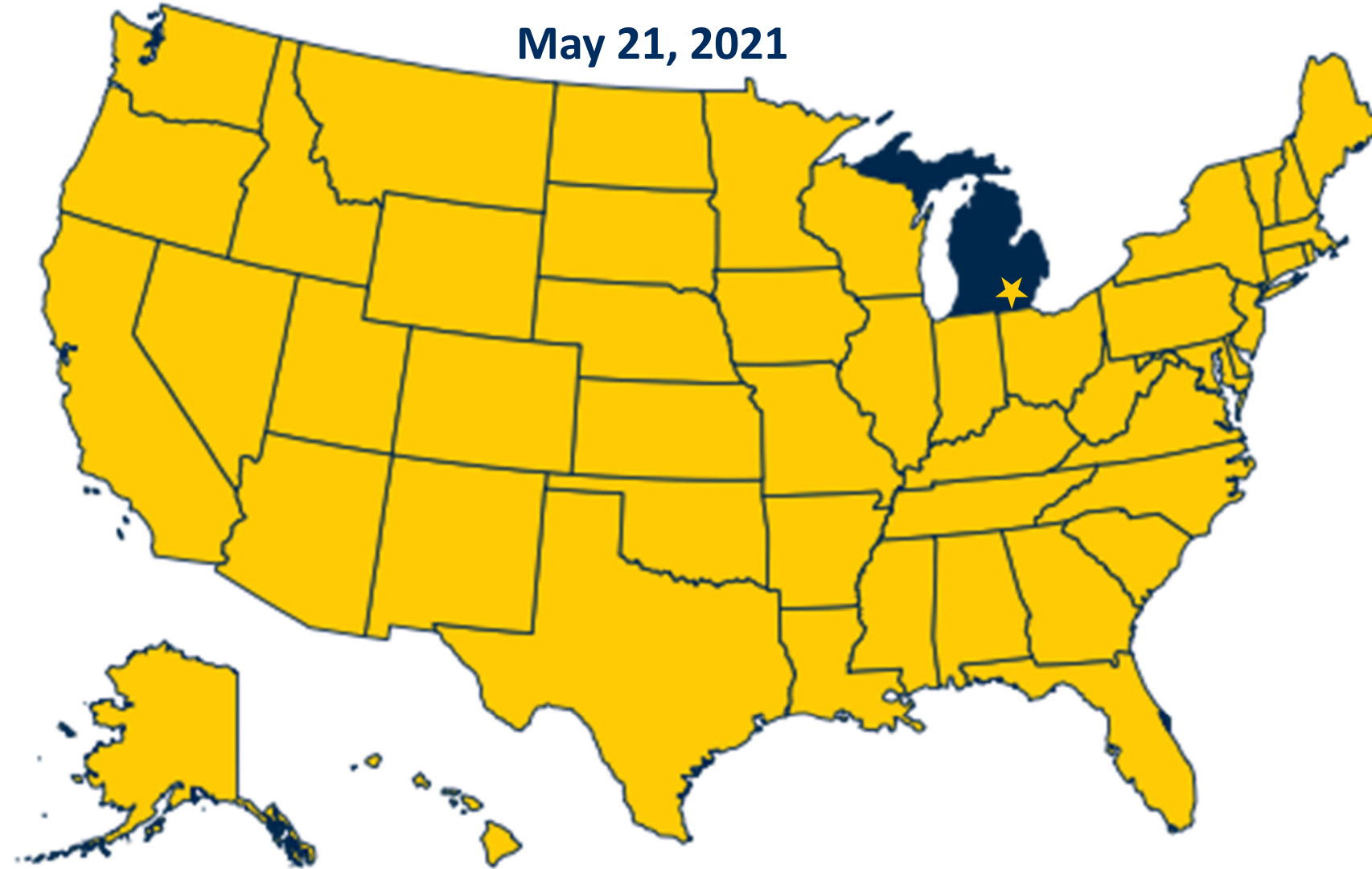


The U.S. and Michigan Outlook for 2021–2023

Consensus Revenue Estimating Conference

Lansing, Michigan

May 21, 2021

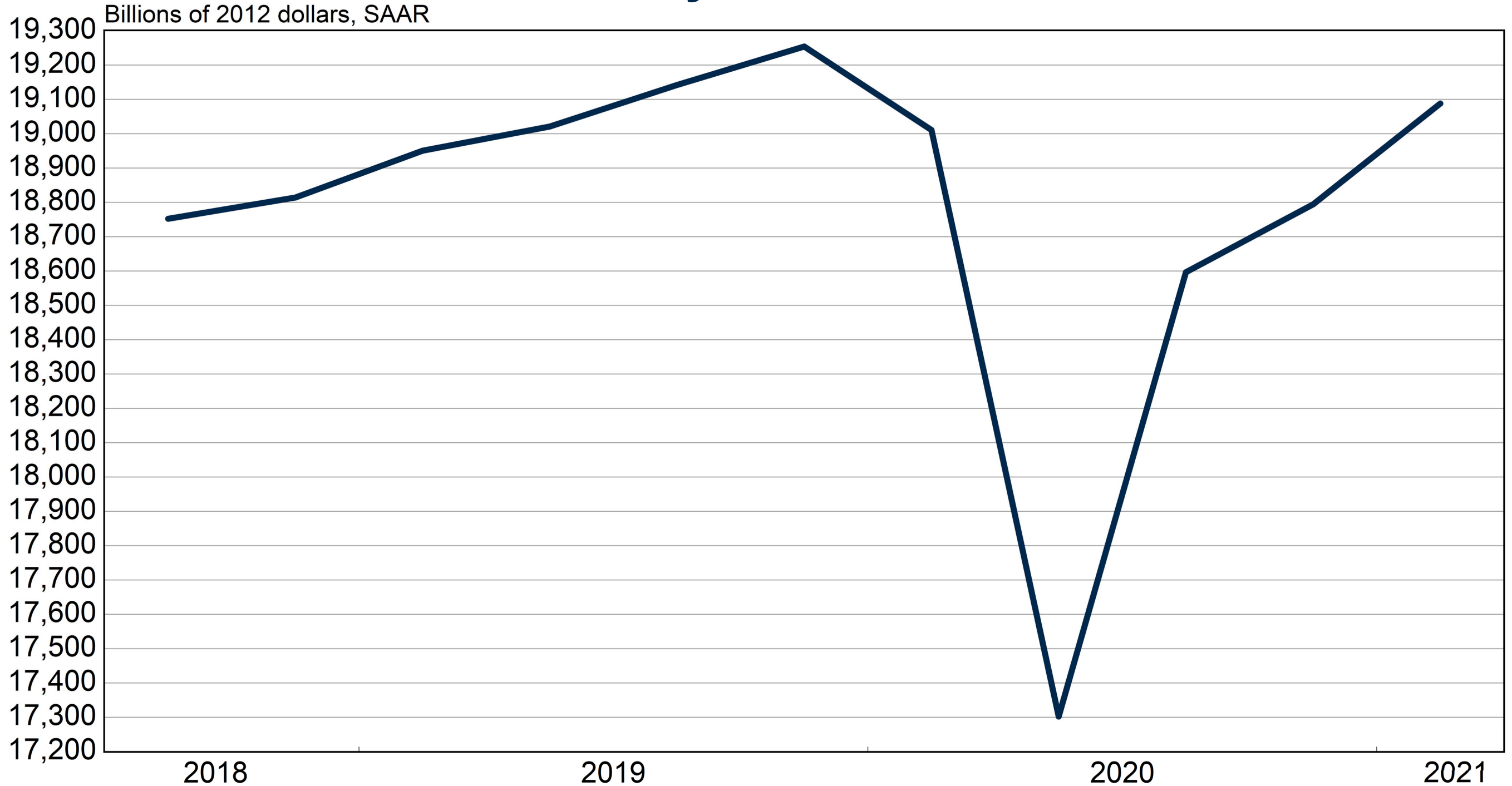


Research Seminar in Quantitative Economics

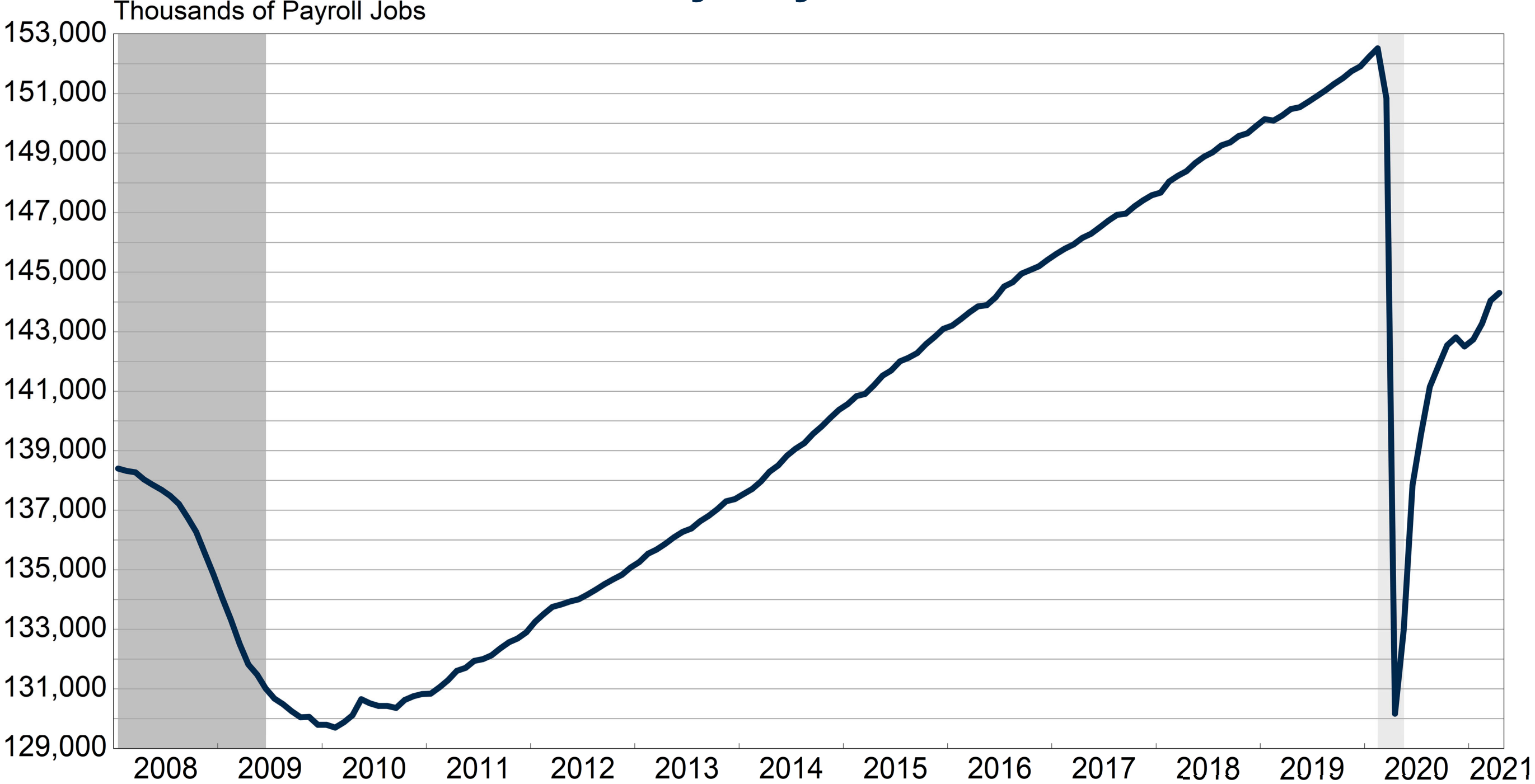


Current State of the U.S. Economy

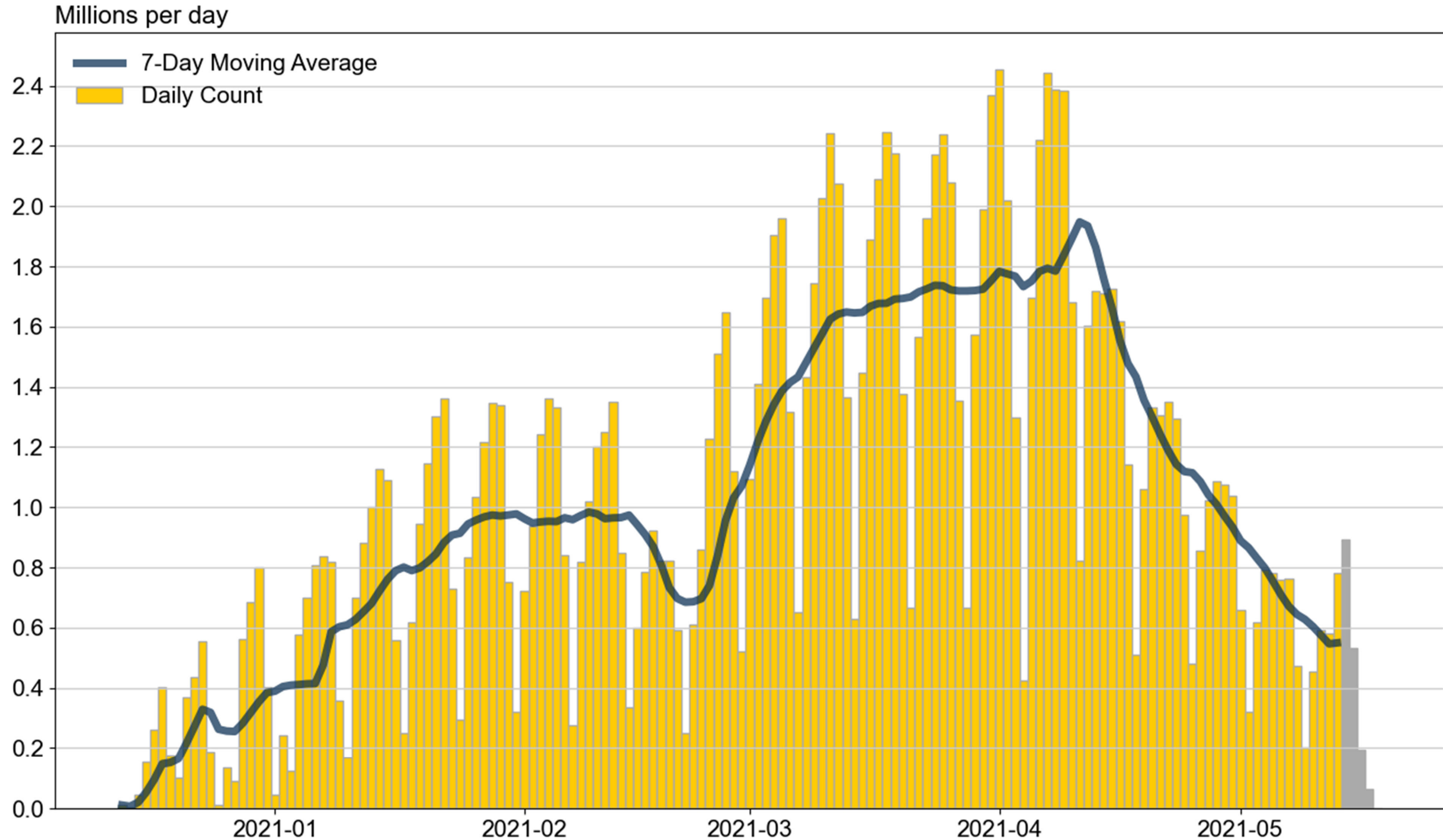
