FEDERAL RESERVE BANK of NEW YORK

Uneven Effects of Changes in the Federal Funds Rate on Households

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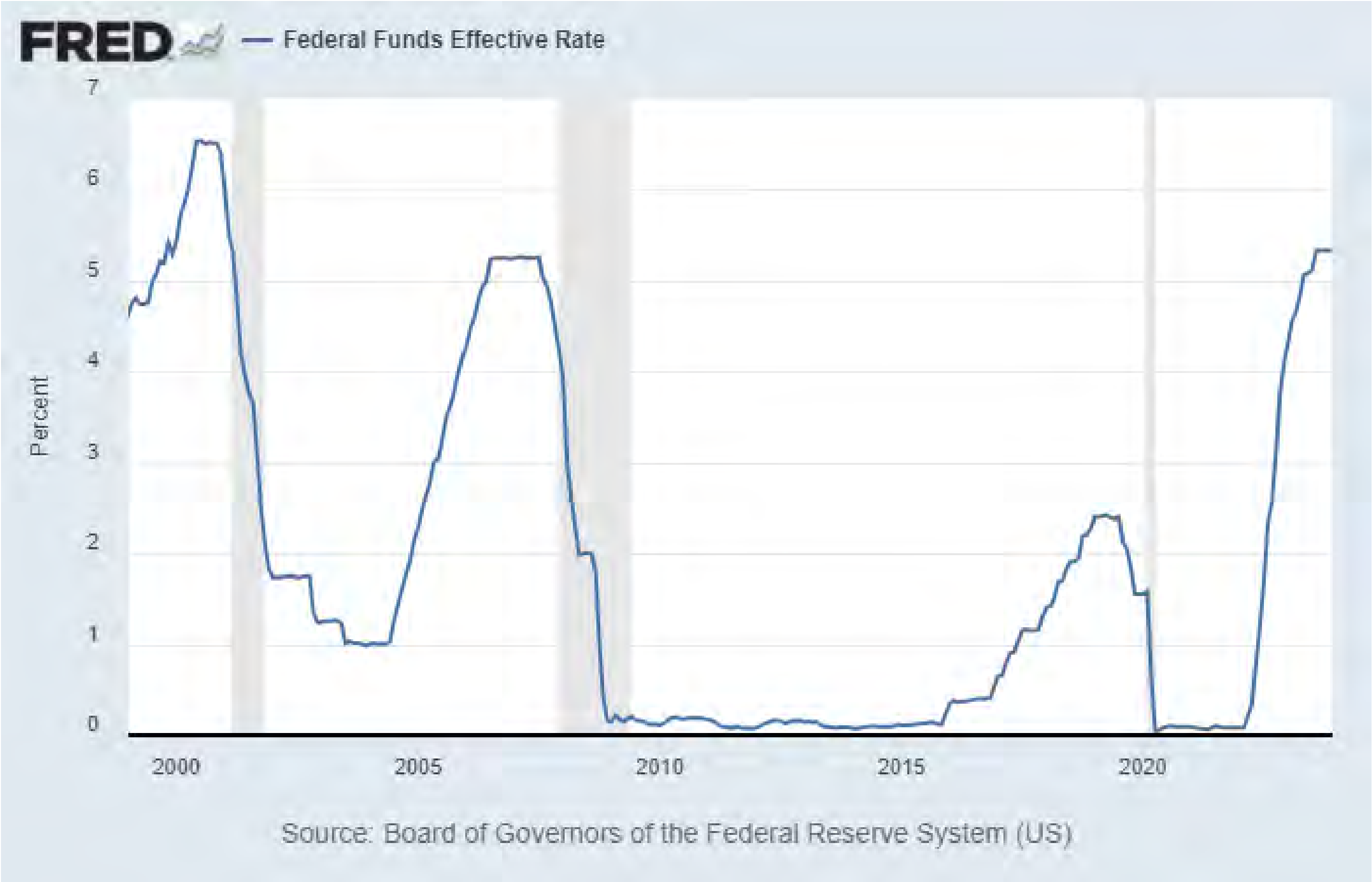
Motivation

- Federal funds rate (FFR) changes affects households in a variety of ways:
  - Through household debt
  - Through the labor market
- Are different households affected differently by FFR shocks?
- We start with different measures of exposure to FFR shocks → are households in areas with high financial strain and/or tighter labor markets differently affected by FFR shocks?
- Do effects on households vary by demographics and geography?

