



SATOSHI INSTITUTE

SIGNAL OVER NOISE FOR BITCOIN TREASURY DECISION-MAKERS.

TREASURY V2 GOVERNANCE FRAMEWORK

RARTA: Risk-Aligned Return Threshold Approach

A Systematic Decision Framework for Bitcoin Treasury Allocation

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◆ WHAT CHANGED IN V1.3

This revision harmonizes RARTA with the fair-value accounting reality already reflected in BEOL v1.1. It is a substance update, not a cosmetic one:

Impairment-era logic removed. Under the prior model, crypto was carried at cost less impairment, creating an asymmetric, downside-only charge to manage around. Under FASB ASU 2023-08 (effective for fiscal years beginning after December 15, 2024), Bitcoin is measured at fair value with changes recognized in net income each period. References to impairment-threshold proximity and book-value-vs-market-value divergence have been replaced by earnings-volatility and covenant-headroom modeling.

CAMT exposure added. For companies near the \$1 billion AFSI threshold, the Corporate Alternative Minimum Tax is now a monitored input. Treasury/IRS interim guidance (Notices 2025-46 and 2025-49) currently excludes unrealized digital-asset gains from AFSI; this remains interim, with final regulations pending.

Executive Summary

Purpose. RARTA provides a systematic methodology for Bitcoin treasury allocation decisions within board-approved parameters, replacing ad hoc judgment with documented decision logic.

Core Problem Addressed. CFOs and Treasurers need reproducible, auditable decision frameworks for Bitcoin allocation that survive personnel changes and satisfy governance requirements.

Key Innovation. A risk-return assessment methodology designed for Bitcoin's unique correlation patterns, volatility characteristics, and fair-value accounting treatment.

Target Users. Corporate Treasurers, CFOs, Treasury Committees.

I. Problem Statement

1.1 The Governance Gap

- Traditional portfolio optimization models assume mean reversion and stable correlations
- Bitcoin exhibits fundamentally different risk characteristics than traditional treasury instruments
- Existing treasury decision frameworks do not address digital-asset-specific governance requirements
- Ad hoc allocation decisions create key-person dependencies and audit vulnerabilities

1.2 Why Traditional Frameworks Fail

- Modern Portfolio Theory assumes normally distributed returns (Bitcoin violates this)
- VaR models trained on traditional assets underestimate Bitcoin tail risk
- Correlation assumptions break during stress periods
- Fair-value accounting (ASU 2023-08) routes every price move through net income, creating earnings volatility that traditional treasury frameworks never had to model
- Liquidity assumptions do not account for market-depth constraints

1.3 What CFOs Actually Need

- A systematic methodology that works within current fair-value accounting reality
- Documented decision logic that satisfies board oversight requirements
- A framework that acknowledges Bitcoin's unique characteristics
- An approach that survives personnel transitions
- Integration with existing treasury risk management

II. Core Methodology

2.1 Risk Assessment Framework

Component 1: Volatility Regime Classification

- Current volatility vs. historical percentiles
- Regime detection algorithm (calm / elevated / stress / crisis)
- Rolling correlation analysis with traditional treasury holdings
- Concentration risk calculation

Component 2: Liquidity Depth Analysis

- Market depth assessment at current allocation size
- Execution timing constraints
- Slippage estimation for stress scenarios
- Exchange counterparty concentration

Component 3: Earnings & Capital-Structure Impact Modeling

- Earnings-volatility modeling: marked profit-and-loss impact across a range of prices, so no quarter is a surprise
- Covenant and GAAP-metric headroom under marked swings (a covenant breached by a non-cash mark is still a breach)
- CAMT / AFSI proximity for companies near the \$1 billion threshold, under current interim guidance
- Disclosure-requirement triggers

◆ NOTE ON THE ACCOUNTING SHIFT

Under the old impairment model, Component 3 tracked distance to an impairment cliff and the divergence of book value from market value. Both are gone: book value now tracks market value, and there is no impairment to avoid. What remains is symmetric earnings volatility flowing through net income, and its knock-on effect on covenants and GAAP-tied metrics. That is what RARTA now models.

