

Expanding the family of U.S. Consumer Price Indexes

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Outline



Introduction and Motivation



Income-based indexes



Household Cost Indexes



Next steps

CPI Family of Indexes

Official Indexes

CPI-U

Chained
CPI-U

CPI-W

Research Indexes-<https://www.bls.gov/cpi/research-series/>

R-CPI-U-RS

R-HICP
R-COICOP

R-CPI-E

R-CPI-Income

R-C-CPI-Income

Household Cost
Index?

Motivation

- Headline consumer price indexes summarize a range of household experiences
- Increased need for data granularity pertaining to demographic groups in particular
 - ▶ Recent recommendations by Committee on National Statistics, interest from Federal Reserve Bank, data users, and media
- Interest in inflation from the household perspective rather than the “macro” perspective
 - ▶ Inspired by the United Kingdom, New Zealand, and Australia



Methods Overview

Index	Prices / Rents	Expenditure Weights
CPI-U, C-CPI-U (official)	<ul style="list-style-type: none"> - Outlets and items selected to represent urban households - Owned housing is measured using owner equivalent rent (OER) 	<ul style="list-style-type: none"> - Consumer Expenditure Surveys (CE) Diary and Interview: sum expenditures for urban households
CPIs by Income	<ul style="list-style-type: none"> - Same as CPI-U and C-CPI-U 	<ul style="list-style-type: none"> - Group CE respondents by quintile of equivalized income, sum expenditures separately for each group
HCI-U	<ul style="list-style-type: none"> - Same as CPI-U except owned housing is measured using payments approach 	<ul style="list-style-type: none"> - Create weights for each CE respondent and average equally (“democratic”) over urban population.