Federal Funds Rate (1999-Present)



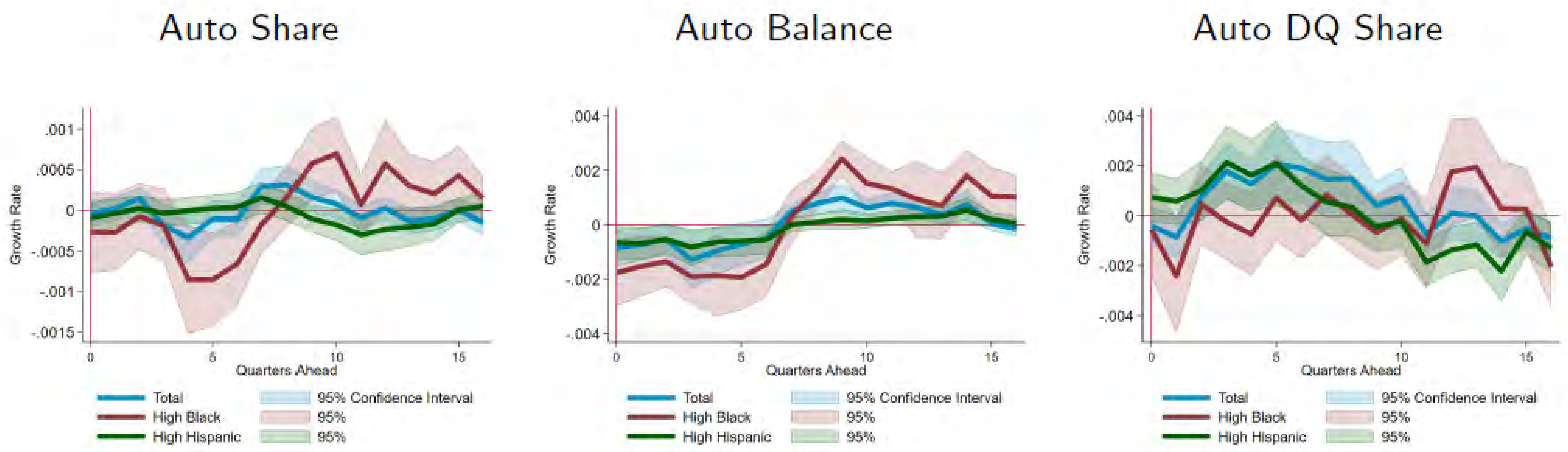
Measures of Exposures to FFR Shocks

- Debt-to income (DTIs) ratios:
  - With FFR increases, households with higher DTIs may find it harder to originate new debt (mortgage or non-mortgage) and make payments on existing debt
  - Households with variable rate mortgages are especially affected
  - These effects may vary by demographics (race/ethnicity, income, education, age) and geography
- Vacancy-to-unemployment ratios OR Employment to Population Ratios (Bergman et al. 2022)
  - With FFR increases, demand for workers may decline. Workers in a slack labor market may consequently be relatively adversely affected than those in a tight labor market.
  - These effects may vary by demographics (race/ethnicity, income, education, age) and geography.