Quarterly U.S. Real GDP



Monthly Payroll Jobs



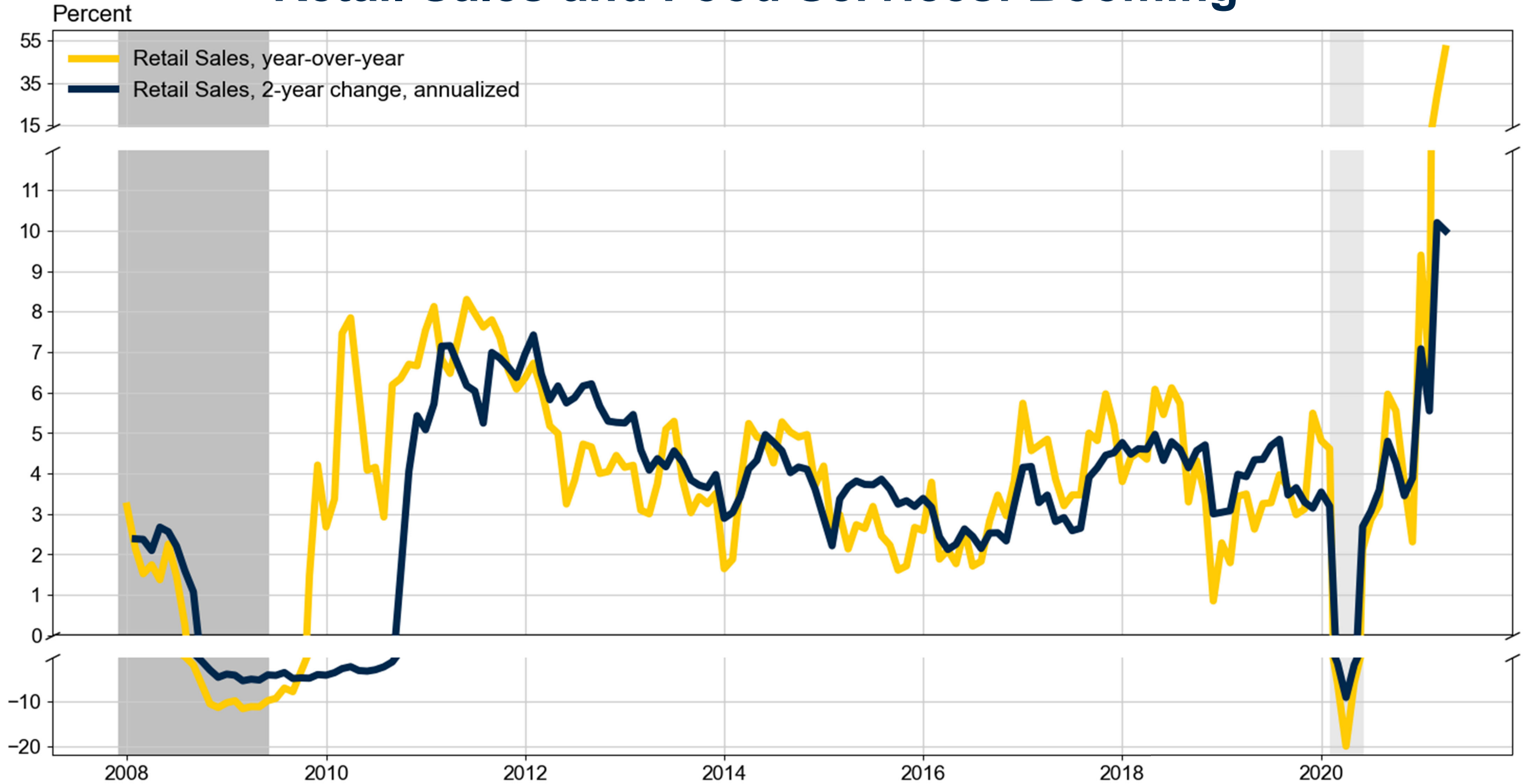
People Receiving COVID-19 Vaccine Dose 1



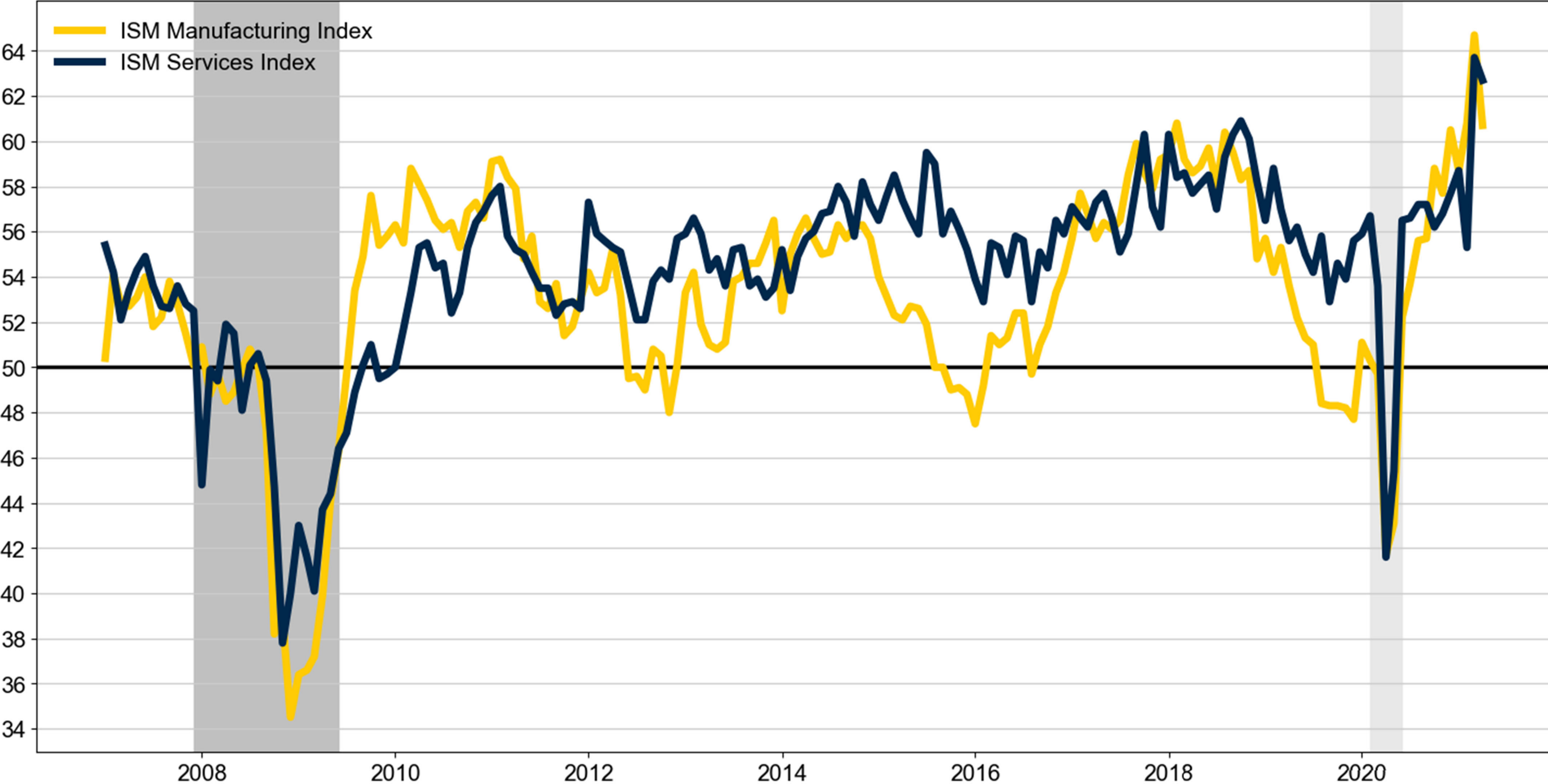
Payroll Employment Change



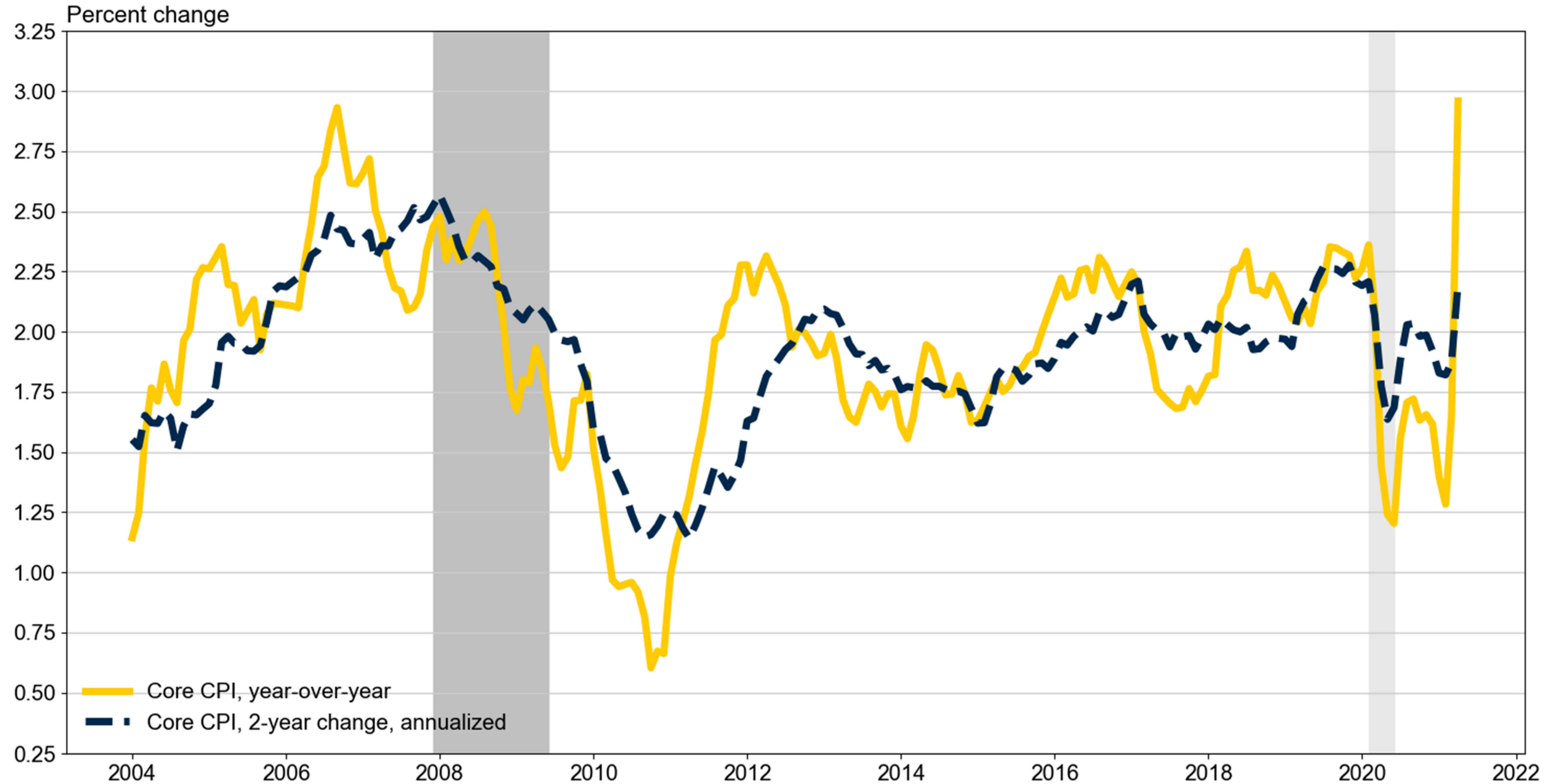
Retail Sales and Food Services: Booming



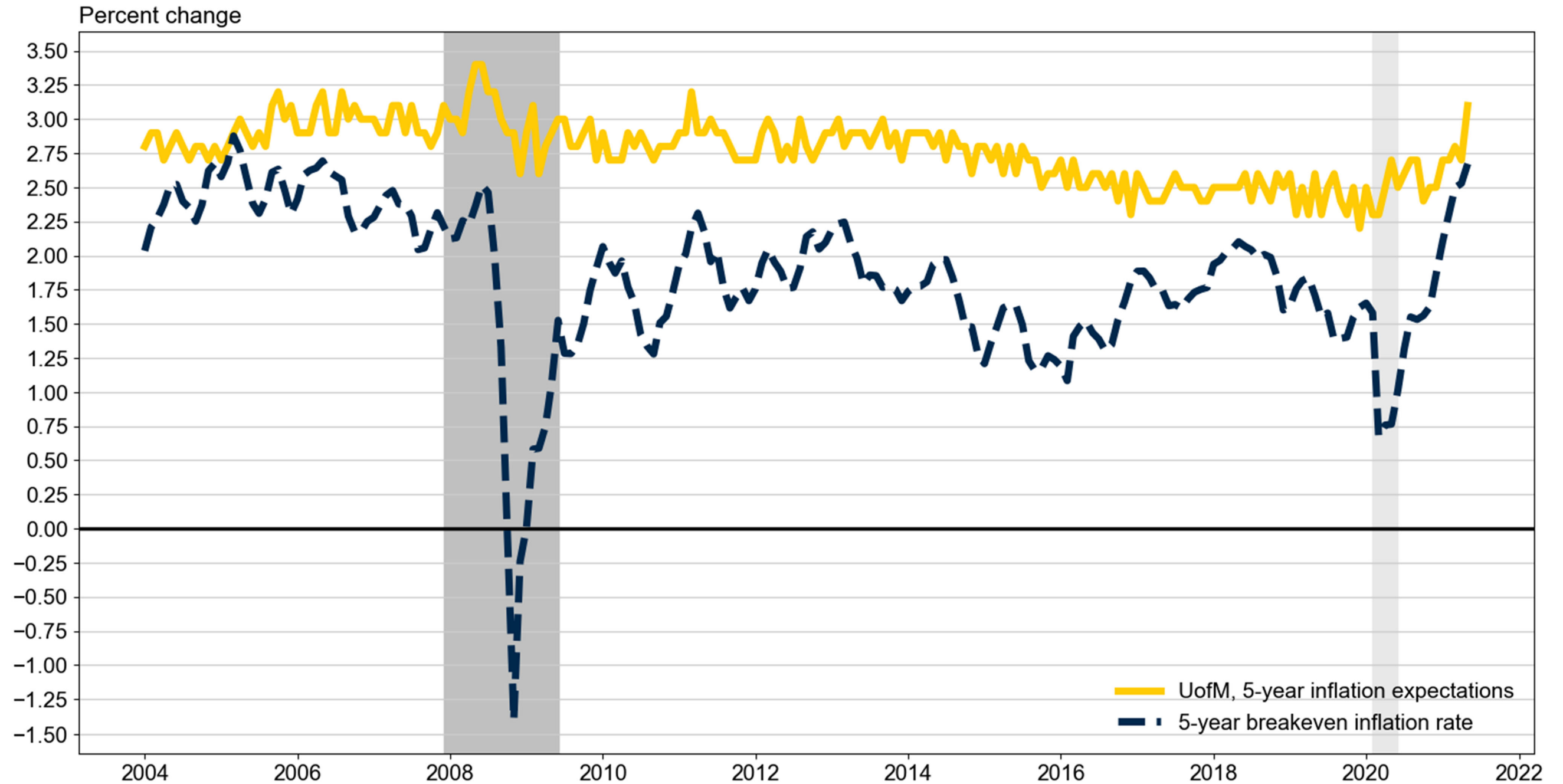
Institute of Supply Management Indexes: Strong Growth