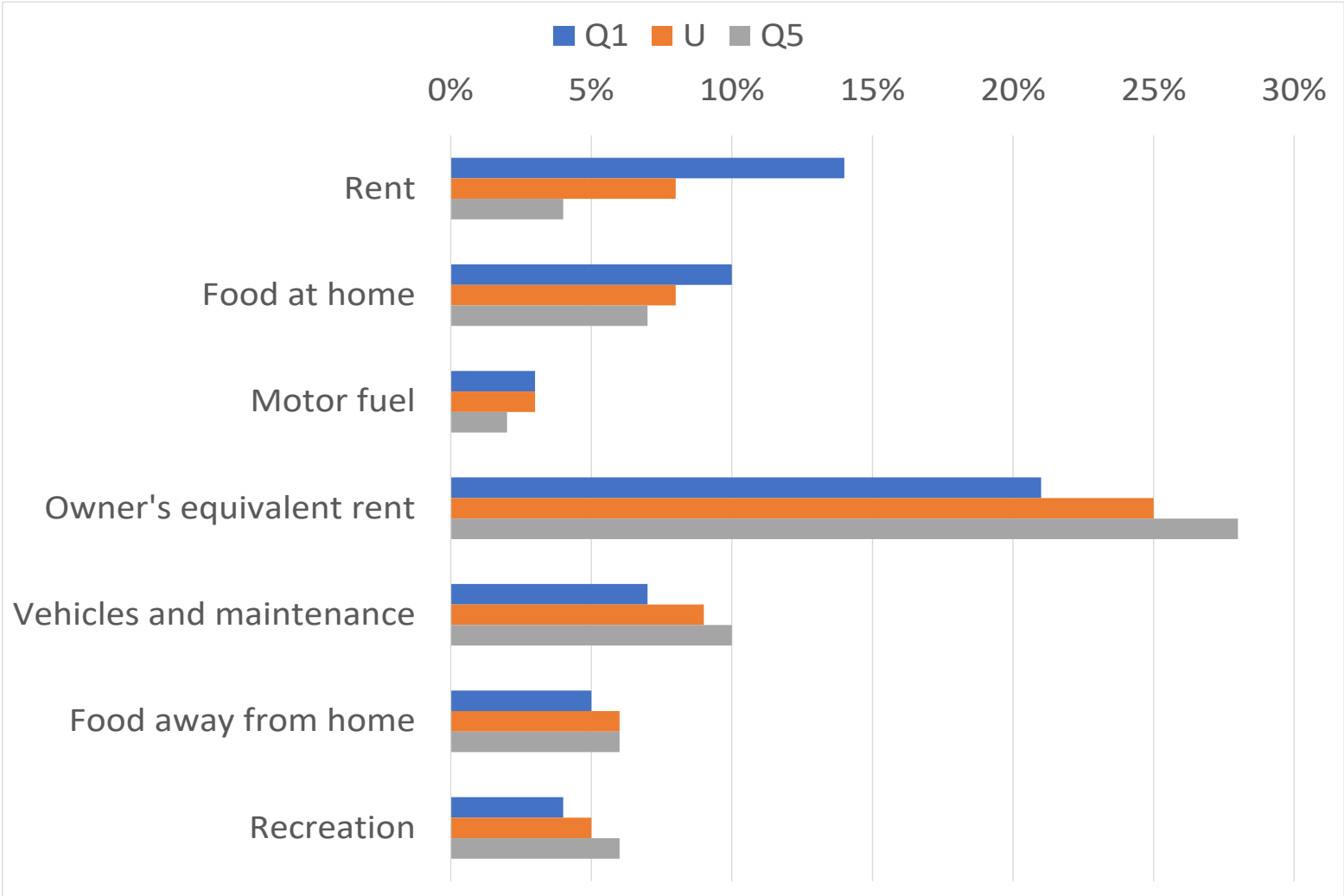


Key Results

- CPIs by equivalized income quintiles: Over 2005-2022, average annual inflation for the lowest quintile was about 0.3 percentage points higher than for the highest quintile.
- Household cost index: using a payments approach and household-weighted (“democratic”) aggregation, average annual inflation for the urban population was about 0.35 percentage lower than the CPI.

