EXECUTIVE PILOT BRIEF FOR CFOS, CONTROLLERS & EXTERNAL CPA AUDITORS

ASC 405-20-40-1 • FINCEN 31 CFR § 1010.100(ff)(5) NON-CUSTODIAL

GaussBook: Blinded Inter-Company AP/AR Clearinghouse

Executive Thesis: Supply-chain cohorts hold substantial working capital trapped in circular Accounts Payable and Accounts Receivable chains (A → B → C → D → A). GaussBook discovers these closed debt loops across blinded QuickBooks, Xero, NetSuite, and Stripe ledgers and legally extinguishes them using **$0.00 of bank cash** while preserving 100% of every company's Net Equity (AR − AP).

01 // ZERO FUNDS CUSTODY

$0.00 Principal Cash Moved

GaussBook never holds, wires, or debits principal funds. Exempt under **FinCEN 31 CFR § 1010.100(ff)(5)**.

02 // U.S. GAAP & UCC AUTHORITY

ASC 405-20-40-1 & UCC § 9-406

Extinguishes undisputed trade payables via contractual multilateral novation with a 5-Part CPA Audit Packet.

03 // FORMAL MATHEMATICAL PROOF

Microsoft Z3 5-Theorem Prover

Proves exact 64-bit integer Flow Conservation (`Delta AP = Delta AR`) and Net Equity invariance before writeback.

04 // SUCCESS-ONLY FEE MODEL

1.00% (100 bps) Only When Cleared

$0.00 upfront or subscription fee. Saves ~2.00% in credit-line interest for a **+1.00% net treasury gain**.

4-STEP PILOT WORKFLOW // FROM BLINDED CSV OR READ-ONLY OAUTH TO CPA AUDIT PACKET

How a Friday Pilot Clearing Batch Operates

Phase	Operational Step	Cryptographic & Accounting Safeguard
STEP 01	**Client-Side OPRF Blinding & Ingestion** Upload an AP/AR aging CSV or connect read-only QuickBooks, Xero, NetSuite, or Stripe OAuth.	Counterparty EINs are blinded via **RFC 9497 OPRF** (256-bit salt). Non-trade operating rows (payroll, rent, tax, utilities) are stripped locally in the browser prior to upload.
STEP 02	**Bilateral PSI-256 & Tarjan Cycle Solver** Matches bilateral invoices across participating firms and solves exact 64-bit integer circulation flows.	Only mutually acknowledged, undisputed invoices with matching `PSI-256` handshake tokens enter the clearing basis. Disputed invoices are automatically quarantined.
STEP 03	**Microsoft Z3 5-Theorem Proof & Ed25519 Seal** Verifies all 5 SMT-LIB2 accounting invariants and signs the ASC 405-20-40-1 Certificate.	Proves `UNSAT` across Flow Conservation, Undisputed Consent, Edge Capacity, Positive Yield, and Post-Clear Solvency. Any violation halts the batch automatically.
STEP 04	**Idempotent Account #2190 ERP Writeback** Dispatches balanced CreditMemo &	Every participant receives a **2-Edge SHA-256 Merkle Boundary Proof** (revealing 0 non-adjacent companies) and a standalone verification link at `gaussbook.com/verify`.

Phase	Operational Step	Cryptographic & Accounting Safeguard
	JournalEntry payloads or downloadable CSV import files.	

STANDARD DOUBLE-ENTRY JOURNAL SPECIFICATION // CLEARING WASH ACCOUNT #2190

Controller & CPA Double-Entry Accounting Treatment (Per Participant)

For every participating company with extinguished flow Δ (where Δ AP = Δ AR = Δ), GaussBook generates two balanced journal legs through **Account #2190 (GaussBook Multilateral Clearing Wash)** that net to exactly **$0.00** upon batch completion:

Journal Leg	GL Account Code & Title	Debit (DR)	Credit (CR)	Audit Evidence Attached
Leg 1 (Payable Discharge)	**#2000 Accounts Payable** (Vendor Bill Subledger) *Offset: #2190 GaussBook Multilateral Clearing Wash*	**$80,000.00**	$80,000.00	Certificate CERT-Z3-ASC40520-3A44D72FE8A2 + Incoming Merkle Leaf
Leg 2 (Receivable Apply)	**#2190 GaussBook Multilateral Clearing Wash** *Offset: #1200 Accounts Receivable (Customer Invoice Subledger)*	$80,000.00	**$80,000.00**	Certificate CERT-Z3-ASC40520-3A44D72FE8A2 + Outgoing Merkle Leaf
Post-Clearing Wash Account #2190 Balance & Net Equity Change		**$0.00 Wash**	**$0.00 Delta Equity**	**Z3 THEOREM 1 PROVED UNSAT**