOs or governance tokens)
- Managing or operating frontend user interfaces
- Promoting, modifying, or updating the protocol
- Writing or maintaining the underlying smart contracts
- Controlling automated market makers (AMMs) or collecting protocol fees
- Operating a platform where no clear accountable entity exists

Entities exhibiting one or more of these characteristics may be considered Reporting Crypto–Asset Service Providers (RCASPs), even if they do not have direct custody of user assets.

5 Crypto–Asset Reporting Framework: Frequently Asked Questions (Last updated July 2025), OECD, accessed August 2025, https://www.oecd.org/content/dam/oecd/en/topics/policy–issues/tax–transparency–and–international–co–operation/faqs–crypto–asset–reporting–framework.pdf.

Recognizing the significant legal and technical complexities involved, the OECD allows jurisdictions to defer the enforcement of DeFi–related CARF obligations pending further interpretive guidance, including that to be issued by the FATF. Nonetheless, the regulatory direction is unambiguous: decentralized architecture alone does not longer place a platform beyond the scope of tax information reporting requirements.

DUE DILIGENCE AND SELF–CERTIFICATION

The CARF imposes rigorous due diligence obligations on CASPs, requiring them to obtain self–certifications from almost every user, including name, tax residence, and Tax Identification Number (TIN) – or, in jurisdictions where no TIN exists, the functional equivalent identification number used for civil registration purposes.

The CARF FAQs confirm that digital onboarding processes can incorporate self–certification, including through secure electronic interfaces – thus enabling automation while maintaining compliance integrity.

These obligations mirror those under the CRS for traditional financial institutions but introduce added complexity due to the pseudonymous and high–velocity nature of crypto transactions. Notably, in many jurisdictions, there has already been a marked increase in audit activity and regulatory inquiries directed at reportable entities regarding how such information has been collected and verified under CRS. **With crypto–asset service providers typically subject to closer scrutiny than traditional financial institutions, enforcement under CARF is expected to be even more stringent.** Consequently, measures such as TIN–format validation, cross–jurisdictional consistency checks, and real–time data integrity controls will no longer be best practices but mandatory requirements to satisfy the framework's enhanced due diligence standards.

Going beyond this, under the EU's DAC8 implementation of CARF, a CASP must suspend services to users who fail to provide valid self–certification data within 60 days, effectively introducing a freezing requirement on non–compliant crypto accounts.

IMPLEMENTATION AND OPERATIONAL CHALLENGES

Implementing CARF is not a theoretical or policy challenge – it is fundamentally a technical one. CASPs must develop or adopt infrastructure capable of:

- Recognizing reportable vs. non–reportable users and assets
- Tracking every in–scope transaction across diverse asset classes
- Capturing and storing fair market value at the time of transaction
- Mapping transactions to individual users and their self–certified jurisdictions
- Aggregating data for annual reporting in the localized XML formats

Meeting these requirements is especially challenging in cross–border contexts where pricing conventions, valuation standards, or user data expectations differ. **Many service providers, particularly those active in DeFi or hybrid models, may currently lack the infrastructure or controls necessary to ensure full compliance.** However, solutions are emerging to fill this gap. These tools automate transaction–level tracking, integrate onboarding with due diligence, and ensure multi–jurisdictional compliance – all essential components as the global regulatory environment matures.

ARE THE US IN SCOPE TOO?

End of July 2025, the U.S. published its *Executive Order No. 14178, Strengthening American Leadership in Digital Financial Technology*,[6] and, for the first time, crypto–related tax information reporting is explicitly recognized as a strategic priority in a national policy document. Key initiatives outlined in the report include:

- Full implementation of digital asset broker rules under the Infrastructure Investment and Jobs Act (IIJA)
- Expanded resources for the Internal Revenue Service (IRS) to enforce compliance and conduct audits
- Recognition of the OECD's CARF as part of a broader global effort toward multilateral tax transparency
- Consideration of beneficial ownership (BO) disclosures for crypto–assets, mirroring AML regimes

This language represents the clearest signal by the U.S. authorities, yet that alignment is under serious consideration.

Historically, the U.S. refrained from joining the Common Reporting Standard (CRS), instead creating its own bilateral model under FATCA.

A shift toward CARF participation would represent a generational change in U.S. policy on tax information exchange – one that now appears increasingly likely, even if its implementation may follow a slightly delayed timeline relative to other jurisdictions.

6 Exec. Order No. 14178, Strengthening American Leadership in Digital Financial Technology, 90 Fed. Reg. 8647 §§ 1, 4 (Jan. 31, 2025).

CONCLUSION

The CARF represents a transformational shift in the way governments and regulators approach financial compliance in the space of digital assets. Acknowledging the inherent borderless nature of crypto, it moves beyond fragmented national approaches to create a unified, transaction–based reporting system for crypto–assets. With the publication of the XML Schema and OECD FAQs, the framework has matured into a robust technical and legal standard ready to be implemented by member jurisdictions.

Its implications are far–reaching, affecting not only custodial service providers, but potentially also those operating under non–custodial, hybrid, and DeFi models. These actors will need to adapt their technical infrastructure and ensure that their legal and compliance teams are equipped to interpret and implement jurisdiction–specific obligations – ranging from user due diligence and transaction tracking to accurate calculations and localized reporting requirements.

Meanwhile, the U.S. has taken a decisive step forward. The Treasury's new strategy document introduces tax transparency into national digital asset policy in a manner that is both substantive and timely. The momentum is unmistakable: It is no longer a question of whether tax–relevant information reporting will be standardized – but when, and how broadly.

As due diligence requirements under CARF take effect in most jurisdictions by January 2026, the window for preparation is rapidly closing. For those navigating this global shift, proactive investment in scalable and compliant infrastructure will be the defining factor between meeting regulatory expectations and falling short of them.

ARTICLE II

SAFE BUSINESS IN BLOCKCHAIN: ARBITRATION AS THE ENFORCEMENT LAYER

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INTRODUCTION

Bitcoin and other blockchain protocols are more than technology: they embody a form of law operating within a new jurisdiction — the internet jurisdiction. This perspective, developed in *Bitcoin Digital Law*[1], highlights the need to recognize blockchain as a normative system in its own right. Only by understanding this reality can we design effective regulation and create effective justice systems for the traditional community and web3.

Traditional justice systems face several legal problems in the new digital world: applicable law, evidence, parties involved, and enforcement of the award or court ruling. A ruling that cannot be enforced is worthless.

New digital mechanisms are therefore needed to administer justice in this new digital environment. The most constructive approach is to integrate judicial mechanisms into the blockchain environment itself. Justice in the web3 area cannot be exercised from outside, but from within the code itself. A clear example is how to enforce a court ruling that requires payment with assets that are on the blockchain, such as Bitcoin or NFTs. The owner can be required to make the transaction, but cannot be forced to do so.

However, if the blockchain code itself is programmed (regulated) to allow the digital asset to be executed when a sentence or an award is issued, then it can be executed automatically. Justice will be effective from within the blockchain itself. **The solution is to introduce legal mechanisms into the blockchain, given that this is the new form of regulation.**

Smart contracts are widely recognized as one of blockchain's most promising innovations. By embedding agreements in self-executing code, they deliver efficiency, transparency, and the reduction of intermediaries.[2] Yet automation conceals a weakness: code alone cannot resolve every dispute. What happens if goods arrive late, services fail, or unforeseen circumstances intervene? Without credible enforcement, companies remain reluctant to rely fully on blockchain in commerce.

The way to include the possibility of executing blockchain crypto assets in the blockchain code is through "legal oracles."

The oracle can enter information into the blockchain. For example, in a DeFi, it can update the value of the dollar or ether in a liquidity pool. A legal oracle is allowed as a third party (tribunal of arbitration) to decide on a dispute and therefore determine whether a digital asset belongs for example to Alice or Bob.

1 Ignacio Ferrer-Bonsoms, "Bitcoin Digital Law: why cryptocurrencies are digital laws of the internet jurisdiction and why states must adapt", 2024.