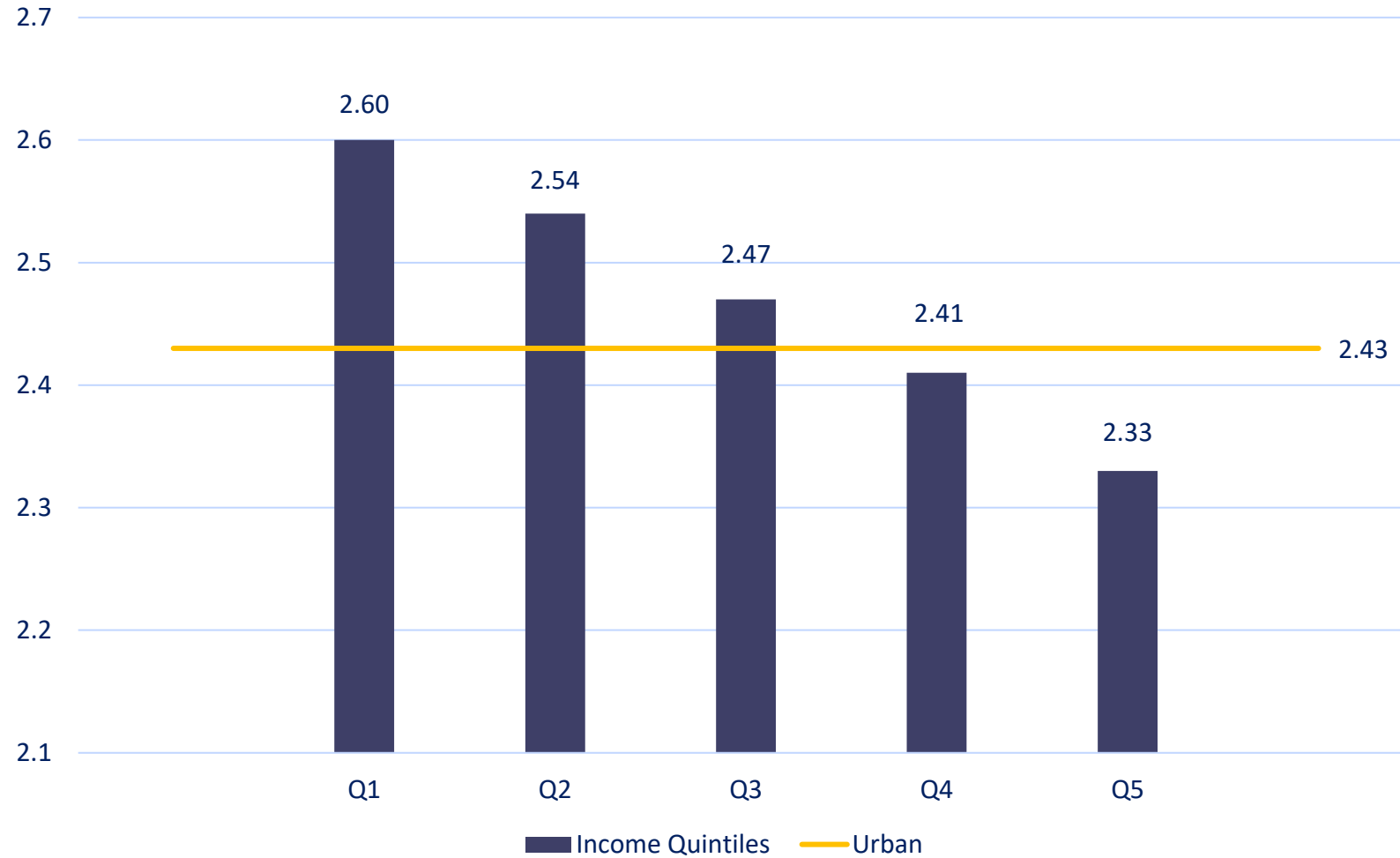


Snapshot of spending weights by population, 2019-2020 biennial expenditure weight share, equivalized income



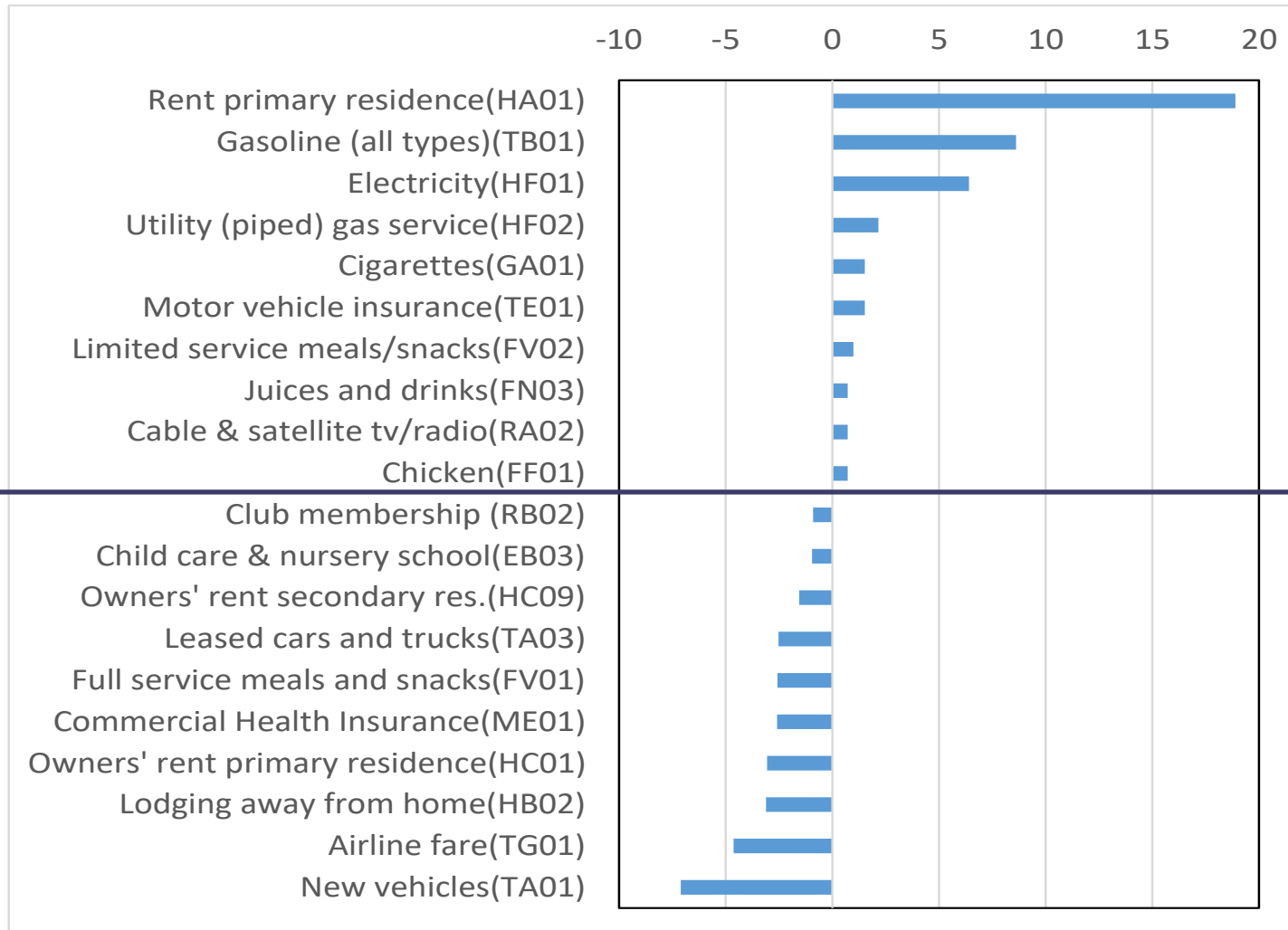
Annualized Inflation Rates by Income Quintile

