

Cross-Bank Repurchase Agreement Pilot with DeFi Lending on Layer-2 Blockchain [Draft]

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Abstract. This study provides an overview of the test of a repurchase agreement (repo) between banking institutions, executed successfully on the DeFiAM Layer-2 blockchain with smart contracts of Aave and Curve, the most widely used decentralized finance (DeFi) protocols for decentralized lending and token exchanges, respectively. In the course of the pilot project, a tokenized government bond denominated in CHF served as collateral to facilitate a loan denominated in EUR stablecoins. The Aave protocol, function as the lender to *Bank A*, and *Bank B* assumed the role of liquidity provider (LP) to the Aave lending pool. The EUR and CHF stablecoins were bridged from Ethereum, while the tokenized bond from Hyperledger Besu. DeFiAM wrapped the tokenized bond to manage corporate actions and bond coupon payments in accordance with the terms of the repo agreement. The on-chain exchange of CH and EUR stablecoins was executed via Curve. Chainlink facilitated cross-chain communication, additionally serving as the oracle. DeFiAM L2 is as a permissioned, privacy-preserving ZK rollup, built with the ZKsync elastic chain framework. It leverages Ethereum's decentralization to ensure data availability and security while maintaining user and transaction privacy.

Keywords: DeFi Lending, Repurchase Agreements, CBDC

References