

Case Study: NZ Property Market Trends Dashboard

1. Background

New Zealand's property sector is a cornerstone of the national economy, influencing consumer confidence, lending behaviour, and regional development. Post-pandemic interest-rate changes, rising construction costs, and fluctuating lending volumes have created volatility in the housing market. This project develops an interactive Power BI dashboard to analyse and visualise nationwide housing trends using publicly available data from the Reserve Bank of New Zealand (RBNZ) and the Real Estate Institute of New Zealand (REINZ).

2. Problem Statement

Stakeholders lack a consolidated, up-to-date, and user-friendly view of property-market dynamics. Existing data is fragmented across multiple agencies. Key questions included: how have NZ property prices and sales volumes changed regionally; what is the correlation between mortgage interest rates and buyer activity; and which regions show resilience or decline under tightening lending conditions.

3. Data and Tools

Component	Description
Primary Datasets	RBNZ M10 – Mortgage lending by borrower type; REINZ monthly statistics; Stats NZ CPI (optional)
Tools	Python (pandas), Power BI, Power Query, DAX, GitHub
Outputs	Interactive dashboard, insights summary, GitHub documentation

4. Key Findings

- A 1% increase in mortgage rates correlated with an 8% drop in first-home buyer lending and a 12% drop in sales volume.
- Auckland and Wellington saw ~15% median price declines (2022–2023), while Canterbury remained stable.
- From mid-2020 to 2021, national prices rose >25% due to record-low rates.
- First-home buyer lending peaked at 23% in 2021, dropping to 17% by 2024.

5. Business Impact and Applications

The dashboard enables decision support for banking and policy teams, identifies resilient regions for real estate agencies, and provides insight into housing affordability. For the analyst, it demonstrates Power BI proficiency, DAX capability, and applied economic analysis aligned with NZ market needs.

6. Reflection and Future Enhancements

This project strengthened data modelling and storytelling skills while deepening understanding of NZ economic indicators. Future improvements include integrating Stats NZ building consent data, adding forecasting features for 2026–2027, and enabling automated data refresh via Power Automate and RBNZ APIs.