



Economic Update

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Federal Reserve Bank of Chicago/Detroit Branch
April 20, 2022

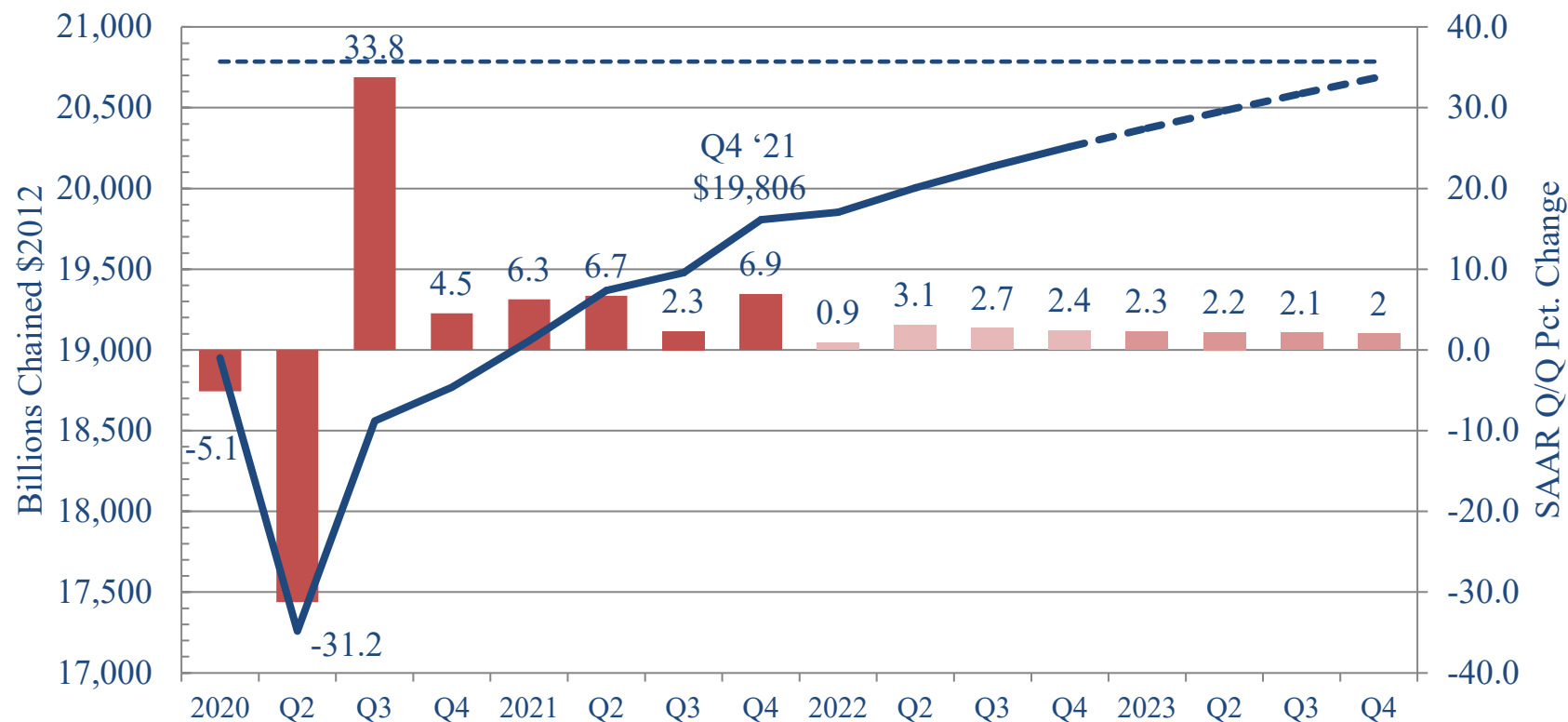
The views expressed here are our own and do not necessarily reflect the views of the Federal Reserve Bank of Chicago, the Federal Open Market Committee (FOMC) or the Federal Reserve System.

Presentation Order

- Economic Activity: More pessimistic growth expectations for 2022
- Consumer Spending
 - The pickup in February year/year growth could be misleading: real spending in February 2021 was especially weak, making February 2022 look stronger
 - Negative Month/Month changes in real spending 3 of the last 4 months
 - However, still only scattered reports of consumers pushing back against higher prices
 - Most consumers continue to possess strong balance sheets
- Leading Indicators: Steady or slightly improving
 - Though many questions persist around the auto industry
- Financial Conditions: Concerns around the movement of interest rates and energy prices
- Dual Mandate
 - March's employment report was an overall positive
 - Inflationary pressures strengthened further

Economic Activity

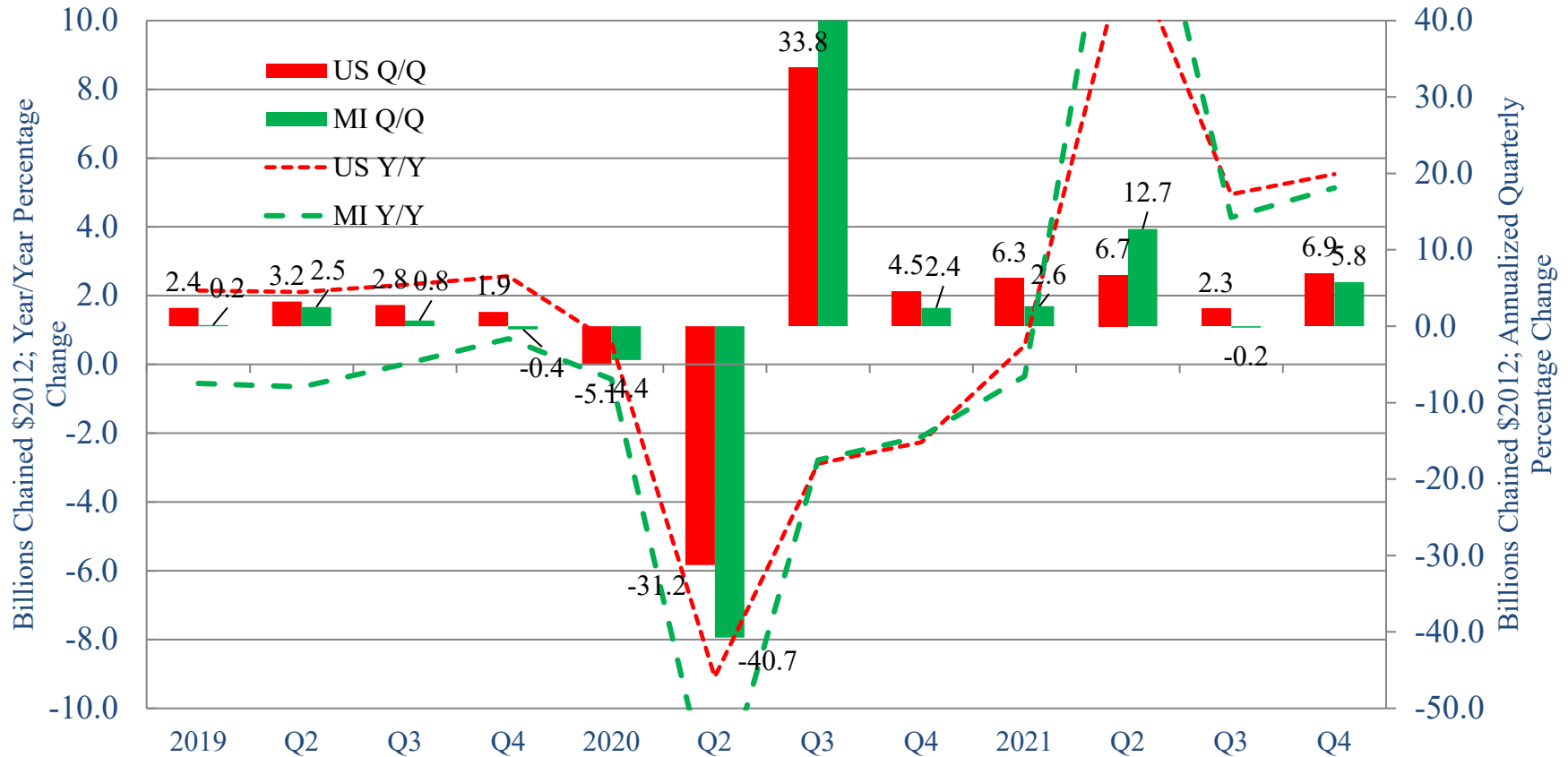
U.S. Real GDP



- Real GDP increased 6.9% in the 4th quarter with higher inventory levels contributing the most to growth.
- Forecasters have revised 2022 growth estimates lower because of the impacts of Omicron (especially in the 1st quarter) and the Russian invasion of Ukraine.
- The Blue Chip consensus has 2022 Real GDP growth coming in at 2.4% after 2021 saw growth of 5.7%.

Source: Author's calculations using data from U.S. Bureau of Economic Analysis and Blue Chip Economic Forecast.

Quarterly Real GDP Changes: Michigan vs. U.S.

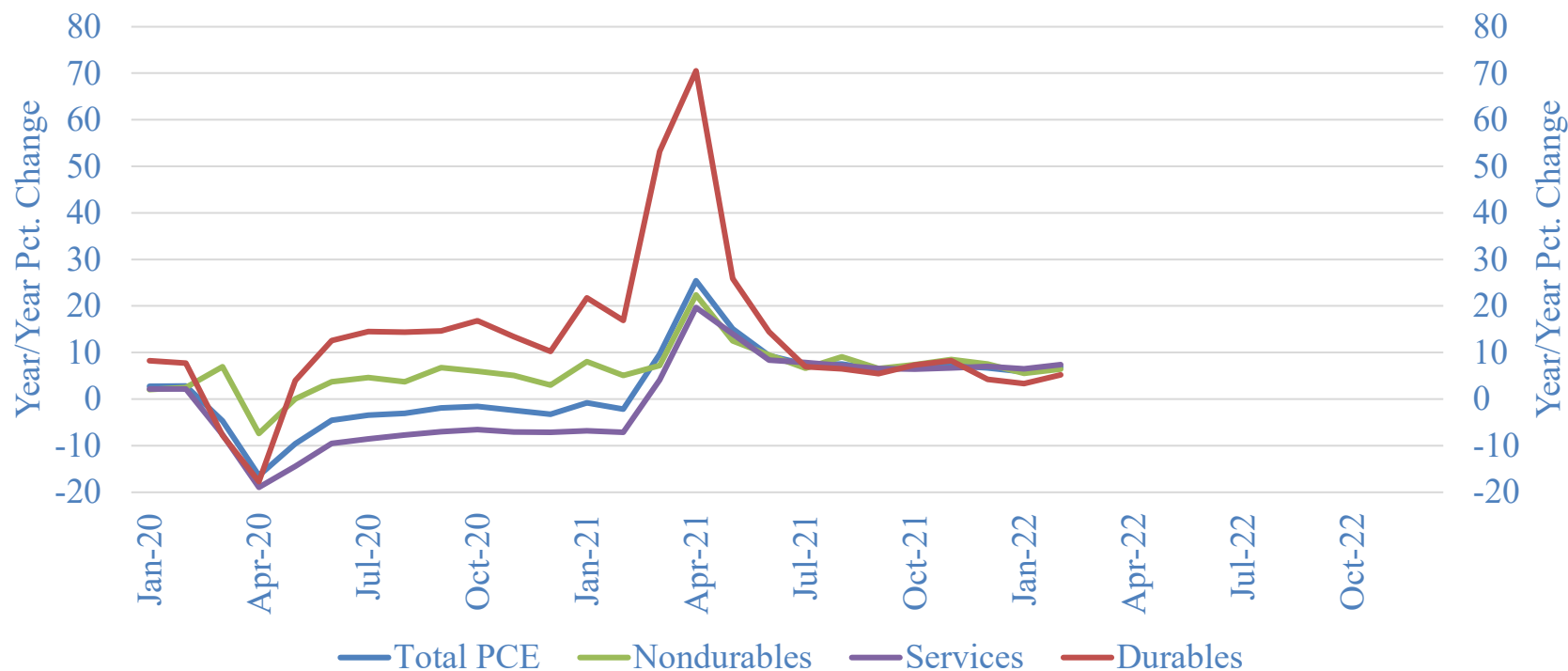


- After a flat 3rd quarter, Michigan's economy rebounded strongly in the 4th quarter
- For all of 2021, Michigan's economy grew at a faster pace than the U.S. and the Great Lakes region
- Construction, Manufacturing, and Leisure & Hospitality registered double digit gains

Source: Author's calculations using data from U.S. Bureau of Economic Analysis.