Data

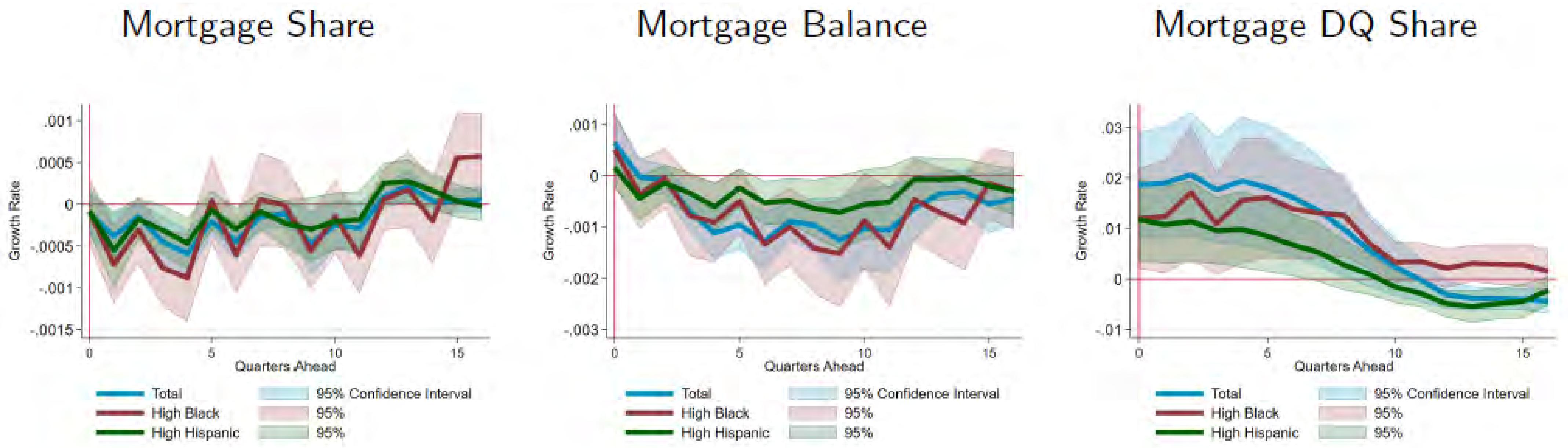
- Household debt data:
  - New York Fed/Equifax Consumer Credit Panel
  - Confidential Home Mortgage Disclosure Act (cHMDA) data
  - Black Knight McDash mortgage servicing data
- Household Spending data:
  - Commerce Signals, a TransUnion Company data
- House Prices data:
  - CoreLogic
  - Zillow
- Labor Market data:
  - Local Area Unemployment Statistics (LAUS)
  - Quarterly Workforce Indicators (QWI)
  - Lightcast data

Uneven Effects of FFR Increase on Auto Debt



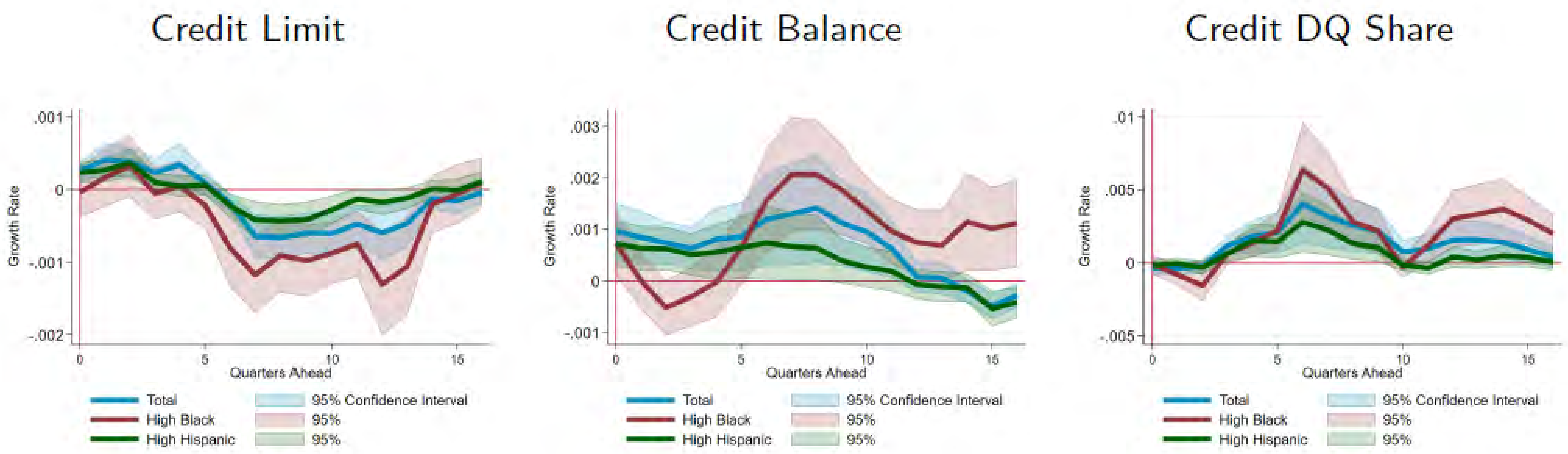
- FFR increases associated with lower auto loan originations, lower balances, and higher delinquency in areas under higher financial stress (as captured by higher DTI).
- Higher share black areas that are under higher financial stress face *even* lower originations and balances within the first 1.5 years and face higher delinquencies after 2.5 years.