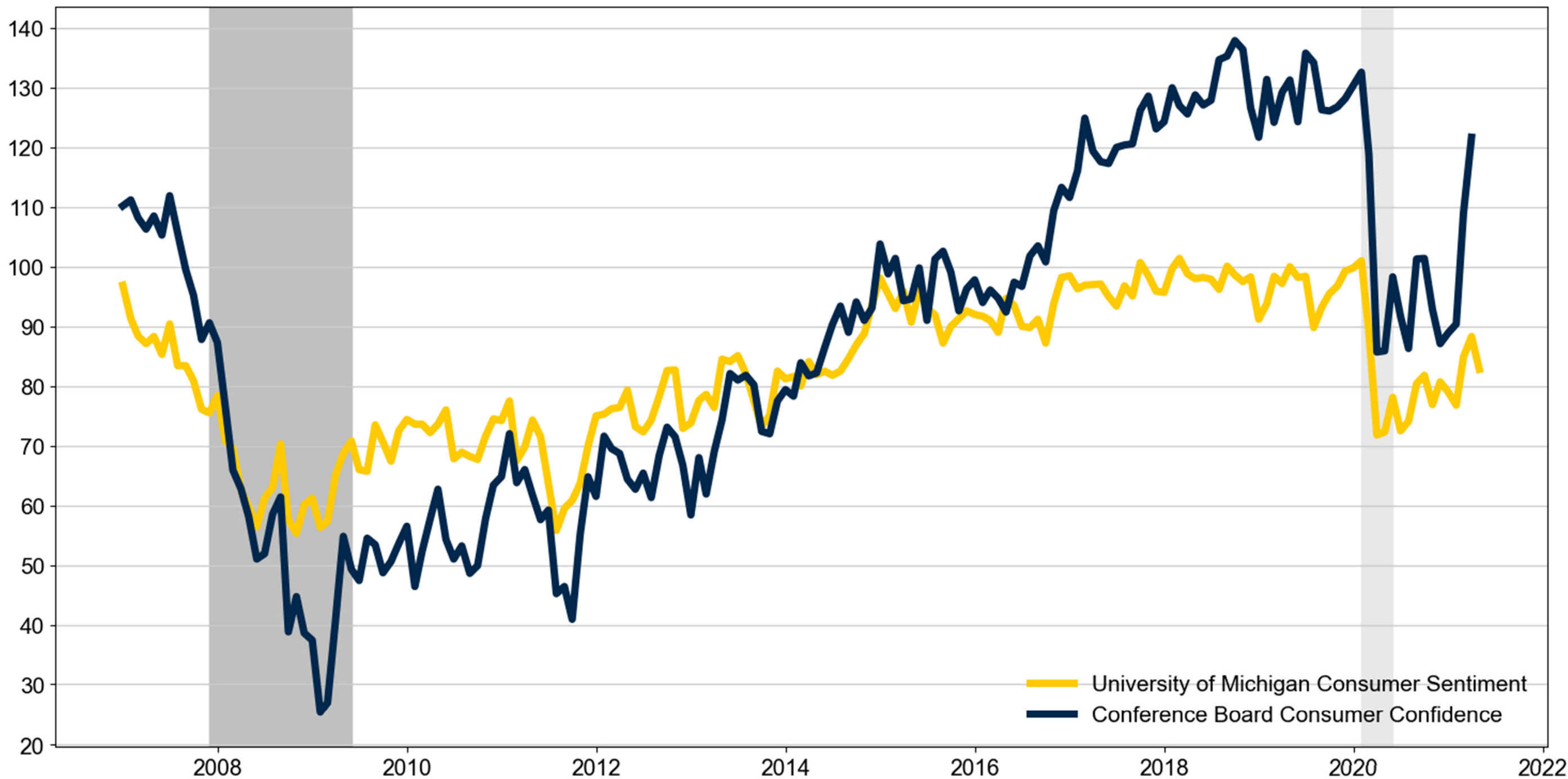
Inflation: Not Alarming ... Yet



Inflation Expectations: Up, Still Anchored



Consumer Confidence: Mixed

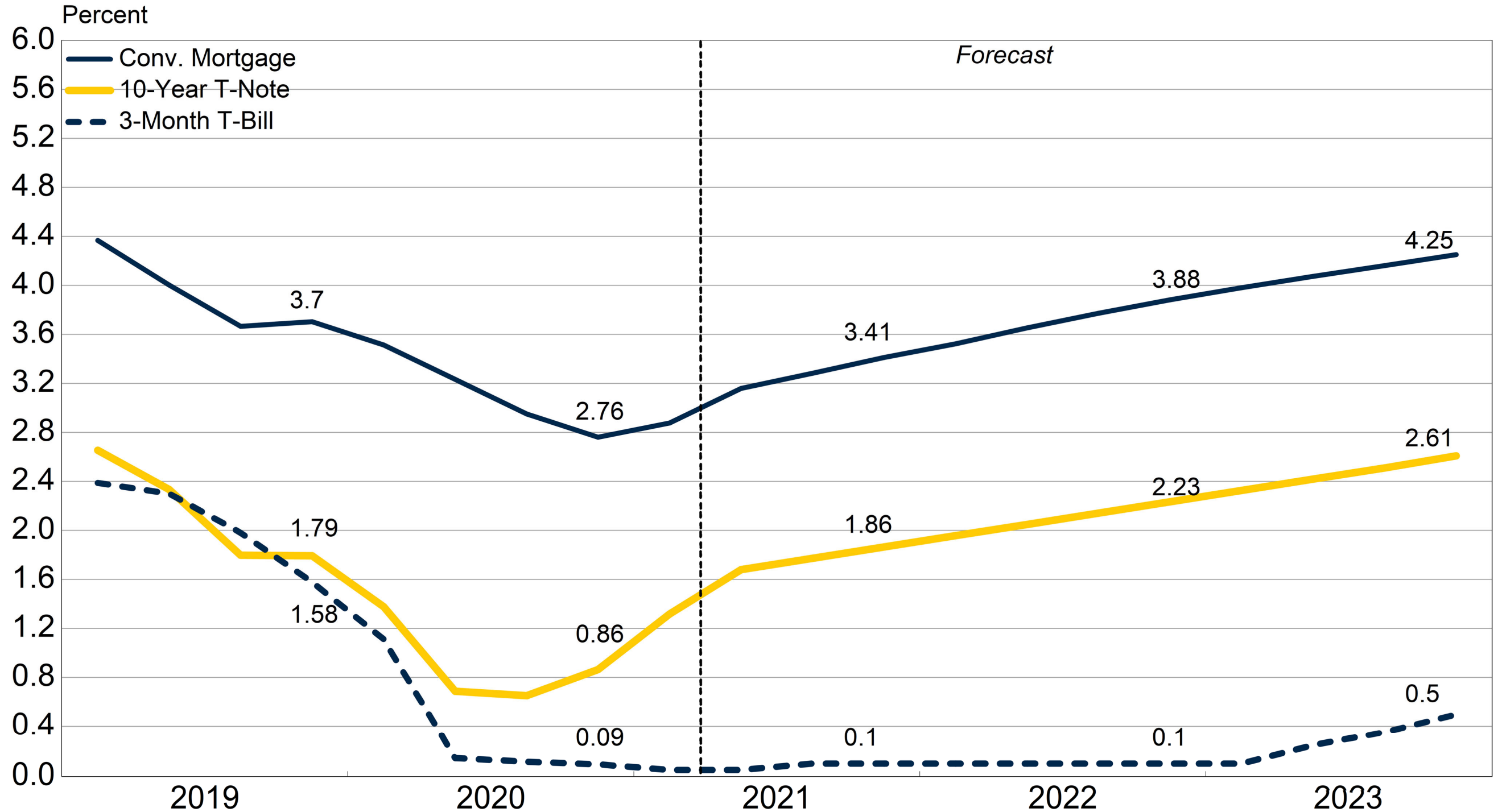


Key Inputs into the Forecast

Monetary Policy

- August 2020 policy framework to be tested soon
 - The Fed to let prices catch up after periods of weak inflation
- Near term inflation will be high due to strong demand and short supply
 - Watch for: inflation persisting or expectations moving higher
 - Asset prices may also factor into the Fed policy
- Fed to taper its safe asset purchases before the end of 2021
 - Enough to manage expectations through temporary inflation spike
- First rate hike in mid-2023, with unemployment rate under 4.5 percent

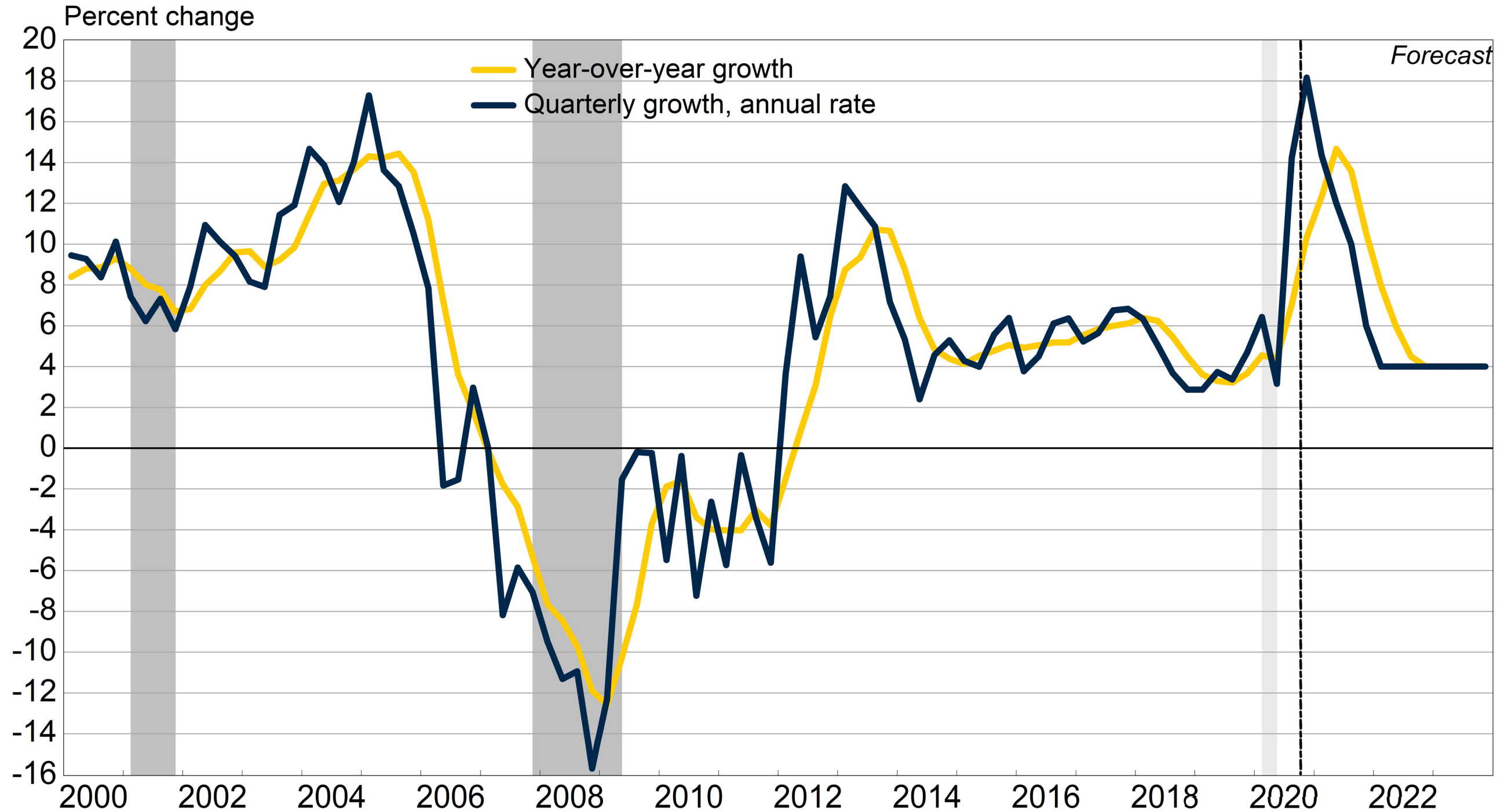
Market Interest Rates



Fiscal Policy

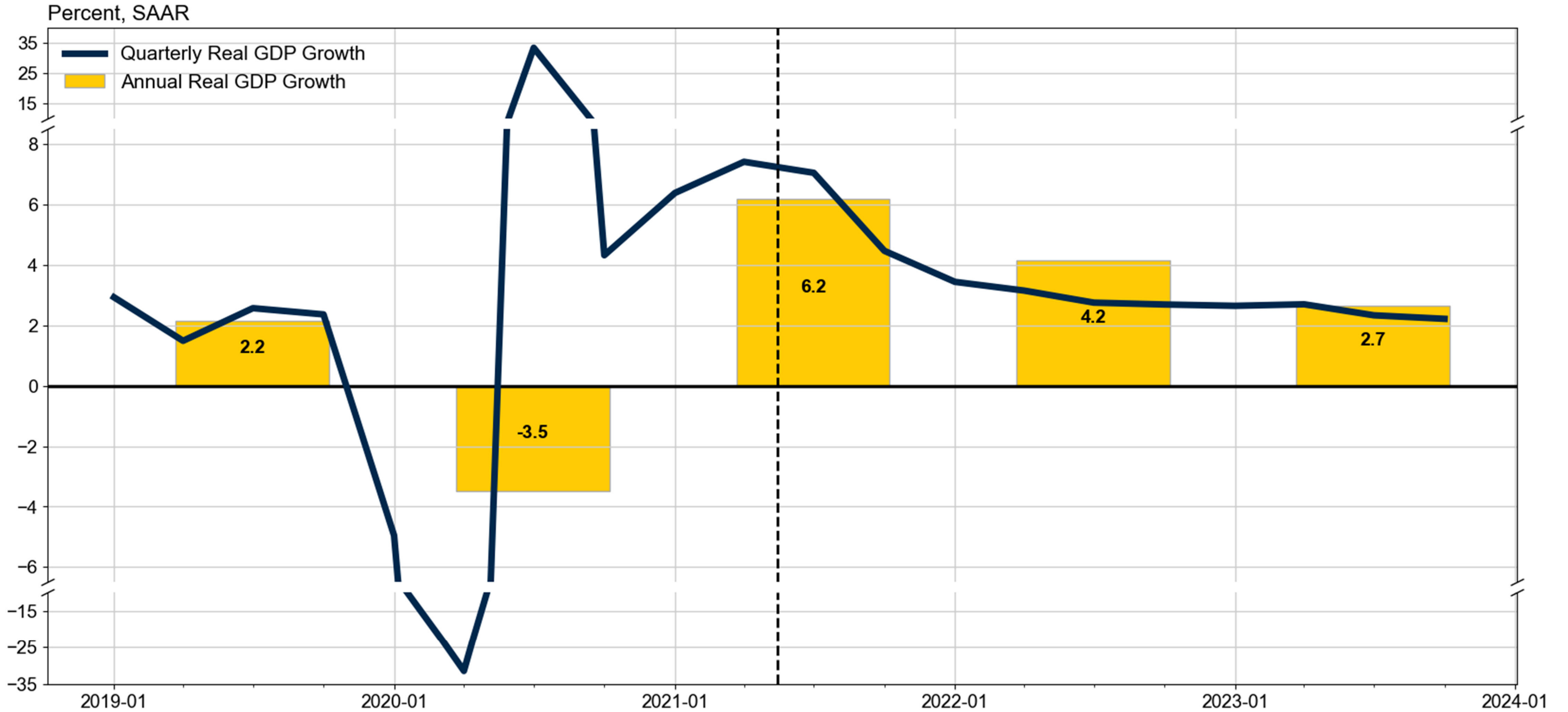
- The ARP \$1.9T stimulus in March
 - Total COVID-19 relief up to \$5T
 - Rebate checks, continued UI benefit boost, refundable tax credits
 - Aid to state and local governments, schools and universities, hospitals, etc
- Further proposed legislation with ~\$4.6T in spending and ~\$2.4T in revenues over 2022-32
- We expect a reconciliation package half as large to pass this fall
 - Most tax increases to be delayed until 2023
 - Most near-term impact: extension of ARP middle-class tax credits beyond '21
 - Inflation staying high through the summer could derail passage

