

# Financial Reporting SQL Pattern Pack

techfitflow.com | Generic schema; map names to your ERP | Not accounting or audit advice

## 1. Eleven patterns

| #  | Pattern             | Key idea                                                          |
|----|---------------------|-------------------------------------------------------------------|
| 1  | Ledger balances     | GROUP BY journal HAVING debit <> credit; count journals checked   |
| 2  | Trial balance       | Use normal_balance to sign each account                           |
| 3  | Fiscal periods      | Join fiscal_calendar; never MONTH()                               |
| 4  | YTD / running total | SUM() OVER (... ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW) |
| 5  | Budget variance     | Start from budget, LEFT JOIN actuals; guard zero budget           |
| 6  | Aging buckets       | Pass @as_of; reconcile to AR control account                      |
| 7  | Sub-ledger to GL    | List timing differences as reconciling items                      |
| 8  | FX conversion       | Rate type and date per policy; never default missing rate to 1    |
| 9  | Reversals           | Exclude reversal pairs when listing or counting                   |
| 10 | As-of rebuild       | created_at <= report run time                                     |
| 11 | Rounding            | DECIMAL(19,4); round once at the end                              |

## 2. Core SQL

Pattern 1: unbalanced journals

```
SELECT journal_id, SUM(debit) d, SUM(credit) c
FROM gl_entries WHERE period_id = @period
GROUP BY journal_id HAVING SUM(debit) <> SUM(credit);
```

Pattern 4: fiscal YTD

```
SUM(revenue) OVER (PARTITION BY fiscal_year ORDER BY period_no
ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW) AS revenue_ytd
```

Pattern 8: as-of FX rate

```
OUTER APPLY (SELECT TOP 1 f.rate FROM fx_rates f
WHERE f.from_ccy = g.currency AND f.to_ccy = 'USD' AND f.rate_date <= g.posting_date
ORDER BY f.rate_date DESC) r
```

Pattern 9: active entries only

```
WHERE g.reversal_of IS NULL
AND NOT EXISTS (SELECT 1 FROM gl_entries r WHERE r.reversal_of = g.entry_id)
```

### 3. Why does the report not tie out?

- ☐ 1. Same period, entity, and accounts? Fix filters and mappings first.
- ☐ 2. Do debits equal credits in both sources? (Pattern 1)
- ☐ 3. Does the gap follow posting time? (Pattern 10: created\_at vs load time)
- ☐ 4. Does the gap follow currency or rounding? (Patterns 8, 11)
- ☐ 5. Reversals, eliminations, manual adjustments?

### 4. Report specification template

| Field                              | Your entry |
|------------------------------------|------------|
| Report name and owner              |            |
| Source of truth                    |            |
| Period logic (fiscal, open/closed) |            |
| Currency policy (rate type, date)  |            |
| Inclusions / exclusions            |            |
| Sign convention and rounding rule  |            |
| Tie-out target and tolerance       |            |
| Refresh timing vs close steps      |            |
| Late-posting handling              |            |
| Reviewer and sign-off              |            |

### 5. Close-week reconciliation sign-off

| Check                             | Pattern | Result                         | Reviewer |
|-----------------------------------|---------|--------------------------------|----------|
| Ledger balances                   | 1       | Zero unbalanced journals       |          |
| Report equals trial balance       | 2       | Difference = 0                 |          |
| Sub-ledger equals control account | 7       | Reconciling items listed       |          |
| Late postings reviewed            | 10      | Entries after load reviewed    |          |
| FX rates complete                 | 8       | No missing rate rows           |          |
| Variance reviewed                 | 5       | Lines over threshold commented |          |

Sources: PCAOB AS 2201; Microsoft Learn SELECT - OVER clause; your ERP data dictionary and accounting policy manual.