



Digital Bonds - Concepts and Practice

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The Rise of Tokenized Bonds: From Theory to Practice

● 2018

World Bank
pioneered Bond-i, a
~A\$110 million two-
year blockchain-
based bond

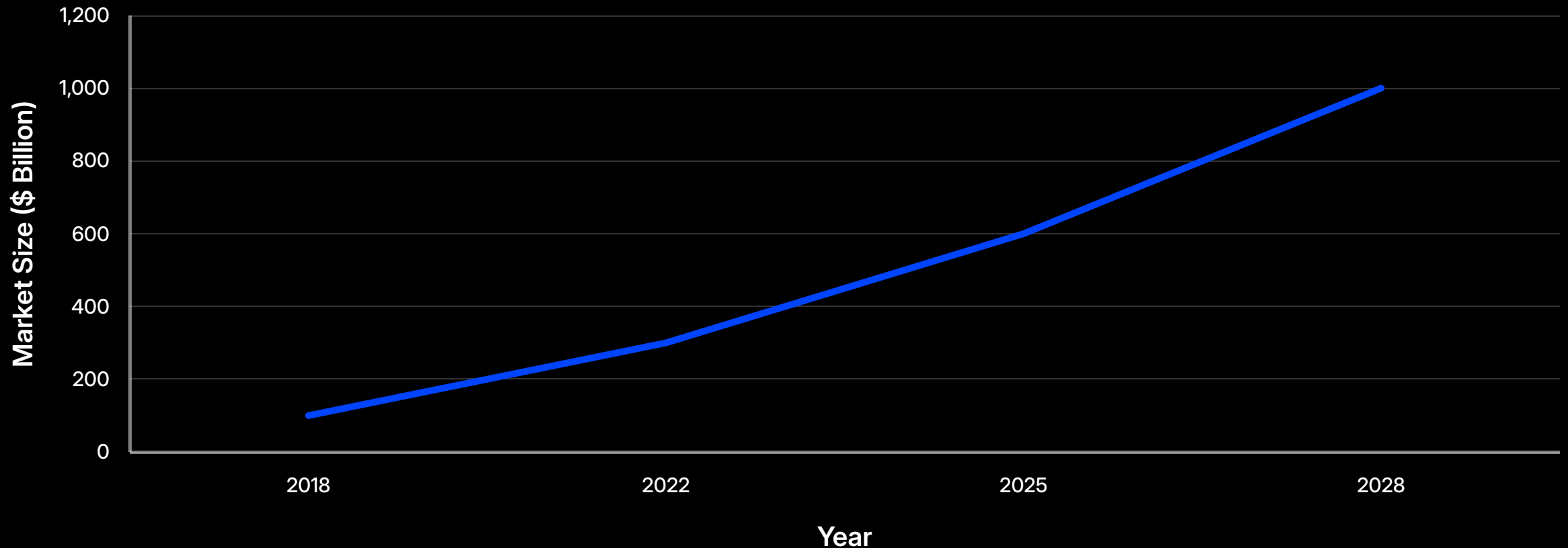
● 2021

European Investment
Bank issued €100
million Ethereum-
based bond

● 2021

Santander and
Societe Generale
issued pilot
blockchain bonds

The Rise of Tokenized Bonds: A \$1 Trillion Opportunity by 2028



The tokenized bonds market is projected to grow rapidly, reaching \$1 trillion by 2028 at a 50%+ annual rate.

*Deloitte, 'The Dawn of the Tokenized Bond Market'

1 Public Sector Activity in Europe

EIB's Journey into Blockchain Bonds

● **April 2021**

EIB launched its first blockchain bond (€100 million 2-year bond on Ethereum)

● **November 2022**

EIB issued a €100 million digital bond (Project Venus) on Goldman Sachs' tokenization platform and settled using Banque de France's experimental wholesale CBDC

● **January 2023**

EIB issued a £50 million digital bond using a combination of private and public blockchains via HSBC's Orion platform

Sovereigns Embrace Blockchain for Bonds

Slovenia's Tokenized Bond

In July 2024, Slovenia became the first European sovereign to issue a tokenized bond, a €30 million, 4-month treasury bond, as part of a European Central Bank trial of DLT-based settlement.

Settlement with Wholesale CBDC

The bond was settled using a Banque de France wholesale digital euro (CBDC), demonstrating end-to-end automation with central bank money.

