

# **Texas Marketplace Health Insurance: Affordability & Coverage Fairness (2015–2016)**

**BA775: Business Analytics Toolbox**

**Team 06: Xincheng Ding, Tanmay Yenge, Zixiao Jiao,  
Linh Le, Yunhsuan Ku, Hanchao Tang**





# Goal & Data Preprocessing

## Goal:

- Analyzed 2015–2016 U.S. Marketplace health insurance data with a focus on Texas, examining premiums, age-based pricing, insurer competition, and cost-sharing structures.
- Project is motivated by ACA-era shifts, rising premiums, and consumer confusion; aims to understand factors driving unequal financial burdens and affordability challenges.

## Data Preprocessing:

- Removed empty or unreliable fields and keeping only consistent, useful variables for accurate joining.
- Filtered data to 2015–2016 and confirmed all states, including Texas, were fully represented.



# Data Sources

## 01. Rate PUF

**Description:** Plan-level data on rates including subscriber age and geographic location.

[Link](#) (CSV, 1.97 GB)

## 02. Benefits and Cost Sharing PUF

**Description:** Plan-level data on essential health benefits, coverage limits and cost sharing.

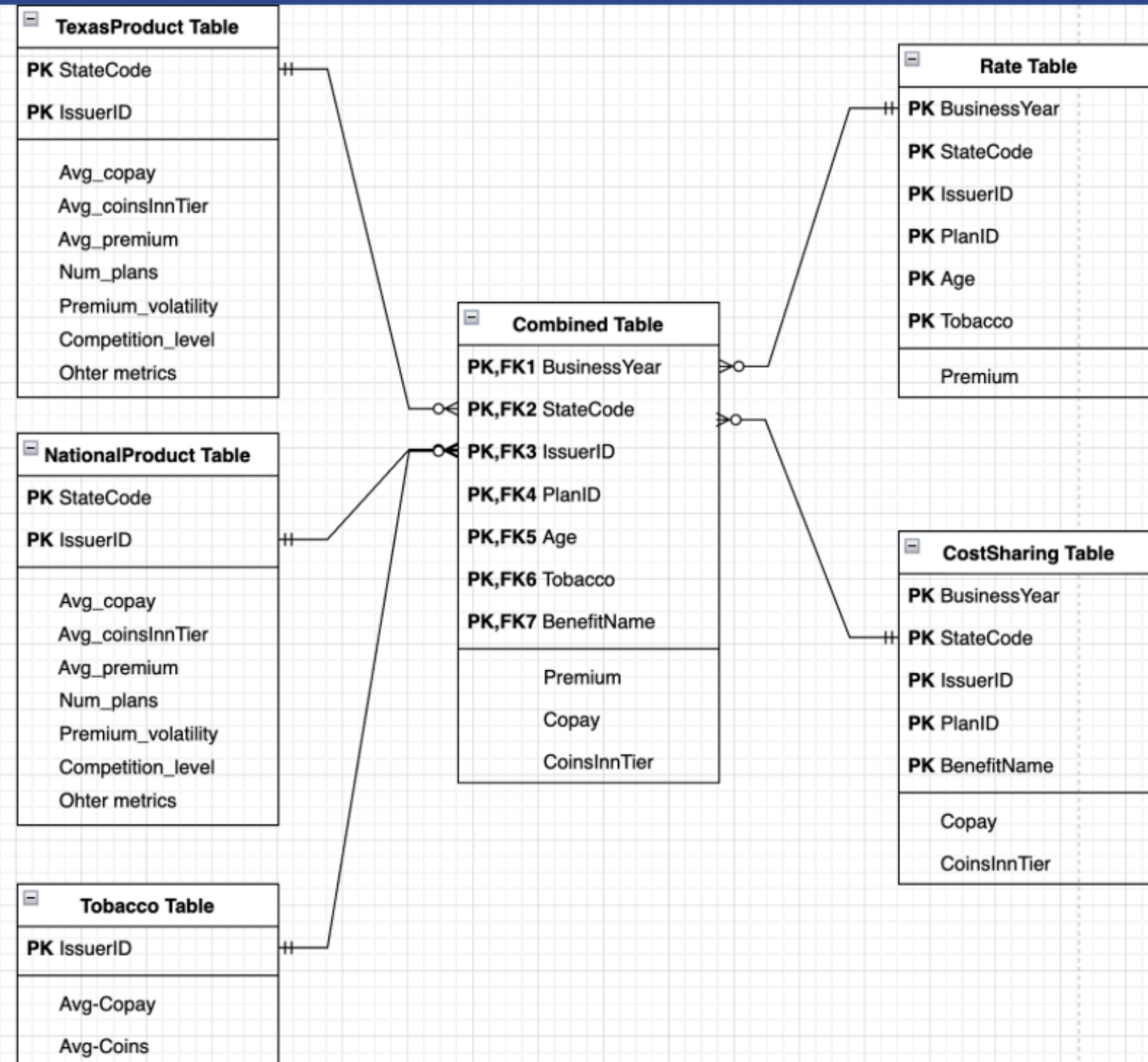
[Link](#) (CSV, 1.33 GB)