2 Nick Szabo, "Smart Contracts: Building Blocks for Digital Markets," 1996.

To do this, it will issue an award, in accordance with traditional law, which will be automatically executed through the blockchain's smart contracts. For example, it may determine that Alice is entitled to 10,000 USDT, and therefore those USDT that are the subject of the dispute will be removed from Bob's wallet and delivered to Alice's wallet.

The absence of effective legal mechanisms raises doubts among companies that would otherwise be willing to expand their adoption of blockchain. The use of legal oracles within the blockchain provides the legal certainty that is lacking.

Companies can confidently explore blockchain business models, from international payments to supply chain management, in a secure and trusted environment. In the event of a dispute, they can obtain an effective legal resolution with the aforementioned legal oracle system.

BUSINESS MODELS ENABLED BY ARBITRATION-BACKED BLOCKCHAIN

For companies, the real advantage is not theoretical. Arbitration-backed smart contracts create a safe atmosphere for applying blockchain in real commerce. Practical opportunities include:

1. International Payments and Remittances

In the traditional financial system, international transfers are often slow and expensive. They pass through multiple intermediaries, such as correspondent banks and clearing houses, which increase both costs and settlement times. Disputes may arise over transfer delays, currency conversion rates, or failed settlements, and resolving these issues typically requires navigating complex cross-border regulations.

With blockchain and crypto-assets, payments can be executed almost instantly and at a fraction of the cost. Smart contracts provide transparency and automation in the execution of transfers, reducing the risk of errors and intermediaries. **However, transfers must be guaranteed by the judicial system and effective legal mechanisms. In this way, if disputes or disagreements arise over delivery or settlement, arbitration ensures that the parties have access to a neutral and enforceable mechanism for resolution.**

2. Global Supply Chains

Traditional supply chains are highly complex, involving multiple intermediaries—manufacturers, shippers, customs authorities, distributors—often located in different jurisdictions. Payments are usually delayed until goods are inspected and approved, which ties up working capital. Disputes over delivery times, product quality, or missing documentation can take months to resolve, disrupting business continuity.

Blockchain-based smart contracts streamline this process by embedding payment conditions directly into the transaction. For example, a smart contract can automatically release funds when IoT sensors confirm that goods have arrived at the port of destination, or when customs authorities digitally verify compliance with import regulations. This automation reduces delays and increases trust among parties who may never have met in person.

Arbitration adds an essential layer of security: if goods arrive damaged, specifications are not met, or there is a dispute about shipment timelines, parties can escalate the issue to a specialized blockchain tribunal. For instance, in a transaction involving coffee beans shipped from Colombia to Germany, if the buyer claims the beans do not meet the agreed quality standards, arbitration can quickly determine liability and issue an enforceable award. In this way, blockchain payments remain fast and automated, while arbitration ensures accountability and fairness when conflicts arise.

3. Trade Finance and Letters of Credit

In traditional international trade, letters of credit (LCs) issued by banks serve as a key mechanism to guarantee payment once exporters meet certain conditions. While effective, the process is notoriously slow and paper-intensive, often requiring physical documents such as bills of lading, invoices, and certificates of origin. This creates opportunities for fraud, forgery, and costly delays, especially when shipments cross multiple jurisdictions.

Blockchain-based trade finance reduces these inefficiencies by digitizing and automating the letter of credit process. A smart contract can be programmed to release payment automatically once all digital documents are uploaded and verified on the blockchain, eliminating the need for multiple layers of manual checks. This reduces both paperwork and the risk of document fraud, while accelerating the flow of capital for exporters and importers.

Arbitration plays a decisive role in ensuring enforceability. If disputes arise—for example, whether the documents truly reflect the agreed shipment, or if there is disagreement over compliance with contractual terms—the parties can rely on specialized arbitration tribunals. This ensures that while blockchain automates execution, there remains a trusted legal mechanism to resolve conflicts quickly and enforce awards across jurisdictions.

4. Licensing and Intellectual Property

Licensing agreements in the traditional economy often involve complex negotiations, manual reporting, and delayed royalty payments. For example, a music publisher must rely on third parties to track usage data and distribute royalties to artists. This creates inefficiencies and exposes licensors and licensees to disputes over reporting accuracy, payment delays, or even allegations of unauthorized use.

With blockchain, intellectual property (IP) rights can be registered and managed on-chain, while smart contracts automate royalty payments in real time.

For instance, a smart contract could release a payment to a songwriter every time their music is streamed, based on verifiable data recorded on the blockchain.

This improves transparency, ensures timely compensation, and reduces the need for intermediaries.

However, disputes may still arise—such as disagreements about the scope of a license, the territorial limits of use, or whether a particular use infringes on the licensed rights. In such cases, arbitration provides a neutral and enforceable mechanism to resolve conflicts efficiently. By combining automated payments with specialized arbitral review, blockchain creates a more secure and reliable ecosystem for IP management and monetization.

5. Tokenized Assets and Investment Platforms

Traditional investment markets rely on centralized intermediaries such as brokers, custodians, and clearing houses. While these institutions provide trust and oversight, they also add costs, create delays, and limit access for smaller investors. Cross-border investment can be particularly complex, often requiring compliance with overlapping regulations and expensive settlement mechanisms.

Blockchain enables the tokenization of assets—such as real estate, company shares, or commodities—allowing them to be divided into digital tokens that can be traded on global investment platforms. This increases liquidity, lowers entry barriers, and allows investors to diversify portfolios with smaller amounts of capital. Smart contracts can automate dividend distribution, voting rights, or profit-sharing, reducing the administrative burden.

Still, disputes may arise: investors may question whether tokens truly represent ownership rights, or conflicts may emerge over governance decisions and compliance with securities laws. Arbitration ensures that such disputes are resolved in a credible and enforceable manner, protecting investors while giving issuers the confidence to launch tokenized products. In this way, blockchain investment platforms combine efficiency and accessibility with the legal certainty businesses and investors require.

6. Insurance and Risk Sharing

Insurance markets traditionally rely on lengthy claims processes, extensive documentation, and manual assessments of damages. This often leads to delays in payouts and disputes over whether policy conditions have been met. In international contexts, these challenges multiply, as differences in local laws and regulatory frameworks complicate enforcement.

Blockchain enables parametric insurance, where payouts are triggered automatically by predefined data events. For example, a smart contract could release compensation to farmers if satellite data shows rainfall below a certain threshold, or to airlines if flight delays exceed a specified number of hours. This reduces administrative costs, ensures transparency, and delivers faster relief to policyholders.

Nevertheless, disputes can still occur—such as disagreements over the accuracy of data sources, interpretation of coverage terms, or whether an event qualifies as insurable under the policy. Arbitration provides the necessary safeguard, ensuring that when automation is not enough, conflicts are resolved fairly and enforceably. By combining automated payouts with trusted arbitration, blockchain can make insurance more efficient, accessible, and reliable.

CONCLUSION: A SAFE PATHWAY FOR BUSINESSES

Blockchain is no longer just a cutting-edge technology. With the implementation of legal oracles, it is now ready for mainstream commerce. Smart contracts bring efficiency, and arbitration ensures enforceability. Together, they create a trusted ecosystem for cross-border business.

For executives and entrepreneurs, the question is not "why blockchain?" but rather: why not adopt blockchain with the guarantees of an effective, specialized, and universal judicial system?[3]

3 One private tribunal specializing in providing effective justice through blockchain, as a legal oracle, is the Blockchain Arbitration & Commerce Society (BACS), www.bacosciety.com.

ARTICLE III

WHERE DOES DIGITAL ASSET POLICY GO FROM HERE?

MANOJ RAMIA*
GENERAL COUNSEL
DIGITAL ASSET

Already we are boldly launched upon the deep; but soon we shall be lost in its unshored harborless immensities.

—Moby Dick

The Naming of Cats is a difficult matter,
It isn't just one of your holiday games;
You may think at first I'm as mad as a hatter
When I tell you, a cat must have THREE DIFFERENT NAMES.

—T.S. Eliot, The Naming of Cats

We are at quite a moment in digital asset policymaking. Years of calls for regulatory clarity are quickly giving way to legislative accomplishments. In the United States, we no longer talk about stablecoin legislation; we have stablecoin laws. And digital asset market structure has passed the House and is hopefully on the fast track in the Senate. In Europe, MiCA is now in effect. It can honestly feel a bit disorienting and dizzying as we try to make sense of where we are today compared to one year ago. Much of what the industry has been advocating for has, or soon will, come to fruition. What's now left to do?