Improving Bond Market Infrastructure

This issuance, arranged with BNP Paribas, highlights that even national debt managers see potential in blockchain for improving bond market infrastructure.

Other EU Sovereign Pilots

Other EU sovereigns are studying similar pilots, such as Austria and Luxembourg exploring DLT for government debt, although full-scale sovereign blockchain bonds remain rare so far.

Tokenization of Bonds: KfW's Blockchain Bonds

Kreditanstalt für Wiederaufbau - Digital Bond Issuance

KfW, Germany's state-owned development bank, has been very active in the digital bond market. In **late 2022**, KfW conducted an initial €20 million blockchain-based bond under Germany's eWpG law, and by **early 2025**, had completed four waves of digital bond sales on Deutsche Börse's D7 platform, totaling €17.5 billion in aggregate.

Large Benchmark Bonds

KfW has issued large benchmark bonds as electronic securities, including a €5 billion 5-year bond in 2023, which were settled through Clearstream's DLT-enabled system.

Investor Demand for Blockchain Bonds

KfW cites heavy investor demand for its recent €100 million Polygon-based blockchain bond, underscoring that tokenization is being used for mainstream funding operations, not just tech experiments.

Supranational and Development Banks

European supranational and development banks, such as the EIB, have been very active in the digital bond market, demonstrating the growing adoption of blockchain technology in the financial sector.

CDP's Digital Bond on Polygon Blockchain

National Development Bank

Cassa Depositi e Prestiti (CDP), Italy's national development bank, issued a €25 million 4-month digital bond.

Fintech Decree

CDP took advantage of a new law - the "Fintech" decree.

Blockchain-based Issuance

The bond was issued on the public Polygon blockchain, a layer-2 scaling solution for Ethereum.

Settlement via Central Bank Money

The bond was settled in central bank money via the Bank of Italy's Target2-TIPS system link.

Regulatory Compliance

It was the inaugural use of Italy's DLT framework outside the EU pilot regime, with a regulated

Summary – EU Blockchain Bond Innovations

EIB's €100M Digital Bond Launch

In November 2024, the EIB launched a €100 million 1-year digital bond under the ECB's new exploratory work on DLT settlement, indicating sustained public-sector momentum.

Regulated Tokenized Bond Pilots

EU bodies (EIB, ECB), sovereigns (e.g. Slovenia), and national promotional banks (KfW, CDP) are testing issuance and settlement of tokenized bonds on DLT.

Establishing Legal Precedents

These projects have proven the feasibility of tokenized bonds in a regulated context, setting important precedents from legal (recognition of blockchain ledgers as securities registers) to technical.

Showcasing Blockchain Bond Benefits

Europe's public institutions are laying groundwork for wider adoption, showcasing use cases such as rapid settlement, reduced reliance on paper or central depositories, and potential cost savings.

Scaling Beyond Pilot Mode

The next challenge is scaling these initiatives beyond pilot mode and extending benefits to a broader array of issuers, including smaller governments and municipalities.

2 Private Sector Activity in Europe

Corporates Embrace Blockchain-based Bonds

Siemens Issues €60M Digital Bond

In February 2023, Siemens AG issued a €60 million one-year digital bond on the Polygon blockchain, the first corporate bond under Germany's eWpG (Electronic Securities Act) on a public network. The transaction was executed **without any bank** acting as an intermediary.

Deutsche Börse's €3B Digital Bond Issuance

In October 2023, Deutsche Börse AG, issued three tranches of digital corporate bonds totaling €3 billion. These bonds, maturing in 2026, 2029, and 2033, were issued under German law via the D7 digital platform and registered in Clearstream's decentralized central register.

Financial Institutions Establish Tokenization Platforms

Major banks and fintech firms have launched tokenization platforms to offer end-to-end digital issuance services to clients.

Examples: HSBC's Orion platform, Goldman Sachs' GS DAP, and 21finance (21X), one of the first licensed DLT exchange and settlement venues under the EU pilot regime.

Extending Tokenization to Smaller Corporates

ABN AMRO in the Netherlands has run trials to help mid-sized corporate clients issue small tokenized bonds to investors, while German fintechs like Cashlink and Upvest provide tokenization technology for smaller-scale security token offerings.