Consumer Behavior

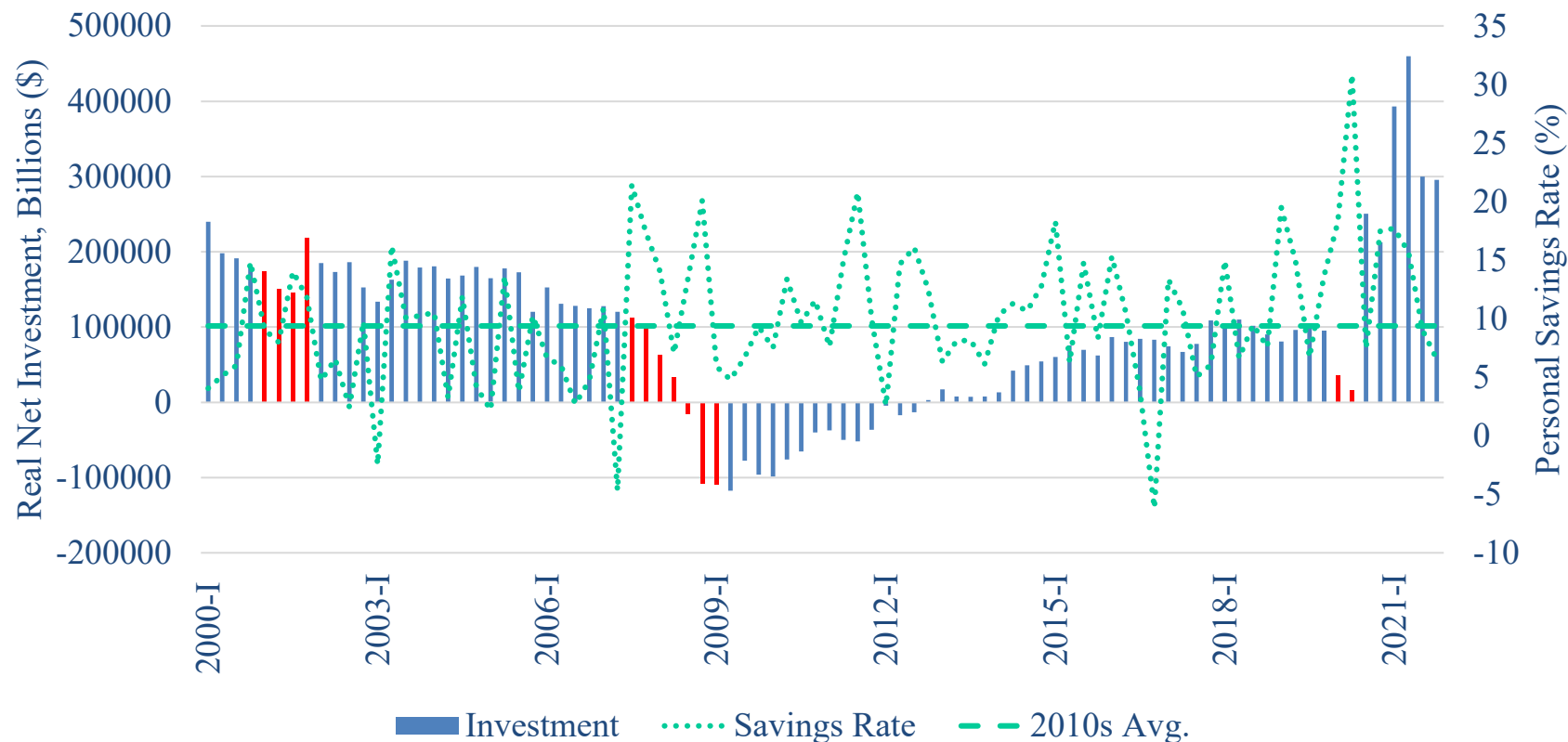
U.S. Real Consumer Spending



- Adjusted for inflation, consumer spending growth picked up across the board in February.
- But real consumer spending fell short of expectations.
- However, Holiday inventory delays pushed some purchases into January, contributing to some of February's weakness
- In recent months, the proportion of consumer spending in goods vs. services started to shift back toward services slightly

Source: Author's calculations using data from the Bureau of Economic Analysis

Real Net Investment in Consumer Durables



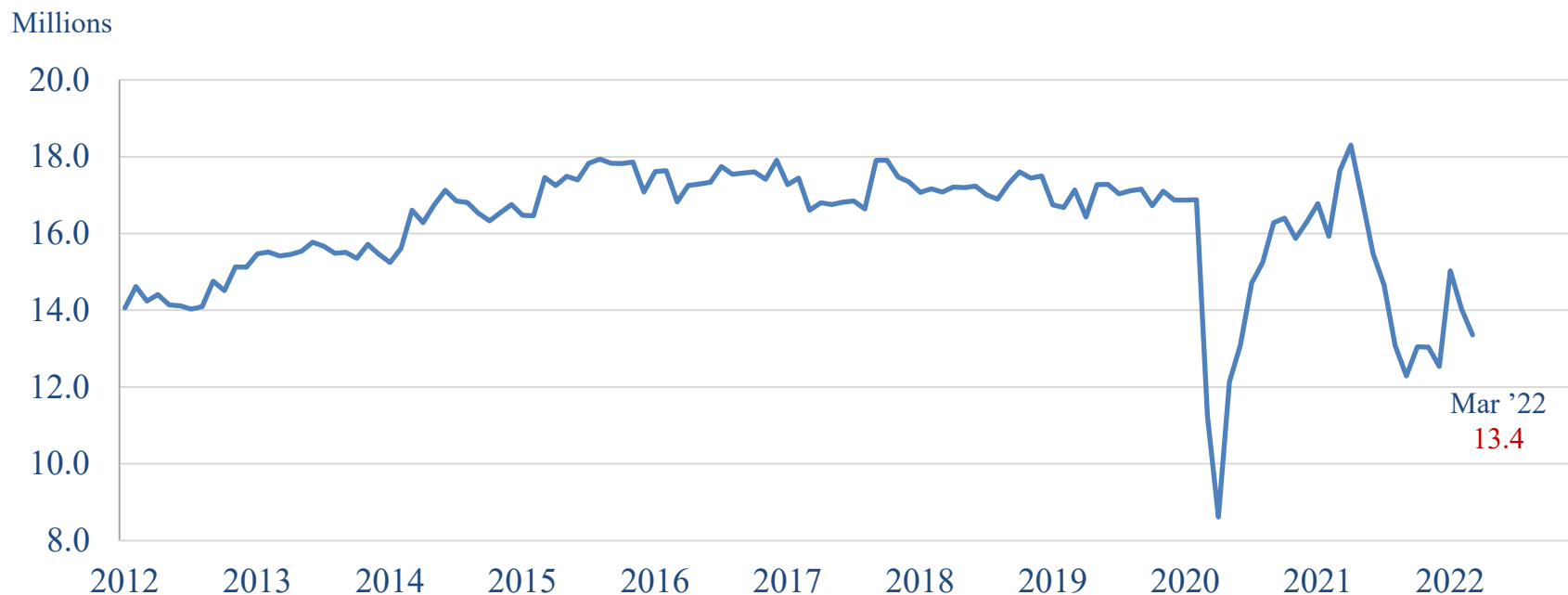
- Net investment (Investment – Consumption) of consumer durables was well above its historical high in 2021, suggesting there's been at least some pull-ahead
- The savings rate suggests there's some pent-up consumption remaining, but what will it go towards? And now, how much will be eroded by inflation?

Note: Personal saving is net acquisition of financial assets net of government insurance and pension fund reserves and including contributions for government social insurance to U.S.-affiliated areas, plus net investment in nonfinancial assets net of consumer durables less net increase in liabilities plus net capital transfers paid.

Leading Indicators

U.S. Light Vehicle Sales

In Millions of Units - SAAR

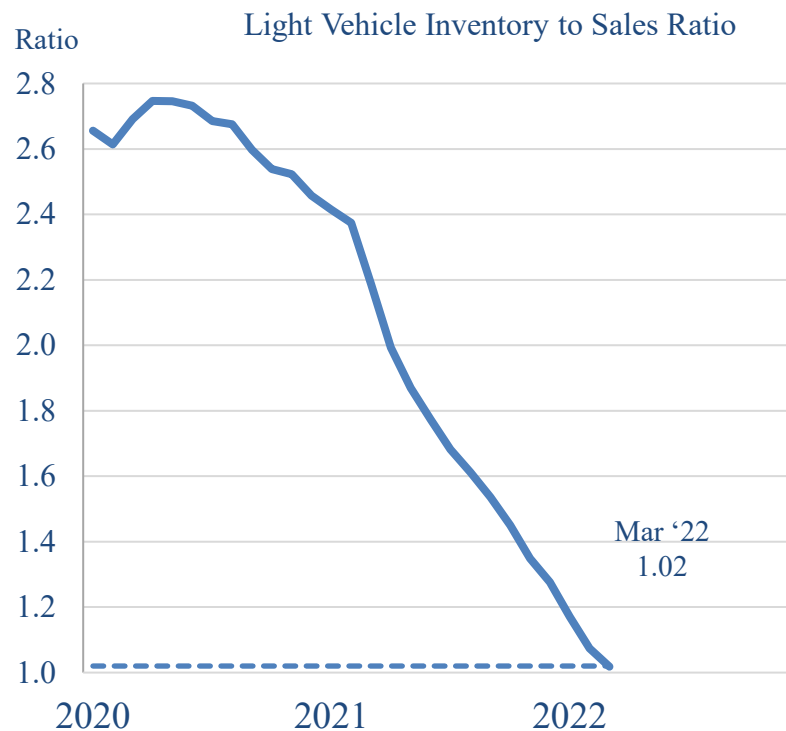
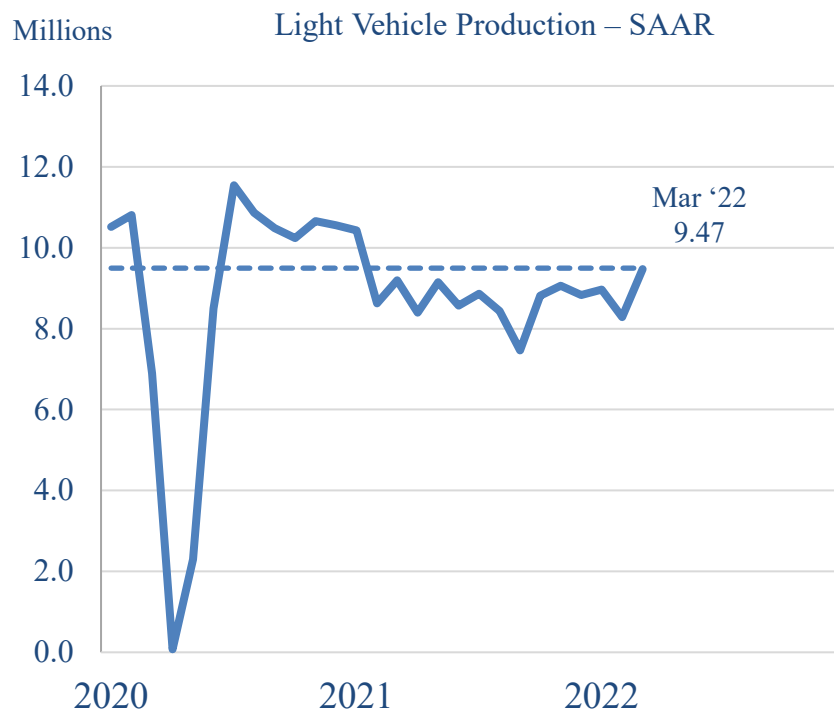


- The average SAAR for new light vehicle sales in the first quarter of 2022 was 14.1 million units, off the pace of 2021's total sales of 14.9 million units
- A slow start considering that the latest Blue Chip Consensus Forecast (March) projects 2022 new light vehicle sales of 15.6 million units.
- By units, 1st quarter 2022 new light vehicle sales were about 10% below the average 1st quarter sales for 2010-2020

Source: WardsAuto Infobank.