Single-Family Home Price Appreciation

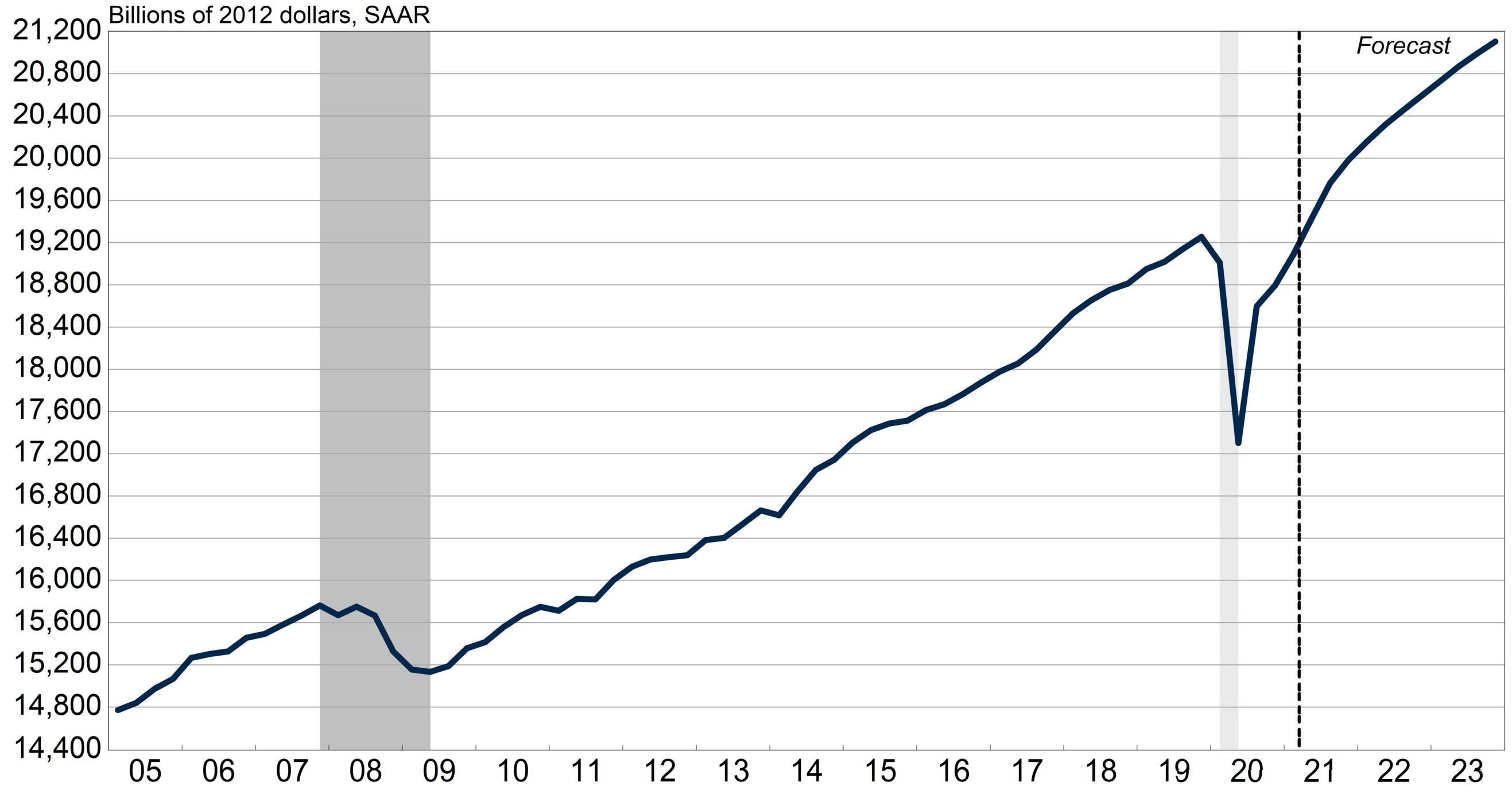


U.S. Forecast for 2021–2023

Real GDP Growth

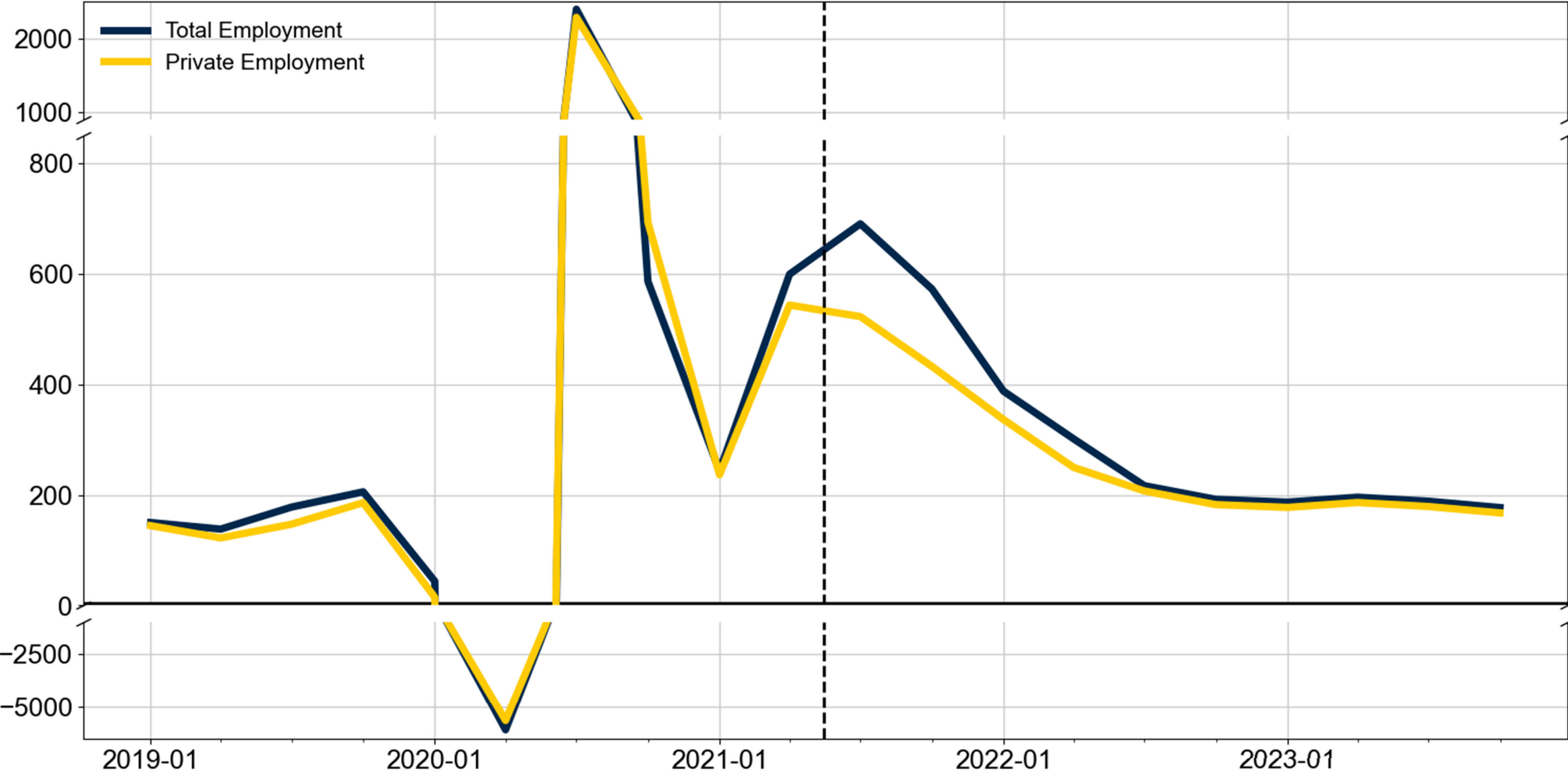


Quarterly U.S. Real GDP

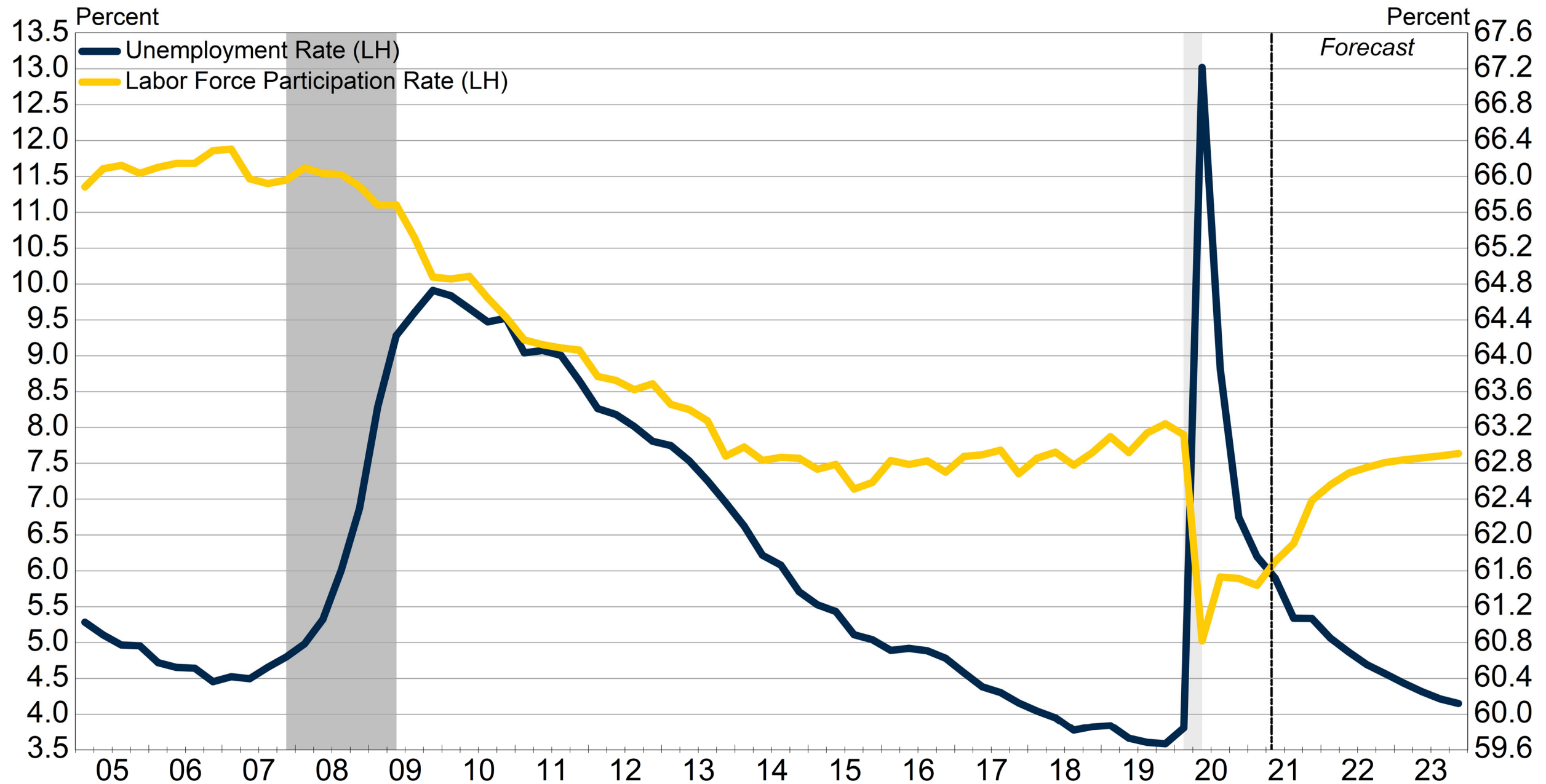


Payroll Employment Growth

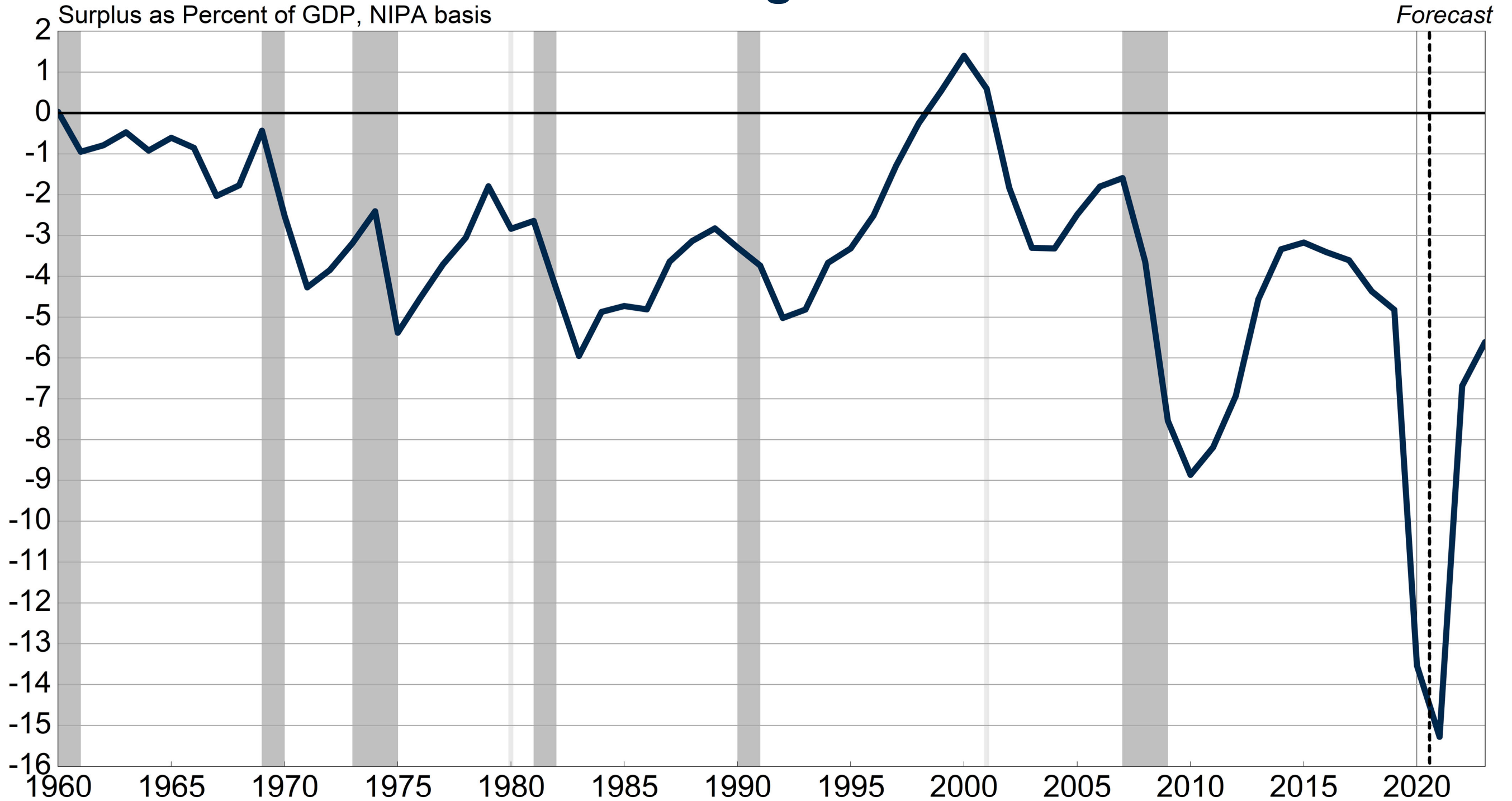
Thousands of jobs per month, quarterly average