Blockchain Bonds in Europe (SMEs)

Blockchain Bond Issuances

Most private-sector blockchain bond issuances in Europe have been led by large corporations or banks, rather than small and medium enterprises (SMEs).

Lack of SME Involvement

As of 2025, no European SME has independently issued a public tokenized bond at scale, with deals typically involving known issuers and significant investor arrangements.

Fintech Startups' Role

Fintech startups are working to simplify compliance and custody for digital securities, often partnering with traditional institutions, to enable cost reduction and efficiency gains.

Emerging Secondary Markets

New secondary market venues, such as digital bond trading segments on platforms like Overstock's tZERO, are emerging, which could improve liquidity for tokenized corporate debt.

Adoption by Market Infrastructure

Europe's market infrastructure giants, like the Luxembourg Stock Exchange and Euroclear, are integrating digital issuance services, indicating that private-sector adoption is moving from proof-of-concept to operational reality.

Fintech's Role in Tokenized Bonds

Aligning Offerings with Regulations

Fintech companies are developing user-friendly issuance portals, compliance tools (digital AML/KYC), and custody solutions to bring more private issuers on-chain and align with new regulations.

Lowering Entry Barriers

European startups and platforms, such as Tokeny in Luxembourg, WeOwn in Liechtenstein, and Fintech Hub Slovenia, aim to lower entry barriers for SMEs and mid-caps to issue security tokens representing bonds.

Overcoming Regulatory Complexity

While uptake by SMEs remains minimal, often due to regulatory complexity and lack of investor reach, these private-sector initiatives are setting the foundation for more streamlined tokenized bond issuance.

Legally Compliant Tokenized Bonds

Law firms, such as Clifford Chance, have helped structure legally compliant tokenized bond offerings, creating templates that private companies can reuse to issue bonds on blockchain.

Reducing Cost and Execution Time

As technology matures, the expectation is that issuing a bond on blockchain can become as straightforward as traditional bond issuance but with much lower cost and faster execution.

3 Regulatory Landscape

EU's DLT Pilot Regime

Overview

A regulatory sandbox introduced by Regulation (EU) 2022/858, effective since 23 March 2023. Allows market infrastructures to trade and settle financial instruments on DLT with certain temporary exemptions from existing rules.

Objectives

Designed to help smaller firms access capital markets via tokenization by targeting SMEs and smaller issuances. Aims to integrate DLT into the regulatory framework permanently after the pilot phase.

Scope

Permits approved entities to operate DLT multilateral trading facilities (MTFs) or DLT settlement systems for tokenized securities, bypassing some requirements of MiFID II and CSDR during the pilot phase.

Limits

For bonds, only those with an issue volume below €1 billion are permitted, and the total market value of DLT-traded instruments on a given platform must not exceed €6 billion. Eligible equity is limited to companies under €500 million market cap.

Pilot Duration

The pilot regime is set to run for 3 years (2023–2026), with a possible 3-year extension, after which the EU will decide on permanently integrating DLT into the regulatory framework.

DLT Pilot Developments and Challenges

Pilot Authorization Highlights

Twenty-One Finance, a platform focusing on small-cap issuers, received authorization as a combined DLT exchange and DLT settlement venue. The Central Securities Depository of Prague gained approval to operate a DLT settlement system, becoming the first CSD in the EU to do so.

Slow Uptake Concerns

As of April 2025, only two major projects were authorized EU-wide, with no projects yet in large markets like France or Italy. Regulators have proposed adjustments to the pilot regime to attract more participants, such as raising or adapting the limits and extending the pilot's duration.

Regulatory Discussions

The French and Italian regulators (AMF and Consob) have proposed adjustments to the pilot regime, arguing that current thresholds are too low to entice big issuers. A Deutsche Börse executive suggested that the pilot is like "adapting an aircraft carrier to land a Cessna, but only for one or two landings".

Pilot Regime Flexibility

The pilot regime explicitly allows the use of stablecoins (electronic money tokens) for settlement and permits retail investor participation with certain safeguards, which could broaden the market if implemented.