Component 4: Governance Capacity Assessment

- Decision-authority alignment check
- Committee bandwidth during stress
- Board tolerance vs. current exposure
- Policy-boundary proximity

2.2 Return Threshold Methodology

Component 1: Opportunity Cost Framework

- Risk-free rate comparison
- Alternative treasury instrument yields

- Liquidity premium requirements
- Volatility compensation threshold

Component 2: Strategic Value Assessment

- Optionality value of Bitcoin exposure
- Competitive positioning considerations
- Innovation signal value
- Treasury modernization benefits

Component 3: Time Horizon Alignment

- Board-approved holding-period assumptions
- Mark-to-market vs. hold-to-maturity logic
- Liquidity-needs timeline
- Strategic-objective timeline

2.3 Allocation Decision Matrix**Threshold Bands**

Band	Risk Level	Required Action
Green Zone	Low risk	Proceed with allocation within authority
Yellow Zone	Elevated risk	Requires enhanced documentation
Orange Zone	High risk	Requires committee review
Red Zone	Critical risk	Requires board escalation or pause

Decision Inputs

1. Volatility regime (from 2.1, Component 1)
2. Liquidity depth score (from 2.1, Component 2)
3. Earnings-volatility / covenant-headroom index (from 2.1, Component 3)
4. Governance capacity score (from 2.1, Component 4)
5. Return threshold met / not met (from 2.2)
6. Time horizon alignment (from 2.2, Component 3)

Output: a systematic go / no-go decision with documented rationale.

III. Implementation Framework

3.1 Pre-Implementation Requirements

Governance Prerequisites

- Board-approved Bitcoin treasury policy with allocation parameters
- Documented decision-authority levels
- Treasury committee structure with defined responsibilities
- Stress escalation protocols (links to SRF)

Operational Prerequisites

- Custody relationship with documented operational controls
- Fair-value accounting treatment documented and approved
- Liquidity-analysis capability
- Risk-monitoring infrastructure

Data Requirements

- Real-time Bitcoin price and volume data
- Historical volatility analysis (minimum 3 years)
- Exchange liquidity-depth monitoring
- Internal accounting-system integration

3.2 RARTA Implementation Process

- Phase 1 — Baseline Assessment (Weeks 1–2): current allocation vs. policy limits, historical decision-pattern analysis, risk-metric baseline, governance-capacity assessment
- Phase 2 — Threshold Calibration (Weeks 3–4): risk-tolerance mapping to threshold bands, return-requirement definition, decision-matrix customization, authority-level alignment
- Phase 3 — Integration & Testing (Weeks 5–6): data-system integration, stress-scenario testing, decision-workflow documentation, committee training
- Phase 4 — Live Implementation (Week 7+): monitored decision-making using RARTA, weekly performance review, monthly calibration adjustments, quarterly governance validation

3.3 Decision Documentation Template

Required documentation for each allocation decision:

7. Date and decision-maker
8. Current allocation vs. policy limits
9. RARTA inputs (all six decision factors)
10. Threshold-band determination

11. Go / no-go decision with rationale
12. Committee approval (if required by threshold)
13. Actual execution details
14. Post-decision review date

IV. Governance Integration

4.1 Board Reporting Framework

Monthly Dashboard Components

- Current allocation vs. policy bands (visual)
- RARTA threshold-band history (trend)
- Decision-authority utilization (who made what decisions)
- Stress-scenario proximity indicators
- Earnings-mark and covenant-headroom metrics

Quarterly Board Review

- RARTA decision-history review
- Threshold-band effectiveness analysis
- Policy-limit adequacy assessment
- Framework-calibration recommendations

4.2 Audit Trail Requirements

Documentation Retention

- All RARTA decision inputs (7 years minimum)
- Committee approvals for yellow / orange / red decisions
- Policy-exception documentation
- Framework-calibration changes with rationale

Audit Accessibility

- Decision-logic reproducibility
- Authority-level compliance verification
- Policy-adherence validation
- Exception tracking and analysis

4.3 Integration with Existing Treasury Governance

Investment Committee

- RARTA decisions within approved authority → notification only
- Yellow-zone decisions → enhanced reporting
- Orange-zone decisions → committee review required
- Red-zone decisions → board escalation

Risk Committee

- Monthly RARTA metrics review
- Stress-scenario monitoring
- Threshold-band effectiveness assessment

- Framework-calibration approval

Audit Committee

- Quarterly decision-pattern review
- Policy-compliance verification
- Documentation-completeness audit
- Framework-effectiveness validation

V. Risk Metrics & Monitoring

5.1 Core Risk Metrics

Volatility Metrics

- 30 / 60 / 90-day realized volatility
- Volatility percentile vs. 3-year history
- Volatility-regime classification
- Correlation-stability index

Liquidity Metrics

- Market depth at current position size
- Exchange-concentration index
- Execution-slippage estimates
- Liquidity-stress index

Earnings & Capital-Structure Metrics

- Modeled earnings impact at current price (and across the stress range)
- Covenant headroom under marked swings
- Quarterly mark-to-market earnings sensitivity
- CAMT / AFSI proximity for companies near the \$1 billion threshold
- Disclosure-trigger proximity

