Trade Settlement Unit (TSU): A Reserve-Backed Settlement Instrument for Africa & BRICS

Executive Summary

The Trade Settlement Unit (TSU) is a centralized, reserve-backed settlement instrument designed to address the severe foreign exchange (FX) bottlenecks faced across Africa and BRICS countries. The TSU operates like a Central Bank Digital Currency (CBDC) but is managed by the Trade Settlement Authority (TSA) through a secure ledger and escrow-backed framework.

Through its Currency Program, Commodities Program, and Beneficiary Program, the TSU unlocks trapped local currencies and export contracts into flexible, globally usable trade liquidity. Pilot corridors include Cameroon (cocoa and currency), Zimbabwe (currency), Mozambique (currency and coal), and Russia–India–Africa (oil contracts). The TSU strengthens trade resilience, reduces reliance on the US dollar, and shares benefits with citizens and companies in BRICS and Africa.

1. Introduction

Global trade remains heavily dependent on the US dollar. For Africa and BRICS countries, this dependence has resulted in structural FX shortages, higher costs of trade, and vulnerability to sanctions. The International Finance Corporation (IFC) estimates a trade finance gap exceeding $120 billion annually across Africa.

The TSU offers a neutral settlement instrument backed by reserves in gold, BRICS currencies, and commodities, positioning it as a scalable alternative to USD dependence.

2. The Problem

African and BRICS companies face multiple challenges in trade finance:
• Severe FX shortages (Zimbabwe, Nigeria, CEMAC states).
• Sanctions limiting Russian, Iranian, and Venezuelan access to USD/EUR.
• Trapped liquidity in weak or restricted currencies such as INR, CNY, ZWL, CFA franc.
• Reliance on barter or discounted sales to bypass USD systems.

These issues reduce competitiveness, delay imports, and weaken economic sovereignty.

3. The Solution: TSU

The TSU is issued by the Trade Settlement Authority (TSA) as a centralized, reserve-backed digital settlement unit. Unlike cryptocurrencies, TSU is anchored in real-world reserves and managed via an institutional ledger.

Reserves include:
• Gold (50%).
• BRICS currencies such as CNY, INR, ZAR, RUB, BRL (30%).
• Commodities such as oil, cocoa, coal, and metals (20%).

Each TSU is backed by more than 100% collateral, ensuring safety, stability, and trust.

4. Program Structures

4.1 Currency Program

Companies deposit local currency into escrow accounts with TSA banking partners. TSU credits are then issued against the escrow value with a lock-up period of 30–60 days, during which TSA raises reserves in gold and BRICS FX. After the lock-up, companies can redeem TSU for FX or use it directly for settlement.

4.2 Commodities Program

Exporters pledge commodity contracts (oil, cocoa, coal, metals) into the TSA framework. TSU is issued equal to 60–80% of the contract value, providing pre-export liquidity. Exporters can use TSU to import inputs while TSA channels buyer flows into reserves.

4.3 Beneficiary Program

Citizens of BRICS and Africa, including Afrodescendants, can register as beneficiaries. Surpluses from TSA operations are distributed among beneficiaries, ensuring broad inclusion and socio-economic impact.

5. Governance & Trust

The TSU is issued by the Trade Settlement Authority (TSA) under a trust structure to ensure neutrality. Funds are held securely in escrow until settlement is performed. Reserves are over-collateralized and subject to quarterly third-party audits. Governance includes trustees, auditors, and community representatives to ensure accountability.

6. Technical Architecture

The TSU operates on a centralized database ledger with the following components:
• Escrow integration with partner banks.
• Wallet system for corporates and beneficiaries.

• APIs for trade partners and financial institutions.
• Mint/Burn standard operating procedure (SOP).

This ensures secure issuance, controlled circulation, and transparent redemption of TSU.

7. Pilot Corridors

7.1 Cameroon (Cocoa & Currency)

Cameroon's cocoa sector is valued at over $4 billion annually. Exporters often face delays in accessing FX for importing fertilizer, packaging, and machinery. Under the Currency Program, companies can deposit CFA francs into escrow to receive TSU, redeemable for FX. Under the Commodities Program, cocoa contracts are registered with TSA to unlock liquidity before shipment.

7.2 Zimbabwe (Currency)

Zimbabwean companies often hold ZWL balances that cannot be converted into usable FX. By depositing ZWL into escrow, they receive TSU, redeemable in USD, CNY, or ZAR after a lock-up period. This provides predictable access to imports.