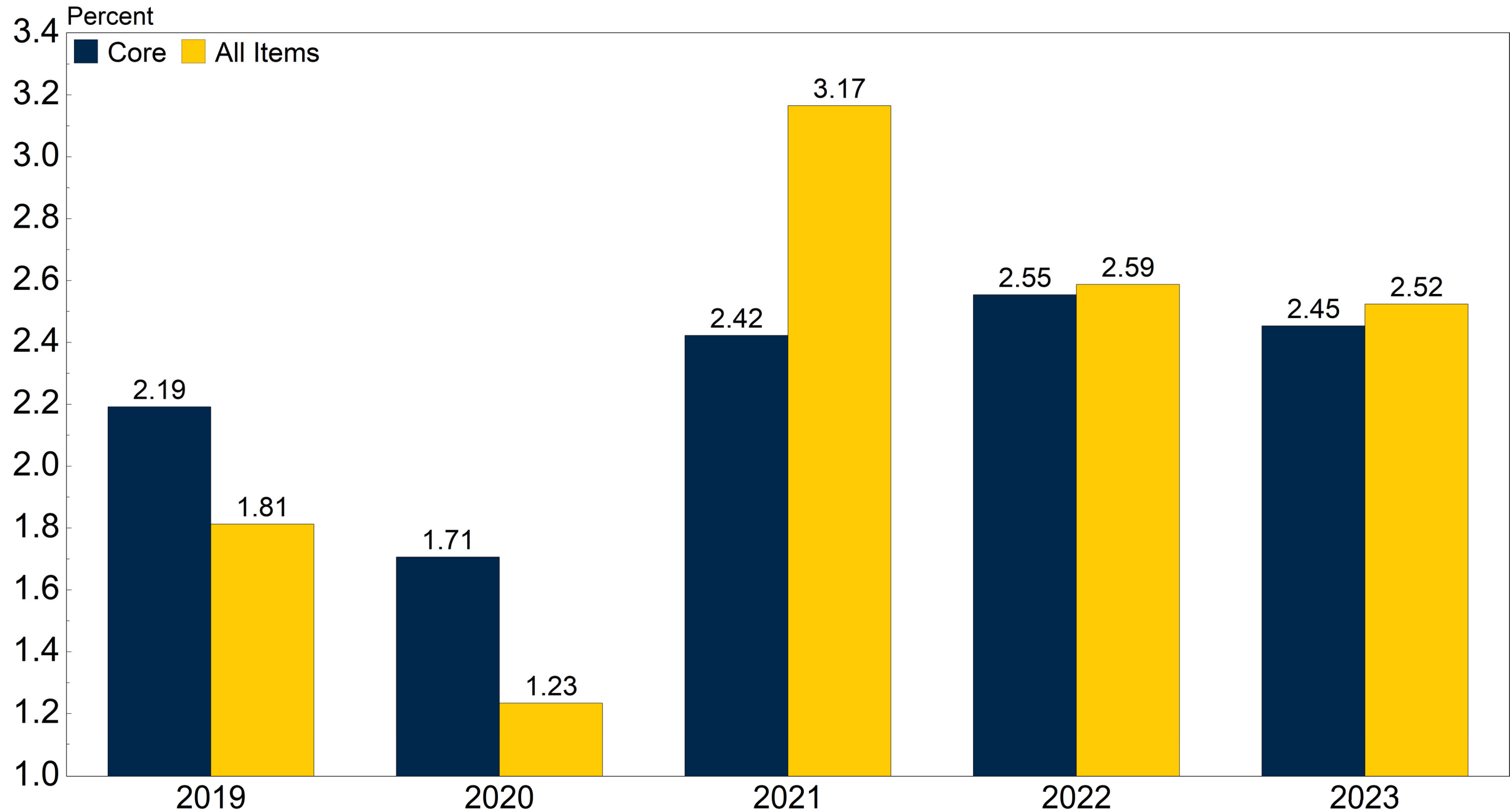
Labor Force Participation and Unemployment Rate



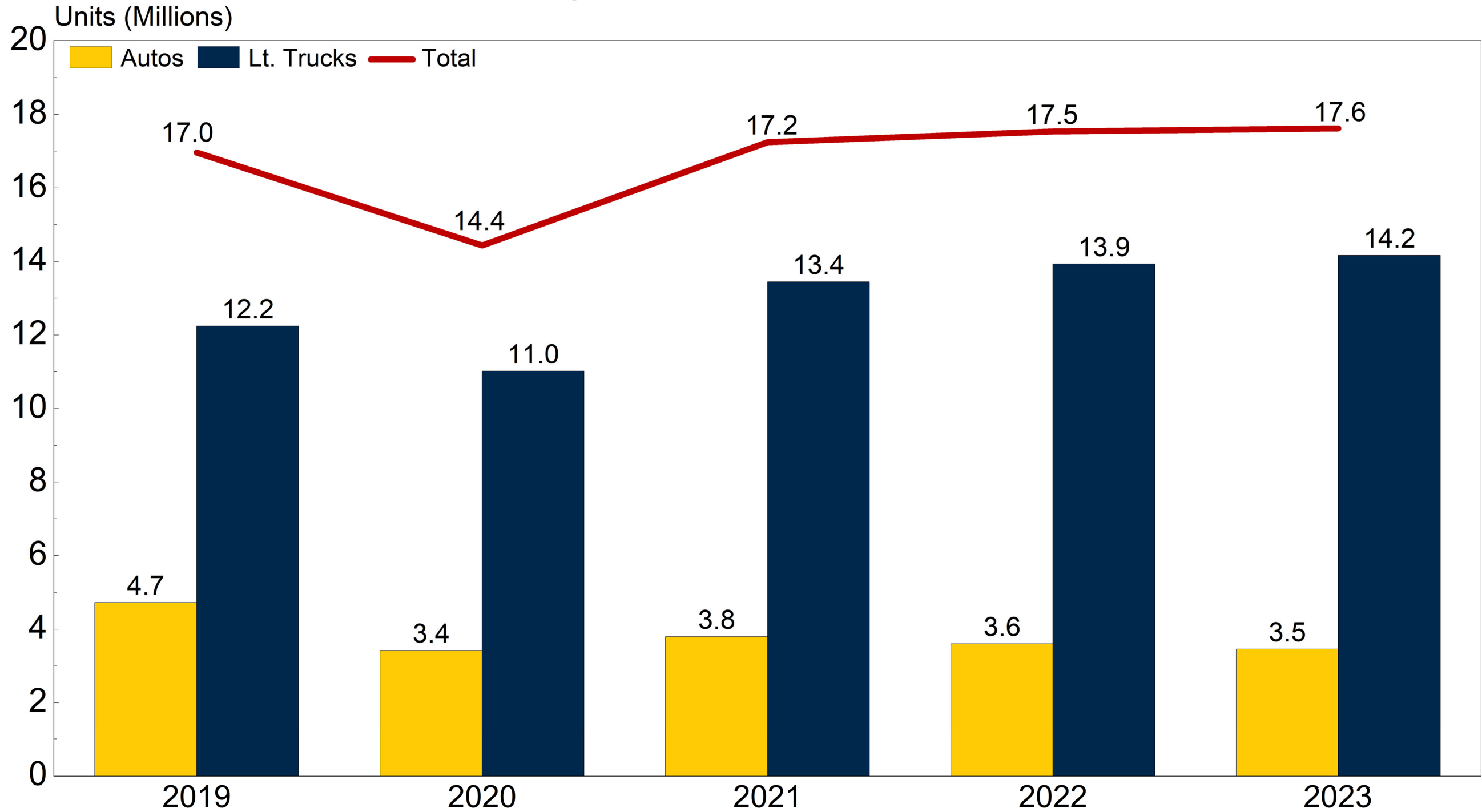
Federal Budget Balance



Consumer Price Inflation (CPI-U)



Light Vehicle Sales



Risks

- Inflation acceleration
 - Would lead to: higher rates sooner, less fiscal stimulus, weaker housing, etc
- Further supply chain disruptions
- Major vaccine-escape COVID-19 mutation
- Housing
- Financial valuations
- Global political developments