U.S. Light Vehicle Production and Inventories

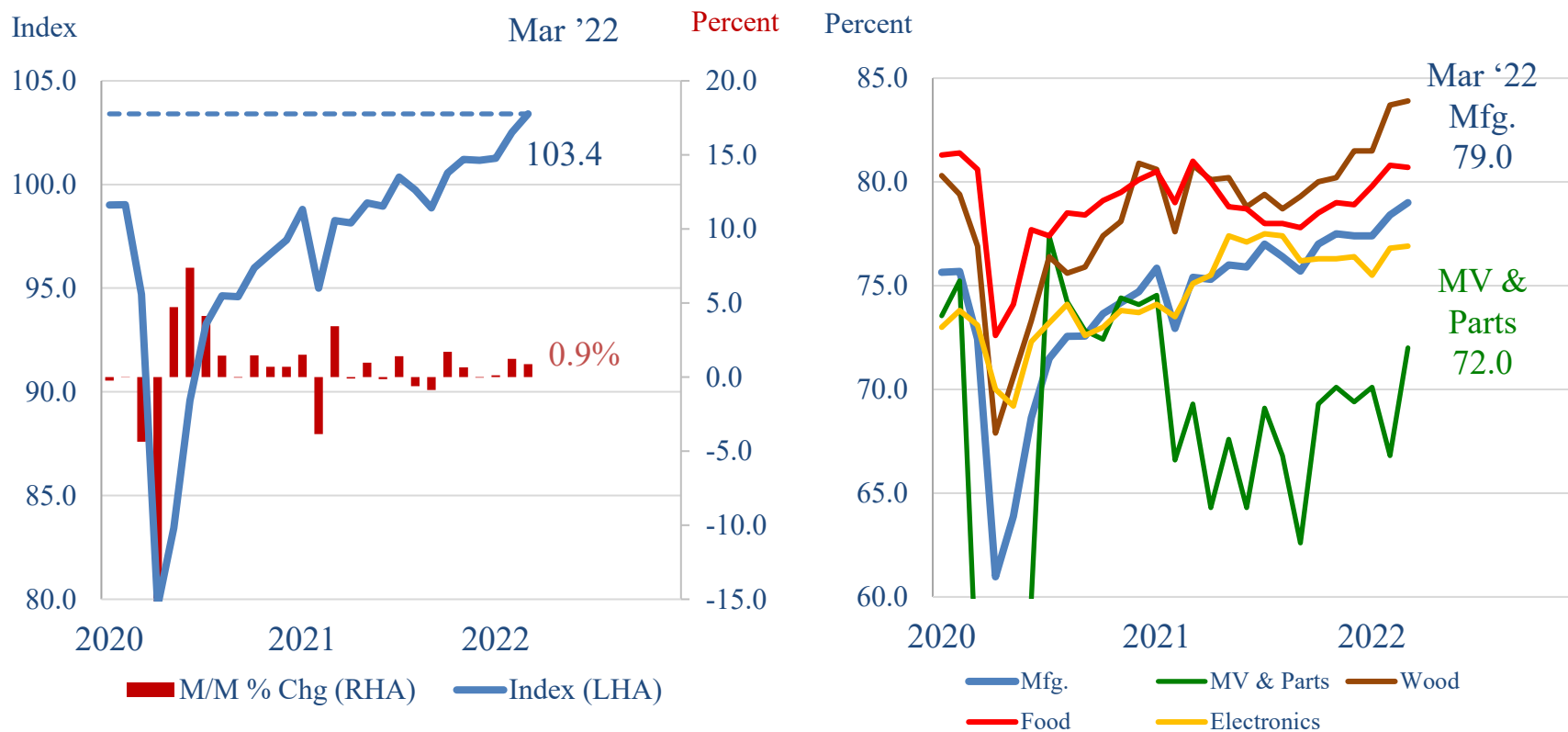
Domestic Production SAAR & Inventory to Sales Ratio



- U.S. light vehicle production rebounded nicely in March, but remains off of pre-pandemic levels
- New light vehicle inventory levels continued to fall. The chart makes inventory levels higher than they are because the ratio is a 12 month moving average.

Source: Author's calculations using data from the Federal Reserve Board of Governors, Wards Intelligence, and the Bureau of Economic Analysis. Inventory/Sales Ratio calculation divides 12 month moving averages of new light vehicle inventory by the 12 month moving average of new light vehicle sales

Manufacturing Production & Capacity Utilization



- Manufacturing production has trended higher since the 2nd half of 2021.
- Capacity utilization in Motor Vehicles & Parts continues to be impacted more by supply-chain disruptions and material shortages more than other sectors impacted by the pandemic.

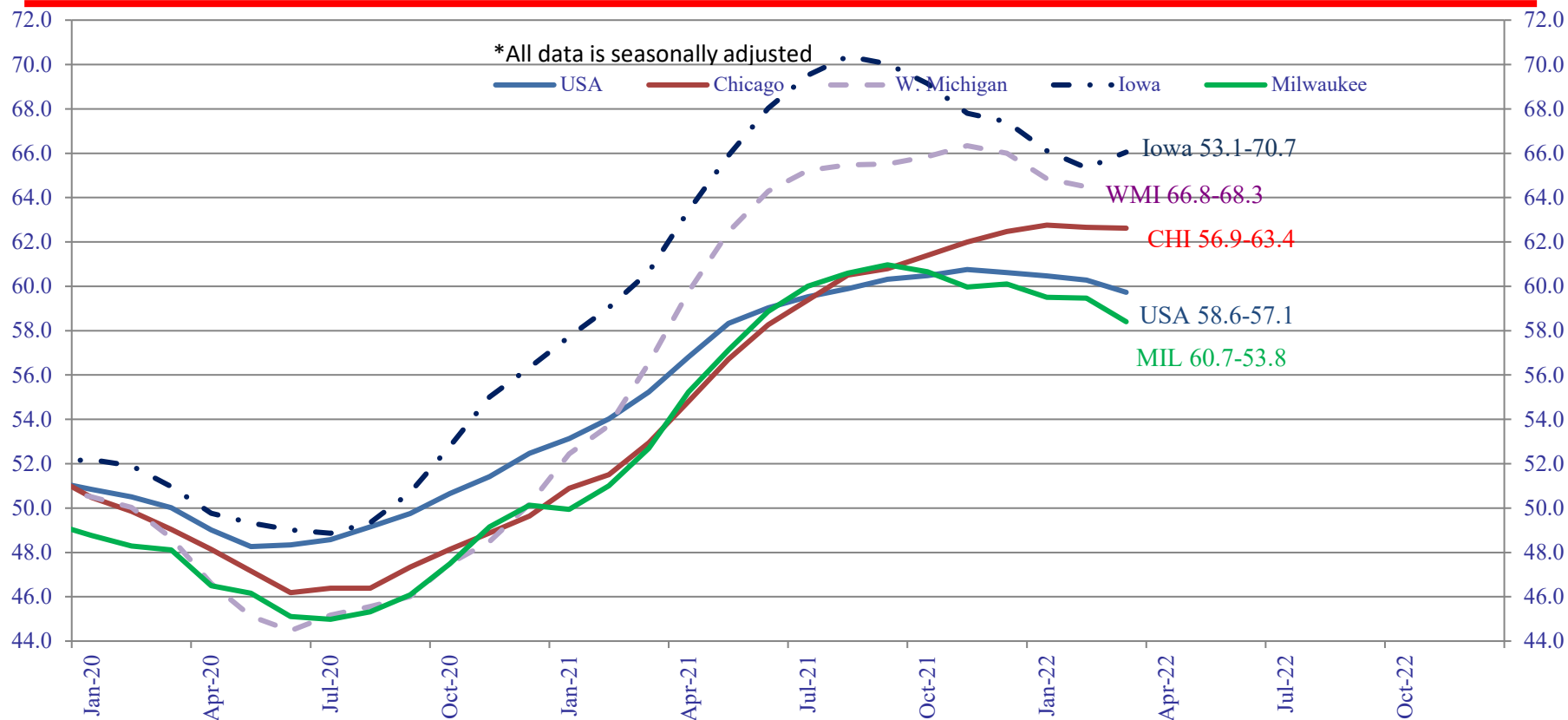
Source: Federal Reserve Board

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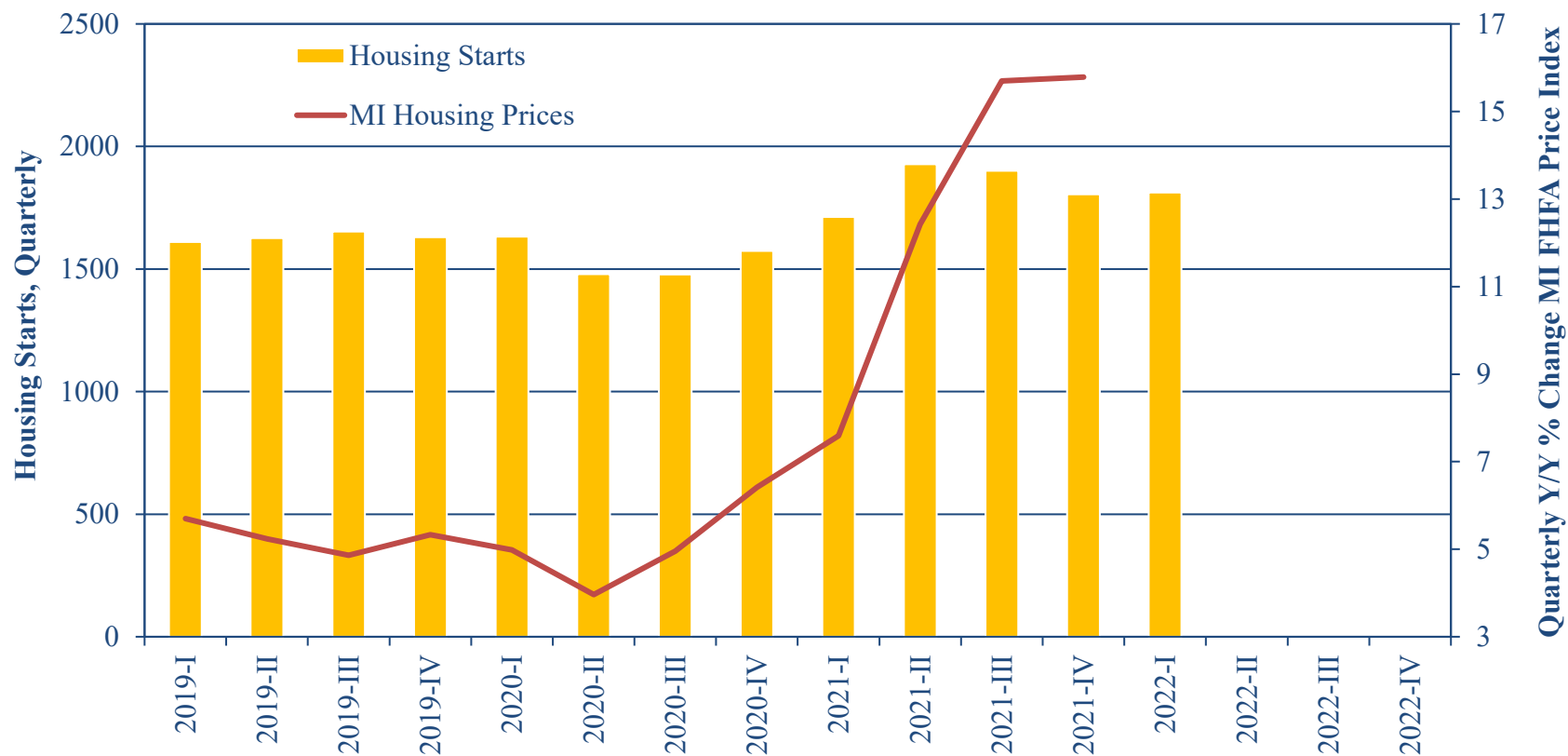
Regional Purchasing Managers' Indexes



- Per the U.S. ISM, March saw slower growth in new orders and production, but a pickup in employment and inventory.
- Overall, a slowing in the pace of growth in the goods-based economy in the trend lines is more evident.

Sources: Author's calculations based on data from Haver Analytics, Creighton Business Outlook, and the Institute of Supply Management, Grand Rapids and Grand Valley St. University; Values above 50 indicate expansion; values below 50 indicate contraction. The chart shows each PMI's 12 month moving average. The lines represent the 12 month moving averages. The 2 numbers next to the location are the readings for the most recent 2 months.