Plenty. This paper considers what the next phase of digital asset policymaking should look like and makes three arguments. First, **the next phase of digital asset policymaking should no longer consider digital assets as some special or niche category; rather, all markets will become digital asset markets, and digital asset policy should be considered accordingly.**

The TradFi vs. DeFi dualism is collapsing and we will see one integrated financial market emerge (and even the continued utility of the term "crypto" is questionable). This requires us to take an integral view when constructing new policies.

Second, **because digital asset policy will now have a much more systemic impact, it is not sufficient to view digital asset policy solely from an economic or financial perspective; the impacts of geopolitics must be considered too along with the impacts of its neologistic siblings, geoeconomics and geofinance.**

And third, as we embark on this new journey of policymaking, we need to do a better job of naming and describing the things that we are trying to create policies for. Terms that can be helpfully descriptive when new technologies begin to emerge can be needlessly restrictive when the technologies mature. Labels turn into straightjackets that prevent a proper understanding of what is actually going on.

*Views are my own.

Many of us in the space expended years of considerable effort trying to understand what "sufficient decentralization" entailed only to see decentralization abandoned for the much more straightforward, technically accurate, and legally faithful concept of "maturity". Decentralization was ultimately a red herring that distracted from necessary conversations about the actual architecture of blockchain networks. This paper argues that "tokenization" presents a similar trap. Whatever value the term may have provided, it is now time to move on to language that is more precise and descriptive of what is actually happening as we marry traditional securities with blockchain technology.

We have an opportunity in this moment to create a meaningfully better financial system. But policy success will require both taking a much broader view of the impacts of new digital asset policies and also a much more precise and thoughtful approach to how we think and talk about the mechanics driving digital asset markets.

ALL MARKETS WILL BE DIGITAL ASSET MARKETS

There is nothing sacrosanct about the form which securities today take; they are rather a product of, and an accident of, history as something that was needed to resolve the paperwork crisis of the 1960s and 70s. And just as all securities went from paper certificate to dematerialized form in an electronic database, they will eventually be represented on a blockchain. This can seem like a big shift. But, when done right, a blockchain is just a database that synchronizes automatically. From this perspective, the appeal is clear and you may begin to wonder why stay on an unsynchronized database requiring reconciliation when one that synchronizes automatically is available.

Of course, the new blockchain databases will need to meet certain privacy criteria if they are to be suitable for regulated financial market participants. Getting privacy right will be critical to making the transition to digital markets. A glaring gap in most infrastructure underpinning stablecoins and tokenization is a lack of privacy: all transactions are visible to all participants; and workarounds to solve for privacy often constrain market liquidity. Digital asset markets cannot truly take off if participants worry that their transaction and trading data can be seen by third parties. As regulators move past baseline market structure regulations and consider tangible market impacts, expect them to pay more attention to privacy. Getting the architecture of digital capital markets right will be critical to their success, and properly addressing privacy is a crucial component.

We are already starting to see the gravitational pull of blockchain erasing the TradFi vs. DeFi dualism. Stablecoins are used to settle U.S. Treasury repo transactions outside of normal business hours.[1] And we are seeing Treasuries also being used as collateral in "crypto" transactions. More broadly, actors in the TradFi space are looking to import innovations from the DeFi space such as 24x7 trading and atomic settlement, while actors from the DeFi space are beginning to appreciate TradFi ways of doing business. The notion of distinct ecosystems for TradFi and DeFi is beginning to disappear. And as Bitcoin's acceptance as a store of value accelerates across what are considered TradFi participants, and as stablecoins begin to play a larger role in day-to-day payments, the notion of "crypto" itself begins to lose its utility.

All financial assets are starting to become digital assets, and digital assets are financial assets. Policymakers will need to bring this perspective to bear when considering future financial regulatory and policy challenges. Their remit is no longer to simply promote innovation with digital asset regulation, but to shape the global markets of tomorrow.

1 *Treasuries Go 24-7 as Repo Trade Hits Blockchain on a Saturday,* https://www.bloomberg.com/news/articles/2025-08-12/treasuries-go-24-7-as-repo-trade-hits-blockchain-on-a-saturday.

GEOPOLITICS, GEOECONOMICS, AND GEOFINANCE

Moreover, in today's geopolitical environment, where historical understandings of how things work are falling away, thoughtful and proactive digital asset policymaking is critical. Good digital asset policy will be critical to a nation's global competitiveness.

Take the GENIUS Act. The immediate and obvious impetus for it is to ensure that stablecoin issuers can be trusted by prescribing the composition of their reserves and bringing them under the supervision of a regulator. But what once seemed as a secondary consideration has quickly become a primary concern, both in the United States and globally: the continued role of the dollar as reserve currency. Stablecoins' ease of use means that dollars can now travel internationally instantly. Traditional notions of not just monetary policy transmission but also monetary sovereignty will be challenged. Contrast this approach with that of the European Union: while the United States has abandoned any possibility of a central bank digital currency, the ECB continues to advocate for a digital euro and recently announced pilot programs to settle central bank money using distributed ledger technology. As so often happens, the Europeans are taking a top-down approach while the United States allows experimentation and innovation by market participants. Meanwhile, China has adopted both approaches: as the digital yuan continues to develop, there is also increasing talk of yuan-backed stablecoins. And all of this is happening against a backdrop of discussions about whether there will be a movement away from dollar-based settlement systems.

This is the key context in which digital asset policy will continue to evolve. If the first stage in digital asset policymaking was to simply set rules, the next stage will be clarifying and expanding on those rules, with geopolitical, geoeconomic, and geofinancial consequences in mind. Stablecoins again are a prime example. They are now (or will soon be) regulated in most major economies.

Yet, as the BIS recently pointed out, they are still not truly "money" so long as they lack access to a central bank balance sheet.[2] Despite this theoretical constraint, stablecoins nonetheless function as "money" from the perspective of their users. **Will practice conform to theory, or will theory need to update to reflect actual practice?**

GETTING THE NAME RIGHT

Against this backdrop of the heightened consequences of digital policymaking, it is critical that policymakers are deliberate and thoughtful in naming and describing the things that they are trying to create policies for. The long saga over "decentralization" is a cautionary tale of what can happen when definitional imprecision is allowed to persist and how attempts at policymaking based on incomplete understandings of technology can be counterproductive. The emerging area of "tokenization" provides an opportunity to avoid a similar fate for something even more critical.

Decentralization: a cautionary tale.

Seven years ago—in 2018—in the heyday of the first crypto/blockchain hype cycle, former SEC Director Hinman gave a speech on digital token transactions that quickly became the lodestar for those looking to determine when these transactions would constitute "investment contracts"—and therefore be subject to securities laws—under *Howey*.[3] In it, Director Hinman noted that "[i]f the network on which the token or coin is to function is *sufficiently decentralized*—where purchasers would no longer reasonably expect a person or group to carry out essential managerial or entrepreneurial efforts—the assets may not represent an investment contract."[4]

2 *The next-generation monetary and financial system*; https://www.bis.org/publ/arpdf/ar2025e3.htm.

3 *Digital Asset Transactions: When Howey Met Gary (Plastic), Speech by William Hinman, June 14, 2018* https://www.sec.gov/newsroom/speeches- statements/speech-hinman-061418.

4 *Id.*

The analytical importance of decentralization was cemented the following year when the SEC released its digital asset framework.[5] In it, the SEC reiterated the role of decentralization in an "investment contract" analysis: if the "essential tasks or responsibilities" are "performed and expected to be performed by . . . an unaffiliated, dispersed community of network users (commonly known as a 'decentralized' network)," then a transaction involving a digital token is less likely to be considered an "investment contract."

While at first blush this appeared to create a straightforward yardstick against which one can measure whether digital token transactions are investment contracts, a closer look revealed a wrinkle—decentralization was not defined. Nor, moreover, did Director Hinman elaborate on how much decentralization would be sufficient under his proposed framework.