National Legal Frameworks for Blockchain-based Securities in Europe

- **National legal frameworks crucial in Europe**

Parallel to EU-level pilot, national laws have been essential in facilitating blockchain-based securities

- **Germany's early adoption with eWpG**

eWpG (*Elektronische Wertpapiergesetz*) law enacted in 2021 allowed issuance of electronic bearer bonds and shares on blockchain or central register

- **Numerous German bonds issued under eWpG**

Siemens' €60 million digital bond and KfW's multi-billion euro bonds on DLT were eWpG-compliant

- **Luxembourg's DLT-based securities laws**

2021 law amendments recognized DLT-based securities, enabling EIB's 2023 blockchain bond

- **France's early blockchain-based bond projects**

2016 law and 2017 decree allowed unlisted securities on DLT, paving way for SocGen's early blockchain bonds

Europe's Regulatory Innovation in Blockchain-based Finance

- **Italy**
Implements the EU pilot regime into Italian law and extends it
- **Empowers Consob and the central bank**
To authorize DLT market infrastructures
- **Allows DLT issuance outside the pilot regime**
If certain extra steps are taken, such as a Digital Securities Register
- **CDP's €25 million blockchain bond**
Italy's first bond using the Fintech Decree, with a Consob-approved digital register
- **Regulatory sandboxes in Spain and Austria**
Tested blockchain-based bond platforms on a case-by-case basis
- **Switzerland's DLT securities law**
Comprehensive framework that influenced EU thinking
- **UK's Digital Securities Sandbox**
Launched in 2023-24 with similar goals to the EU

Summary - Europe's Dual Approach to Tokenized Bond Regulation

Europe's regulatory landscape for tokenized bonds is characterized by a dual structure:

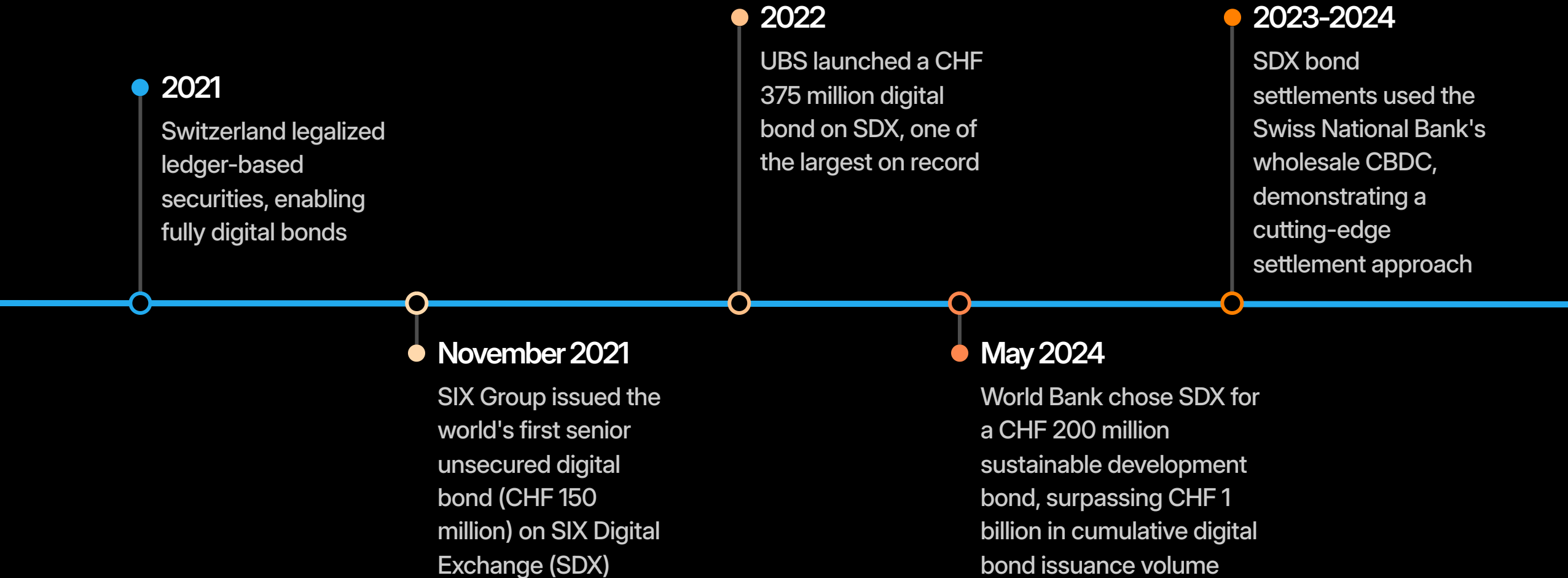
- 1 an EU-wide pilot regime to trial DLT market infrastructure under a common framework,
- 2 individual member state laws enabling digital securities issuance within their jurisdictions.