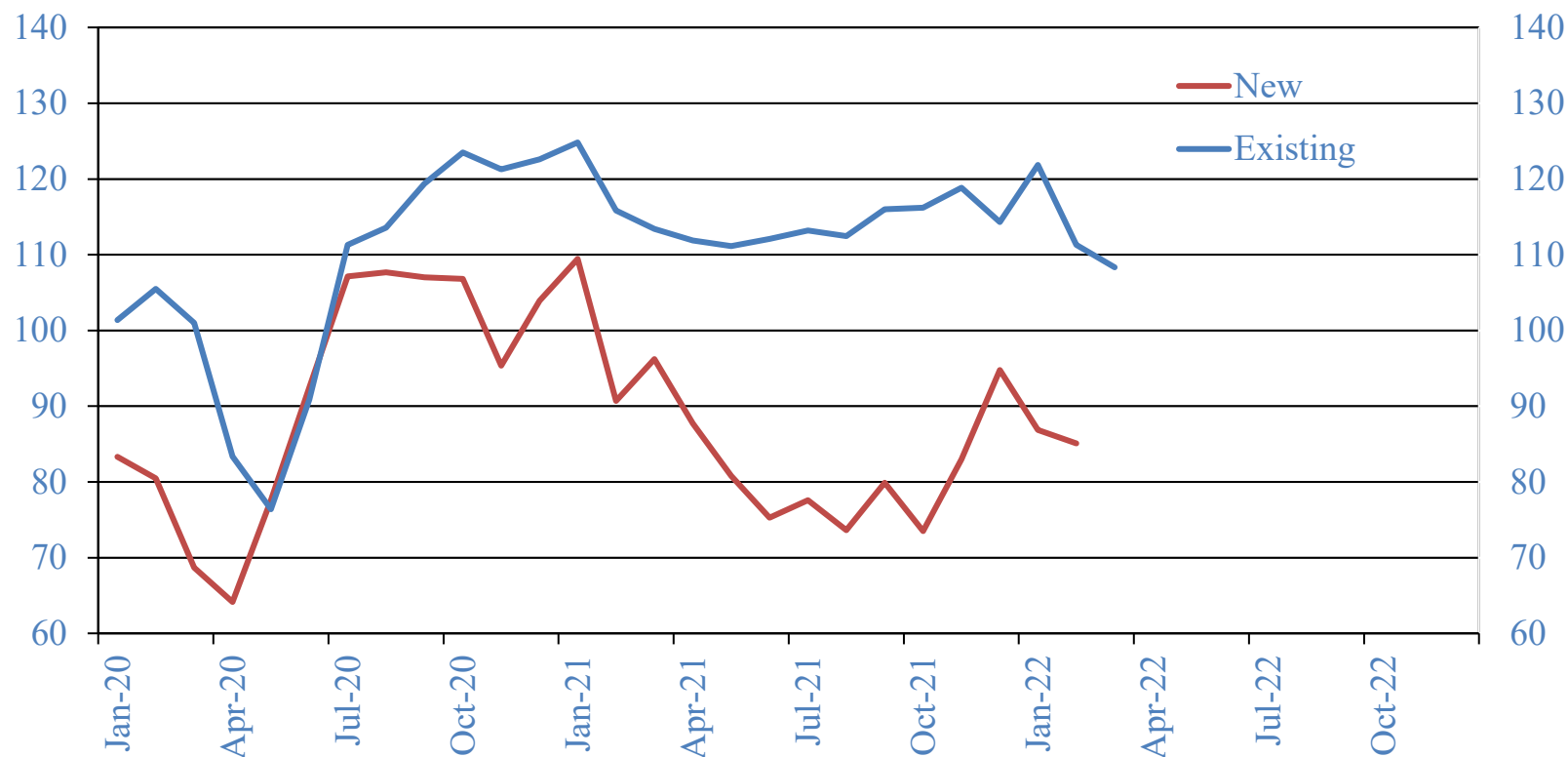
Michigan Housing Starts



- Note: 1st quarter 2022 housing start data is an average of January and February.
- Michigan housing starts have been at or above pre-pandemic levels for 18 months
- National housing starts remain at the upper end of historical trend levels
- Housing price growth leveled out at elevated levels at the end of 2021

Sources: Author's calculations using data from the Census Bureau and FHFA

U.S. Housing Sales

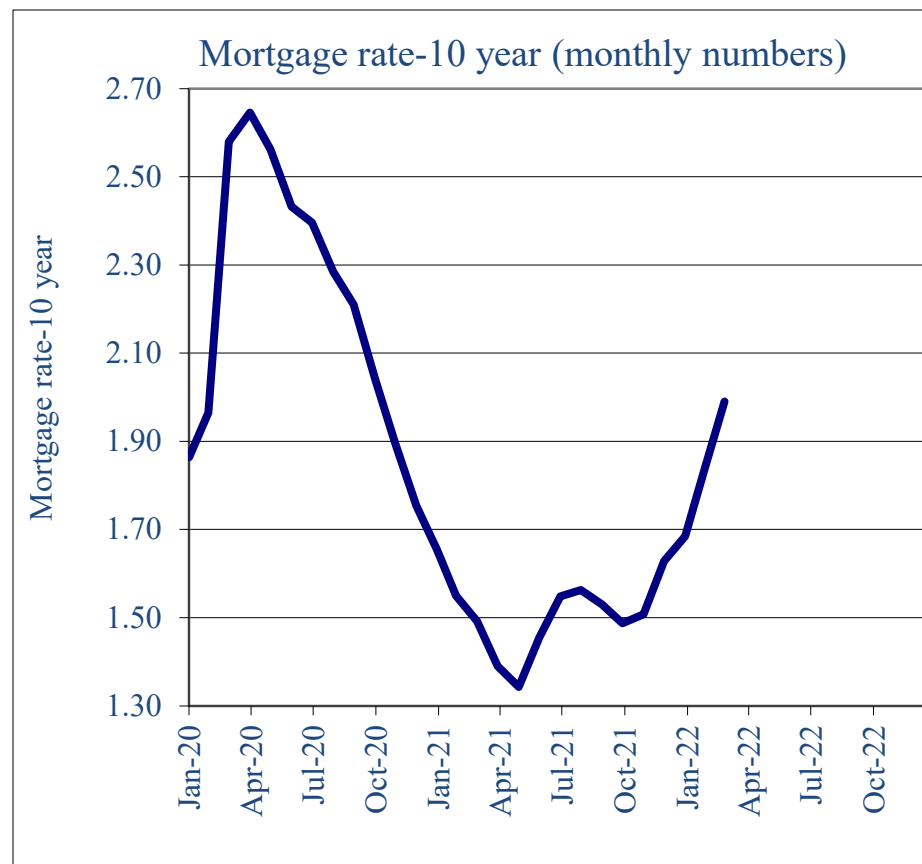
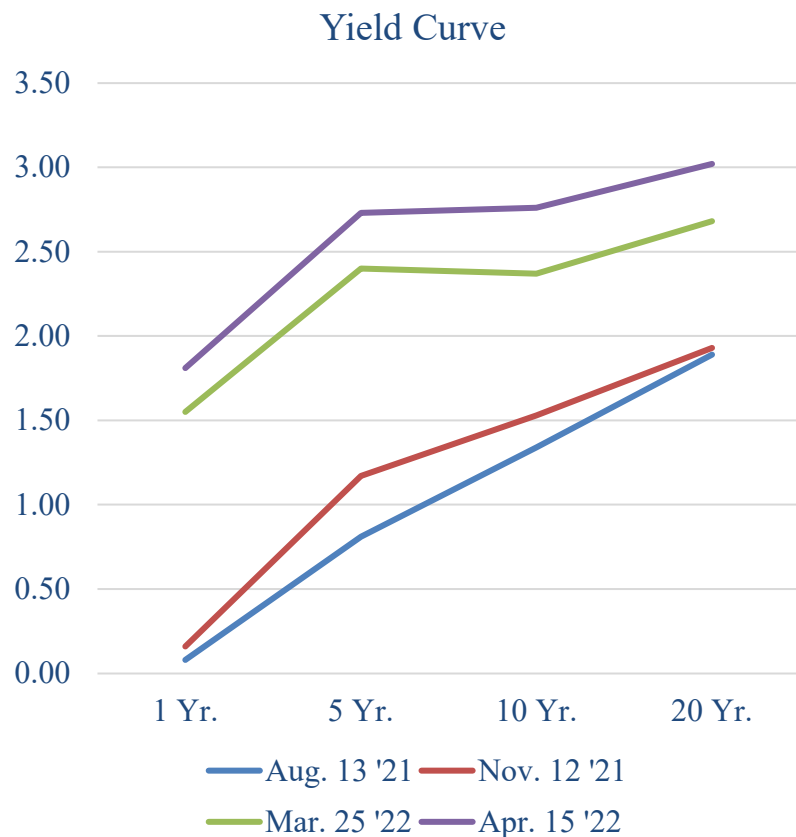


- Index: 2001=100. Home sales retreated slightly in February (and existing in March)
- Low inventory levels held spring/summer sales back last year. Will inventory rebound enough to satisfy pent-up demand? Will potentially higher mortgage rates deter pent-up demand from entering the market?

Sources: Author's calculations using data from the Census Bureau and NAR

Financial Conditions

Interest Rates and Spreads



- Interest rates have moved up more on the short end than at the long end
- The yield curve's shift and change in shape before and after the most recent FOMC meeting is noticeable
- Risk spreads are at pre-pandemic levels, which is modestly above where they were for most of the 2010s

Sources: Author's Calculations using data from the Federal Reserve Board of Governors.

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Real Monthly Imported Crude Oil Prices

Imported Crude Oil Prices

Values



Source: U.S. Energy Information Administration

- The real oil price is at its highest level since 2014
- The same is true for real gas prices
- Gasoline purchases as a percentage of consumer spending (in real dollars) have just returned to pre-pandemic levels

Source: U.S. Energy Information Administration

Note: Oil Price forecast as of April 7, 2022

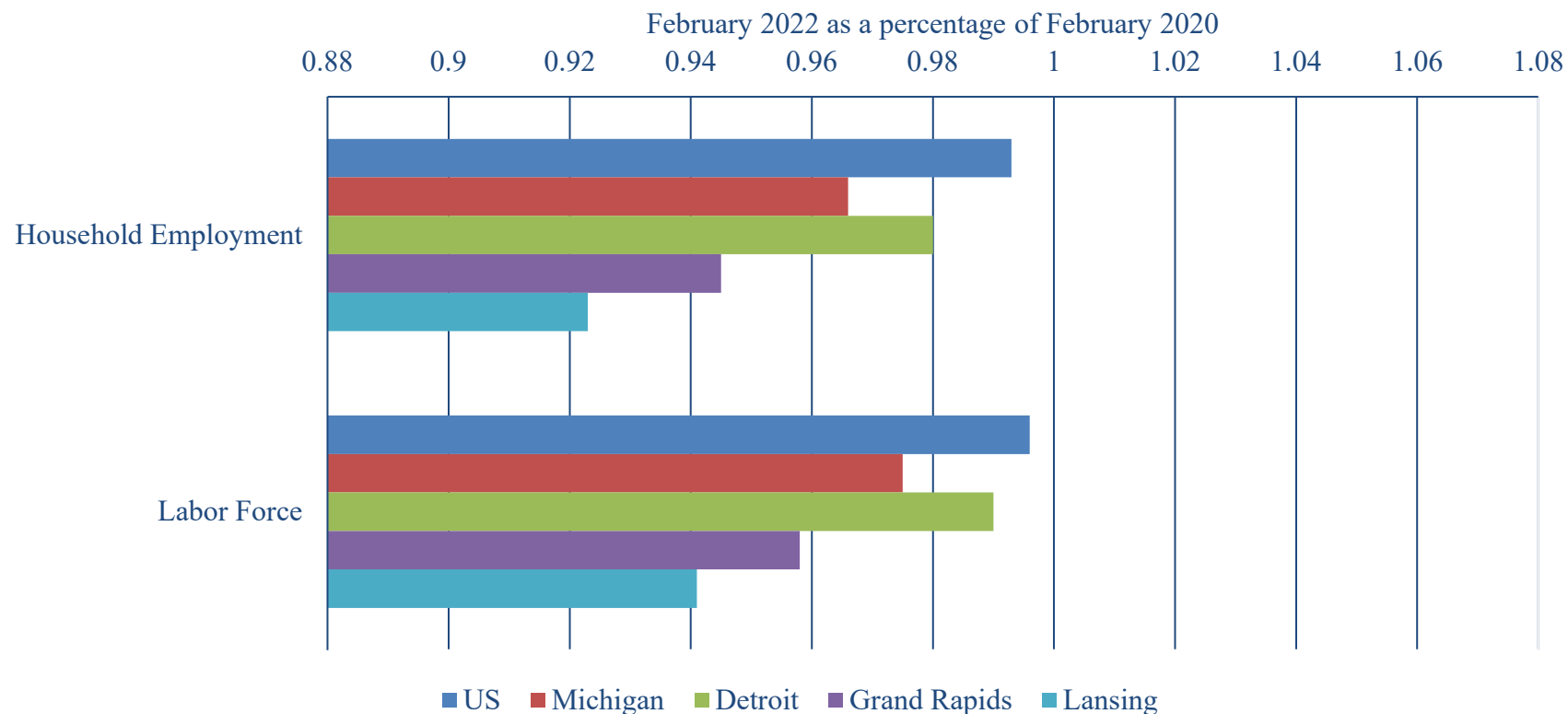
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Labor Market