More fundamentally, neither Director Hinman's speech nor the SEC's framework substantiated the SEC's reliance on decentralization (in one dimension, let alone three) in *Howey* or its progeny. Neither *Howey* nor its progeny support the idea that an investment contract can be avoided by simply dispersing the efforts necessary to the successful operation of the network among a group of parties. In *Howey*, the issue was not that the efforts to develop the orange groves were insufficiently dispersed or decentralized. Rather, the issue was that the efforts were undertaken by a party other than the purchasers of the orange groves. Even if there were only one purchaser of orange groves (and thus clearly no "decentralization"), this would still hold.

Potentially, decentralization may play a role in *Howey*'s "efforts of others" prong, but, as noted above, the real question is over the identity of the party whose efforts matter, not the dispersion of efforts among multiple parties.

While having some form of decentralization may be relevant in demonstrating that the promoter's efforts are not significant, decentralization is not necessary under these cases for a digital token transaction to avoid being classified as an investment contract.[6]

For example, a blockchain network may have hundreds of validators (and thus can credibly claim to be decentralized), but if the underlying technology is not mature and the company that created the blockchain network still needs to do meaningful technological development to get the network to function, then caselaw would suggest that there is a reliance on the efforts of others here notwithstanding a decentralized validator pool.

On the other hand, a blockchain network with relatively fewer validators would seemingly have a weaker claim to decentralization. But if the underlying technology is sufficiently mature such that the network would function if the company that developed the technology disappeared, then caselaw would suggest that there is *no* reliance on the efforts of others notwithstanding a relatively small validator pool.

And, critically, without a clear or readily accepted definition of decentralization (and without an understanding that decentralization in a blockchain network can occur in multiple dimensions), attempts to transpose this concept onto the *Howey* framework that has evolved through caselaw have been difficult and ultimately failed to provide any meaningful regulatory clarity to those looking to innovate in the space.

Initial legislative efforts (namely the Financial Inclusion in the 21st Century Act) attempted to provide more clarity on what decentralization entailed. And, it should be said, did a good job. But the ultimate legislative outcome (the CLARITY Act) abandoned decentralization. **As policymakers' understanding of the underlying technology and resulting markets matured, "decentralization" was replaced with "maturity" as the analytical hinge.**[7]

5 *Framework for "Investment Contract" Analysis of Digital Assets,* https://www.sec.gov/corpfin/framework-investment-contract -analysis-digital-asset.

6 *Id.*

7 *H.R.3633 - Digital Asset Market Clarity Act of 2025,* https://www.congress.gov/bill/119th-congress/house-bill/3633/text.

So, after seven years of lawyers in the space trying to decide what decentralization means and struggling to provide actionable legal advice in the face of definitional difficulties, decentralization is no longer central. Instead, we have a more mature way of looking at blockchain networks that both bears better fidelity to the underlying principles in *Howey* and also is more aligned with the actual functionality of blockchain networks. Innovators can now focus on building rather than feeling like they need to engage in decentralization theatre.

Will tokenization follow decentralization?

For some time now, "tokenization" has captured mindshare in both the DeFi and TradFi worlds. It has become a catchall phrase to cover the idea of bringing traditional securities onto a blockchain to transform financial markets. The excitement is justified; the benefits promised—including real-time settlement, more efficient use of capital, and elimination of manual processes—are obvious and immediate.

But under what circumstances can these benefits actually be delivered? As "tokenization" goes from concept to practical application, the limits of the term are starting to become apparent. A broadly descriptive phrase is insufficiently precise to capture the different technological approaches to marry traditional securities with blockchain technology. Indeed, many "tokenization" projects are taking a literal approach, creating a token that represents a security. Unfortunately, the end result is the creation of a new instrument such as a derivative that gives the token holder a different set of legal rights than the holder of the underlying security. **Not only is it not clear how things like real-time settlement and more efficient use of capital can be achieved by creating derivative digital tokens of traditional securities, doing so also leads to market fragmentation and increased inefficiency as capital is diverted from the security to its derivative and separate markets emerge for each. The goal of a national market system for securities is undermined rather than furthered.**

The challenges of this type of "tokenization" become apparent when viewed through specific legal and policy lenses.

In the United States, when we speak of securities, what we usually mean are securities entitlements under Article 8 of the Uniform Commercial Code given our indirect securities holding system. In this context, "holding" a security really means having an entitlement to that security through a set of books and records. However, with many "tokenization" initiatives, where a new instrument is created pointing to the underlying securities entitlement, the holder of this "token" no longer has a securities entitlement and is thus not, in colloquial terms, the holder of the security. The link to the operative books and records is severed. And, critically, the holder of the token has a different set of legal rights than the holder of a security entitlement. This has consequential downstream effects. If one promise of "tokenization" is better collateral mobility, a prerequisite for that is the ability to obtain and perfect a security interest in the collateral. But if the thing being transacted in is a token with a different set of legal rights than the security entitlement, then how will you perfect a security interest in the underlying security entitlement? Collateral mobility with "tokenization" then loses its thrust. The same can be said for any purported gains in settlement efficiency because the thing being settled—the token—is different from the underlying security entitlement, which will need to be settled separately. And then settlement finality itself comes into question when dealing with these tokens.

From this perspective, as noted above, much of the excitement around "tokenization" gets deflated. The promised benefits begin to feel illusory. And, moreover, the market consequences can become concerning.

SEC Chair Paul Atkins recently noted that "accommodating trading of tokenized securities on-chain may require us to explore amendments to Reg NMS, in addition to what we otherwise would do in the normal course to correct market distortions that it engenders."[8] And he noted his longstanding concern that Reg NMS's "prescriptive requirements . . . distort market activity and impede the evolution of our securities markets. Congress clearly intended that 'competitive forces, rather than unnecessary regulation, guide the development of the national market system."[9] But, for these competitive forces, including technological development, to guide the development of a national market system (regardless of whether overlayed by additional regulation), investors need to be trading the *same thing*. **However, if one investor is trading a stock (as a security entitlement) with one set of legal rights, and another investor is trading a token acting as a derivative or tracker of that stock with a different set of legal rights (and yet another investor may be trading a different token of that stock with yet another set of legal rights…), then rather than competitive forces spurring a national market system, we risk instead balkanization of markets and the creation of new market distortions.**

And these concerns around "tokenization" surface as well in the context of the Basel Committee on Banking Supervision's cryptoasset prudential standards. Much has been made of the Basel Committee's comment on the suitability of "permissionless" blockchains for receiving favorable capital treatment. The focus on that comment by many commentators, however, may miss the mark. They may be correct that drawing a conclusion on regulatory treatment for a broad swath of blockchains despite the fact the underlying technology continues to evolve rapidly was premature. But the critical point is that what ultimately determines classification under the prudential standards is satisfaction of a set of classification conditions.

Though one of the classification conditions addresses the type of blockchain network used for the asset, the others focus on the asset itself. Even assuming the BCBS retracts its statement on permissionless networks, and permissionless networks are able to satisfy the applicable classification condition relating to the underlying blockchain network, there still remains the requirement that a "tokenized" security have the same legal rights and obligations as the "original" security in order to receive the same capital treatment as the "original" security. Many of the current "tokenization" efforts fail this classification condition because they create an instrument with a different set of legal rights than the original security.

Contrast this with an approach where, rather than creating on a blockchain a token representing a security, the blockchain is simply the location of the official books and records of the security. Here, there is no creation of a separate instrument, with a separate set of legal rights. In UCC speak, the record on the blockchain is the securities entitlement. Only in this construct can the promised benefits of "tokenization" such as increased collateral mobility and atomic settlement be realized. And only in this construct can "competitive forces . . . guide the development of the national market system."

This requires one of two things: either policymakers need to precisely define tokenization to mean the creation of an on-chain set of books and records for a security that serve as the official, legal books and records for that security (and exclude derivative or other tracker tokens that are in reality separate legal instruments), or policymakers need to move to a more precise taxonomy such as "on-chain" securities to distinguish from the tokenization initiatives that are creating separate legal instruments.