Uneven Effects of FFR Increase on Mortgage Debt



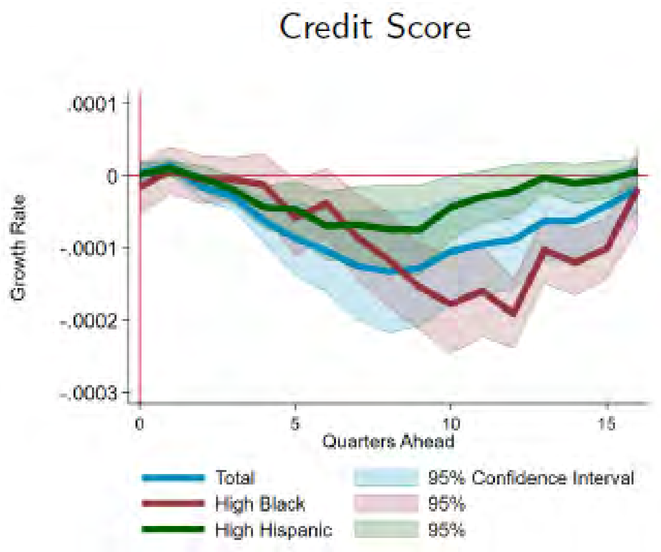
- FFR increases associated with higher mortgage delinquencies in areas under higher financial distress.
- Higher share black areas that are under higher financial distress see elevated delinquencies even after they decline elsewhere.

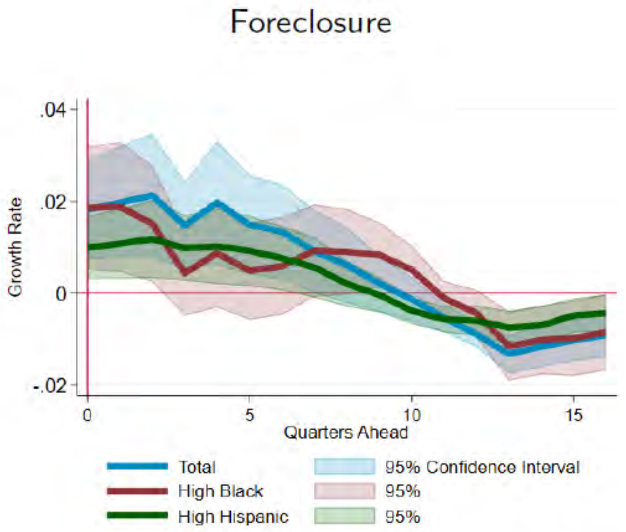
Uneven Effects of FFR Increase on Credit Card Debt

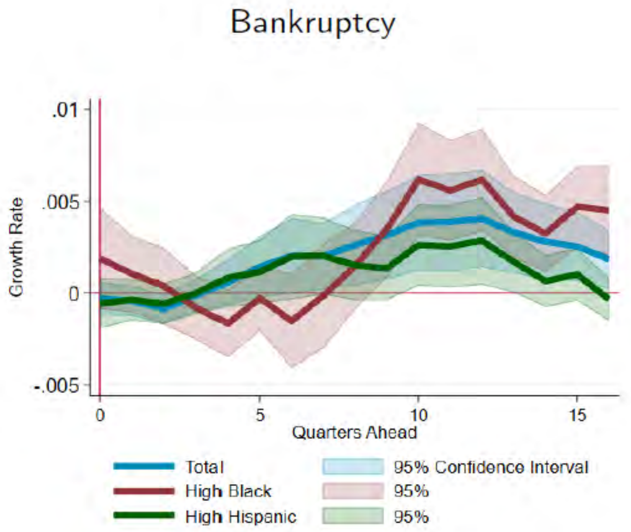


- FFR increases associated with lower credit card limit in the first year and higher credit card balances and delinquencies in financially more stressed areas.
- Borrowers in higher share Black areas that are financially more stressed face perceptibly lower credit limits and higher delinquencies that persist four years after the FFR increase.
- This may be due to higher credit card interest rates, credit market frictions leading to lending aversion for some groups or a greater need to rely on credit card debt after an FFR increase.