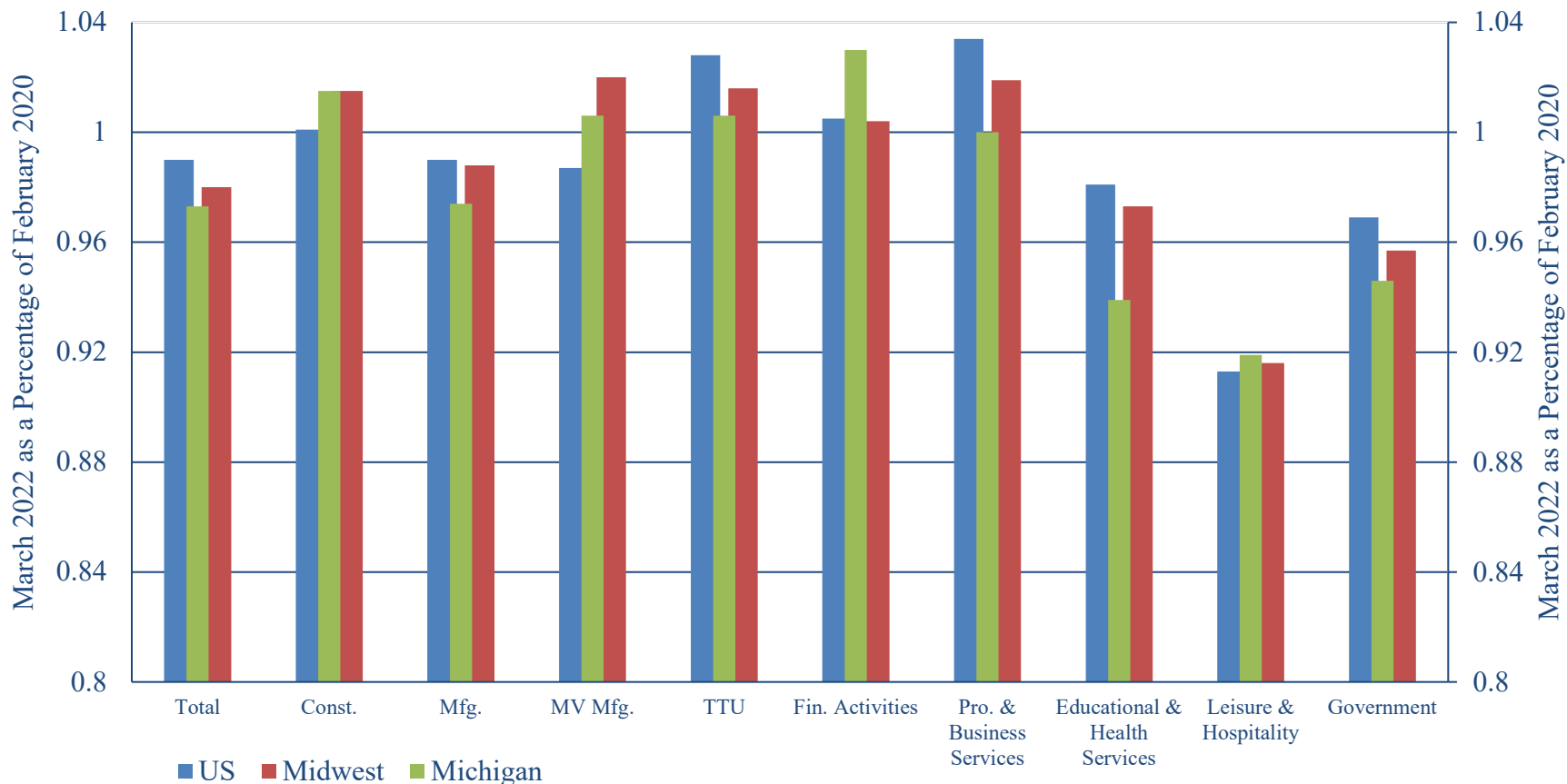
Household Employment Recovery: U.S., Michigan, select Michigan MSAs



- Michigan's employment recovery lags that of the U.S.
- Metro Detroit's labor market recovery has overtaken Grand Rapids. Grand Rapids' recovery has actually regressed in recent months
- These gaps are larger if the pace of growth immediately before the pandemic were to continue throughout 2020.

Sources: Author's calculations using data from the Bureau of Labor Statistics; MSA Data is only through January

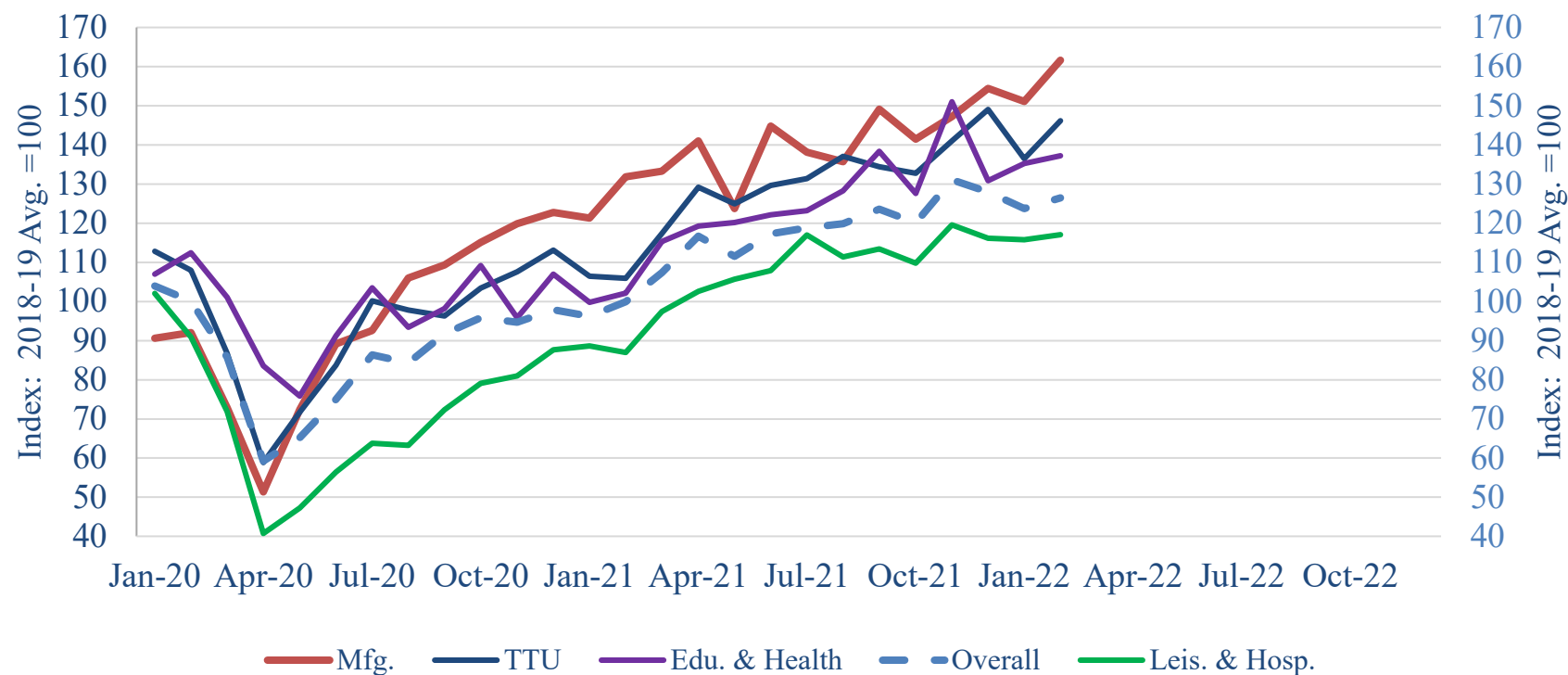
Payroll Employment Recovery: U.S., 7th District, Michigan



- Multiple sectors have now reached their pre-pandemic level of employment
- Gaps in the last 3 sectors on the chart are closing much slower relative to the other sectors.

Sources: Author's calculations using data from the Bureau of Labor Statistics;

Job Quits: Overall & Select Sectors

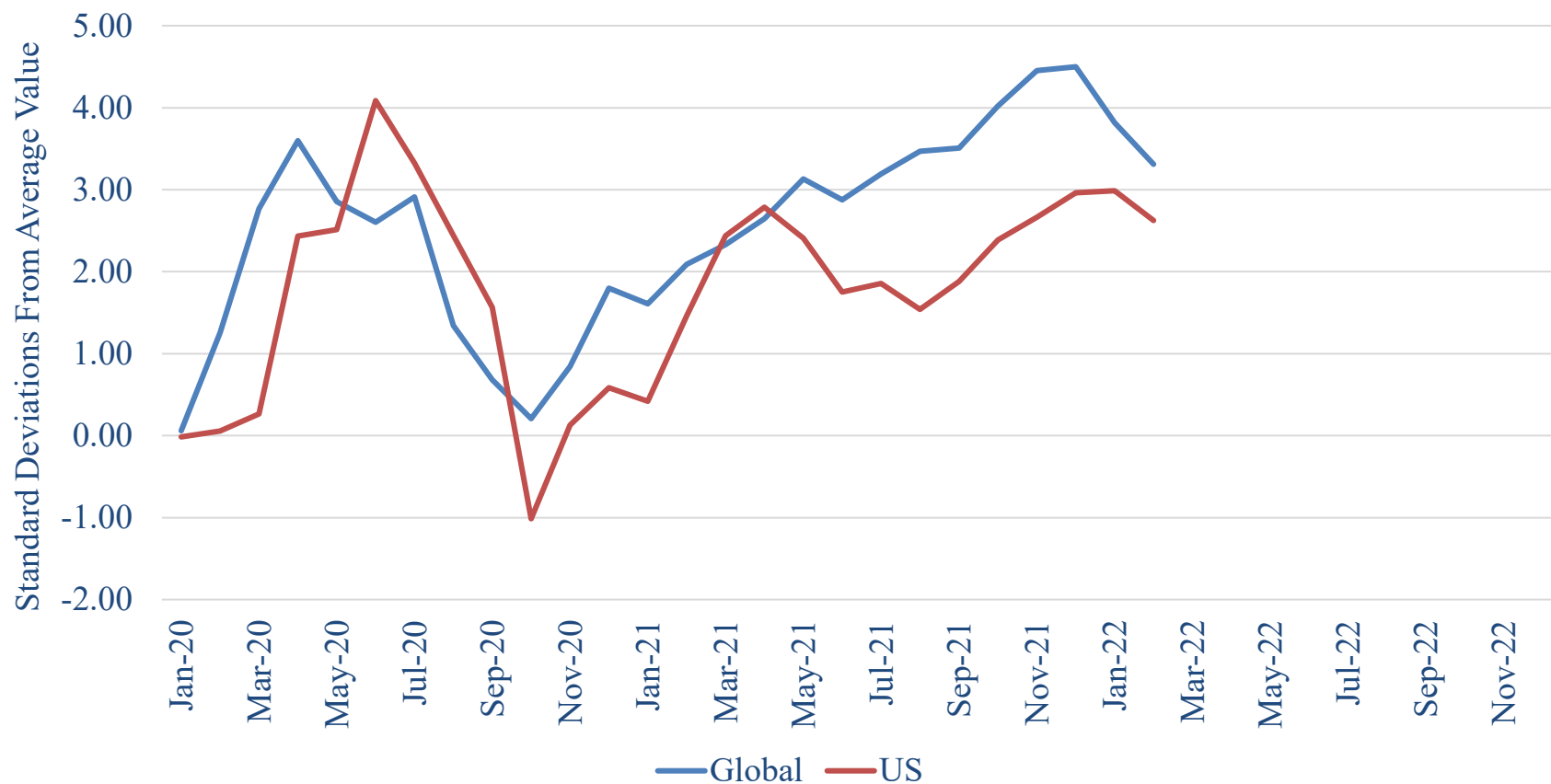


- Quit rates in some sectors were already trending higher pre-pandemic
- The dynamics of the pandemic have exacerbated that trend, in some sectors particularly, notably Health Care, which puts greater pressure on the system to handle the Omicron and any other potential surges.
- Manufacturing quit rates now 75% above January 2020 levels