The Michigan Economic Outlook for 2021–2023



Consensus Revenue Estimating Conference

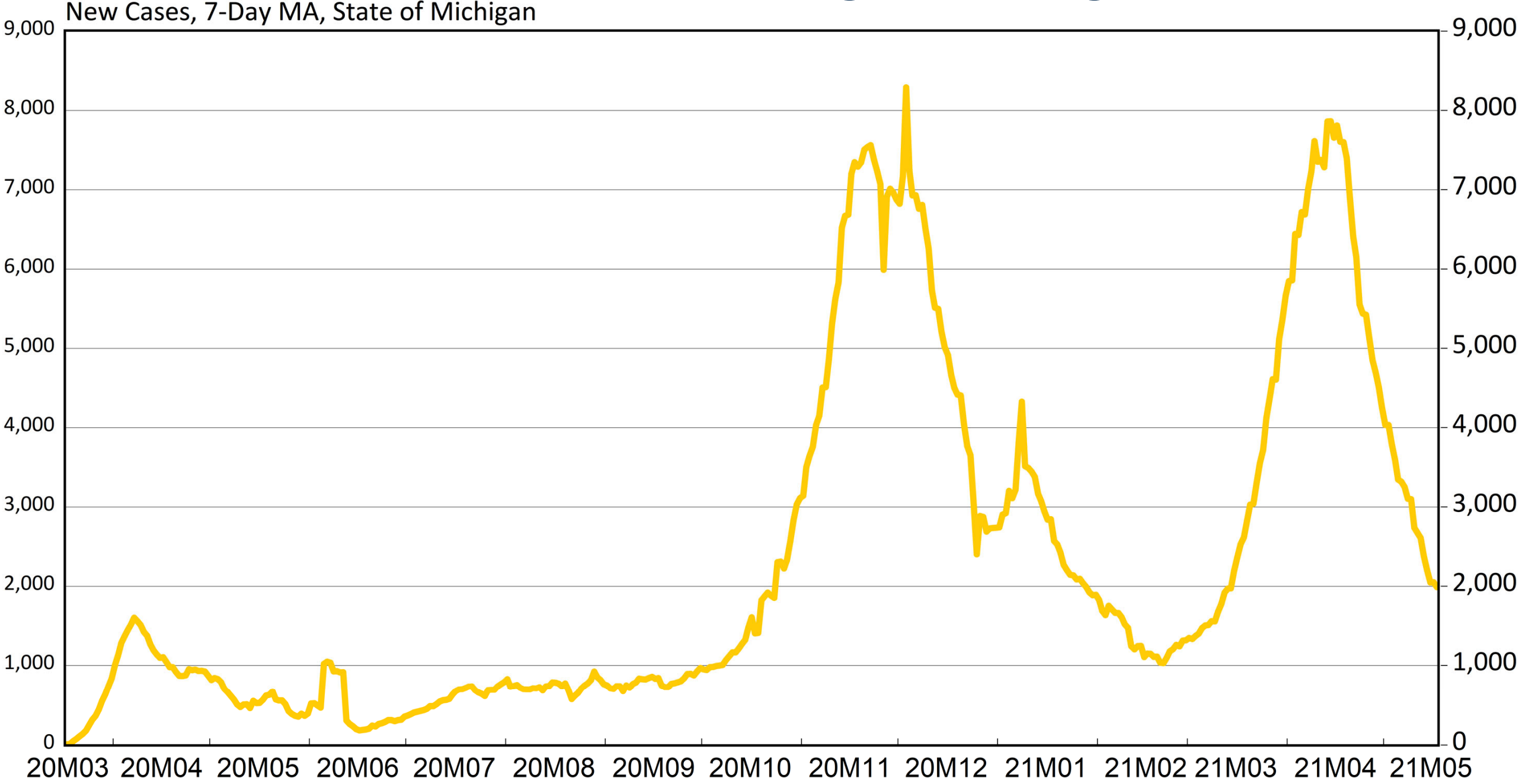
May 21, 2021

Research Seminar in Quantitative Economics



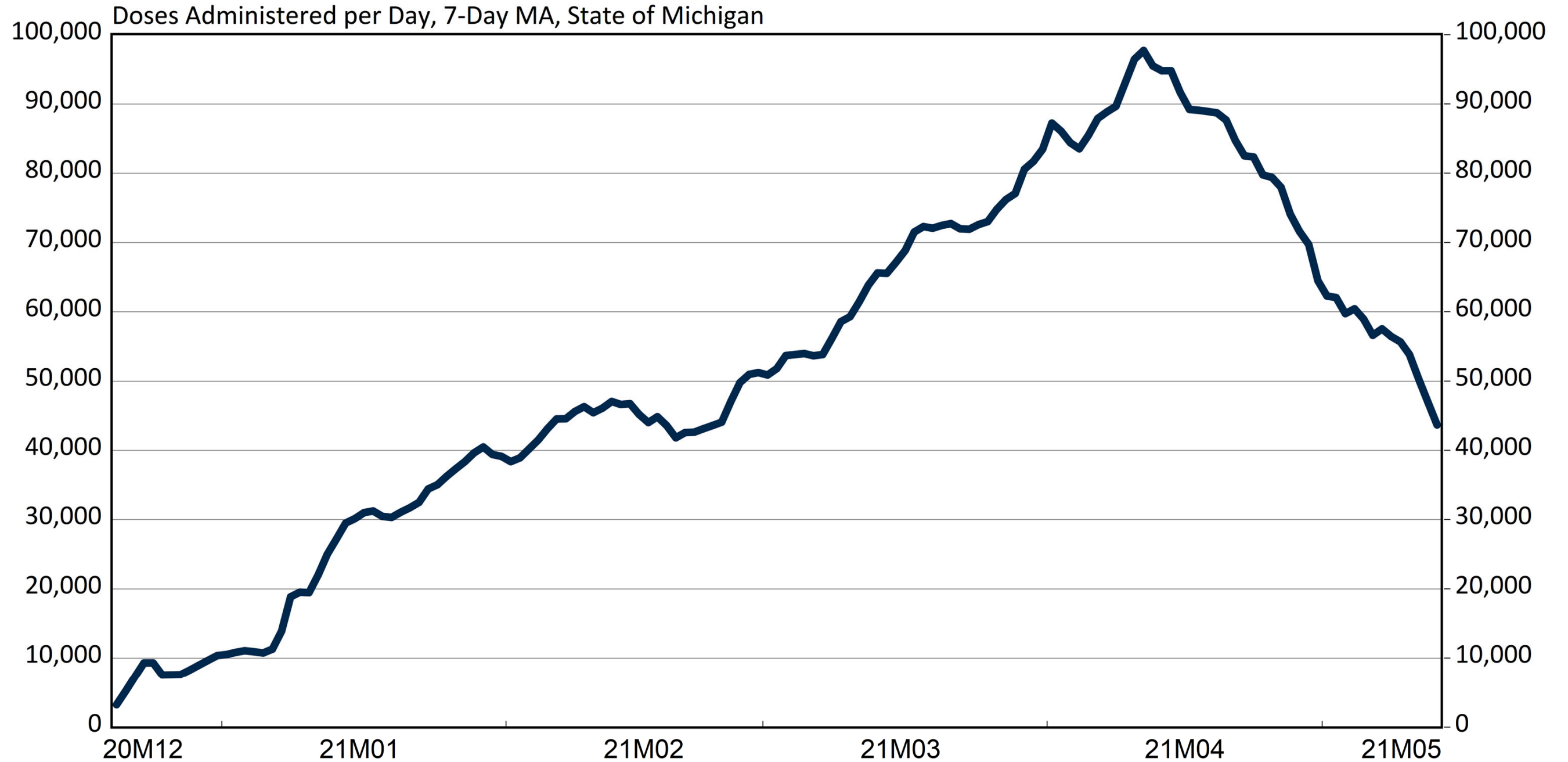
High-Frequency Indicators: Michigan

COVID-19 Subsiding in Michigan



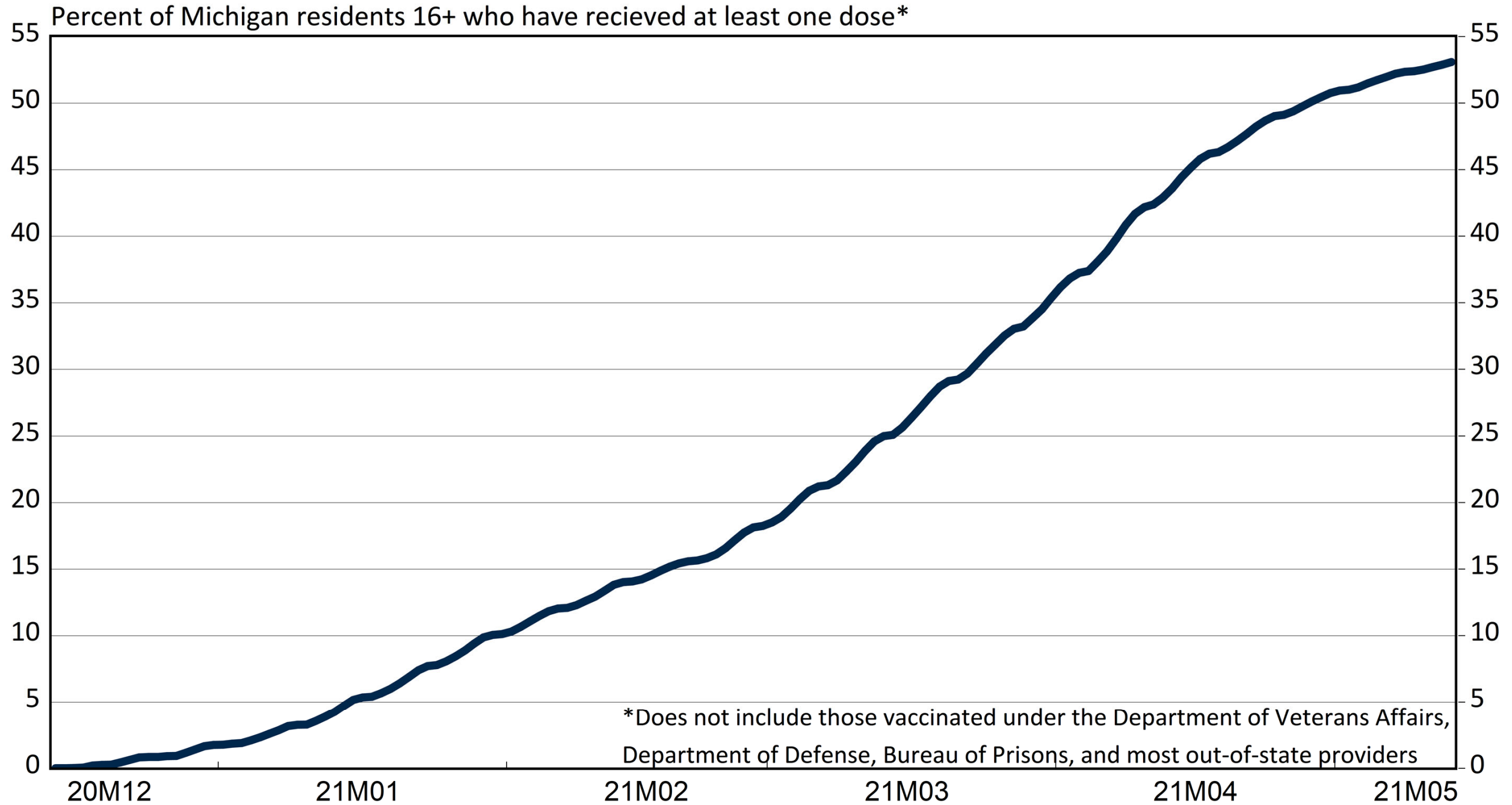
Source: New York Times

Vaccine Rollout Slowing Down



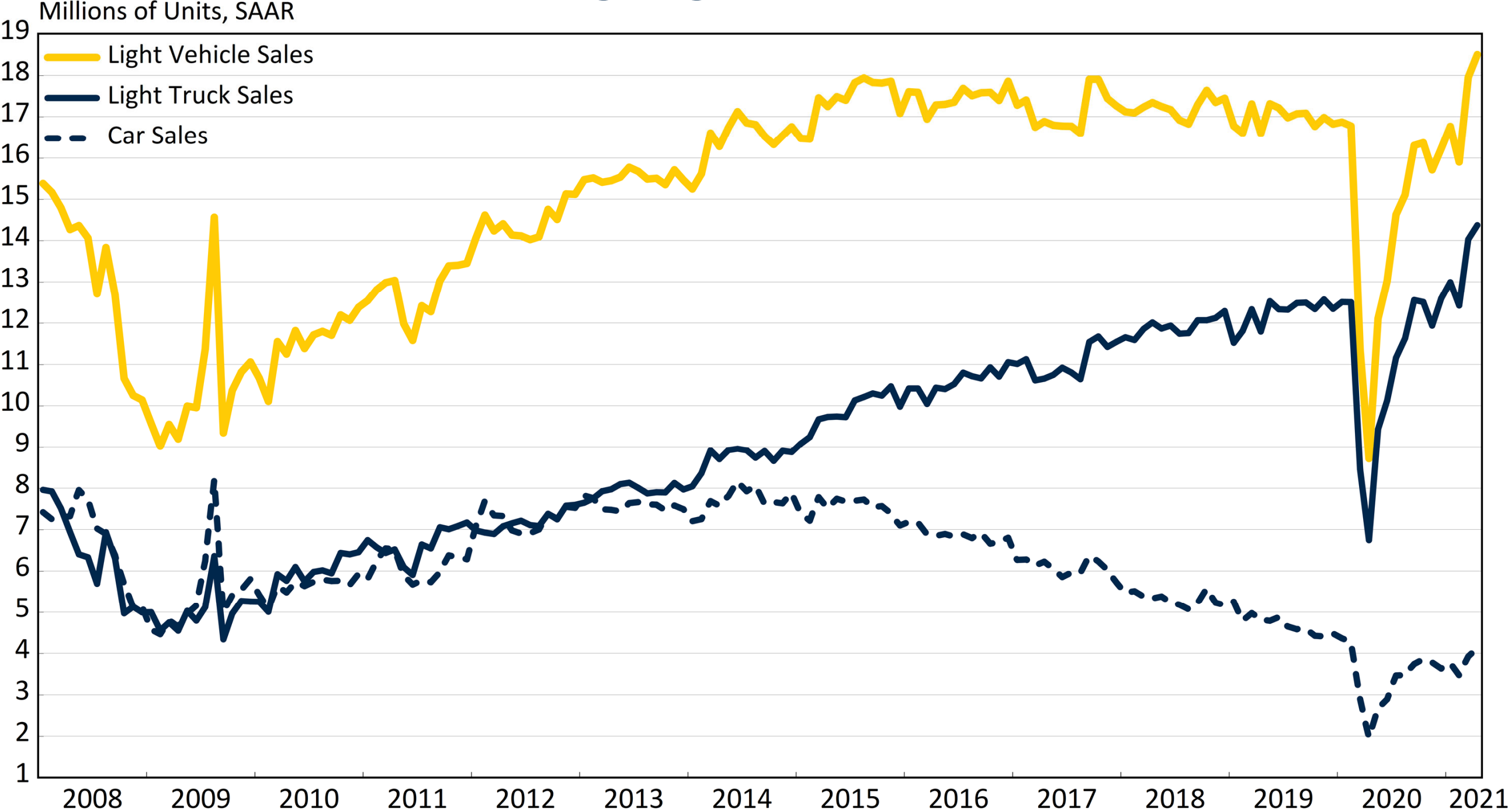
Source: MDHHS as of 05/14/2021

Cumulative Vaccinations Leveling Off?