Uneven Effects of FFR Increase on Overall Financial Wellbeing



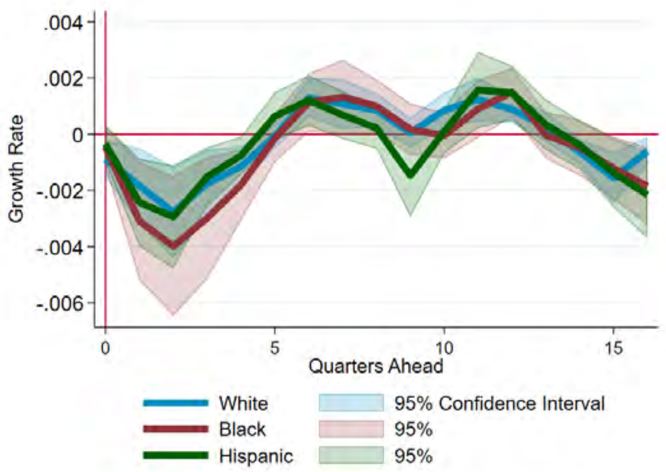




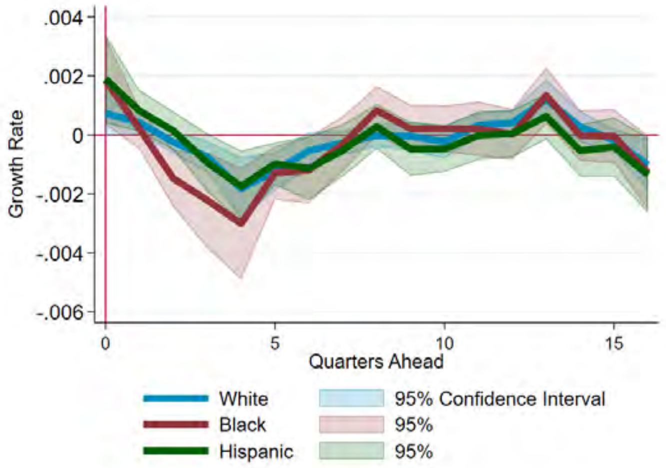
- Credit scores decline, and foreclosure and bankruptcy rates rise in areas under high financial stress after FFR increases.
- The credit score declines and bankruptcy rate increases are particularly pronounced for higher share Black areas under high financial stress.