This approach has provided legal certainty for early issuances and a sandbox for more integrated trading/settlement experiments across borders.

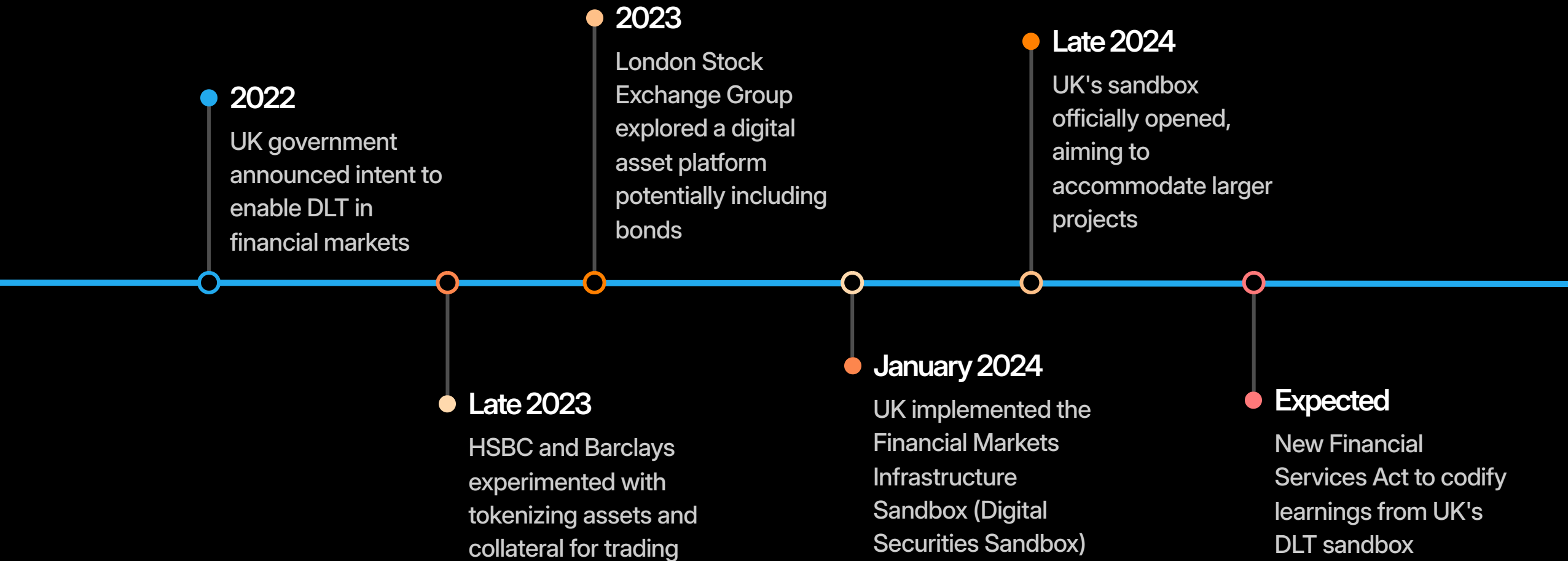


4 Institutional Adoption Outside the EU – Brief Overview

Switzerland's Pioneering Adoption of Digital Bonds



UK's Journey to Integrate DLT in Financial Markets



Tokenized Bonds in the U.S.: Navigating Regulatory Uncertainty and Emerging Initiatives

- **Regulatory Uncertainty in the U.S.**

No U.S. equivalent of the EU pilot regime, blockchain-based bonds must fit into existing SEC regulations

- **Notable Private and Pilot Initiatives**

JPMorgan Chase's Onyx blockchain used to tokenize U.S. Treasuries and other assets for collateral, Goldman Sachs' GS DAP platform used in Europe

- **Investor Appetite for Blockchain Vehicles**

Franklin Templeton's blockchain-based U.S. money market fund with \$270 million in tokenized U.S. government debt assets

- **Experiments in the Municipal Bond Market.**

City of Miami discussed a blockchain muni bond (not yet materialized)

- **Regulatory Clarity Remains a Hurdle**

SEC cautious on crypto-securities, industry calls for clearer rules to allow corporate issuers to register tokenized bonds

Tokenized Bonds in Asia: Hong Kong's Leadership

Hong Kong's Tokenized Green Bond Issuance

In February 2023, the Hong Kong government successfully issued an HKD 800 million tokenized Green Bond, the first tokenized government green bond globally. This bond used a private blockchain network and involved HSBC, Goldman Sachs, and others as placing banks.