8 *American Leadership in the Digital Finance Revolution*, https://www.sec.gov/newsroom/speeches-statements/atkins-digital-finance-revolution-073125.

9 *Id.*

CONCLUSION

While the confusion over "decentralization" impacted—at the time—only a small market, the consequences of not getting "tokenization" right will be systemic. **The flywheel of assets coming on chain is accelerating and we have only so far touched a small fraction of total assets. Increasing policy clarity, particularly from the United States, is no doubt a factor in the quickening pace of adoption. But also driving this is the growing sense that a shift to digital asset markets is inevitable. The benefits are too obvious to ignore.** And coupling this with the new geopolitical, geoeconomic, and geofinancial context we now live in, finding the proper name for what "tokenization" was intended to convey is critical.

ARTICLE IV

 THE CONVERGENCE OF AI AND DISTRIBUTED LEDGER TECHNOLOGY: OPPORTUNITIES AND RISKS

Clifford Chance and Deutsche Bank have released a white paper that explores how artificial intelligence (AI) and distributed ledger technology (DLT) can create greater value when used together.

Clifford Chance shared, **"Artificial intelligence (AI) and Distributed Ledger Technology (DLT) are transforming industries. Each of these technologies can offer benefits, but by combining the predictive and analytical capabilities of AI with the decentralised and resilient infrastructure of DLT, this synergy of "AIxDLT" has the potential to accelerate the transformation of a range of products, services and industries by enabling smarter, automated systems that operate with improved transparency, efficiency and trust."**

The report explains that AI's strengths in automation and data analysis complement DLT's transparency and decentralization, offering opportunities to build smarter, more efficient, and trustworthy systems.

It outlines five key steps for organizations:

- Taking a collaborative, cross-departmental approach;
- Improving internal tech literacy;
- Aligning innovation with company culture and sustainability goals;
- Managing legal and regulatory risks strategically; and,
- Engaging with policymakers and industry peers.

The paper ultimately emphasizes that the convergence of AI and DLT could reshape industries, provided organizations navigate the operational, legal, and cultural challenges thoughtfully.

READ THE WHITE PAPER

ARTICLE V

BREAKING DOWN THE GENIUS ACT: STABLECOIN LEGISLATION PASSES IN THE US SENATE AND HOUSE

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In July 2025, the United States' Congress passed, and President Donald J. Trump signed, the "Guiding and Establishing National Innovation for U.S. Stablecoins Act," otherwise known as the "GENIUS Act." The GENIUS Act provides clarity to stablecoin issuers and market participants in the United States and abroad while also enshrining consumer protections and anti-money laundering requirements into law.

The GENIUS Act defines "permitted payment stablecoins," and sets requirements for financial institutions and other entities to issue and redeem these assets. "Payment stablecoins" are defined as "digital assets designed for use as a means of payment or settlement, redeemable for a fixed amount of monetary value, and not classified as a security or deposit." Only "permitted payment stablecoin issuers"—entities approved under the Act—may issue such stablecoins in the U.S. Moreover, the GENIUS Act explicitly establishes that payment stablecoins are not securities. The act specifies which regulators are responsible for oversight of the various types of entities that may be authorized to issue payment stablecoins.

This provides valuable certainty because prior to the adoption of the GENIUS Act, the SEC, and federal and state regulators had all claimed jurisdiction over various stablecoin arrangements, but that jurisdiction had not been conclusively determined by legislation or court decisions. With this increased clarity the stage is set for further stablecoin development in the United States and further integration of stablecoins into traditional financial systems.

SO, WHO CAN ISSUE STABLECOINS?

The Act draws a bright line around who may issue payment stablecoins: after a three-year transition period, only permitted issuers—those approved under the new federal or state regimes, provided that the state-supervised entity does not cross $10 billion in stablecoin issuance—may issue stablecoins. After this three-year transition period, any non-permitted payment stablecoin issuer will be prohibited from issuing stablecoins in the United States, while digital asset service providers will be prohibited from offering or selling stablecoins from non-permitted payment stablecoin issuers.

However, "public companies"—public companies "not predominantly engaged in 1 or more financial activities, and its wholly or majority owned subsidiaries or affiliates"—cannot issue payment stablecoins "unless the public company obtains a unanimous vote of the Stablecoin Certification Review Committee[, which includes the Secretary of the Treasury, the Chair of the Board of Governors of the Federal Reserve System, and the Chair of the Federal Deposit Insurance Corporation.]"

Relatedly, foreign issuers will face some additional hurdles, including registration, compliance with U.S. lawful orders, and a requirement that the Committee conclude the issuer's home jurisdiction has a comparable regulatory regime to that imposed by the GENIUS Act. A prior iteration had forbidden foreign issuance outright and another iteration that also ultimately was not adopted would only have restricted foreign issuers that do not have "the technological capability to comply, and will comply, with the terms of any lawful order and any reciprocal arrangement pursuant to section 18."

OPERATIONAL AND COMPLIANCE REQUIREMENTS

The GENIUS Act imposes stringent operational requirements on stablecoin issuers. Issuers must maintain fully backed, identifiable reserves on a 1:1 basis, limited to highly liquid assets such as U.S. currency, short-term Treasuries, and certain money market instruments. Moreover, issuers are required to publicly disclose clear redemption procedures and all associated fees, and to publish regular audits and monthly reports on reserve composition, subject to third-party examination.

Issuers are subject to the Bank Secrecy Act and must implement robust anti-money laundering and sanctions compliance programs, including adopting technological capabilities to block or freeze transactions in response to lawful orders.

Pursuant to Section 9(d), FinCEN is directed to issue public guidance and notice and comment rulemaking regarding stablecoins and illicit activity.

LIMITATIONS ON REHYPOTHECATION, YIELD

Under Section 4(a)(2), reserves may not be rehypothecated or pledged except to (1) satisfy margin obligations in connection with investments in permitted reserves, (2) satisfy obligations associated with standard custodial services, or (3) create liquidity to meet reasonable expectations of redemption requests.

Additionally, under Section 4(a)(11), issuers are restricted to stablecoin-related activities and are expressly prohibited from paying interest or yield to holders: "No permitted payment stablecoin issuer or foreign payment stablecoin issuer shall pay the holder of any payment stablecoin any form of interest or yield (whether in cash, tokens, or other consideration) solely in connection with the holding, use, or retention of such payment stablecoin." This provision has sparked much debate as to the extent to which intermediaries—not the issuers themselves—can provide rewards around stablecoins. The GENIUS Act does not explicitly address or resolve that.

INSOLVENCY AND CUSTOMER PROTECTIONS

Another notable feature of the Act is its treatment of issuer insolvency under Section 11. **In the event of a bankruptcy, stablecoin holders are granted first-priority claims on reserve assets, with specific amendments to the Bankruptcy Code to enshrine these rights. This is a significant step toward protecting consumers and maintaining confidence in stablecoin arrangements.**

CUSTODY, SAFEKEEPING, AND ASSET SEGREGATION

Under Section 10, only regulated entities may provide custody services for stablecoin reserves and private keys, and the Act mandates strict segregation and customer property protections. This is designed to prevent the commingling of customer assets and to ensure that customer claims are protected in the event of a custodian's insolvency.

FOREIGN ISSUERS AND INTERNATIONAL RECIPROCITY

Per Section 18, foreign stablecoin issuers may operate in the U.S. if their home country's regulatory regime is deemed comparable, they register with U.S. authorities, and meet reserve and compliance requirements. **The Act also contemplates reciprocal arrangements with other jurisdictions, potentially paving the way for cross-border interoperability and regulatory harmonization.**

However, under Section 8(b), if a foreign payment stablecoin issuer does not enter compliance with the above within 30 days, secondary trading of that issuer's payment stablecoins shall become prohibited.

CLARIFICATION OF SECURITIES AND COMMODITIES LAWS

Perhaps its most consequential element, Section 17 of the Act explicitly excludes payment stablecoins issued by permitted issuers from the definitions of "security" and "commodity" under federal securities and commodities laws. This added provision provides long-awaited regulatory clarity and should, ideally, reduce the risk of overlapping or inconsistent regulatory treatment (setting aside the question of yield-bearing stablecoins, of course).