Heterogeneous labor market impacts in financially stressed areas

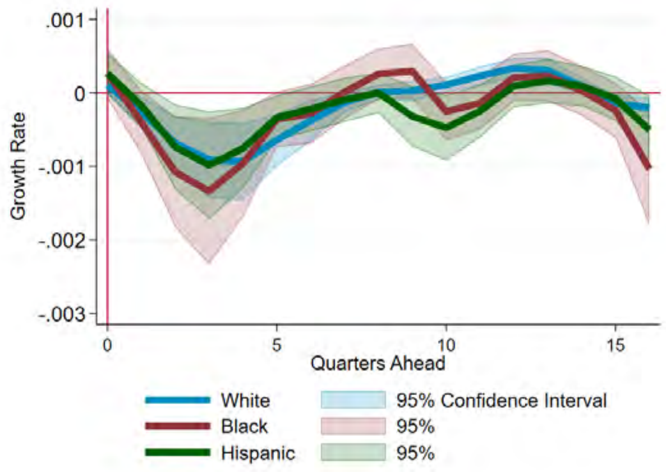
Hires



Separations



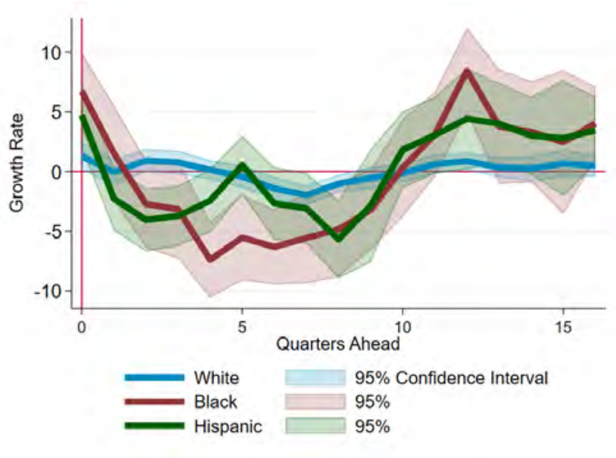
Employment



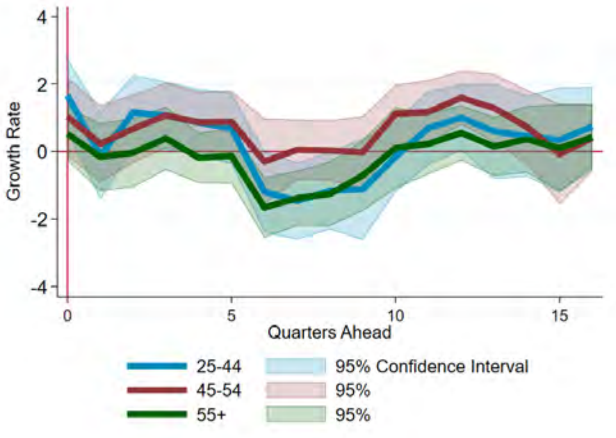
- Counties with high financial stress see both hires and separations decline, though hires decline by more than separations do, leading to a temporary drop in employment in the first year after the FFR increase.
- This pattern is more pronounced in counties with a higher Black share.

Heterogeneous labor market impacts by labor market tightness

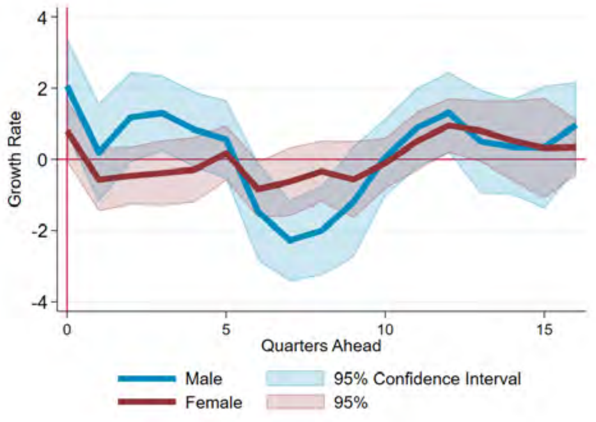
Race



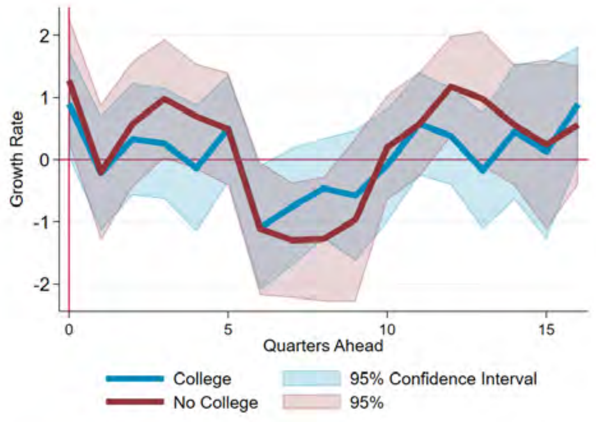
Age



Gender



Education



- Employment responds more in counties with tighter labor markets after FFR shocks
- Black, Hispanic and Female workers see greater declines in employment in the first 5 quarters after an FFR increase in tighter labor markets, while middle aged (45-54) workers see smaller declines.

Conclusion

- We aim at understanding the effect of changes in interest rates (as captured by the FFR) on households
- We use debt-to-income ratios (DTI) and employment-to-population ratios as measures of exposure to FFR shocks in the household debt and labor market
- Additionally, we explore whether the effects of interest rate changes, both on household debt and labor market outcomes, vary by demographic and other groups.
- We see that counties with higher debt-to-income ratios tend to have higher debt balances, delinquencies, foreclosures and bankruptcies after FFR increases.
- Higher share Black counties see more pronounced effects at all levels of DTI.
- Employment more responsive to FFR increases in counties with high DTI and tight labor markets, with Black, male and non-college workers more responsive and middle-age (45-54) workers less responsive.