LINKEDIN GUIDE

Double-Entry Ledger

for Cross-Border Payments

The financial architecture behind finance, reconciliation, treasury and revenue.

DEBITS = **CREDITS**

Every movement. Every currency. Fully traceable.

BRAJKISHOR PANDEY

FinTech Engineering Leader | Cross-Border Payments

Swipe to follow the money ->

THE PROBLEM

A transaction status is not money truth

Paid, failed and refunded describe workflow. They do not explain the accounting.

PENDING | PAID | FAILED | REFUNDED

The platform must still answer:

- Where is the customer's money now?
- Which bank or partner holds it?
- What is reserved, payable or in transit?
- How much revenue and cost was generated?

THE MONEY TRUTH

A central double-entry ledger records the financial effect behind every payment event.

Workflow tells you what happened. The ledger proves what happened to the money.

ARCHITECTURE

One ledger. Four financial views.

Do not build separate financial truths for every department.

01

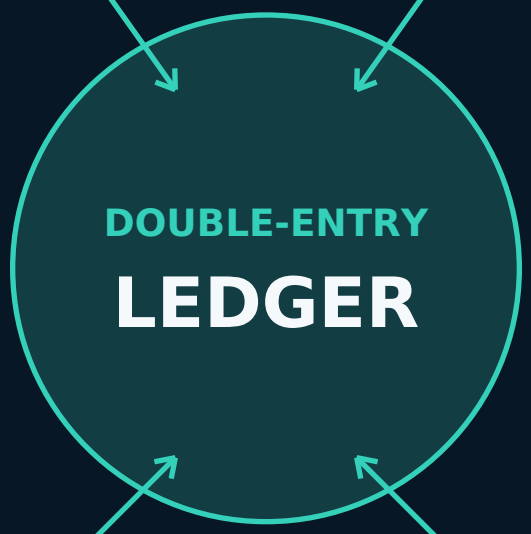
FINANCE

Trial balance, GL, P&L and audit

02

RECONCILIATION

Bank, gateway and partner matching



03

TREASURY

Liquidity, prefunding and FX exposure

04

REVENUE

Fees, FX margin, cost and profit

Rule: **All modules read from the same posted journals and balances.**

LEDGER RULES

The rules that protect financial integrity

A ledger becomes trustworthy only when these controls are non-negotiable.

01

Debits equal credits

Every posted journal must balance within each currency.

02

One account, one currency

USD, INR and NGN balances are never mixed in one account.

03

Posted means immutable

Correct mistakes through reversal and replacement journals.

04

Every event is idempotent

The same callback or event cannot post money twice.

05

Atomic posting

All journal lines succeed together or none are committed.

06

Ledger is the source of truth

Cache and dashboards are projections, never the authority.

If an admin can directly edit a balance, you do not have a reliable ledger.

CHART OF ACCOUNTS

Accounts that explain where the money sits

Each account is scoped by legal entity, owner and currency.

ASSETS

+ Bank collection
+ Gateway receivable
+ Partner prefund
+ Settlement in transit
+ FX clearing / position

LIABILITIES

+ Customer funds
+ Beneficiary payable
+ Partner payable
+ Refund payable
+ Deferred fee

REVENUE

+ Transfer fee
+ FX margin
+ Express fee
+ Partner commission

EXPENSES

+ Pay-in cost
+ Payout fee
+ Bank / SWIFT fee
+ FX or fraud loss

ACCOUNT CODE

`US_ENTITY:LIABILITY:CUSTOMER_FUNDS:USD`

TRANSACTION STORY

Follow one transfer from USD to INR

Customer pays USD 102. Principal is USD 100. Fee is USD 2. Beneficiary receives INR 8,300.

1

CUSTOMER PAYS

USD 102

↓

2

FUNDS CAPTURED

Principal + deferred fee

↓

3

FX CONVERTED

USD 100 -> INR 8,300

↓

4

PAYOUT COMPLETED

Beneficiary receives INR

↓

5

REVENUE EARNED

Fee and FX margin

One business journey. Several balanced financial events.

JOURNAL ENTRIES

Step 1: capture and settle the pay-in

The customer money and the platform fee must be recorded separately.

PAYMENT CAPTURED

DR	Gateway receivable	USD 102
CR	Customer funds liability	USD 100
CR	Deferred fee liability	USD 2

The fee is deferred until the service obligation is completed.

GATEWAY SETTLED

DR	Bank collection	USD 101
DR	Pay-in processing expense	USD 1
CR	Gateway receivable	USD 102

The ledger now explains both cash received and the processing cost.

CONTROL CHECK

Debit total **USD 204**

Credit total **USD 204**

Balanced across both posted journals

JOURNAL ENTRIES

Step 2: FX, payout and revenue

FX creates linked, balanced journals in each currency.