Based on CPIs Lowe Formula, December 2005 - December 2022



Items contributing to inflation gap (2022)

CPI-U 8%; Q1 8.2%; Q5 7.7%

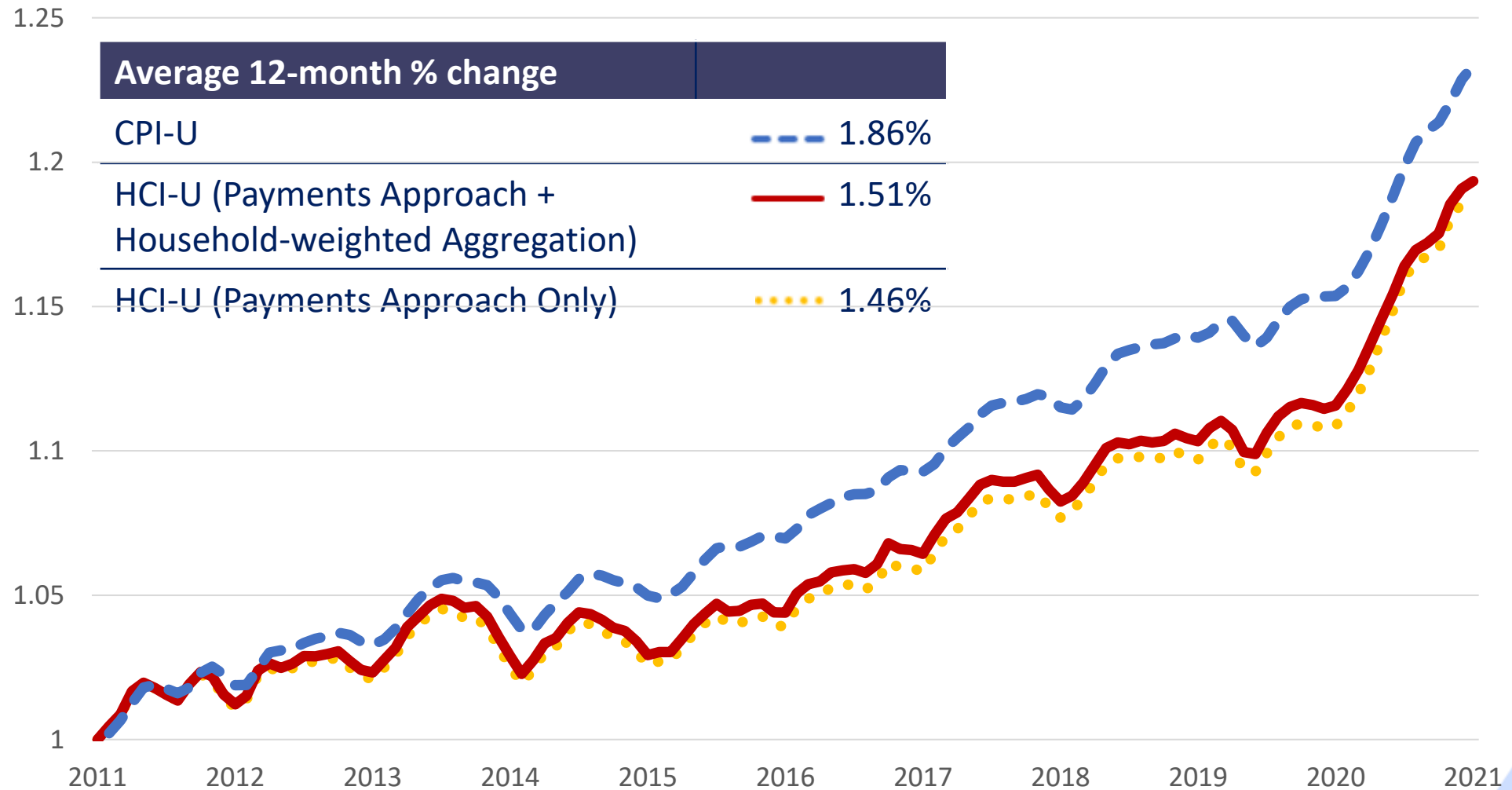


Q1 > Q5

Q1 < Q5