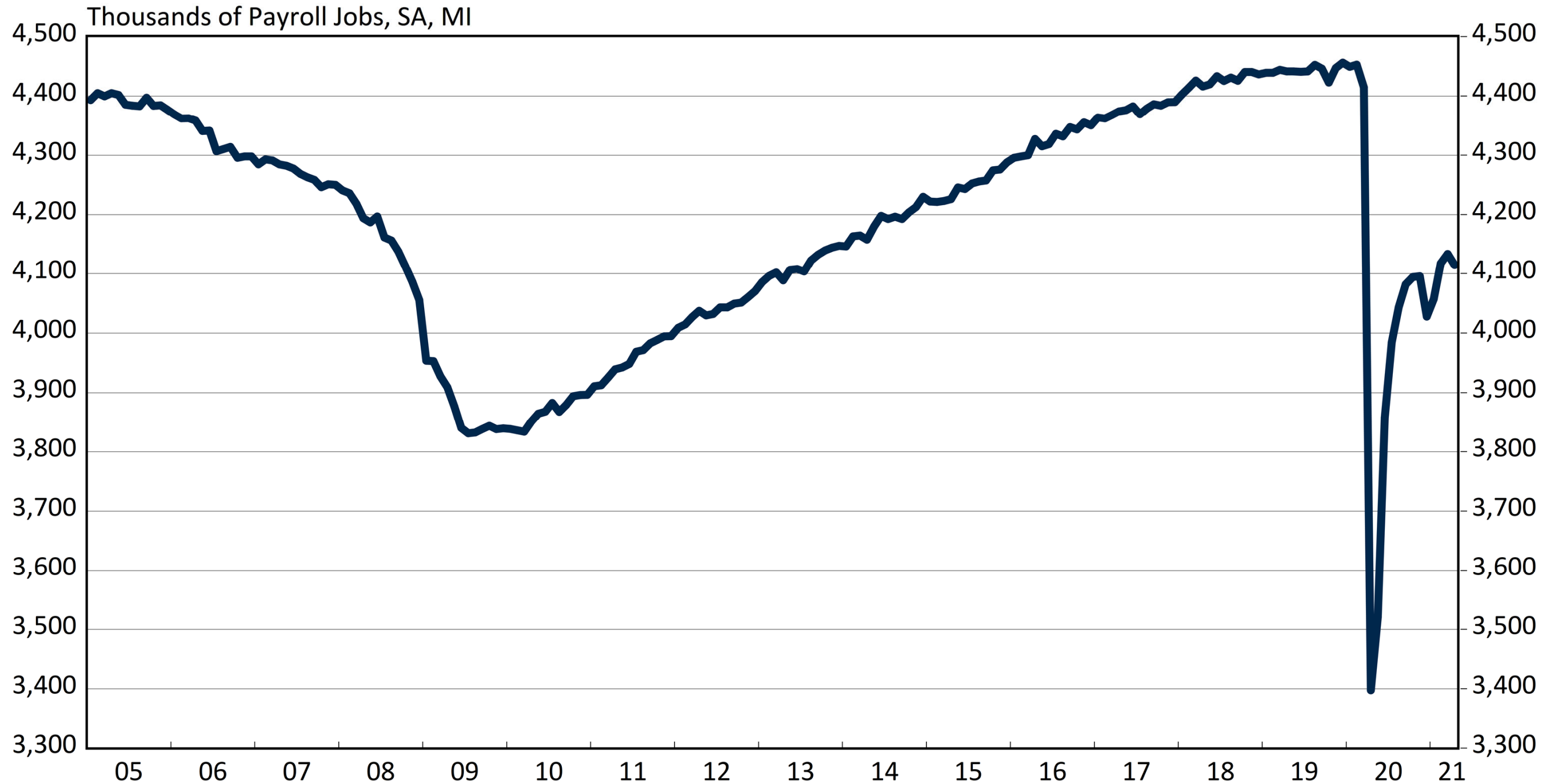


Source: MDHHS as of 05/14/2021
RSQE: May 2021

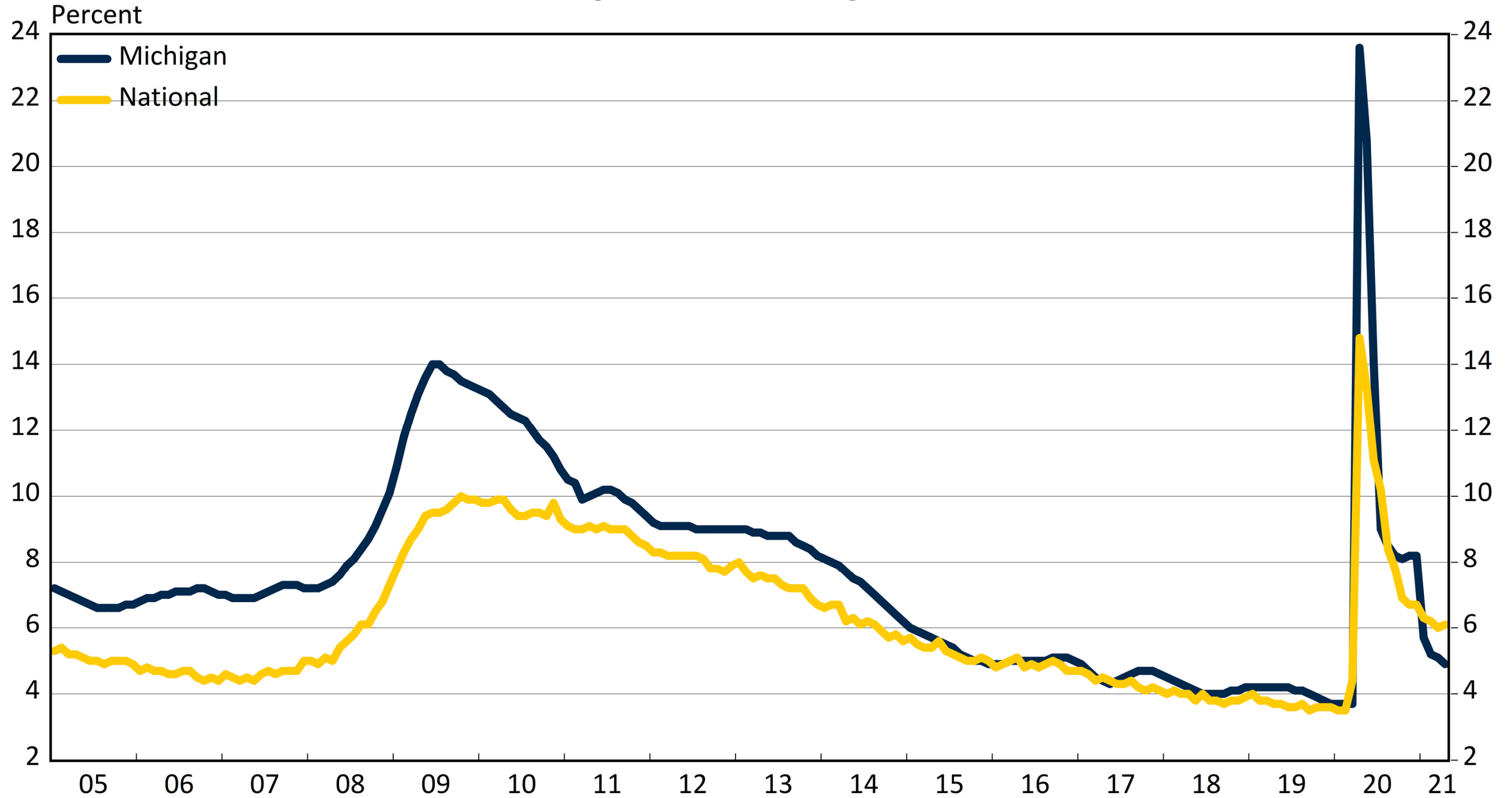
Strong Light Vehicle Sales



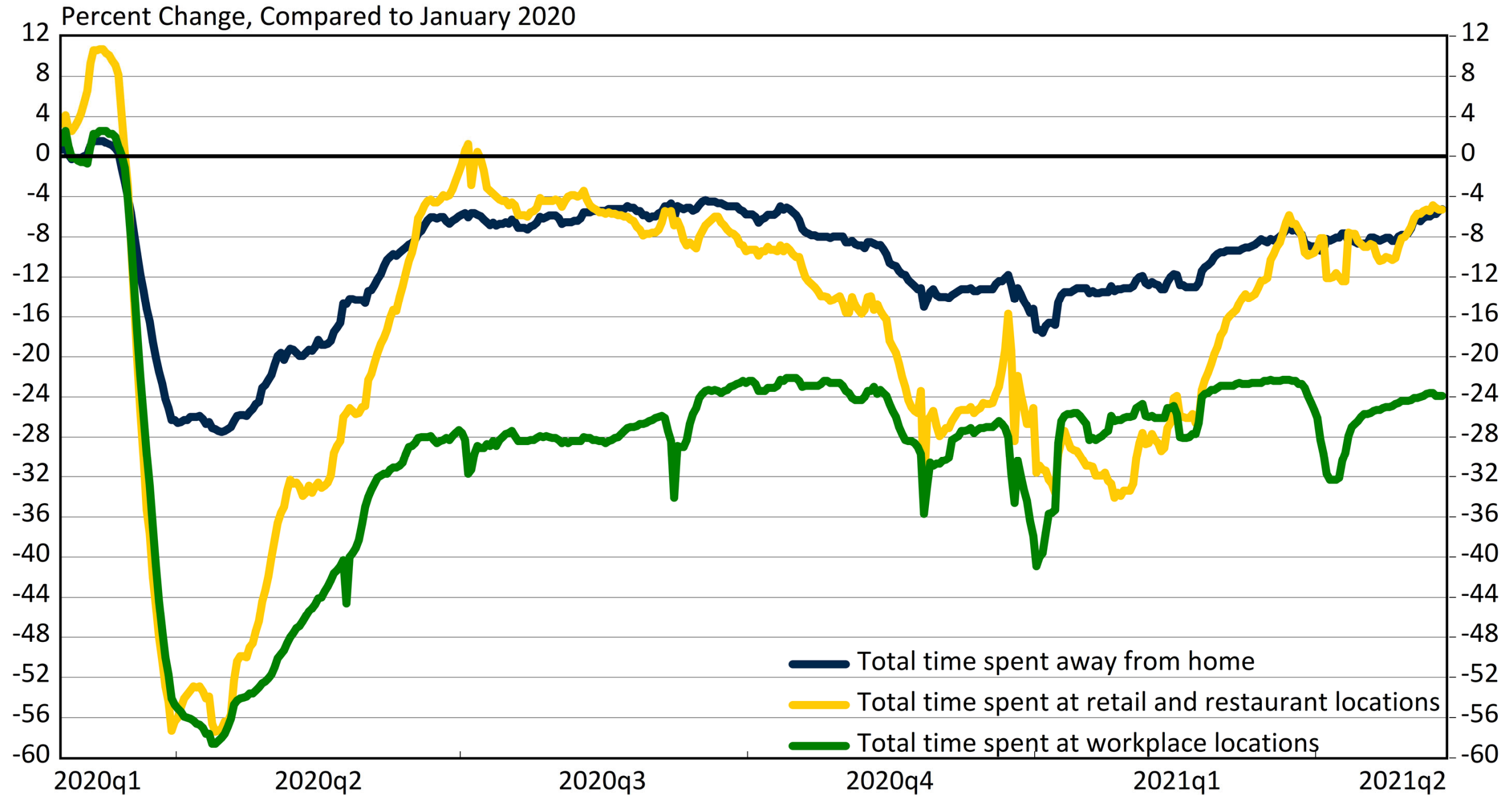
Still Climbing Out of a Deep Jobs Hole



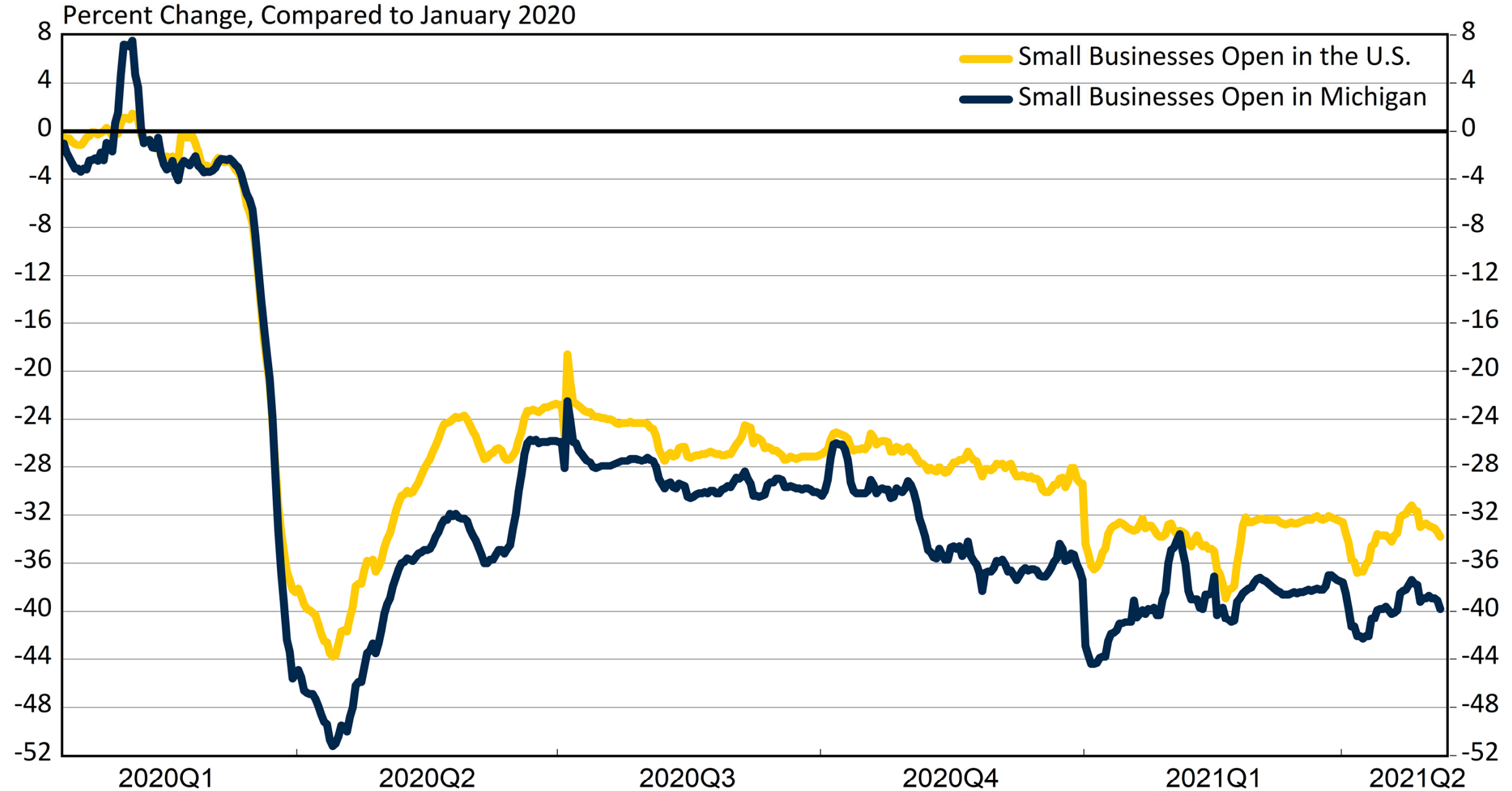
Monthly Unemployment Rate



Total Time Spent at Various Michigan Locations



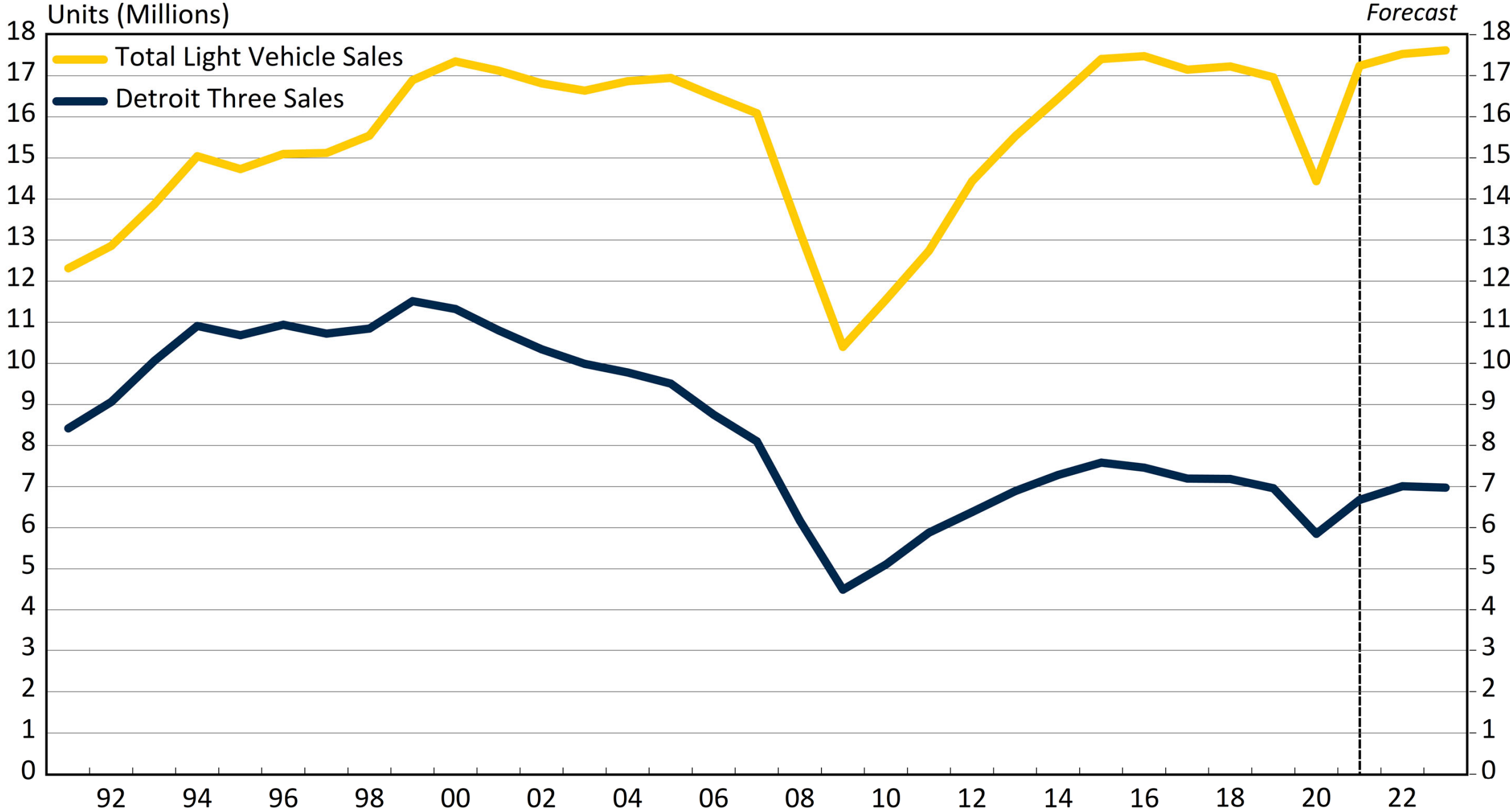
Small Businesses Closures Remain High



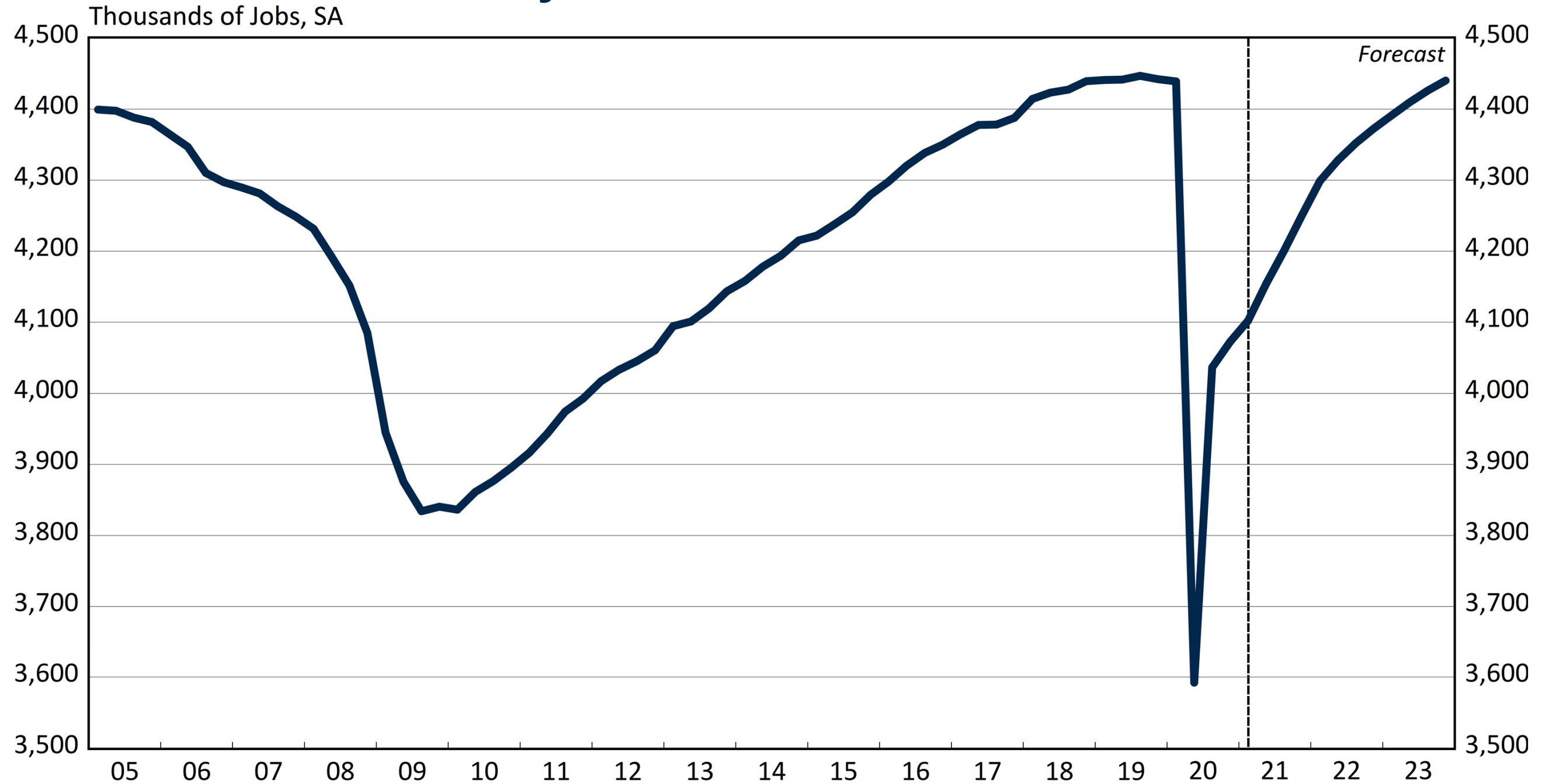
Source: Womply via Opportunity Insights

