Finance Charts & Business Logic – Developer Guide

This document describes the most used financial charts, their purpose, and the underlying business logic with developer-ready sheet schemas. It is designed to be used directly as a product or engineering handoff.

1. Cash Flow Timeline (Income vs Expenses)

Purpose: Shows money movement over time and answers whether the user is financially stable.
Business Logic: Income is positive, expenses are negative. Net = Income + Expenses.
Sheet Schema: month, income_total, expense_total (negative), net (formula).
Developer Notes: Persist net values, enforce negative expenses, sort strictly by date.

2. Net Worth Over Time

Purpose: Measures real financial health instead of activity.
Business Logic: Net Worth = Assets − Liabilities.
Sheet Schema: month, assets_total, liabilities_total, net_worth.
Developer Notes: This is state data, not flow. Never mix with income or expenses.

3. Expense Breakdown by Category

Purpose: Reveals where money actually goes.
Business Logic: Expenses grouped by category per month.
Sheet Schema: date, category, amount (negative), recurring.
Developer Notes: Normalize categories and allow uncategorized entries.

4. Cumulative Savings Curve

Purpose: Shows progress momentum and long-term discipline.
Business Logic: cumulative_savings[n] = cumulative_savings[n-1] + net.
Sheet Schema: month, net, cumulative_savings.
Developer Notes: Derived data only; never reset without user intent.

5. Burn Rate & Runway

Purpose: Estimates how long funds will last before depletion.
Business Logic: Burn Rate = average monthly expenses; Runway = cash / burn_rate.
Sheet Schema: current_cash, avg_monthly_burn, runway_months.
Developer Notes: Ignore income intentionally when calculating burn rate.

6. Forecast vs Actual

Purpose: Compares planning versus reality to improve accuracy.
Business Logic: Variance = Actual − Forecast.
Sheet Schema: month, forecast_income, forecast_expense, actual_income, actual_expense.
Developer Notes: Lock past months and allow forecast edits for future periods.

7. Income Source Distribution

Purpose: Evaluates income stability and diversification.
Business Logic: Group income by source and sum amounts.
Sheet Schema: date, source, amount.
Developer Notes: Never mix expenses here; prepare for tax logic expansion.

8. Cost of Living & Inflation Context

Purpose: Adds economic context to user spending behavior.
Business Logic: External indexed data compared against user expenses.
Sheet Schema: month, category, index_value.
Developer Notes: Read-only reference data; cache aggressively.

Architecture Insight

A production-grade finance system separates raw events (income, expenses), derived states (net, savings, runway), and contextual data (inflation indexes). This separation prevents logic bugs and enables scalable analytics.