## 03. State-level Economic Indicators

**Description:** Median household income, healthcare spending per capita, poverty rate by state

[Link](#)

# ERD



# 01

## Core Metrics & Rate



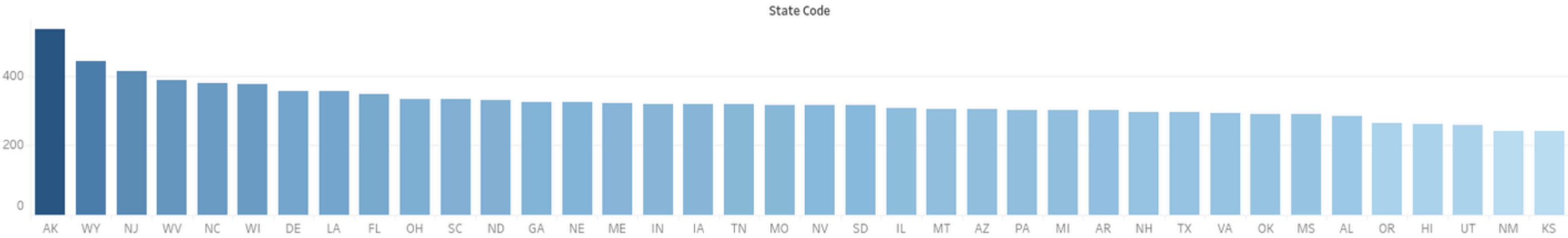
Age Banding Factor by State



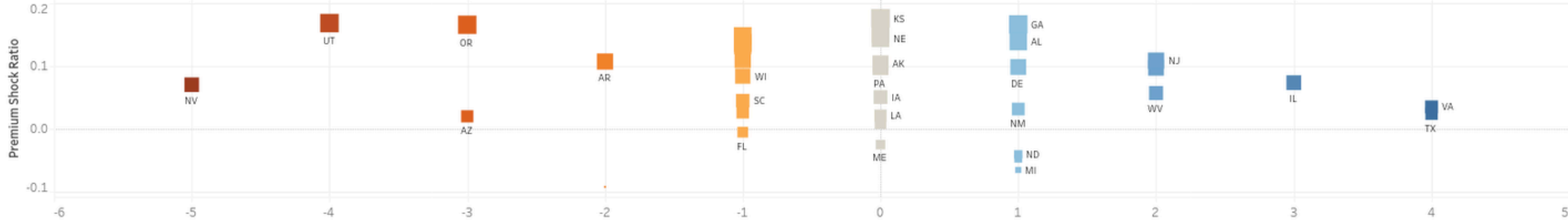
State Code

(All)