LOOKING AHEAD: GENIUS ACT COMPLIANCE

The GENIUS Act has created regulatory certainty for payment stablecoins in the U.S. To that end, stablecoin issuers and digital asset service providers have begun preparing for a regime that demands greater compliance, robust operational controls, and proactive engagement with federal or state legal requirements. Stablecoin issuers will, in due time, have to apply and be authorized by either federal or state regulators. As such, this three-year transition period will be critical for existing issuers to align their operations with these new requirements.

GLOBAL MOMENTUM, LOCAL CHALLENGES: TOWARDS A STABLECOIN REGIME IN INDIA

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In 2025, stablecoins became the quiet workhorses of the global crypto economy. Today they underpin much of on-chain liquidity, serve as rails for DeFi, and critically, function as low-friction instruments for cross-border value transfer. In markets like Nigeria, Argentina, and Türkiye, stablecoins are a practical hedge[1] against local currency volatility; in the United States and Europe, they are the experimental rails for a more efficient payments future.

The Indian market is by far the largest recipient of overseas remittances (roughly $129 billion in 2024)[2] and home to a sprawling domestic interoperable digital payments architecture.[3] India's unified payment interface (UPI) is the largest real-time payment system in the world by volume, with more than 19 billion transactions a month.[4]

However, India's payment architecture is limited to domestic payment transactions, and does not allow cross-border transfers.

Additionally, India's position in global trade has significantly strengthened, with its overall share doubling since 2005, particularly in services where it ranks 7th globally for services exports.[5] However, India remains tethered to outdated and expensive infrastructure with trade payments relying on slow and costly legacy systems.[6] Stablecoins have the potential to transform the way international trade takes place, and India is no exception to this. They offer a faster and more cost-effective alternative to traditional remittance channels by reducing reliance on intermediaries, which often involve high fees, FX markups and prolonged settlement times.[7]

* The views and opinions expressed in this article are those of the author(s) and do not necessarily reflect the official policy or position of the Hashed Group.

1 Dave Sutter, "What Argentina, Nigeria, and Turkey Are Really Telling Us About the Future of Money." *OpenTrade (Medium)*, April 8th, 2024. Available at: https://medium.com/opentrade/what-argentina-nigeria-and-turkey-are-really-telling-us-about-the-future-of-money-8a2a250e133c

2 "Overseas Indians Send Home Record $129.4 Billion in 2024; Remittances Cross $100 Billion for 3rd Consecutive Year." *The Times of India*, October 7th, 2024. Available at: https://timesofindia.indiatimes.com/business/india-business/overseas-indians-send-home-record-129-4-billion-in-2024-remittances-cross-100-billion-for-3rd-consecutive-year/articleshow/119851568.cms

3 María Soledad Martínez Pería, "India's Frictionless Payments." *IMF Finance & Development Magazine*, September 2025. Available at: https://www.imf.org/en/Publications/fandd/issues/2025/09/indias-frictionless-payments-maria-peria

4 *Ibid.*

5 Government of India Press Release on "India's Advancing Role in Global Trade Competitiveness", December 3rd, 2024. Available at: https://www.pib.gov.in/PressReleasePage.aspx?PRID=2079986#

6 Aishwary Gupta, "How Stablecoins Could Save Billions and Redefine Global Commerce", June 26th 2025. Available at: https://startupsuccessstories.in/how-stablecoins-could-save-indians-billions-and-redefine-global-commerce/

7 Rawad Nasser, "Are Stablecoins the Game Changer for Cross-Border Payments?" May 1st, 2025. Available at: https://www.edgardunn.com/articles/are-stablecoins-the-game-changer-for-cross-border-payments#:~:text=Stablecoin%20For%20Cross%2DBorder%20Payments&text=They%20offer%20a%20faster%20and,future%20of%20cross%2Dborder%20payments

Despite clear user demand for cross-border transfers, evidenced by the remittance inflow into India and a huge and consistently expanding international trade industry, India remains at a delicate crossroad about whether to embrace, restrict, or effectively co-opt stablecoins. That indecision may turn costly.

At the outset, the thought-process here is not advocating for replacing India's seamless domestic payment network. Rather, we explore stablecoins from a cross-border perspective, in terms of how they could serve businesses and individuals as a faster, cheaper, and more efficient channel for global value transfer, complementing India's digital payments success story rather than competing with it.

WHY STABLECOINS MATTER

The global stablecoin market remains heavily concentrated: the largest fiat-backed stablecoins[8]—USDT and USDC—collectively account for about 93% of total supply.[9] Stablecoin issuers and markets have expanded[10] in market-cap terms over the last few years even as regulators moved from caution to formal frameworks. At the same time, countries are taking divergent approaches—Europe has implemented MiCA, the United States passed[11] stablecoin related legislation in 2025 (the GENIUS Act), and Singapore has operationalized rules for single-currency stablecoins[12]— meaning that regulatory clarity elsewhere is no longer a hypothetical.

These developments matter for India because they change the geography of where projects incorporate, where liquidity pools are hosted, and which jurisdictions set cross-border rules.

India's remittance inflows are not an abstract line item: they are lifelines for households and local economies. Stablecoins can cut costs and settlement times dramatically, achieving near real-time settlement,[13] compared with some legacy corridor rails that charge 3–7 percent[14] and take days. For ordinary families and small businesses, the difference in cost and speed is material. That's why, even under a punitive tax regime for crypto[15]—30% on gains and a 1% TDS designed for traceability—demand for stable, fast value-transfer instruments persists.[16]

In a trade-heavy economy like India's, the efficiency dividend proposed by stablecoins alone is worth serious policy attention. India's export-import volumes crossed US$800 billion in FY2024–25,[17] a scale that exposes every friction in the current cross-border settlement system—delays, conversion spreads, and dependency on costly correspondent banking. For exporters and importers alike, especially Micro, Small and Medium Enterprises that live on tight margins,[18] stablecoins could function as digital settlement assets that are near-instant. They wouldn't replace existing rails but sit atop them, turning what is now a multi-day, multi-intermediary process into a real-time flow of value.

8 *CoinMarketCap*, n.d. Available at: https://coinmarketcap.com/view/stablecoin/

9 Did You Know 93% of the Stablecoin Market Share Is Controlled by Just 2 Coins?" *Nasdaq*, July 29, 2025. Available at: https://www.nasdaq.com/articles/did-you-know-93-stablecoin-market-share-controlled-just-2-coins

10 "Stablecoins Are Rising Fast — What Does This Mean for Financial Systems?" *World Economic Forum*, March 12th, 2025. Available at: https://www.weforum.org/stories/2025/03/stablecoins-cryptocurrency-on-rise-financial-systems/

11 Fact Sheet: President Donald J. Trump Signs GENIUS Act into Law." *The White House*, July 15th, 2025. Available at: https://www.whitehouse.gov/fact-sheets/2025/07/fact-sheet-president-donald-j-trump-signs-genius-act-into-law/

12 "MAS Finalises Stablecoin Regulatory Framework." *Monetary Authority of Singapore (MAS)*, August 15th, 2023. Available at: https://www.mas.gov.sg/news/media-releases/2023/mas-finalises-stablecoin-regulatory-framework

13 Considerations for the Use of Stablecoin Arrangements in Cross-Border Payments." *BIS CPMI*, October 2023. Available at: https://www.bis.org/cpmi/publ/d220.pdf

14 How Stablecoins Could Unlock India's $130 Billion Remittance Economy." *Fortune India*, April 10th, 2025. Available at: https://www.fortuneindia.com/markets/cryptocurrency/how-stablecoins-could-unlock-indias-130-billion-remittance-economy/123706

15 "Cryptocurrency Taxation Guide." ClearTax, n.d. Available at: https://cleartax.in/s/cryptocurrency-taxation-guide

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17 "India's Economic Outlook in 2025: GDP Forecast and Key Sectors to Watch." *India Briefing*, December 27, 2024. Available at: https://www.india-briefing.com/news/indias-economic-outlook-2025-gdp-forecast-35580.html/

18 "Cash Flow Challenge for India's MSMEs." *Hindustan Times (insight)*, September 25, 2025. Available at: https://www.hindustantimes.com/ht-insight/economy/cash-flow-challenge-for-india-s-msmes-101758809635525.html

THE REGULATORY VACUUM

India currently lacks a formal legal framework for stablecoins. They are not recognized as currency, securities, or payment instruments under existing law. The Payment and Settlement Systems Act (PSS Act) does not contemplate tokenized value, and the Foreign Exchange Management Act (FEMA) still governs cross-border movement of money in strictly fiat based terms. Taxation rules capture "virtual digital assets" (VDAs) broadly, but without distinguishing between volatile cryptocurrencies and price-stable tokens. This absence of classification and clear rules leaves issuers, intermediaries, and users operating in a legal grey zone.