7.3 Mozambique (Currency & Coal)

Mozambique, with large coal reserves and a metical currency often difficult to convert, faces FX constraints. Through the Currency Program, companies can place metical balances into escrow for TSU issuance. Through the Commodities Program, coal contracts are registered, enabling pre-export financing and supporting imports of industrial inputs.

7.4 Russia–India–Africa (Oil Contracts)

Russian companies often receive payment for oil in INR or CNY, which are not always liquid. By placing these balances into escrow, companies receive TSU usable for imports across BRICS and Africa. Similarly, oil contracts registered with TSA generate TSU advances, monetizing receivables faster and expanding corridor trade flows.

8. Tokenomics

TSU supply is elastic, minted only against escrowed currency or pledged contracts. Reserves exceed 100% coverage, ensuring stability. Fees include:
• 0.5–1.0% issuance fee.
• 0.25% settlement transaction fee.

Revenue is used to expand reserves, sustain operations, and distribute benefits to community members.

9. Risk Management

The TSU framework incorporates:

• Over-collateralization (120–150%).
• Diversified reserve basket.
• Escrow safeguards.
• Third-party audits.
• Regulatory compliance via partner banks.

This ensures resilience and prevents systemic risks.

10. Roadmap

Phase 1: Cameroon cocoa and currency pilot, Zimbabwe currency pilot.
Phase 2: Mozambique currency and coal program.
Phase 3: Russia–India–Africa oil contracts.
Phase 4: Expansion across Africa and BRICS corridors.
Phase 5: Institutional adoption with multilateral support.

Appendices

• Mint/Burn SOP
• Reserve Policy Outline
• Governance Charter Summary
• Technical API Surface

Appendices

Appendix A – Mint/Burn SOP

- Minting Process:

1. TSU is minted only against escrowed deposits of local currency or pledged commodity contracts.

- 2. Minting requires dual authorization by TSA compliance and treasury officers.
- 3. Issued TSU is recorded in the centralized ledger and linked to corresponding escrow accounts.
- Burning Process:

1. When escrow contracts mature or reserves are redeemed, corresponding TSU is burned.

- 2. Burning is executed automatically upon redemption and verified by TSA auditors.
- 3. All mint/burn events are logged, timestamped, and published in quarterly transparency reports.
- Controls: Over-collateralization and mandatory audits prevent excess issuance or under-backing of TSU.

Appendix B – Reserve Policy Outline

- Reserve Composition:

• Gold: minimum 50% of reserves.

• BRICS Currencies (CNY, INR, ZAR, RUB, BRL): up to 30%.

• Commodities (oil, cocoa, coal, metals): up to 20%.

- Reserve Management Principles:

• Over-collateralization between 120–150%.

• Quarterly third-party audits of reserve composition and valuation.

• Diversification across assets to minimize systemic risk.

• Liquidity buffers maintained to ensure redemption requests are met promptly.

- Transparency: Reserve reports published quarterly and made available to stakeholders.

Appendix C – Governance Charter Summary

- Issuing Authority: TSU is managed by the Trade Settlement Authority (TSA) under a neutral trust structure.
- Governance Structure:

• Trustees oversee reserve accounts and escrow operations.

• Independent auditors verify reserves and mint/burn operations.

• Community representatives (corporates and beneficiaries) participate in advisory functions.

- Decision-Making Scope: Allocation of reserves, corridor prioritization, fee structures, and beneficiary distributions.
- Accountability Mechanisms:

• Regular reporting to stakeholders.

• Checks and balances between treasury, compliance, and governance boards.

• Dispute resolution framework for trade counterparties.

Appendix D – Technical API Surface

- APIs are provided for corporates, banks, and financial institutions to integrate TSU settlements:

• Authentication: Secure API keys with multi-factor authentication.

• Escrow Module: Endpoints for depositing local currencies and verifying balances.

• Mint/Burn Module: Endpoints for tracking issuance and redemption of TSU.

• Wallet Module: APIs for transferring TSU between accounts and beneficiaries.

• Reporting Module: Real-time dashboards for transaction history, reserve ratios, and corridor flows.

- Technical Standards: REST/JSON APIs with TLS encryption; ISO 20022 compatibility for bank integrations.