

Full Claim Set in Formal USPTO-Style Format USPTO Filing US19362415 (Priority October 20, 2024)

- 1.** (System Claim) A system for an end-to-end Web4 tokenized financial ecosystem, comprising: one or more AI Agents controlling tokenization, hypothecation, and service execution; digital bearer instruments representing any tokenized physical asset, commodity, security, contract, intangible asset, financial instrument, natural resource, property, or other Real World Asset (RWA); special custody accounts and fractional reserve smart contracts for collateral management; and integrated functionality for deposits, payments, loans, staking, reinvestment, and exchange trading on a blockchain.
- 2.** The system of claim 1, wherein the one or more AI Agents are trained using Retrieval-Augmented Generation (RAG) and Large Language Model (LLM) architectures on data from IoT systems, Digital MRV systems, Internet sources, or combinations thereof.
- 3.** The system of claim 1 or 2, wherein the one or more AI Agents autonomously analyze, score, validate, and value any RWA prior to tokenization into digital bearer instruments.
- 4.** The system of any one of claims 1–3, wherein the digital bearer instruments include deposit tokens, loan tokens, and payment tokens that are interoperable within the ecosystem.
- 5.** The system of any one of claims 1–4, wherein the special custody accounts implement pledge mechanics via smart contracts that preserve original ownership of the RWA collateral without transferring legal title.
- 6.** The system of any one of claims 1–5, wherein the special custody accounts are configured to provide FDIC-aligned segregation across multiple accounts.
- 7.** The system of any one of claims 1–6, wherein the fractional reserve smart contracts enable scalable hypothecation of the RWA collateral at any ratio to issue additional value tokens or loan tokens.
- 8.** The system of any one of claims 1–7, further comprising logic for issuing interest-free personal loans and commercial loans using loan tokens generated through hypothecation.
- 9.** The system of any one of claims 1–8, further comprising logic for no-fee payments and transfers using the digital bearer instruments.
- 10.** The system of any one of claims 1–9, further comprising staking services and yield generation based on performance or reinvestment of the underlying RWA collateral.
- 11.** The system of any one of claims 1–10, further comprising integration with one or more commodity, cryptocurrency, security, or hybrid exchanges for trading or swapping of the digital bearer instruments.
- 12.** The system of any one of claims 1–11, wherein the one or more AI Agents are configured to function as a drop-in module for autonomous management of financial operations within a corporate, institutional, governmental, or individual network.
- 13.** The system of any one of claims 1–12, further comprising compliance logic wherein the AI Agents perform KYC/AML verification at onboarding and ongoing monitoring while maintaining user privacy during normal operations.
- 14.** The system of any one of claims 1–13, further comprising network-effect logic that requires loan repayments in external assets or currencies different from the issued loan tokens to drive additional token minting and liquidity.

15. The system of any one of claims 1–14, further comprising clawback mechanisms for defaulted loans and automated settlement logic for exchange trades and banking transactions.

16. The system of any one of claims 1–15, wherein the AI Agents control end-to-end operations including tokenization, collateral management in special custody accounts, hypothecation, banking services, and exchange trading within a unified Web4 tokenized financial ecosystem. This provides a **complete and logically structured set of dependent claims** for Independent Claim 15 (now renumbered as Claim 1). The dependents are designed to offer strong fallback protection while fully covering the end-to-end ecosystem aspects from the October 20, 2024 provisional.