Diverse Investor Group and Cost Efficiencies

The tokenized Green Bond reached a diverse group of investors and reportedly achieved cost efficiencies in allocation.

Multi-Currency Tokenized Bond Issuance

In February 2024, Hong Kong issued HKD 6 billion (≈USD 768 million) in digital green bonds across four currencies (HKD, USD, EUR, RMB) – the world's first multi-currency tokenized bond issuance. These were settled through the HKMA's Central Moneymarkets Unit with links to Euroclear/Clearstream, showing a hybrid of DLT and traditional systems.

Hong Kong's Regulatory Support

Hong Kong's regulator has explicitly supported developing digital bond issuance capabilities to maintain the city's debt market competitiveness.

Exploring DeFi in Wholesale Funding Markets: Singapore's MAS Project Guardian

MAS Project Guardian

A regulatory sandbox in Singapore for exploring DeFi in wholesale funding markets.

2022 Pilot

DBS Bank, JP Morgan, and SBI Digital Asset Holdings tokenized Singapore Government Securities bonds and foreign exchange on a public blockchain to test atomic trading and lending.

Demonstrating Compliance

The pilot showed how a bond could be traded or used in DeFi protocols while complying with regulations.

Expanding Use Cases

Singapore has since expanded Project Guardian to include tokenized corporate bonds and funds as collateral.

Developing Risk Analytics

S&P Global has been brought in to develop risk analytics for digital bonds.

Asia's Blockchain Bond Revolution



Japan Digitizes Securities

Japan amended its Act on Book-Entry Transfer of Corporate Bonds in 2022 to accommodate digitized securities, enabling large Japanese financial firms like Mitsui and SBI to issue tokenized security tokens backed by bonds or loans domestically.



Thailand Launches Blockchain Bond Platform

Thailand launched a blockchain platform for government savings bonds in 2020, allowing retail investors to buy small-denomination bonds via a blockchain system, raising billions of baht within days.



China Explores Blockchain for Bond Issuance

China, while cautious on cryptocurrency, has explored blockchain for bond issuance through state banks and the BSN network, and the People's Bank of China has tested bond trading on a digital yuan platform.

Asia is leading the way in embracing innovative financial technologies, such as blockchain and tokenization, to modernize bond markets and improve access for investors.

Summary - Global Landscape of Tokenized Bonds

- **Regulated digital exchange in Switzerland**

Switzerland has the most advanced live environment with a fully regulated digital exchange and multiple large issuances

- **Private innovation but regulatory uncertainty in the U.S.**

The U.S. has strong private innovation but regulatory uncertainty delaying broad adoption of tokenized bonds

- **Regulator-driven pilots in Asia**

Asia, led by Hong Kong and Singapore, is using regulator-driven pilots to tokenize bonds (especially government bonds) to prove efficiency gains and market readiness

- **U.K. pursuing its own sandbox**

The U.K., having left the EU, is paralleling the EU's efforts with its own sandbox to remain competitive in the tokenized bond market

- **Europe's leadership in clear legal regimes and public institution engagement**

Europe is not alone in pursuing tokenized bonds, but it has been among the leaders in setting up clear legal regimes and engaging public institutions

- **Europe's DLT pilot and global consortia participation**

Europe's DLT pilot is one of the first regulatory sandboxes of its kind, and its large banks have actively participated in global consortia

- **Competition heating up**

Hong Kong's multi-currency tokenized bond and Switzerland's integration of CBDC in bond settlement are notable firsts that Europe will want to match or surpass