Source: U.S. Census Bureau

Inflation

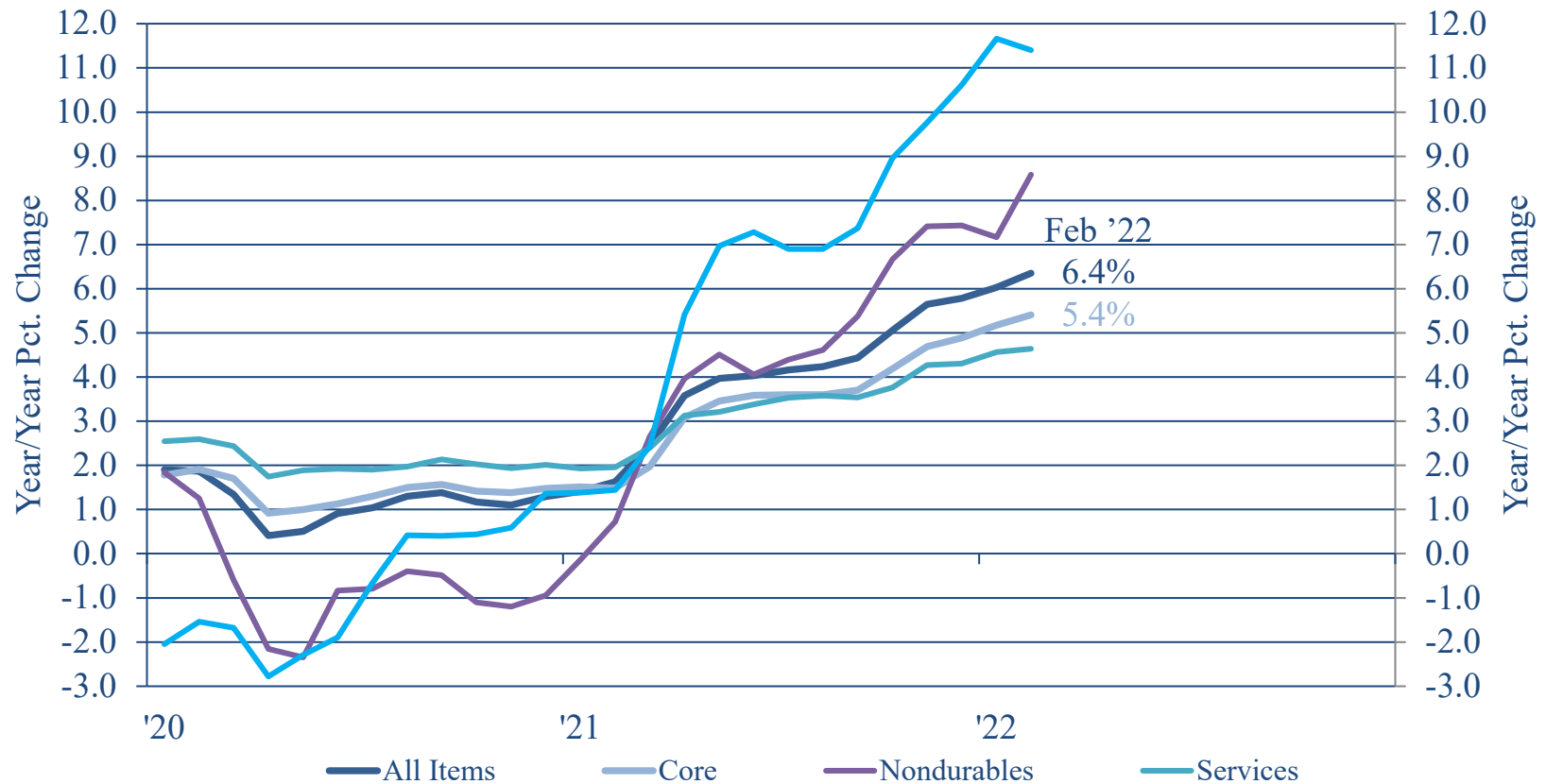
New York Fed Global Supply Chain Pressure Index



- Despite spotty improvements in supply-chain flows, supply-chain normalization isn't likely to occur in 2022
- As long as supply-chain bottlenecks persist, pricing pressures will remain present

Sources: Bureau of Labor Statistics; Harper Petersen Holding GmbH; Baltic Exchange; IHS Markit; Institute for Supply Management; Haver Analytics; Bloomberg L.P.
 Note: Each index is scaled by its standard deviation

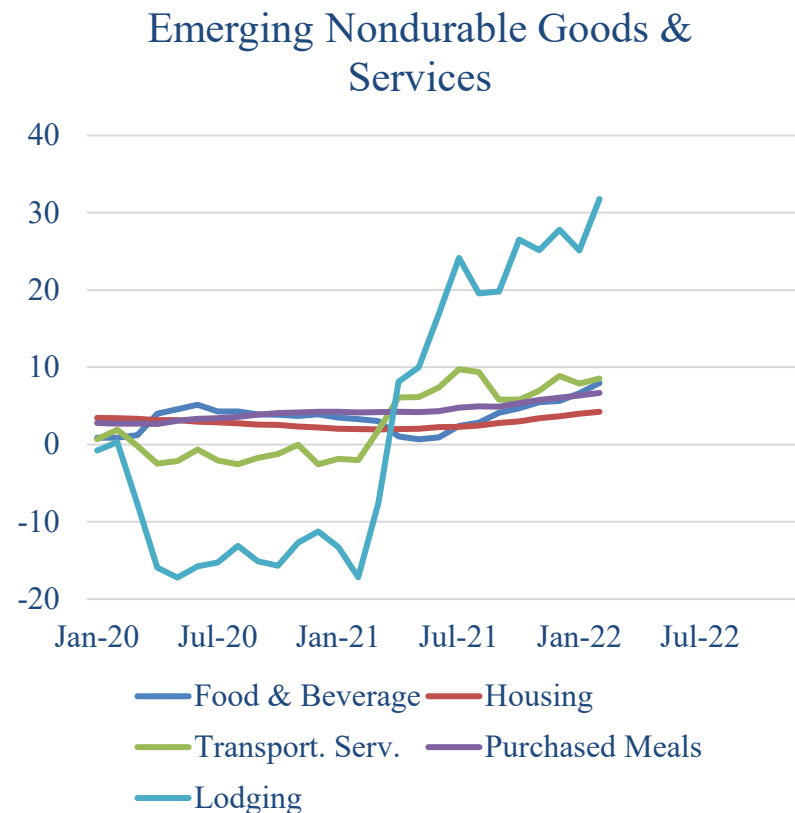
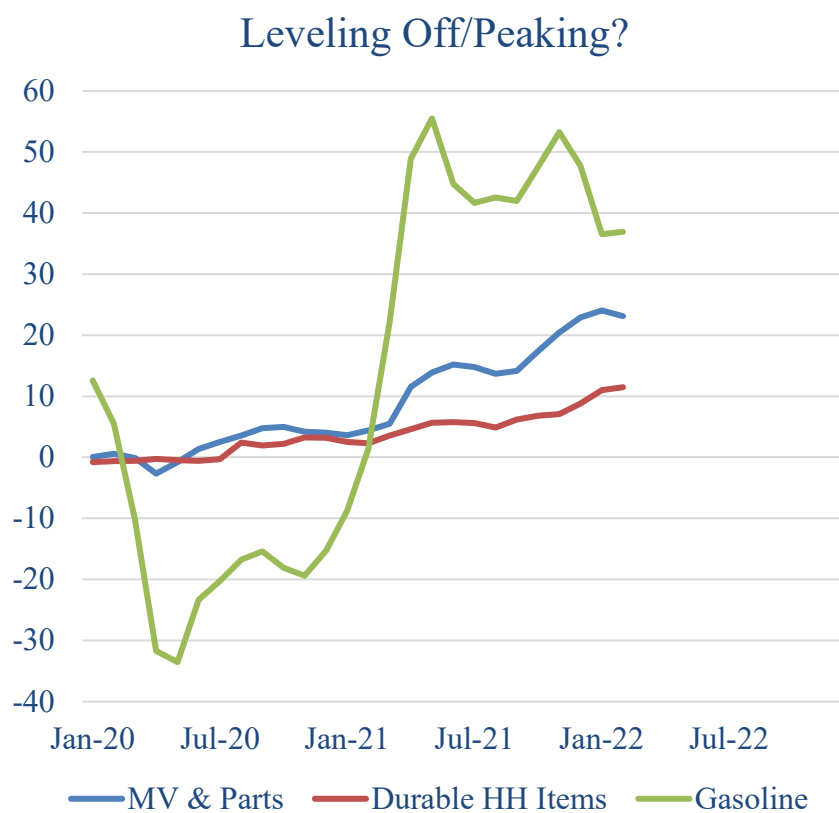
PCE Inflation



- Not surprisingly, headline and core inflation moved higher in February
- Inflationary pressures in nondurable goods intensified significantly
- Inflation in durable goods flattened out at least for 1 month

Source: Author's calculations using data from the Bureau of Economic Analysis

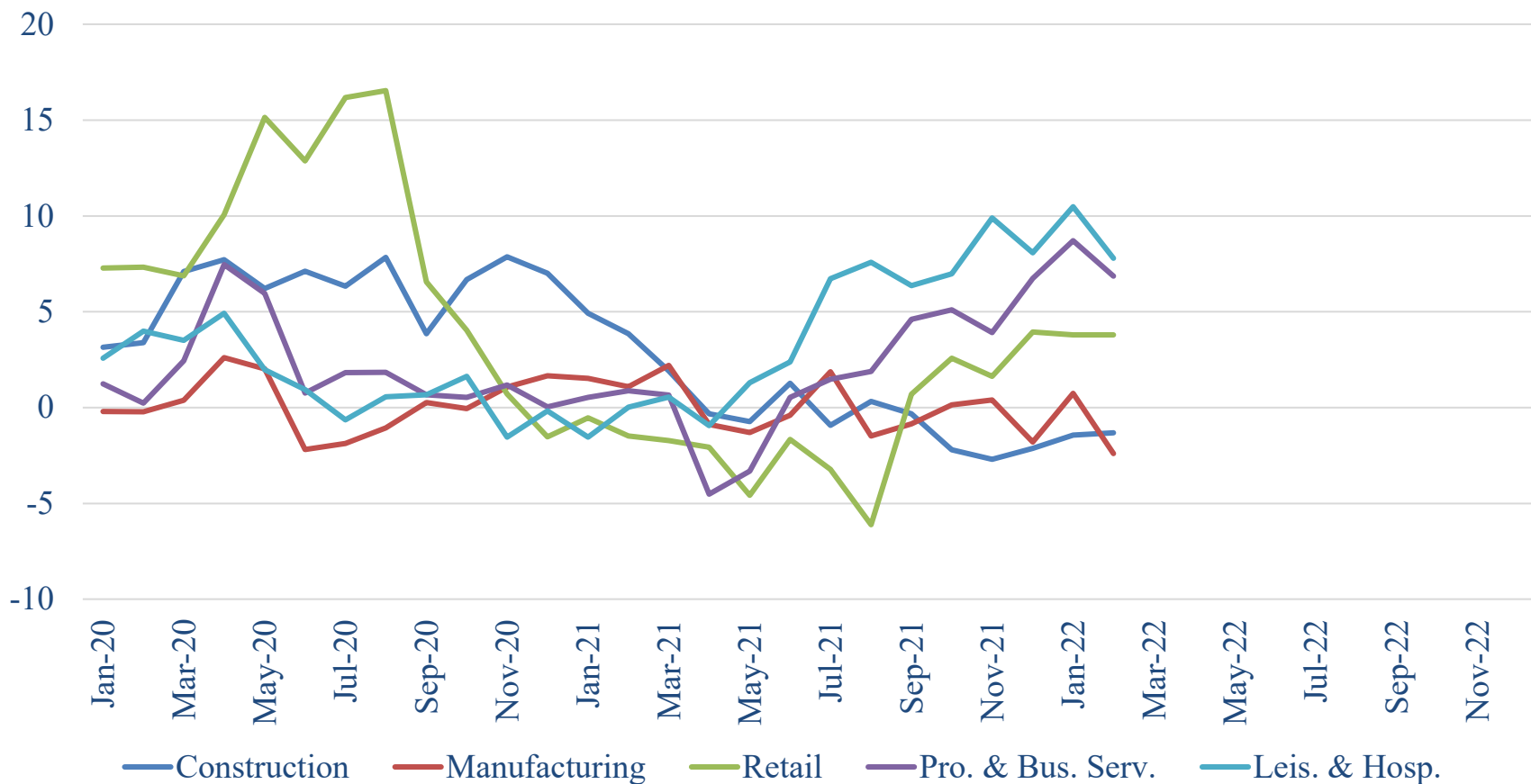
Select subcategories contributing highly to PCE Inflation



- Durable goods may be running into affordability challenges because of persistent inflationary pressures
- Housing rents starting to move higher
- Is there enough “rage” tourism to drive demand while prices move higher?