USD FX LEG

DR	Customer funds liability	USD 100
CR	FX source clearing	USD 100

INR FX LEG

DR	FX destination clearing	INR 8,300
CR	Beneficiary payable	INR 8,300

PAYOUT COMPLETED

DR	Beneficiary payable	INR 8,300
CR	Partner prefund	INR 8,300

FEE RECOGNIZED

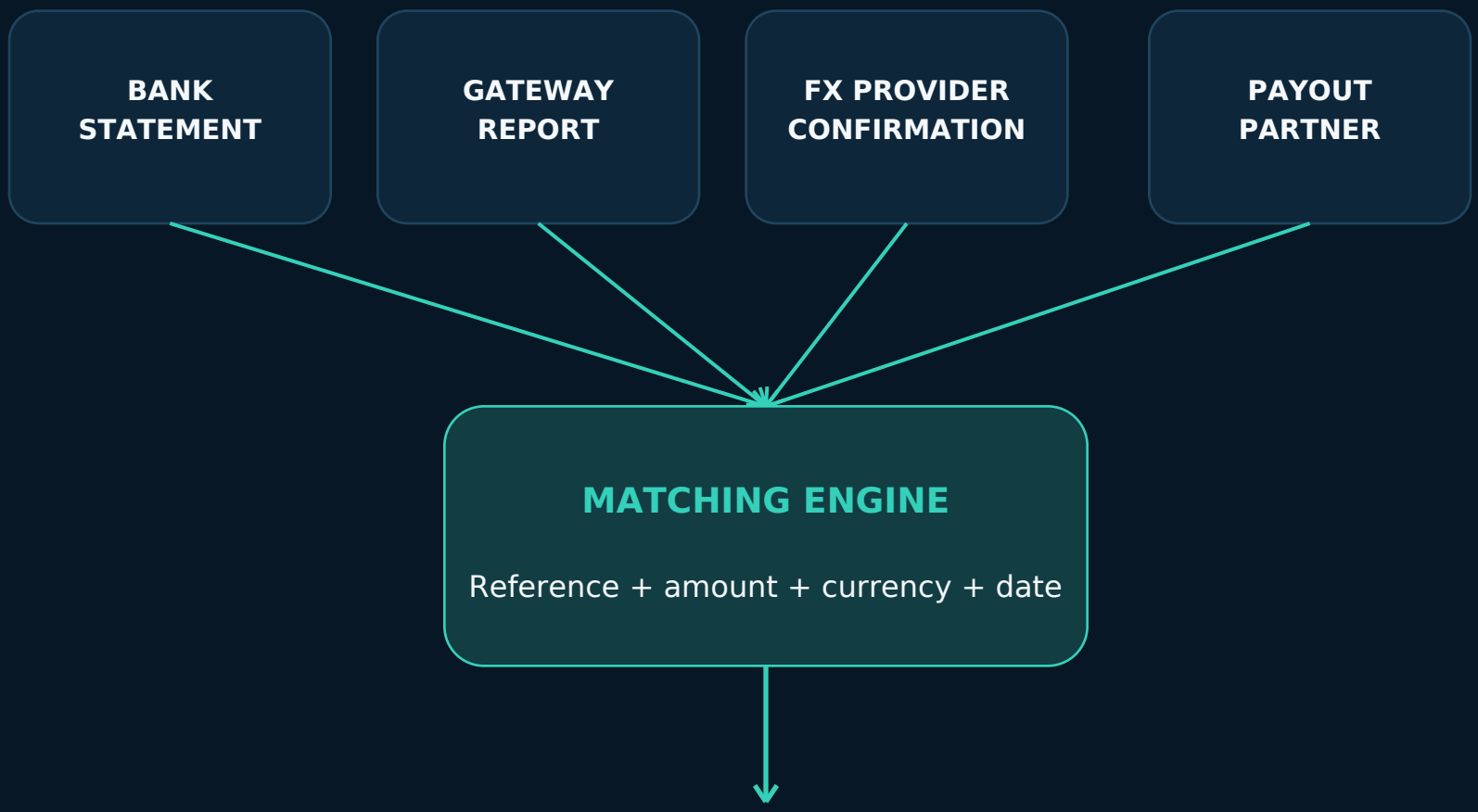
DR	Deferred fee liability	USD 2
CR	Transfer fee revenue	USD 2

Link both FX legs using the same fx_trade_id for complete traceability.

RECONCILIATION

Reconciliation proves the outside world agrees

The internal ledger must match bank, gateway, FX and payout records.



MATCHED

External record agrees with the internal ledger.

Result: reconcile and close

EXCEPTION

Timing, amount, duplicate or missing-record difference.

Result: investigate, never overwrite

An adjustment requires an approved journal - not a manual balance edit.