5 Key Obstacles

Legal and Regulatory Hurdles for Blockchain Bonds

- **Regulatory hurdles for blockchain bonds**
Current EU and German laws limit trading of crypto-securities on public exchanges due to requirement for a CSD
- **Limitations of the EU DLT Pilot Regime**
Strict volume caps (e.g. bonds < €1 billion) and short timeframe discourages large issuers, viewed as too constrained for meaningful use
- **Eligibility issues for tokenized bonds**
European Central Bank has not yet confirmed DLT-issued bonds can be used in its refinancing operations, reducing investor attractiveness
- **Legal fragmentation within the EU**
Cross-border recognition of blockchain bonds not automatic, creating legal mismatches for issuers and investors
- **Unresolved legal risks**
Ambiguity around liability and governance of decentralized networks makes conservative issuers and regulators cautious

Technical and Integration Challenges in DLT-based Bonds

- **Interoperability challenges**

Limited interoperability between blockchains and legacy systems, requiring parallel traditional processes

- **Lack of on-chain cash settlement**

No euro CBDC for atomic DvP (delivery vs payment) on-chain, leading to workarounds with added complexity

- **Mainframe integration issues**

Europe's Target2-Securities settlement system cannot natively settle tokenized securities, limiting mainstream adoption

- **Scalability and performance**

Public blockchains struggle with high throughput and privacy concerns, while private blockchains create walled gardens

- **Cybersecurity risks**

Digital bonds as tokens raise the stakes of potential hacking or key theft, though institutional-grade custody has prevented incidents so far

- **Lack of standardization**

Each issuance uses different platforms and token standards, making integration and secondary trading difficult

Market Fragmentation and Liquidity in the European Tokenized Bond Landscape

- **Market Fragmentation**

The European tokenized bond landscape is currently fragmented along multiple lines – by country, by platform, by technology. No single marketplace or exchange where all tokenized bonds can be traded; instead we have isolated pockets (an issue on SDX in Switzerland, another on a German platform, others held internally by banks).

- **Liquidity Challenges**

This fragmentation means liquidity is shallow: investors in one digital bond cannot easily sell or buy others unless they join multiple platforms, which defeats the efficiencies DLT is supposed to bring.

- **Regulatory Fragmentation**

Within the EU, regulatory fragmentation adds to this – until a common EU-wide regime is in place post-pilot, issuers face differing requirements (German eWpG vs French treatment vs Italian Fintech decree, etc.), hindering cross-border issuance.

- **Concerns about Linking DLT to Traditional Systems**

Incumbents worry about settlement finality and operational risk when linking DLT to traditional systems – concerns that have kept some on the sidelines.

- **Lack of Clear Custody and Settlement Infrastructure**

Market participants have also cited a lack of clear custody and settlement infrastructure for a pan-European digital bond market. While entities like Euroclear have now built digital issuance services, these need time to mature and connect with trading platforms.

- **Overcoming Fragmentation**

Overcoming fragmentation will likely require consolidation or interoperability agreements among platforms, and possibly an EU-level push toward a common digital marketplace (the way Target2 or Target2-Securities unified settlements in the past).

SME Exclusion and Accessibility in Tokenized Bonds

- **SMEs Benefit Most from Tokenized Bonds.**

Small and medium-sized enterprises (SMEs) could benefit the most from easier access to bond markets, but they are still effectively excluded from the tokenized bond space.

- **SMEs Rely on Bank Loans in Europe**

In Europe, SMEs generate a large portion of GDP and employment, but they rely almost entirely on bank loans for debt financing, with bonds accounting for only a small fraction.

- **Costs and Complexity Remain Prohibitive**

The costs and complexity of issuing a bond (legal fees, prospectus requirements, credit ratings, etc.) remain prohibitive for SMEs, even if the technical process is digitized.

- **Awareness and Trust Gap for SMEs**

Many mid-sized company CFOs are unfamiliar with tokenization or doubt investor appetite for a

- **Lack of Easy On-ramp for SME Bond Issuance**

Europe's financial system currently lacks an easy on-ramp for SME bond issuance, tokenized or otherwise.

- **Fragmentation Hinders SME Bond Issuance**

SMEs are fragmented across Europe and need cross-border investment to make bond issuance viable, but the fragmentation issues particularly hinder SMEs compared to larger companies.

Summary - Unlocking the Potential of Blockchain in European Bond Markets



Legal Harmonization

Facilitate continuous trading and cross-border recognition of digital bonds through regulatory flexibility



Technical Innovation

Integrate with central bank money and ensure DLT systems can seamlessly communicate with legacy systems



Collaboration

Prevent isolated solutions and work towards interoperable platforms or a common 'network of networks'



Inclusive Strategies

Develop specific strategies to include SMEs, so tokenization does not reinforce the status quo of only large entities accessing bond finance

By addressing these legal, technical, and market challenges, Europe can unlock the full benefits of blockchain in bond markets and seize the opportunity without faltering due to remediable barriers.