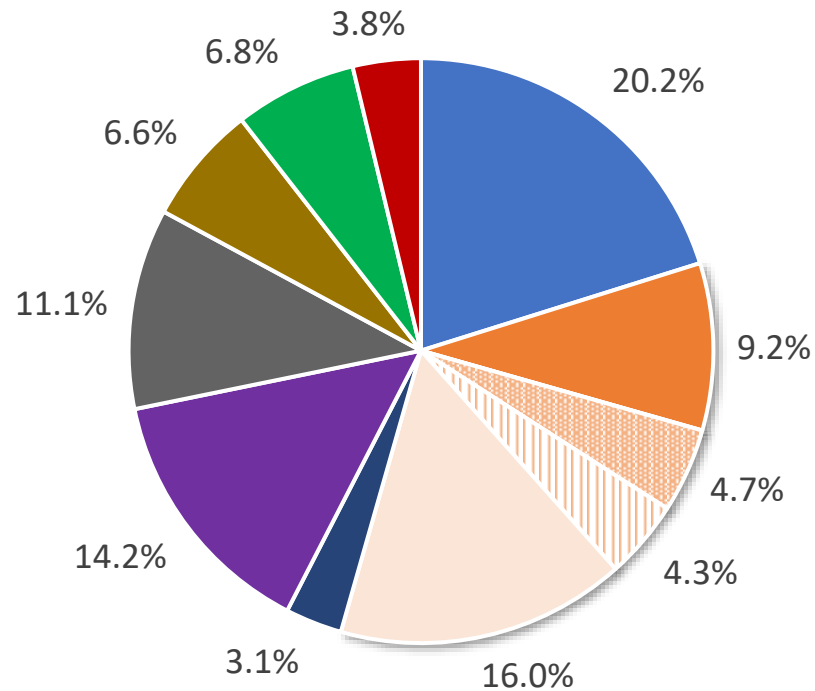


HCI-U and CPI-U index levels

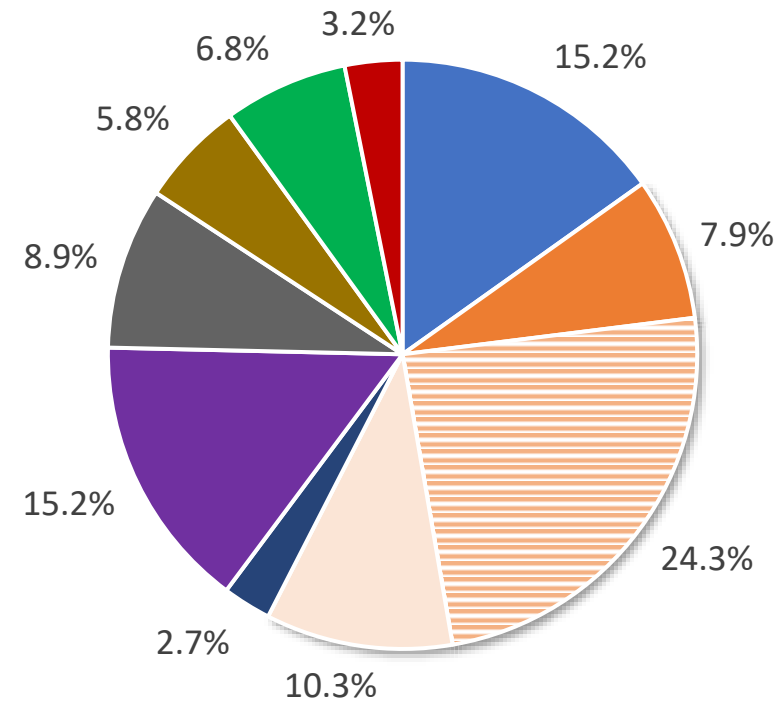


December 2020 relative importance

HCI-U (2019 weights)



CPI-U (2017-18 weights)



■ Food & Bev.

