

# Inflation, Interest Rates and Real Estate: What's happened and What's to Come

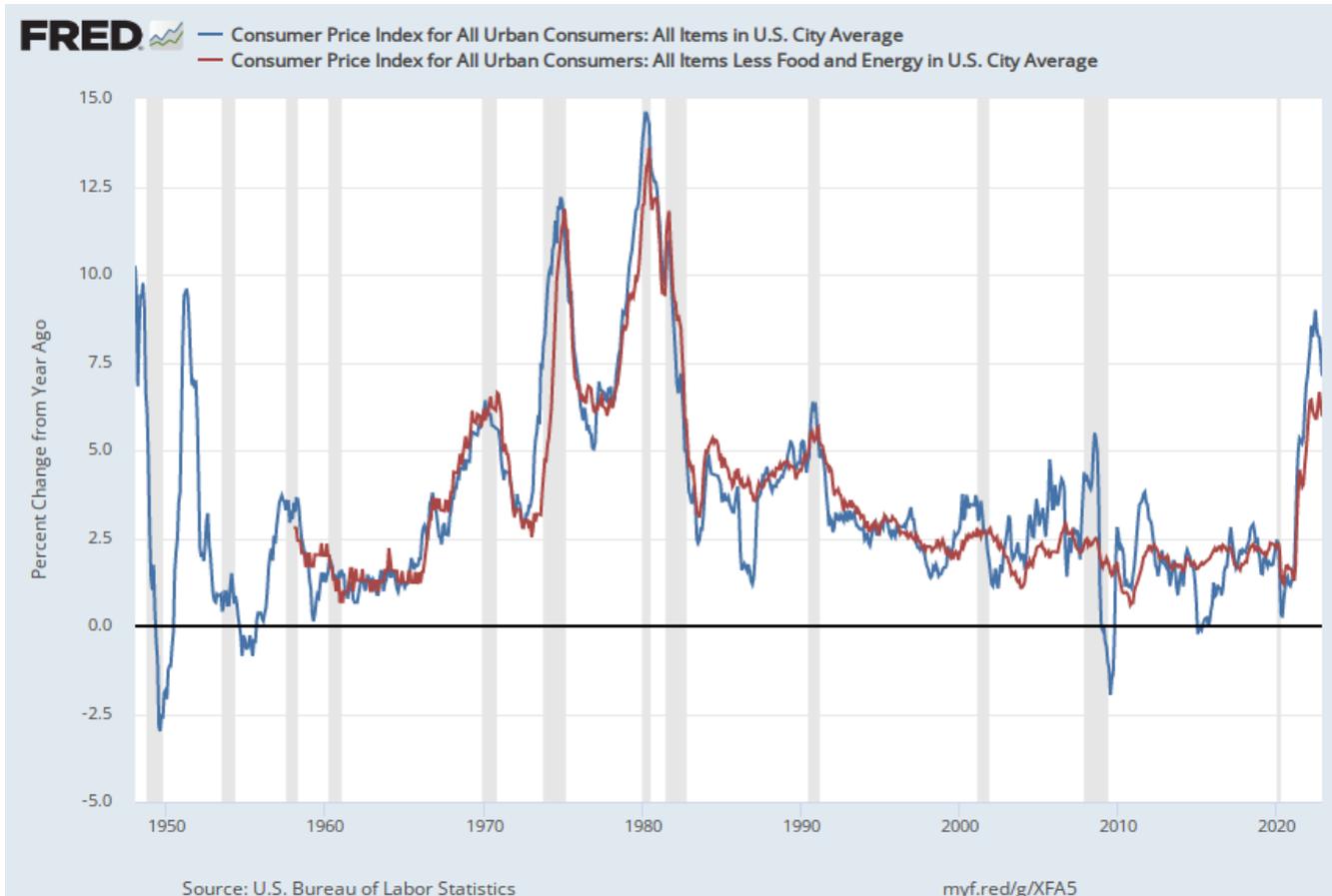
Ed Coulson,

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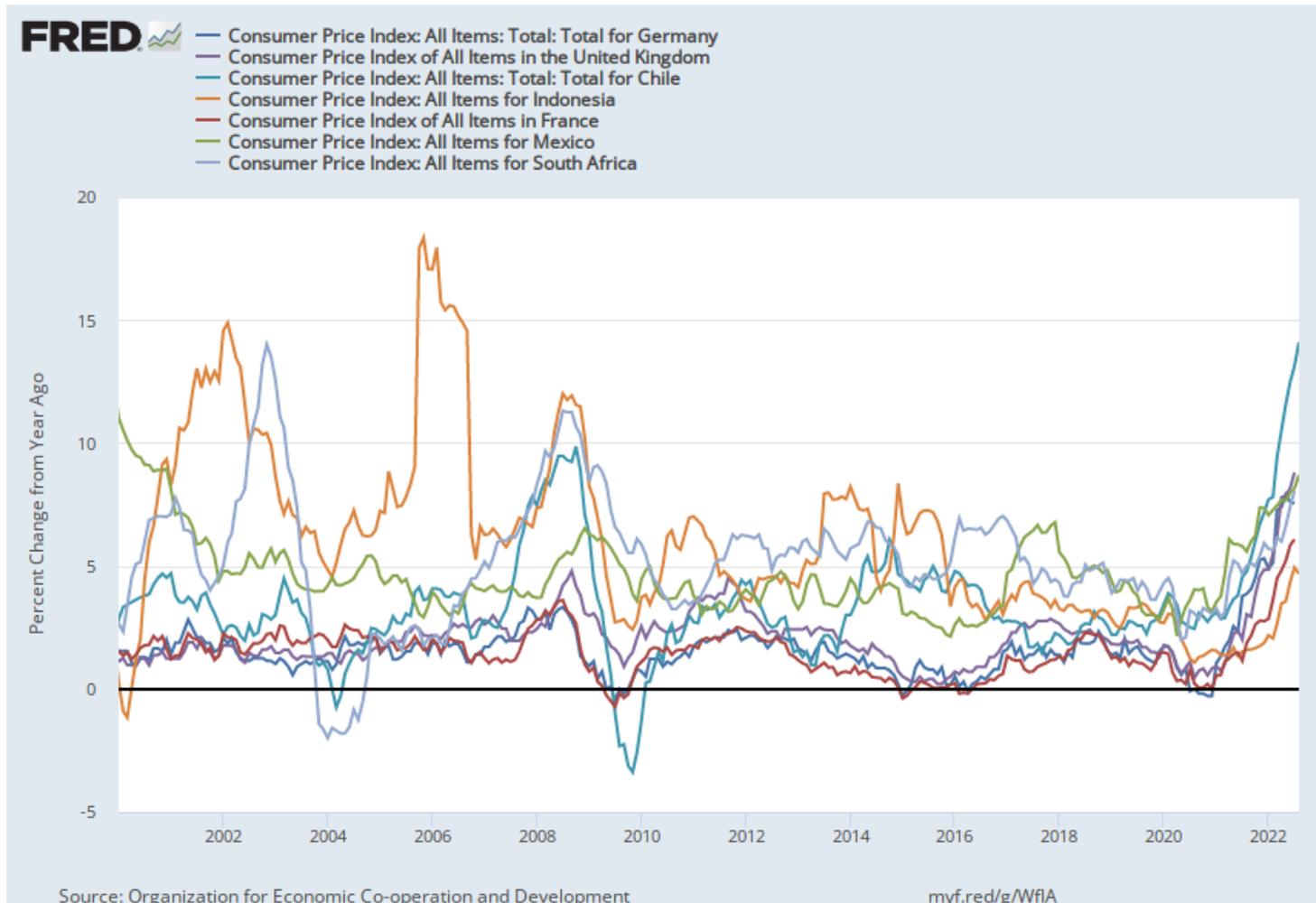
