

# American Fidelity Claims Quality Dashboard

---

Prepared by: Will Thompson

Contact: Will.j.Thompson@outlook.com | (405) 802-5252

GitHub Repo: <https://github.com/Willthompson99/american-fidelity-claims-dashboard>

## Executive Summary

This project simulates how American Fidelity can detect claims anomalies, monitor data quality, and enhance audit readiness using open-source tools. It demonstrates a full-stack analytics pipeline from raw claims CSV data to interactive visualization in Power BI, powered by Power Query logic and DAX.

It aligns directly with the company's mission to ensure accuracy in insurance operations, and illustrates the capabilities expected in a modern data analytics role.

## Project Goals

- Identify and flag erroneous or suspicious claim records
- Create a reproducible, Git-tracked solution using Power BI and Excel-based claims data
- Visualize findings with a clean, interactive dashboard for decision-makers
- Propose quality control processes rooted in actual data evidence

## Technical Stack

- Data Load: Power Query in Power BI used to clean and transform CSV data
- Rule Logic: Power Query conditional logic to flag data quality errors
- Dashboard: Built in Power BI with dynamic filters, KPI cards, and error visualizations
- Version Control: GitHub-hosted project with documentation and PBIX file

## Power Query Logic (Examples)

- Negative Payment Check: if [Claim\_Payment] > 0 then "Error" else null
- Early Payment Check: if [Payment\_Date] < [Claim\_Date] then "Error" else null

- Missing Value Check: if [Claim\_Payment] is null or [Annual\_Premium] is null then "Error" else null
- Excessive Claim Check: if  $\text{Number.Abs}([\text{Claim\_Payment}]) > 0.5 * [\text{Annual\_Premium}]$  then "Error" else null

### Data Quality Rules

Rule ID	Description	Logic
1	Negative Payments	$\text{Claim\_Payment} > 0$
2	Early Payment	$\text{Payment\_Date} < \text{Claim\_Date}$
3	Missing Values	Claim_Payment or Annual_Premium is null
4	Excessive Claim	$\text{ABS}(\text{Claim\_Payment}) > 0.5 * \text{Annual\_Premium}$

### Power BI Dashboard Features

- KPI Cards: Show total claims, average, highest, and lowest payment values
- Filters: Audit flags, claim date, quarter, region, and issue flags
- Error Count Visuals: Bar chart showing number of claims per error type
- Detailed Table: Drill-through enabled, sortable by region, date, and audit flag

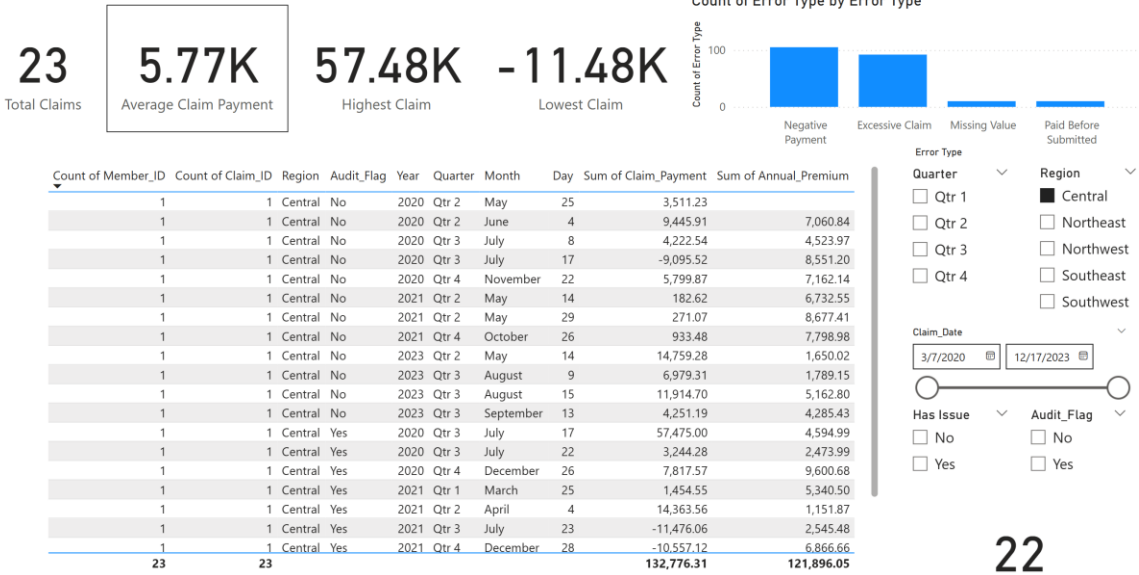
### Reproducibility & Domain Alignment

- ✓ Fully self-contained PBIX with included CSV source
- ✓ Uses Power BI, Power Query, and DAX for all logic
- ✓ Models claims quality assurance aligned with insurance workflows
- ✓ Clean, stakeholder-facing dashboard that reflects business rule enforcement

### Dashboard Snapshot

Below is a sample snapshot of the Power BI dashboard used to visualize claims data quality. The dashboard includes KPI cards, error-type breakdowns, filters for region and audit flag, and a detailed claims table for drill-through analysis.

American Fidelity Claims Quality Dashboard



Data based on sample claims for quality monitoring – American Fidelity