Without formal licensing, oversight or fail-safe protections, firms face uncertainty about which regulator applies (while the laws governing virtual digital assets are included in the legislation on prevention of money laundering with regular reporting requirements to the Financial Intelligence Unit and prosecution of violators by the Enforcement Directorate, traditionally payment systems fall under the domain of the Reserve Bank of India (RBI) as do exchange control laws), what compliance standards apply[19], and what liability or recourse exists; users may transact with tokens that are not statutorily validated (that is the virtual digital asset service providers operating in India (whether offshore or onshore) that have not registered as per the requirements of Indian law), and intermediaries may be exposed to enforcement-risk.

This posture is less "vacuum" than "strategic silence": multiple authorities stare at the same problem.

To provide a summary: the RBI insists that money-like instruments and cross-border movement of money fall in its domain (as reflected in recent public remarks by the RBI Governor favoring central-bank digital currencies over privately issued stablecoins)[20]; Securities and Exchange Board of India (SEBI) generally scrutinizing instruments with investment-like features for securities characteristics; and the Finance Ministry has already placed VDAs into an austere tax code meant to deter speculation, not to enable safe payments. This results in a jurisdictional standoff that disincentivizes onshore development.

Web3 projects are increasingly setting up shop[21] in Singapore, Dubai, and other friendly jurisdictions, and hence, the rails that serve Indian users are often governed by foreign rules. Indian demand is being met—but by providers outside India's regulatory reach with solicitation through foreign Web3 projects. If policymakers wish to maintain domestic control over flows and to capture the economic benefits of issuance and custody, silence is not going to cut it but will only concede rule-making to others while still exposing India to the downsides of unregulated foreign issuance and transactions.

Contrast India's hesitation with the regulatory path elsewhere. The EU's MiCA defines asset-referenced and e-money tokens amongst others, sets reserve and disclosure requirements, and imposes licensing conditions on certain service providers—thereby creating an on-ramp for compliant activity. Singapore's framework for single-currency stablecoins (SCS) requires issuers to have local presence and imposes governance, capital and prudential conditions. **In the U.S., the GENIUS Act requires full reserve backing for payment stablecoins and brings issuers within the scope of established AML obligations.**

19 OKX Ceases Operations in India, Citing Regulatory Hurdles." *CryptoNews.com*, March 21 2024. Available at: https://www.cryptonews.com/news/okx-ceases-operations-in-india-citing-regulatory-hurdles/

20 "RBI Governor Malhotra Urges Other Central Banks to Promote CBDCs over Stablecoins" *The Indian Express,* October 16, 2025. This sentiment is misplaced in our view since the RBI can formulate regulations overseeing stablecoins issuance and usage also (including its role in cross-border payments, rather than advocate the preference for central-bank digital currency only which may not fully alleviate the concerns emanating from the current cross-border payment system). Available at: https://indianexpress.com/article/business/rbi-governor-malhotra-urges-central-banks-promote-cbdcs-stablecoins-10309697/

21 Isaac John, "Dubai is Becoming Crypto's New Playground as Singapore Tightens Regulations." *Khaleej Times*, July 6th, 2025. Available at: https://www.khaleejtimes.com/business/cryptocurrency/dubai-cryptocurrency-hub-global-firms-leave-singapore

These places are not naïve about risk; they have simply decided that risk is better managed through defined rules than opaque prohibitions.

The cost of waiting is not just lost fees or missed taxes; it is lost anchor institutions. When clear rules and licensing frameworks exist, legitimate businesses—exchanges, custodians, and payment firms—build within the system. That strengthens oversight, improves safety, and positions to help shape international standards. **India is effectively outsourcing that rule-making to other jurisdictions, and permitting offshore entities to set the norms and infrastructure that Indian users rely on. This also makes later 'recognition' of onshore alternatives harder and more expensive.**

INDIA'S DILEMMA OF CONTROL VS. COMPETITIVENESS

Regulators often frame the issue as a zero-sum trade between monetary sovereignty and technological dynamism, which can be misleading. India faces two clear paths: one where regulation remains absent, and innovation moves offshore, eroding our ability to influence or supervise it, while retail users continue to access these offshore platforms; or another where we build a deliberate, well-calibrated framework that allows responsible innovation while keeping macroeconomic control firmly intact. The question is not whether to regulate, but how to regulate smartly enough to balance both.

What RBI fears—and why some fears are rational

RBI's concerns are serious and rooted in macroeconomics. Widespread adoption of foreign-pegged stablecoins could fragment the domestic monetary system, reduce the effectiveness of conventional liquidity management, and in extreme cases accelerate a form of digital dollarization.[22]

Standard Chartered and other institutions have warned[23] that dollar-pegged stablecoins could materially shift deposits out of emerging market banks over time—an outcome that would constrict domestic credit intermediation and complicate FX management. Those scenarios justify prudence. But technology can be subservient to supervision.

The same architecture that enables anonymity can be used for transparency. Smart contracts can encode limits, require KYC attestation before transfers, and automatically notify authorities of cross-border flows. On-chain analytics tools now provide transaction tracing that is far superior in auditability to some legacy options. If the regulator's objective is to ensure traceability, AML robustness and reserve integrity, then technology can help deliver those outcomes, provided rules require the right technical safeguards.

Yet, there is another dimension to this debate. Because the stablecoin economy today is overwhelmingly dollar-denominated,[24] it presents both a challenge and an opportunity for India. If even a fraction of those inflows moved through clearly governed stablecoin channels, the efficiency gains could be enormous. However, to unlock those benefits, India will also need to revisit its taxation which largely affects off-ramping. **Treating routine conversions or withdrawals of stablecoin remittances as taxable events risks undermining the very inclusion and efficiency gains such innovation could bring. A smart regulatory approach would therefore pair prudential safeguards with a rationalized tax treatment that encourages compliant, low-cost digital inflows.**

22 *Ibid.*

23 "Stablecoins Could Suck $1 Trillion from EM Banks in Next Three Years, Standard Chartered Estimates." *Reuters*, October 7th, 2025. Available at: https://www.reuters.com/business/finance/stablecoins-could-suck-1-trillion-em-banks-next-three-years-standard-chartered-2025-10-07/#:~:text=LONDON%2C%20Oct%207%20(Reuters),report%20from%20Standard%20Chartered%20estimates

24 "Stablecoins: Competition, FX, and Agents." *Outlier Ventures*, October 6, 2025. Available at: https://outlierventures.io/article/stablecoins-competition-fx-and-agents/

An Indian Rupee (INR)-first, pragmatic alternative

There is a path that preserves control and unlocks competitiveness: an INR-backed (Indian rupee), regulated stablecoin ecosystem governed by strict reserve, audit and redemption rules, issued only by licensed entities (banks, regulated payment institutions, or consortia etc.) and interoperable with RBI's e-rupee and UPI rails. This hybrid approach would deliver the user benefits of low cost and speed while keeping monetary policy tools intact, because the liabilities would sit largely inside the regulated perimeter. Even more creatively, India could pilot commodity-backed alternatives (e.g., gold-referenced tokens) that respect capital-control sensibilities while offering users a non-USD store of value—an option explicitly argued for by practitioners[25] who note the limited global reach of the rupee.

A POLICY SKETCH

1. **Classify first.** Enact a statute or notification that defines stablecoin categories (INR-backed; foreign-pegged/payment coins; asset-referenced). Clear labels enable proportionate rules.