Source: Author’s calculations using data from the Bureau of Economic Analysis

Michigan Real Wages By Sector

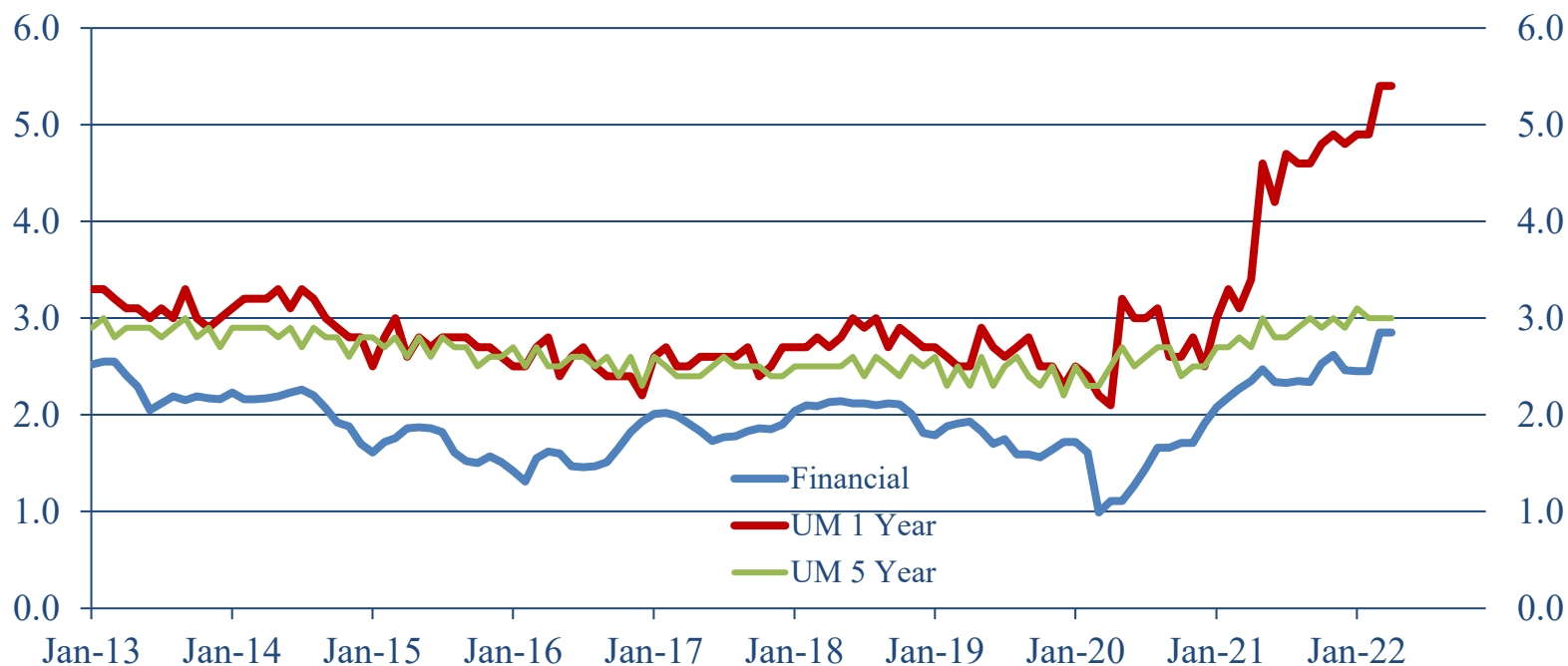


- Real wage gains limited by inflationary pressures
- A relatively large employment gap in Leisure & Hospitality has boosted wage pressures

Source: Author's calculations using data from the Bureau of Economic Analysis and Bureau of Labor Statistics

Inflation Expectations

10-Year TIPS (Financial) vs. 1-Year and 5-Year UM Consumer Survey



- Financial market inflation expectations have increased in the spring after holding relatively steady for the last few months.
- Short-term measures of consumer inflation expectations jumped in March and have held steady since.
- Note: The last time UM's 5 year inflation expectations was consistently above 3% was in the mid-1990s

Source: Survey of Consumers – University of Michigan, Federal Reserve Board, and Haver Analytics

Macroeconomic Summary

- Economic Activity
 - Omicron, Russia's invasion of Ukraine, and high energy prices have contributed to lower estimates of real economic growth for 2022
 - Michigan's economy finished on a strong note in 2021 despite lower new vehicle sales
 - Going forward
 - What impact will higher energy prices have on consumer spending?
 - Are we at the beginning of the shift back toward more spending on services?
- Employment
 - March's national unemployment rate of 3.6% indicates the labor market is relatively tight
 - But imbalances persist in key sectors, notably health care and public K-12 education
 - Attracting and retaining workers remains especially challenging
- Inflation
 - Headline PCE inflation increased to 6.4% in February
 - Short-run survey inflation expectations especially moved higher in March.
 - No apparent sign that underlying inflation drivers will recede this year
 - Increasing fuel surcharges on top of already high freight transportation costs
 - Higher wages for workers
 - Within the supply chain: drivers, warehouse employees, loading crews, etc.
 - And in areas still impacted by the pandemic: leisure & hospitality, production, construction, etc.
 - Higher food prices may linger longer than expected because of firming input prices, some of which are consequences from Russia's invasion of Ukraine

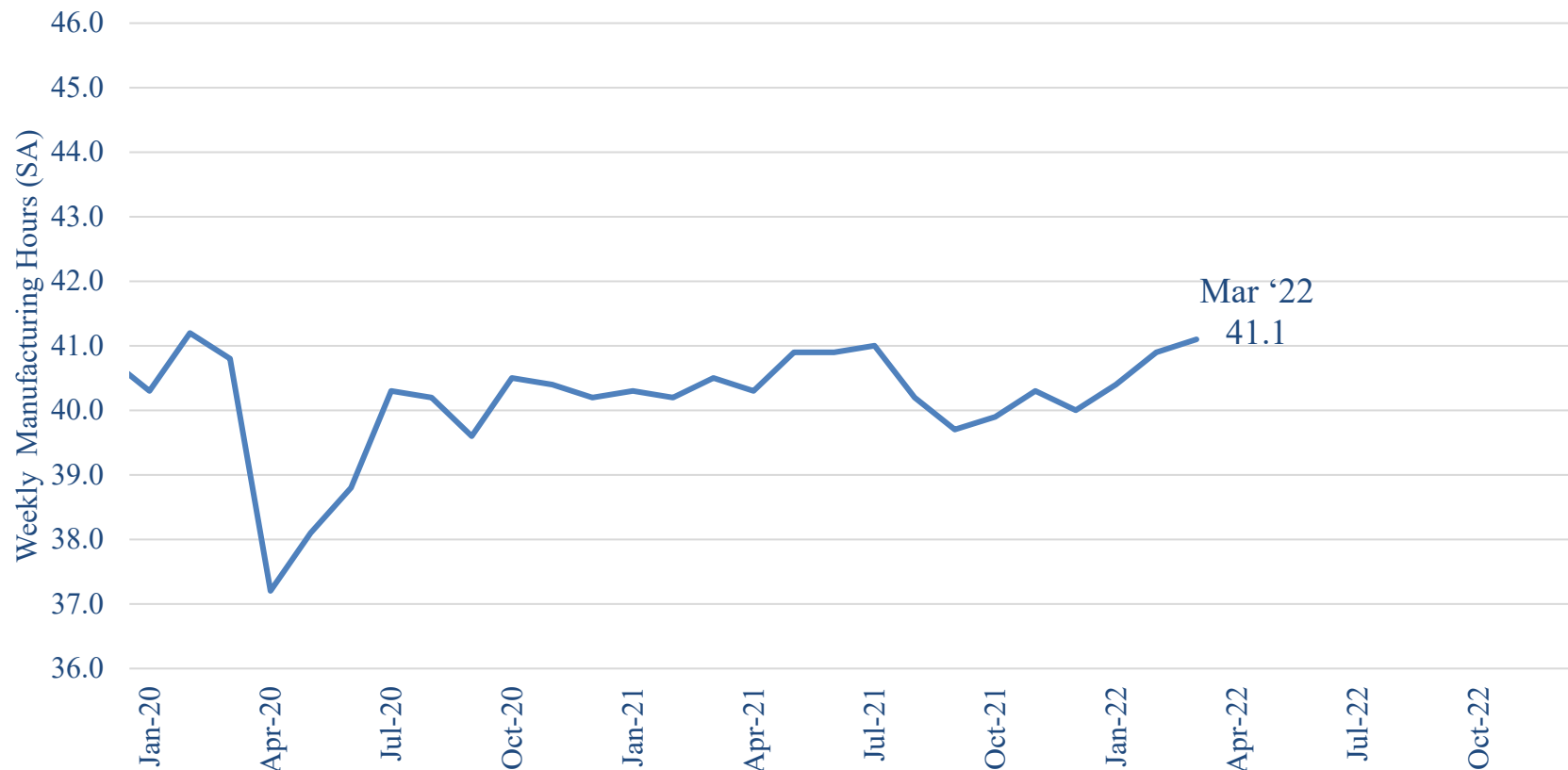


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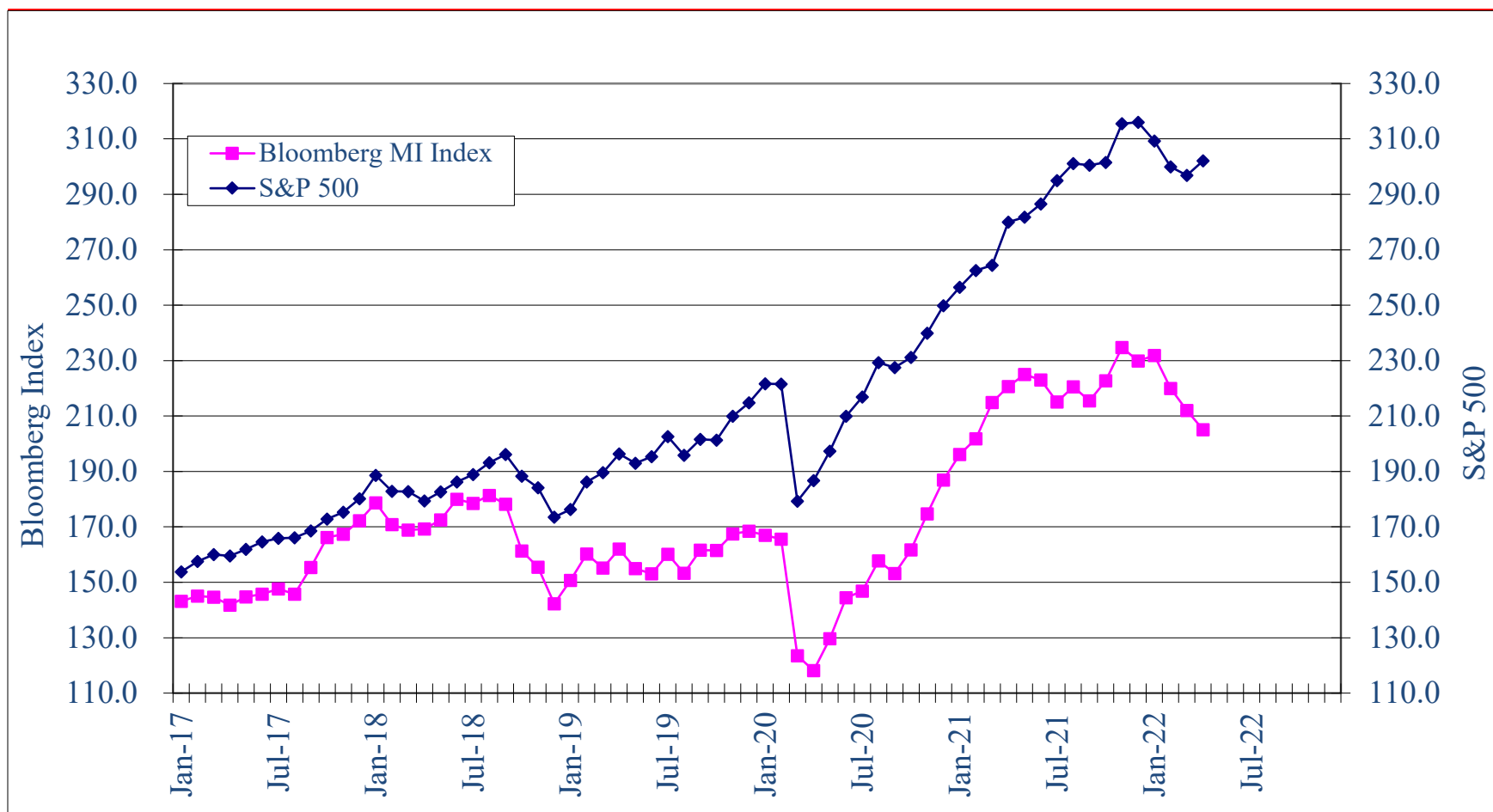
Michigan Manufacturing Weekly Hours



- Weekly manufacturing hours (along with employment) have returned to pre-pandemic levels
- But hours increased despite the shortages of foam and microchips and their respective impacts on durable goods, specifically vehicle, production.