■ Housing: Rent

▨ Housing: OER

▨ Housing: Prop. Tax

▨ Housing: Mortgage

■ Housing: Other

■ Apparel

■ Transportation

■ Medical

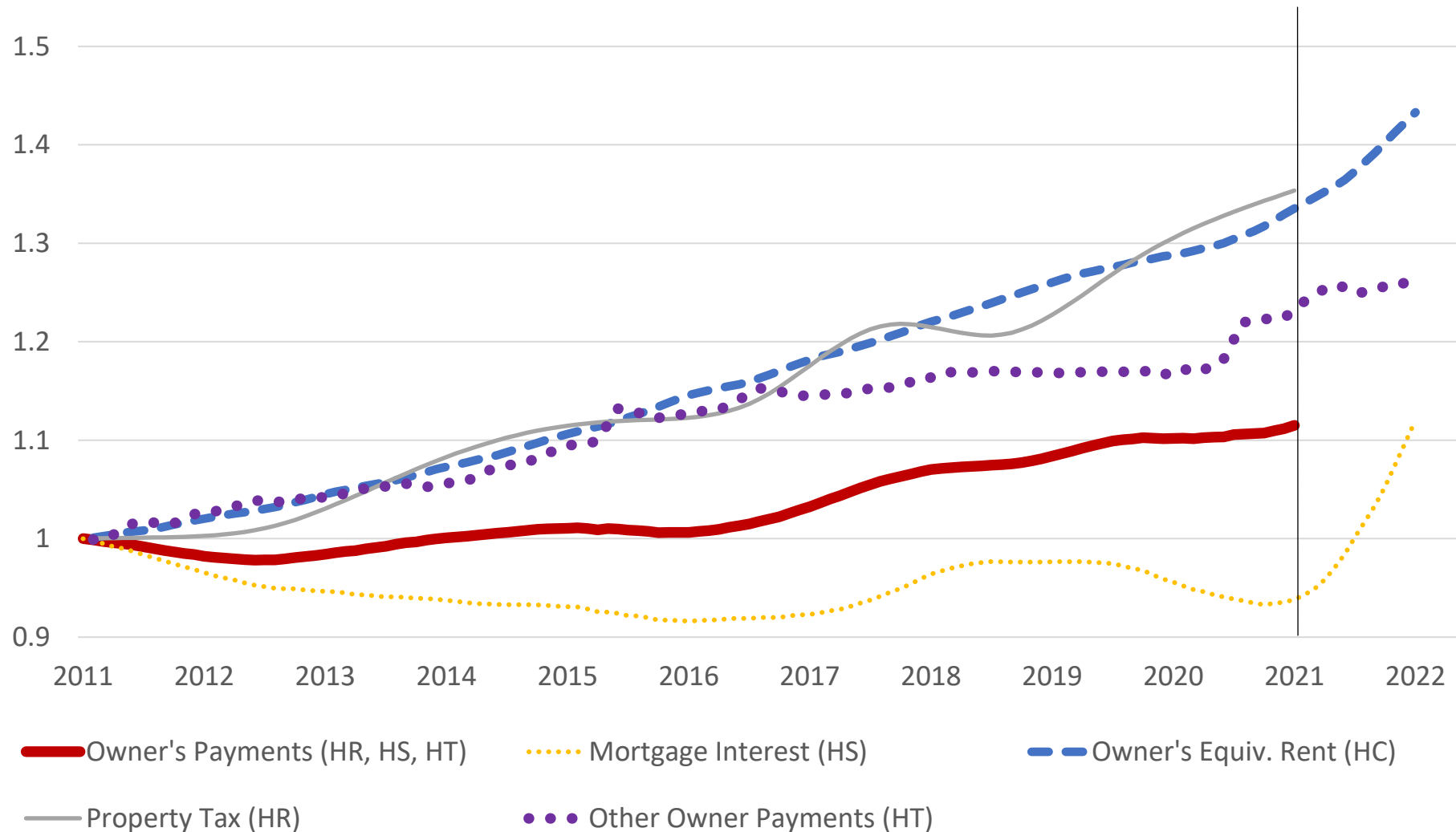
■ Recreation

■ Educ. & Comm.

■ Other



HCI-U housing components versus OER



Limitations and Future Research

- Data does not reflect lower-level heterogeneity (e.g. specific prices paid by households or groups)
- Ongoing discussions on payments approach methods for HCI
 - ▶ e.g., should mortgage payments reflect principal as well as interest?
- Continued refinement of methods
- What is the impact on poverty measurement?

Further Reading

■ CPI by Income

- ▶ Publications: [Initial working paper](#), [Spotlight on Statistics](#)
- ▶ Home page: <https://www.bls.gov/cpi/research-series/r-cpi-i.htm>

■ Household Cost Index

- ▶ [Working paper](#)

Thank you!

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