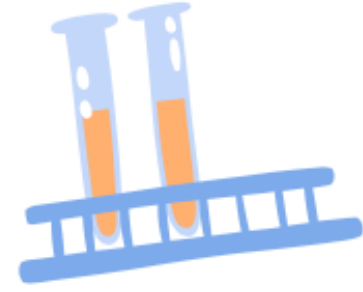
Median Standardized Premiums by State



InsurerExits vs.PremiumShock

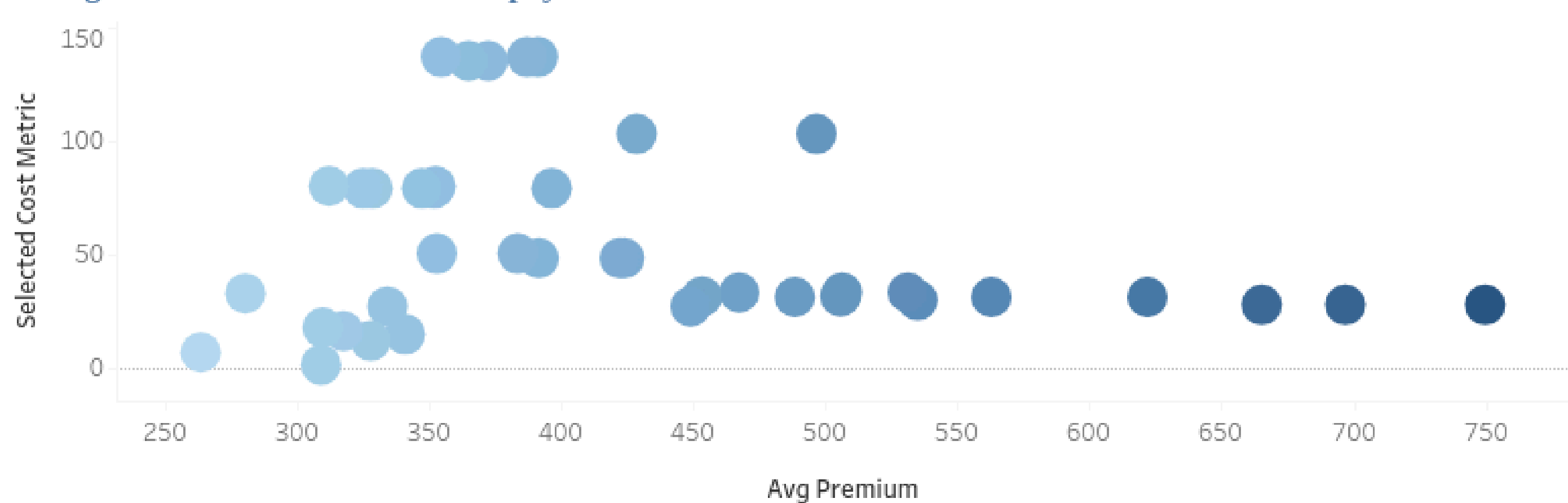


- zoom 1
- zoom 2
- zoom 3
- zoom 4
- zoom 5



# Advanced Market Insights

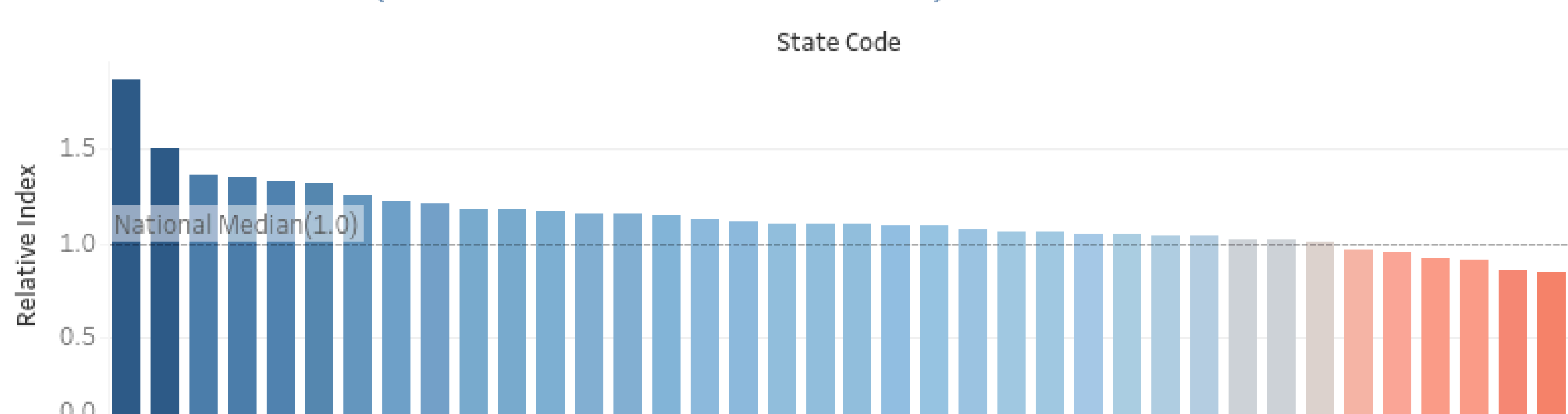
Average Premium vs In-Network Copay



Avg Premium



Relative Index Bar Chart(States vs National Median Indicator)





# **Takeaway & Next Steps**

# Main Conclusions & Implications



Out-of-network costs are mid-range—better than high-risk states but still a financial burden.



Premiums don't reliably reflect benefit generosity; cost-sharing varies widely within similar price levels.



Texas has moderate base premiums but one of the steepest age-rating curves, making coverage much less affordable for older adults.



Despite having the most issuers, Texas maintains stable premiums, showing strong competition without price volatility.



**THANK  
YOU!**