Governance Metrics

- Policy-limit utilization percentage
- Decision-authority alignment score
- Committee-bandwidth index
- Escalation frequency

5.2 Threshold Calibration Process

Quarterly Review Cycle

- Historical decision-outcome analysis
- Threshold-band effectiveness assessment
- False positive / negative rate calculation
- Calibration-adjustment recommendations

Triggers for Immediate Recalibration

- Major accounting or tax guidance change (e.g., final CAMT regulations replacing the current interim notices)
- Significant policy revision
- Market-structure shift (e.g., ETF approval)
- Governance-structure change

5.3 Early Warning Indicators

Yellow Flags (Enhanced Monitoring)

- Approaching 75% of any policy limit
- Volatility above 80th percentile
- Liquidity depth declining
- Earnings-volatility / covenant pressure rising

Red Flags (Immediate Review)

- Approaching 90% of any policy limit
- Volatility above 95th percentile
- Liquidity stress detected
- Covenant-breach risk under a marked swing

VI. Stress Testing & Validation

6.1 Framework Stress Testing

Monthly Stress Scenarios

15. Bitcoin -40% in 72 hours
16. Exchange liquidity collapse
17. Adverse accounting or tax guidance change (e.g., CAMT final regulations)
18. Multiple simultaneous stress factors

Testing Protocol

- Run the RARTA decision matrix under each scenario
- Validate that threshold bands trigger appropriately
- Confirm escalation protocols activate
- Document decision outcomes

6.2 Backtesting Validation

Historical Performance Analysis

- Apply RARTA to historical allocation decisions
- Compare RARTA recommendations vs. actual decisions
- Calculate decision-quality metrics
- Identify framework-improvement opportunities

Peer Benchmarking

- Compare threshold calibration across working-group members
- Analyze decision-pattern differences
- Validate metric effectiveness
- Share calibration insights (anonymized)

6.3 Continuous Improvement Process

- Data collection: every RARTA decision logged, outcomes tracked over time, framework effectiveness measured, adjustment opportunities identified
- Framework evolution: quarterly working-group review of aggregate findings, proposed methodology improvements, peer review and validation, version control and documentation

VII. Limitations & Risk Factors

7.1 Framework Limitations

What RARTA Does

- Provides a systematic decision methodology
- Documents allocation rationale
- Aligns decisions with governance
- Creates an audit trail

What RARTA Does Not Do

- Predict Bitcoin price movements
- Guarantee optimal allocation timing
- Replace the board's judgment on policy
- Eliminate all allocation risk

7.2 Implementation Risks

Common Failure Modes

- Over-reliance on quantitative metrics without qualitative judgment
- Threshold calibration too tight (excessive false positives)
- Threshold calibration too loose (insufficient governance)
- Data-quality issues undermining metrics
- A committee-override culture defeating the framework's purpose

Mitigation Approaches

- Regular calibration reviews
- Framework-effectiveness monitoring
- Data-validation protocols
- Governance-culture assessment

7.3 Dependency Risks

External Dependencies

- Market-data quality and availability
- Accounting and tax guidance stability (the CAMT interim notices are a live example)
- Exchange operational reliability
- Regulatory-environment stability

Internal Dependencies

- Governance structure functioning
- Committee-bandwidth availability
- Data-system reliability

- Personnel continuity

VIII. Appendices

Appendix A: Technical Specifications

- Volatility-calculation methodology
- Liquidity-depth measurement formulas
- Fair-value earnings-impact and covenant-headroom equations; CAMT / AFSI modeling
- Threshold-band calculation algorithms

Appendix B: Implementation Checklist

- Pre-implementation requirements validation
- Phase-by-phase implementation tasks
- Documentation templates
- Training-materials outline

Appendix C: Decision Matrix Examples

- Sample scenarios with RARTA inputs
- Threshold-band determinations
- Decision-rationale documentation
- Committee-escalation examples

Appendix D: Integration Templates

- Board-reporting dashboard mockup
- Monthly committee report template
- Quarterly governance-review structure
- Audit-documentation checklist

Appendix E: Glossary

- Risk-metric definitions
- Threshold-band descriptions
- Decision-authority levels
- Governance terminology

Working Group Feedback Process

Current Version: 1.3 (Released: June 17, 2026)

Status: Published — practitioner feedback welcome

Feedback Channels

- GitHub repository: [link]
- Working group sessions: Quarterly
- Direct submission: feedback@satoshiinstitute.com

Next Version: 1.4 (Planned)

- Finalize earnings-impact and CAMT modeling once Treasury issues final regulations
- Additional stress-test validation
- Enhanced board-reporting templates