2. **Permit INR-backed private issuance, under strict licence.** Banks and regulated payment institutions could issue INR stablecoins redeemable 1:1 for central bank-acceptable assets, subject to daily transparency and periodic audits.

3. **Sandbox foreign-corridor pilots.** Allow limited remittance pilots using foreign-pegged coins under custodial and reserve safeguards, with caps per wallet and per corridor to monitor FX leakage.

4. **Embed compliance in rails.** Mandate programmable KYC attestation, sanctions screening, and automated reporting built into the transfer mechanism.

5. **Tax differentiation.** Create a lighter tax/administrative regime for low-volatility, payment-oriented stablecoins to distinguish them from speculative VDAs.

6. **Coordinate internationally.** Negotiate mutual recognition or equivalence with jurisdictions that implement robust reserve and AML standards so cross-border settlement can scale without regulatory arbitrage.

FINAL WORD: LEAD, DON'T LAG

India has the technical infrastructure, developer talent, and market demand to make a distinctive choice: to build a stablecoin regime that preserves monetary sovereignty while exporting regulated rails. The alternative of perpetual avoidance hands the future to others. Globally, the regulatory tide has turned from debate to implementation. Each jurisdiction recognizes that stablecoins are no longer niche—they are the connective tissue of the next financial architecture. For India, the choice is between reacting to that architecture or shaping it. Policy making is always complex; it requires risk, institutional cooperation, and a willingness to use technology to supervise rather than to fear it. But incremental, strategic leadership could convert a perceived monetary threat into a new instrument of national financial influence.

25 DLTevangelist on X (formerly Twitter), October 2025. *X (Twitter)*, October 2025. Available at: https://x.com/DLTevangelist/status/1964183582362009700

SESSION RECAP

GBBC'S 8TH ANNUAL BLOCKCHAIN CENTRAL UNGA: CAPITAL MARKETS RISK MITIGATION FRAMEWORK

GBBC members and Ambassadors gathered for GBBC's 8th Annual Blockchain Central UNGA alongside the 80th Session of the United Nations General Assembly (UNGA) at the Offices of the United Nations Joint Staff Pension Fund (UNJSPF) in New York City. Blockchain Central UNGA brought together thought leaders and changemakers across blockchain, government, technology, and industry to examine how we can leverage blockchain-powered solutions to accelerate progress towards the United Nations Sustainable Development Goals (SDGs).

During the full day of programming, we were pleased to host the discussion *"Capital Markets Risk Mitigation Framework: Why It's Important"* with Otto Nino (DTCC Digital Assets), Jørgen Ouaknine (Euroclear), Wee Ming Choon (Ava Labs), Michael Wagner (Oliver Wyman), and Amina Turgulova (GBBC). The Capital Markets Risk Mitigation Framework (RMF) delivers industry-led guidance on analyzing and mitigating operational risks arising from public blockchain adoption by regulated financial institutions.

This conversation addressed why such frameworks are essential for safe and sustainable digital asset adoption, and how they can assist with establishing trust and institutional readiness throughout the capital markets ecosystem.

WATCH THE RECORDING

VIEW ALL SESSIONS

HOW CAN I GET INVOLVED?

Since 2021, GBBC has released the International Journal of Blockchain Law (IJBL), an open access online journal written and edited by lawyers, designed to help business and non-legal communities better understand the world of blockchain and digital assets.

Interested in submitting new work to or becoming an editor for IJBL? Review the submission guidelines below and write to us at IJBL@gbbc.io.

Length	3-4 print pages including footnotes
Target Audience for Submission	Broader business community aiming to better understand the technology and the legal issues associated with it
Content	All legal areas related to blockchain technology and digital assets
Structure	Introduction - Description of legal matter - Proposed solution - Conclusion/key takeaways
Writing Style	Not too academic; lucid and clear-cut language
What Can I Submit?	Previously published work is welcome for submission to the IJBL

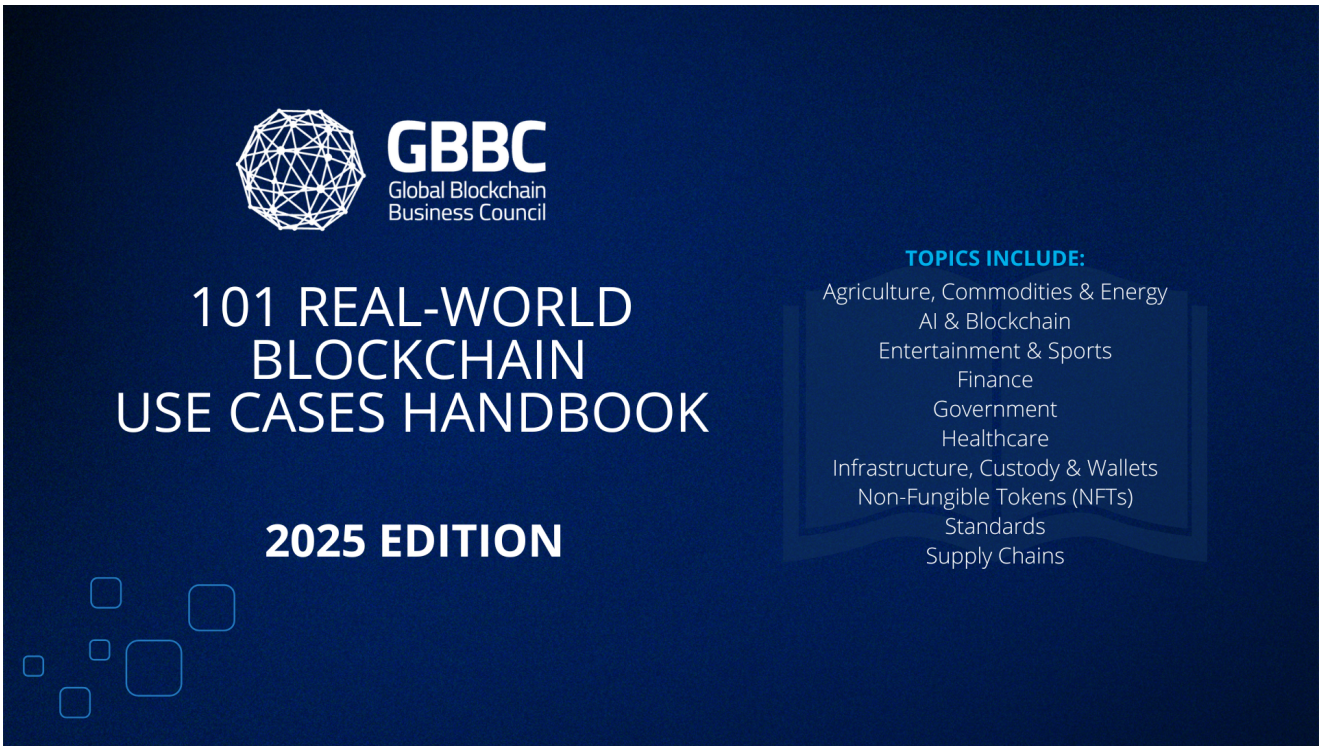
GBBC COMMUNITY'S 101 REAL-WORLD BLOCKCHAIN USE CASES HANDBOOK, 2025 EDITION

This summer, GBBC and our community released the *101 Real-World Blockchain Use Cases Handbook, 2025 Edition*, which has recently received a Library of Congress Control Number (LCCN) for the printed version: 2025914759.

This Handbook is a valuable reference guide for government agencies, regulators, and central banks worldwide, providing an educational resource to deepen their understanding of blockchain and digital assets. It highlights practical solutions, moving beyond the hype to showcase real-world use cases that are driving meaningful impact across industries, jurisdictions, and organizations.

Thank you to our community for the incredible work you have been doing and for taking the time to share your use cases with the industry. Your contributions make this resource possible.

GBBC's 101 Real-World Blockchain Use Cases Handbook is certified using SureMark Digital's blockchain-based registry to authenticate content. SureMark Digital is an authentication and content verification platform, leveraging the pioneering work of Stuart Haber and W. Scott Stornetta, co-inventors of early blockchain technology, to combat misinformation, certify digital documents, and protect against deepfakes.



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