Zach Zukowski

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DIGITAL ASSET RISK, CONTROLS & MARKET INFRASTRUCTURE

SUMMARY

Digital asset risk and controls professional focused on tokenized-product diligence, gateway monitoring, and settlement-infrastructure risk. Founding research hire at an institutional investment adviser, where I built risk assessment and monitoring frameworks supporting ~250 investments and ~$500M in assets under management. Author of two published risk frameworks: the Minimum Viable Equivalence Pack (MVEP) for tokenized-product diligence and the Control Layer Intensity Index (CLII) for custody, reconciliation, and concentration risk. Deep expertise across stablecoin issuance, crypto custody, tokenization, settlement infrastructure, and operator concentration. Four papers on SSRN; work submitted to the Federal Reserve's Fifth Conference on the Dollar's International Roles (June 2026).

EXPERIENCE

Senior Investment Analyst, Digital Assets | Borderless Capital (RIA; first hire) *Dec 2019 – Present*

- Developed the **MVEP**, a nine-category risk and control framework defining minimum artifacts for tokenized product diligence: rights parity, system of record, reconciliation, custody, insolvency posture, settlement finality, exception handling, governance/change control, and disclosures. Stress-tested against the SVB weekend's cascading impact on stablecoin infrastructure.
- Developed the **CLII**, a continuous monitoring methodology classifying regulatory intensity (custody segregation, reconciliation integrity, and concentration risk) across digital asset gateways. Flags drift when products that initially passed assessment begin degrading. Both frameworks published on SSRN.
- Led diligence on settlement infrastructure across issuers, custodians, and settlement banks: reserve custody and composition, redemption pathways, settlement finality, concentration and portability risk, and stress-episode behavior. Evaluated ~75 tokenization offerings in 2025; advised on 100+ engagements covering control gap analysis and regulatory surface mapping.
- Focused on where liability, control, and operational dependence concentrate across issuers, custodians, settlement banks, and gateways, and what should trigger escalation when those concentrations shift. Translated regulatory change (GENIUS Act, CLARITY Act, state licensing frameworks) into control requirements, monitoring thresholds, and escalation triggers.
- Built risk assessment operating system from zero: compliance workflows, decision logs with assumption registers, trigger-based posture updates, and QA standards. Led four-analyst team. Supported underwriting across ~250 investments (~$500M AUM, ~10 funds) with documented assumption tracking and committee briefing materials.
- Forecasted $1B+ on-chain protocol collapse ~12 months early by mapping causal chain and defining leading indicator thresholds. Prevented hostile governance capture on a top-50 Layer 1 blockchain via voting-path simulation. Identified circulating-supply misreporting propagated to major public data aggregators; partnered with foundation engineers to correct the affected dashboards.

Analyst Intern | Greenway Solutions (USAA) *May – Sep 2016*

- Benchmarked USAA fraud controls across online, mobile, and call-center channels versus 9 peer U.S. banks; delivered recommendations on funds-availability, wire-transfer, and identity-verification controls.

SELECTED RESEARCH

- **Minimum Viable Equivalence Packs.** *SSRN.* The institutional risk/control standard for tokenized products: three equivalence claims tested through nine diligence categories with pass/fail tests.
- **Routing the Dollar.** *Submitted, Fed Reserve Board / FRBNY, June 2026. SSRN.* Gateway concentration risk scoring (CLII), SVB contagion tracing, and operator accountability under stress.
- **Operational Risk in Token Economies.** *SSRN.* 624-run simulation: adaptive controllers compress variance after infrastructure shocks; threshold-gated reputation systems become structurally nonfunctional under routine operational risk.
- **Dollar v3 / The Control Layer War.** *Published.* How different token types inherit different regulatory perimeters, backstop expectations, and failure modes.

TECHNICAL

Methods: Monte Carlo simulation, Johansen cointegration / vector error correction, scenario and stress testing, concentration analysis (HHI, Gini)
Data: Dune Analytics, Nansen Pro, Artemis, DefiLlama, FRED, CoinGecko, Helius, rated.network
Languages: Python (pandas, statsmodels, scipy), SQL (DuneSQL, Trino), JavaScript/TypeScript, Excel
Infrastructure: 10 custom Python MCP servers for real-time data integration, Claude Code, Cursor, n8n, Apify, Git/GitHub

EDUCATION

High Point University | B.S.B.A., Business Administration (Magna Cum Laude) *2018*
Investment Club President | Lingnan University, Hong Kong (Exchange)