TREASURY

Treasury answers: Can we fund the next payout?

Track liquidity separately for every entity, currency and partner.

AVAILABLE LIQUIDITY

Book balance **- holds - committed payouts - minimum reserve**

What can safely be used right now

REAL-TIME POSITION

Bank, prefund, payable and in-transit balances

LIQUIDITY FORECAST

Expected inflows and payouts by value date

FX EXPOSURE

Open positions, revaluation and realized P&L

FUNDING CONTROLS

Thresholds, alerts and maker-checker approval

A profitable transaction can still fail when the payout currency is not funded.

REVENUE

Transaction volume is not revenue

Profitability requires fees, FX margin and every delivery cost to be separated.

Transfer fee	**+ USD 2.00**
FX margin	**+ USD 1.20**
Pay-in processing	**- USD 1.00**
Payout partner cost	**- USD 0.60**
Compliance cost	**- USD 0.20**

NET TRANSACTION MARGIN

USD 1.40

Report by corridor, partner, customer, product and payment rail.

GMV measures money moved. Revenue measures what the business earned.

DATA MODEL

A clean schema keeps journals explainable

The journal header records the event. Journal lines record its debit and credit

JOURNAL_ENTRIES

- id
- journal_number
- transaction_id
- event_source
- event_id
- event_type
- effective_at
- reversal_of
- status

JOURNAL_LINES

- id
- journal_entry_id
- ledger_account_id
- currency
- debit_amount
- credit_amount
- functional_amount
- fx_rate
- partner_leg_id

RELATIONSHIP

journal_lines.journal_entry_id -> journal_entries.id

Use journal_number for a human-readable reference. A separate journal_id is unnecessary unless a real parent journal table exists.

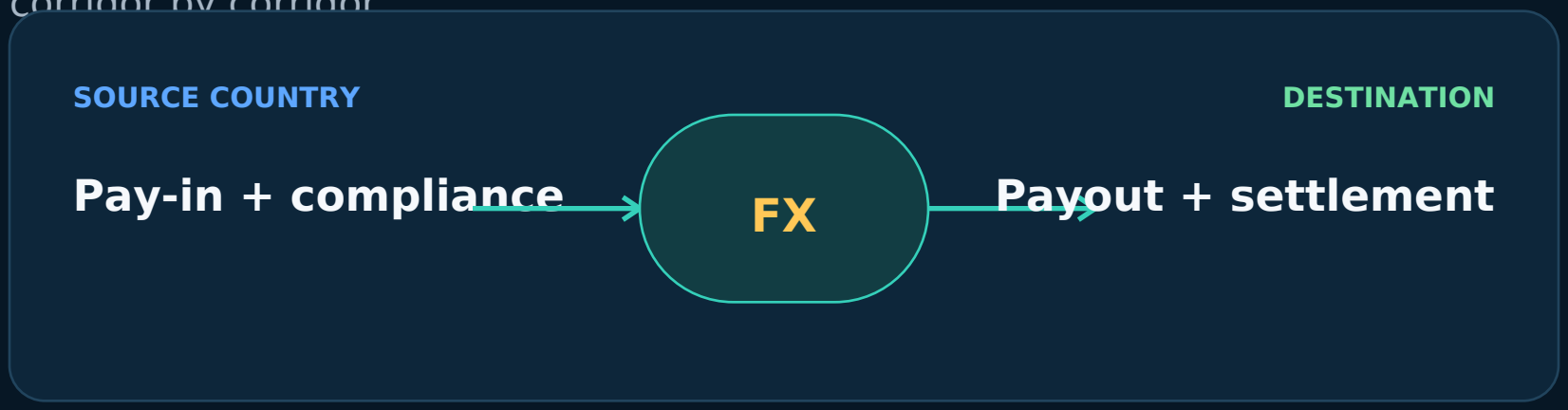
UNIQUE(event_source, event_id, event_type)

Prevents duplicate financial posting

GLOBAL CORRIDORS

Global-ready does not mean live everywhere

The architecture can support any currency pair. Operations must be activated corridor by corridor.



Licensed entity / regulated partner

Who is legally moving the money?

KYC, KYB, AML and sanctions rules

What must be verified and monitored?

Safeguarding and settlement model

Where are customer funds protected?

Liquidity, limits and local rails

Can the payout be completed on time?

Design globally. Launch responsibly. Reconcile locally.

LET'S BUILD IT RIGHT

Your payment platform needs a money truth.

I help fintech founders and payment companies design, audit and scale:

- Cross-border payment architecture
- Double-entry ledger implementation
- Reconciliation and settlement systems
- Treasury, liquidity and FX workflows
- Partner integrations and platform scalability

17+ YEARS

Building secure and scalable technology

for high-volume cross-border payment platforms.

CONNECT WITH ME

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