Michigan Economic Outlook

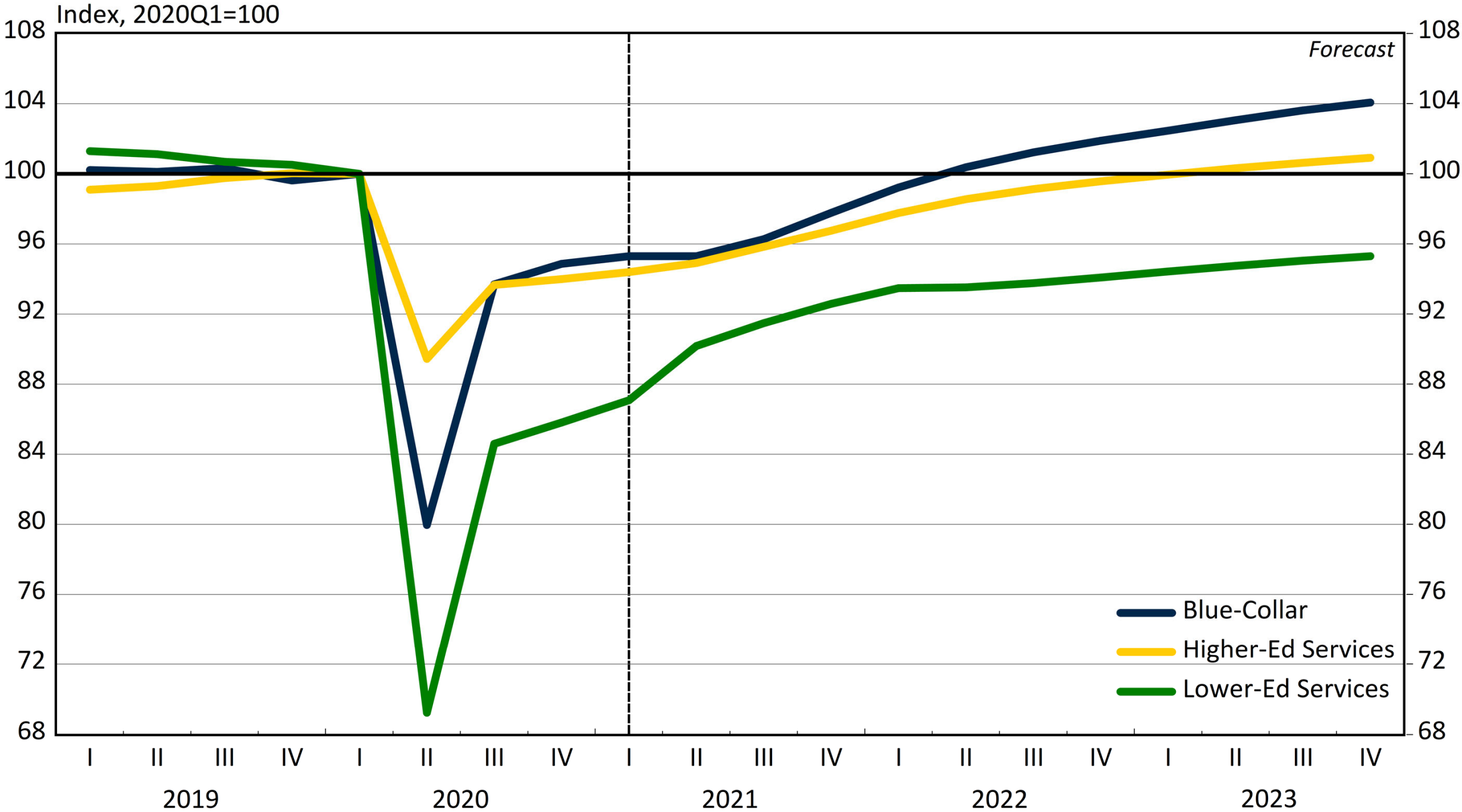
Annual Light Vehicle Sales: Not the Great Recession



Quarterly Michigan Payroll Employment: Recovery Continues at a Slower Pace



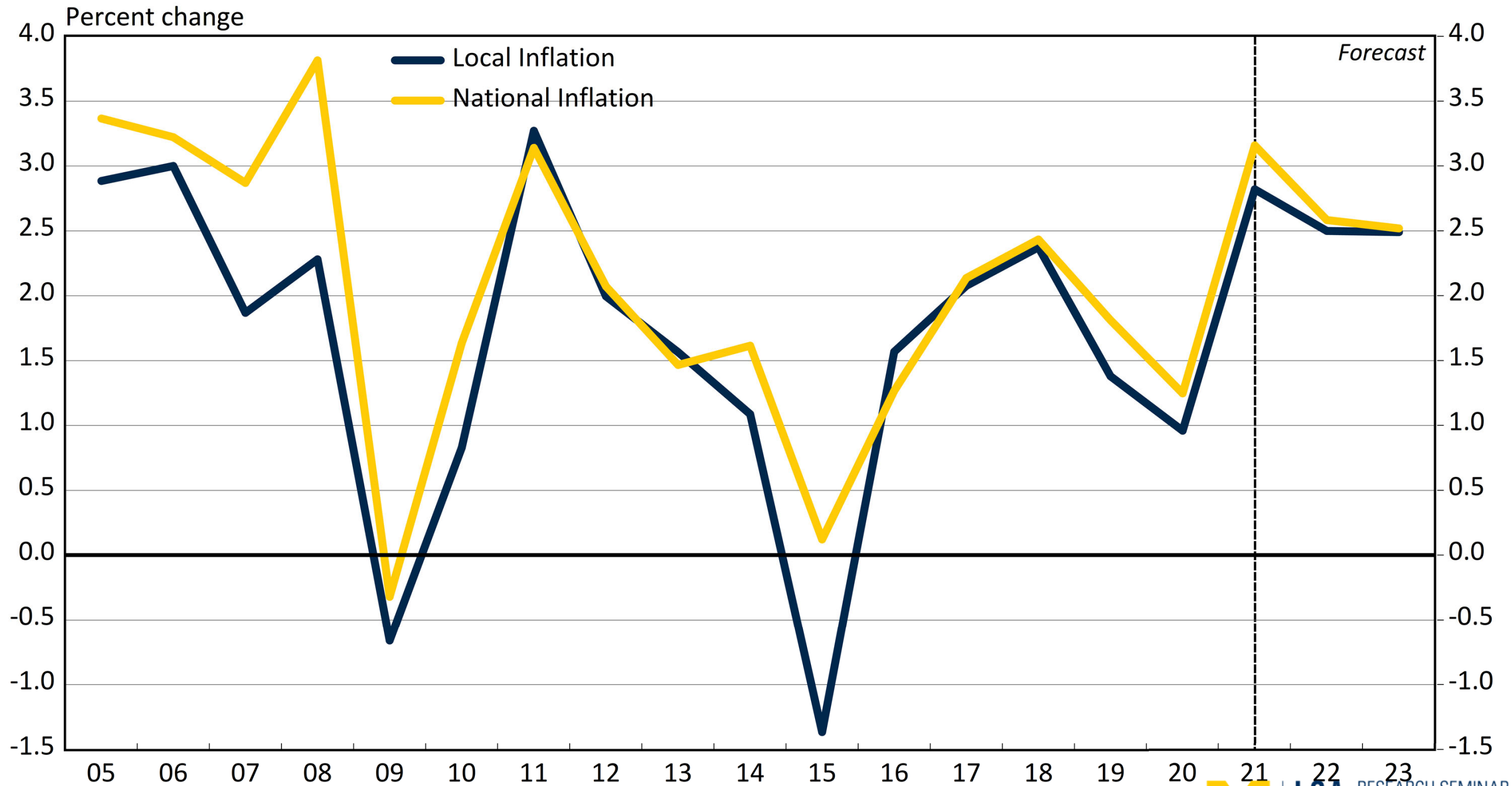
Job Growth in Michigan by Industry Groupings



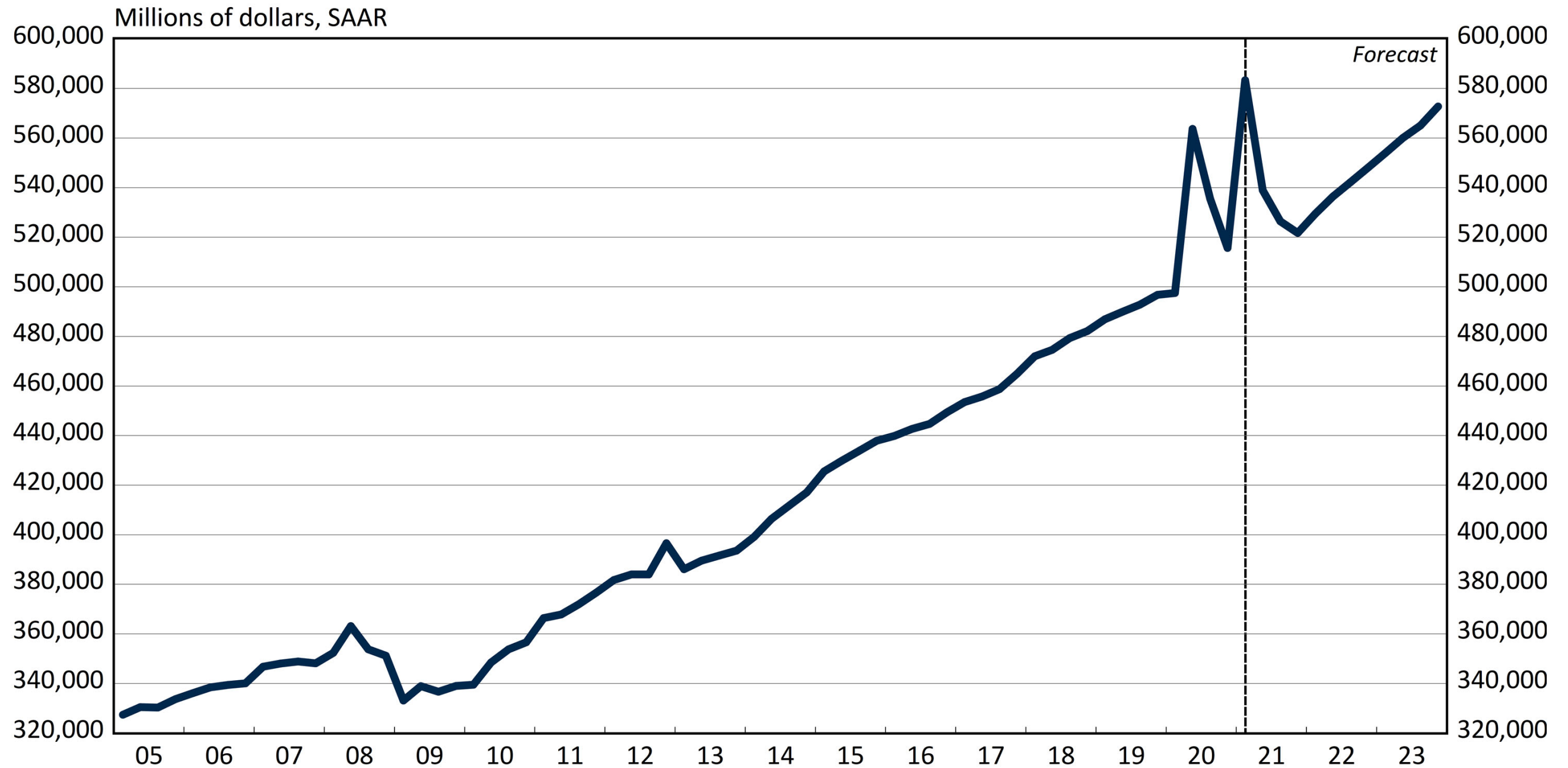
Quarterly Michigan Unemployment Rate



Inflation Rate, National and Detroit CPI



Quarterly Michigan Personal Income: Stimulus Cushions Income Losses





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