

Bay Area Wages vs. Rent – Summary

Question. Did wages keep up with rent in the San Francisco-Oakland-Hayward metro, and what happened to affordability?

Data. BLS/QCEW wages (FRED ENUC418640510SA); CPI-U All Items (FRED CUUSA422SA0); CPI-U Rent of Primary Residence (FRED CUUSA422SEHA). Monthly CPI averaged to quarters; wages are quarterly; base index = 2015-01-01.

Method. Align to the same quarters; compute indices (2015=100), real wages (deflated by local CPI), wage-to-rent ratio, YoY, and CAGRs. Simple Δ log regression of wages on rent with robust SE.

Headline findings (1990-03-31 → 2024-09-30). - Wages: **395.1%** - Rent CPI: **242.0%** - Real wages: **84.6%** - Wage-to-rent ratio: **44.8%**

Interpretation. If wages rose faster than rent CPI, affordability pressures eased; if rent CPI outpaced wages, they tightened. The wage-to-rent index summarizes affordability in one line (\uparrow is better).

Limits. CPI-Rent is a price index for renters (not listing medians like Zillow ZORI). QCEW wages include bonuses/stock; Bay Area quarters can spike. Descriptive analysis; correlation \neq causation.

Figures. See figures/sf_wage_vs_rent.png, figures/sf_real_wage_vs_rent.png, figures/sf_yoy.png.