# Key milestones in Traditional Financial Assets Tokenization

Laying the foundations for the transformation of the global financial infrastructure

### 2016 - 2017

**MAS** Tested a digital representation of SGD for interbank settlement on R3 Corda, with privacy on permissioned Ethereum (Quorum)

**J.P. Morgan, National Bank of Canada** Issued $150mm certificate of deposit on permissioned Ethereum (Quorum)

**MAS** Tested Interbank Real-Time Gross Settlement Systems across R3 Corda, Hyperledger Fabric, and permissioned Ethereum (Quorum)

**LuxDeco** Issued bond denominated in ether on Ethereum

**Tether** Surpassed a market cap of $1bn USD Stablecoin, USDT, on Ethereum

### 2018

**Credit Suisse, ING** Conducted €25mm securities lending transaction on R3 Corda

**Sberbank** Completed ₽750mm rubles commercial bond transaction on Hyperledger Fabric

**MAS, SGX** Developed DVP capabilities to enable asset settlement on permissioned Ethereum (Quorum) and on permissioned Anquan

**World Bank, Commonwealth Bank of Australia** Issued AU$110mm bond on permissioned Ethereum (*Bond-i*)

**Paxos** Issued USD Stablecoin, USDP, on Ethereum

**Centre (Circle, Coinbase)** Issued USD Stablecoin, USDC, on Ethereum

**St. Regis Aspen** Issued real estate equity on Ethereum

**Komgo** Issued digital letter of credit on permissioned Ethereum

### 2019

**J.P. Morgan** Launched USD payments product, JPMCoin, on permissioned Ethereum (Quorum)

**BBVA** Issued green structured bond on Hyperledger Fabric

**Societe Generale** Issued €100mm covered bond on Ethereum

**MAS, Bank of Canada, Bank of England** Tested cross-border and cross-currency CBDC payments on permissioned Ethereum (Quorum) and R3 Corda

**Franklin Templeton** Recorded money market fund share ownership on Stellar

**Santander** Issued $20mm bond on Ethereum

**Paxos** Recorded allocated gold ownership on Ethereum

**Bank of China** Issued ¥19.4bn bond on Neo

### 2020

**Jefferies, Nomura, Tilden Park Capital, DoubleLine** Issued asset-backed security based on $159mm loans originated on Provenance Blockchain

**Vanguard** Completed pilot of asset-backed security on Symbiont DLT

**MAS, Temasek, J.P. Morgan** Developed multi-currency payments network supporting DVP settlements, conditional payments and escrow for Trade, and payment commitments for Trade Finance on permissioned Ethereum (Quorum)

**Olam International, SGX, HSBC, Temasek** Issued S$400mm syndicated bond on Canton

**J.P. Morgan** Launched Intraday Repo with U.S. Treasuries and USD (JPMCoin) on permissioned Ethereum (Onyx Digital Assets)

### 2021

**DBS, J.P. Morgan, Temasek** Launched Partior, platform to digitize M1 commercial bank money to reduce current frictions and latency for cross-border payments, trade transactions and foreign exchange settlements on permissioned Ethereum (Quorum)

**EIB, Goldman Sachs, Santander, Societe Generale** Issued €100mm bond on Ethereum

**Societe Generale** Issued €5mm structured note on Tezos

**Arca Labs** Issued 40 Act Treasuries Fund on Ethereum

**Banque de France, Euroclear** Completed pilot settlement of French Government Bonds for CBDC on Hyperledger Fabric

### 2022

**Apollo** Completed origination and ownership transfer of digital mortgages on Provenance Blockchain

**BlockTower, MakerDAO** Issued $220mm credit fund on Ethereum

**BNP Paribas** Issued renewable energy bond on Ethereum

**BNY Mellon, Goldman Sachs** Executed agency securities lending transactions on R3 Corda (HQLAx)

**KKR** Enabled access to private equity fund on Avalanche

**Apollo** Enabled access to private fund on Provenance Blockchain

**Hamilton Lane** Enabled access to private equity and private credit funds on Polygon

**J.P. Morgan** Executed FX transaction (SGD/JPY) on Polygon, as part of MAS Project Guardian

**EIB, Goldman Sachs, Santander, Societe Generale, Banque de France, Banque Central du Luxembourg** Issued €100mm bond on permissioned Canton (GS DAP)

**Sberbank** Recorded gold ownership on Hyperledger Fabric, accessible by Ethereum

**WisdomTree** Enabled access to a variety of mutual funds on Ethereum and Stellar

### 2023

**EIB** Issued £50mm bond on Hyperledger Fabric (HSBC Orion)

**HKMA** Issued HK$800mm green bond on both permissioned Canton and Hyperledger Besu

**Siemens** Issued €60mm bond on Polygon

**Franklin Templeton** Issued 40 Act money market fund on Stellar and Polygon (last reported AUM of $270mm as of April 2023)

**Paypal** Issued USD Stablecoin, PYUSD, on Ethereum

**Citi** Agented over $900bn in syndicated loan commitments on Canton (Versana)

**UBS** Issued VCC money market fund on Ethereum, as part of MAS' Project Guardian

**J.P. Morgan, Blackrock, Barclays** Tokenized money market fund shares for collateral on permissioned Ethereum (Onyx Digital Assets)

**J.P. Morgan, Apollo, WisdomTree** Tested automated discretionary portfolio construction and rebalancing across multiple asset types (USD, private funds, mutual funds) on permissioned Ethereum (Onyx Digital Assets), Provenance Blockchain, and Avalanche, as part of MAS' Project Guardian

ONYX by J.P.Morgan | APOLLO