6 Conclusions

Blockchain Bonds: Europe's Fintech Frontier

A Watershed Moment (2023-2025)

The period 2023–2025 has proven to be a watershed for blockchain-based bonds in Europe, with Europe's window of opportunity to lead this financial innovation now open.

Critical Groundwork Laid

Europe has laid critical groundwork, with legal frameworks largely in place, the EU's DLT Pilot providing an admired sandbox, and countries adapting laws to legitimize digital securities.

Successful Bond Issuances

Major European institutions have shown the concept works, issuing digital bonds that attracted real investor interest, such as KfW's oversubscribed €100m blockchain bond.

Delivering on Fintech Promises

Tokenization can deliver results such as instant settlement, reduced intermediaries, and wider distribution, fulfilling many of the promises of fintech in capital markets.

Maturing Technology

Blockchain platforms can now handle bond lifecycles, and integration with banking systems is improving, paving the way for further adoption.

Europe's Opportunity in Tokenized Bonds

- **Europe's capital markets push**
Deepening capital markets and diversifying financing sources for companies, with tokenized bonds as a catalyst to energize Europe's bond markets, especially for mid-sized firms.
- **Alignment with policy priorities**
Europe's emphasis on digital transformation and financial sovereignty aligns perfectly with promoting homegrown DLT infrastructure.
- **Establishing global standards**
If Europe seizes this moment, it could establish standards and platforms that become the backbone of a new era of digital finance, exporting its model globally.
- **Competitive landscape**
The U.S. is slowly awakening to tokenization, and Asia's financial hubs are aggressively courting fintech innovation in bonds. Europe must act during this pivotal phase to convert its head start into lasting leadership.
- **Urgency of action**
The next 2–3 years will likely determine which jurisdictions set the norms and attract the bulk of tokenized issuance.

Markets in Crypto-Assets Regulation — MiCA

Timeline

Last updated: 9 June 2023



Unlocking the Potential of Blockchain in European Bond Markets

The potential benefits of integrating blockchain technology into European bond markets are significant. By leveraging this innovation, Europe could lower issuance costs, democratize access to capital, and stimulate economic growth by allowing **thousands** of small and medium-sized enterprises (SMEs) to raise funds directly from investors across the EU. Investors would also benefit from greater transparency and potentially higher yields due to efficiency gains.

"Europe's regulatory landscape is characterized by a dual structure: an EU-wide DLT Pilot Regime and individual member state laws enabling digital securities issuance."

Unlocking the Full Potential

Legal and Regulatory Hurdles

Certain regulations still impede blockchain bonds, such as the requirement for a CSD for official exchange trading. The DLT Pilot Regime's strict volume caps and short timeframe also discourage large issuers.

Technical and Integration Challenges

Interoperability between blockchains and legacy systems is limited, and the lack of on-chain cash settlement in central bank money is a significant technical gap.

Market Fragmentation and Liquidity

The European tokenized bond landscape is currently fragmented, with no single marketplace or exchange where all tokenized bonds can be traded, hindering liquidity.

SME Exclusion and Accessibility

So far, no major tokenized bond platform tailored to SMEs has launched at scale, and the costs and complexity of issuing a bond remain prohibitive for smaller firms.

Strategic Recommendations

Build collaborative platforms, focus on cost reduction and automation, prioritize on-chain settlement, enhance investor access, target the SME segment, and invest in education and ecosystem building.

Policy Recommendations

Adapt and extend the DLT Pilot Regime, promote harmonization across member states, improve SME access, strengthen integration with traditional infrastructure, and continue oversight and risk management.

Digital Bonds - Concepts and Practice

Europe has emerged as a global leader in the blockchain bond revolution, driven by its proactive regulatory approach, public sector initiatives, and growing private sector adoption. By addressing the remaining technical, legal, and market barriers, Europe is poised to unlock the full transformative potential of tokenized bonds, enhancing capital market access and efficiency across the Union.

Equity in Private Placement

Bitcoin convertible bonds

Share subscription warrants

Public Offering

Fiat convertible bonds

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