Source: Bureau of Labor Statistics/Haver Analytics

S&P 500 vs. MI Bloomberg Index



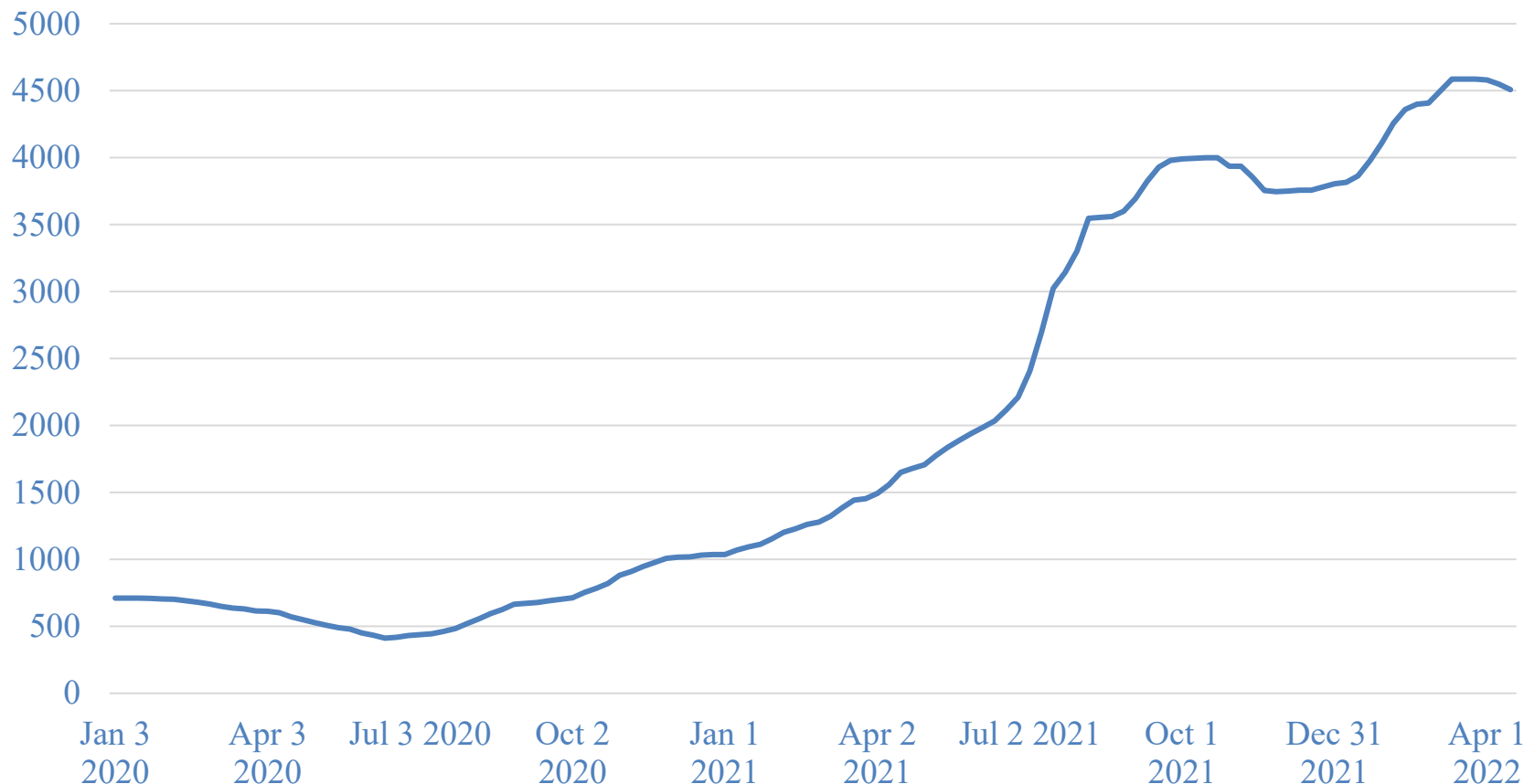
- Overall, investors feel better about the U.S. compared to Michigan
- More negative sentiment surrounding the auto industry not helping

Sources: Author's calculations based on data from the Wall Street Journal and Bloomberg; Index: 2007 = 100

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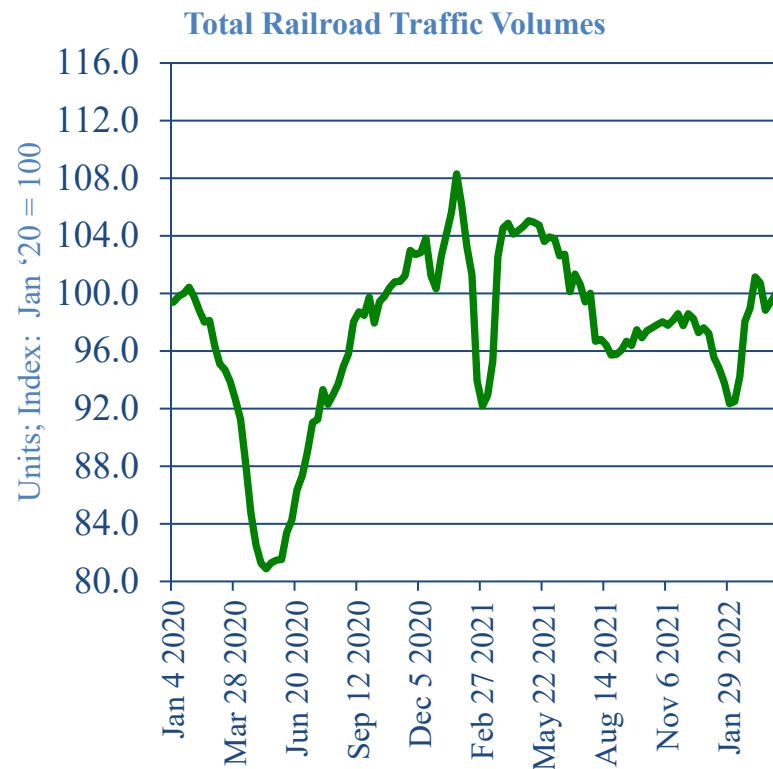
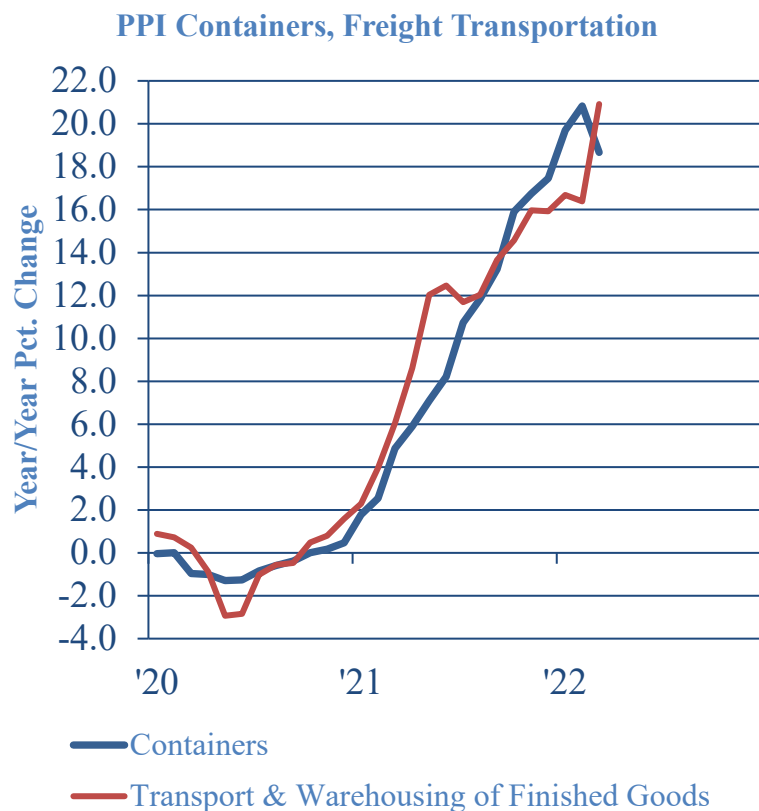
Charter Vessel Costs: Harper Petersen Index



- Charter vessel costs have plateaued in the spring.
- Logistics costs remain elevated and are expected to remain so throughout this year.

Sources: Harper Petersen Holding GmbH & Co. KG/Haver Analytics. The HARPEX (HARPER PETERSEN Charter Rates Index) is published by HARPER PETERSEN and reflects the worldwide price development on the charter market for container ships. The Charter Rates are assessed weekly for 6-12 months fixture periods on the basis of actual weekly fixtures reported and our own market assessment.

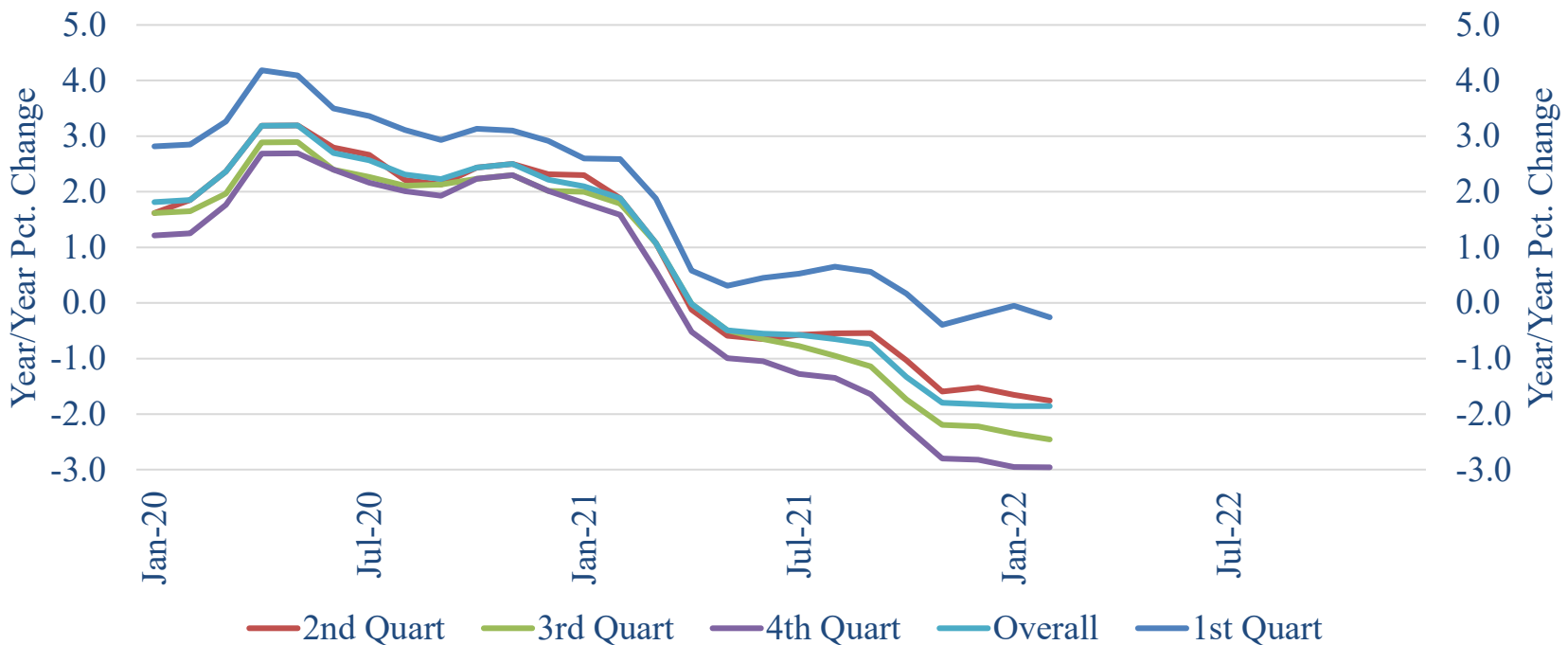
Shipping Containers: Prices & Railcar Volumes



- Spot container prices have also plateaued or even fallen somewhat in recent weeks.
- Railcar volumes rebounded in recent weeks.
- But even with scattered supply-chain improvements, substantial freight backlogs remain to be worked through

Source: Author's Calculations using Data from the Bureau of Labor Statistics and American Association of Railroads; Haver Analytics

Real Wage Growth by Quartile using Atlanta Fed Wage Growth Tracker



- Despite across the board wage gains, more so for relatively lower wage workers, real wage growth remains negative
- The lowest wage quartile experienced 6% year/year increases in nominal wages, but real wage gains were slightly negative.

Source: Author's calculations using data from the Atlanta Fed's Real Wage Growth Tracker and Bureau of Economic Analysis

Consumer Sentiment

University of Michigan (SA)



- Consumer sentiment rebounded off its March low.
- Is it just a coincidence that the increase in gas prices slowed, even reversed slightly in recent weeks?.

Source: Thomson Reuters / University of Michigan and Haver Analytics