Director, Center for Real Estate



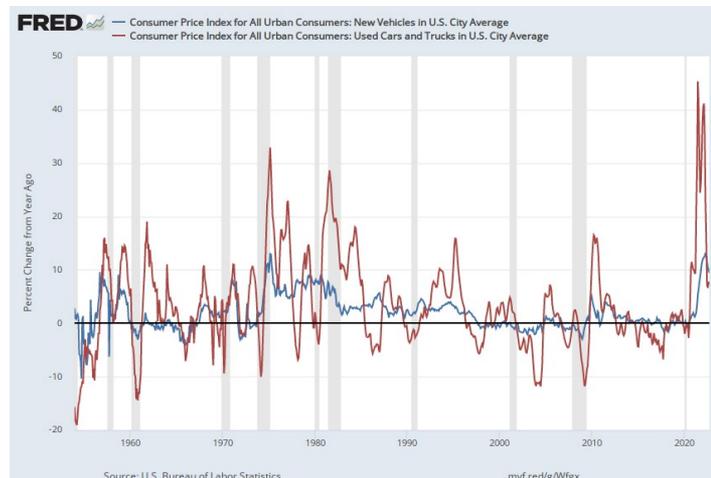
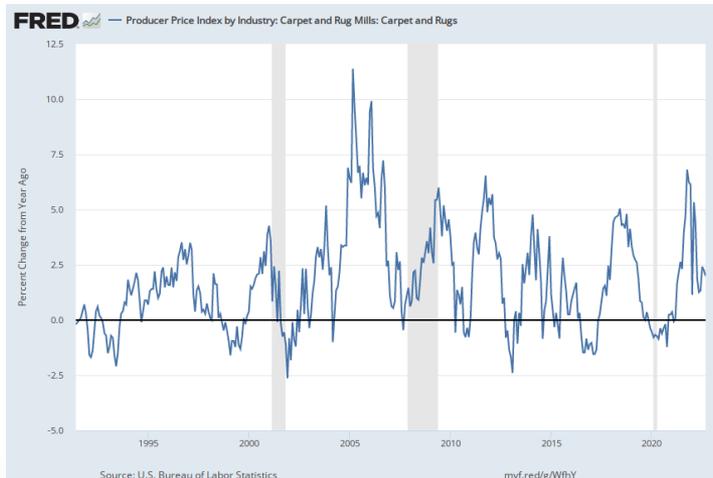
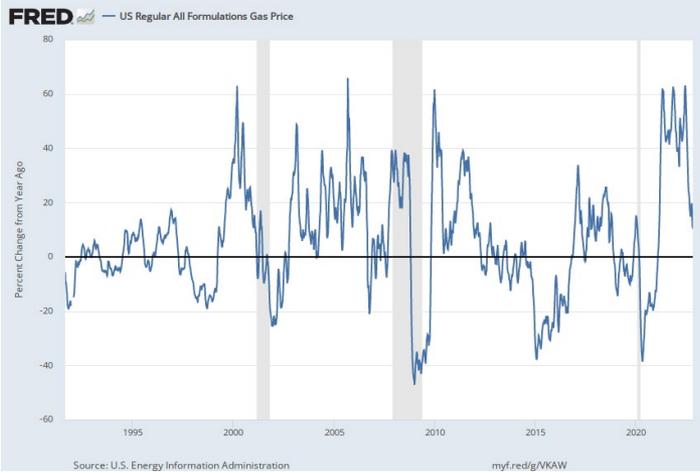
# What's new?



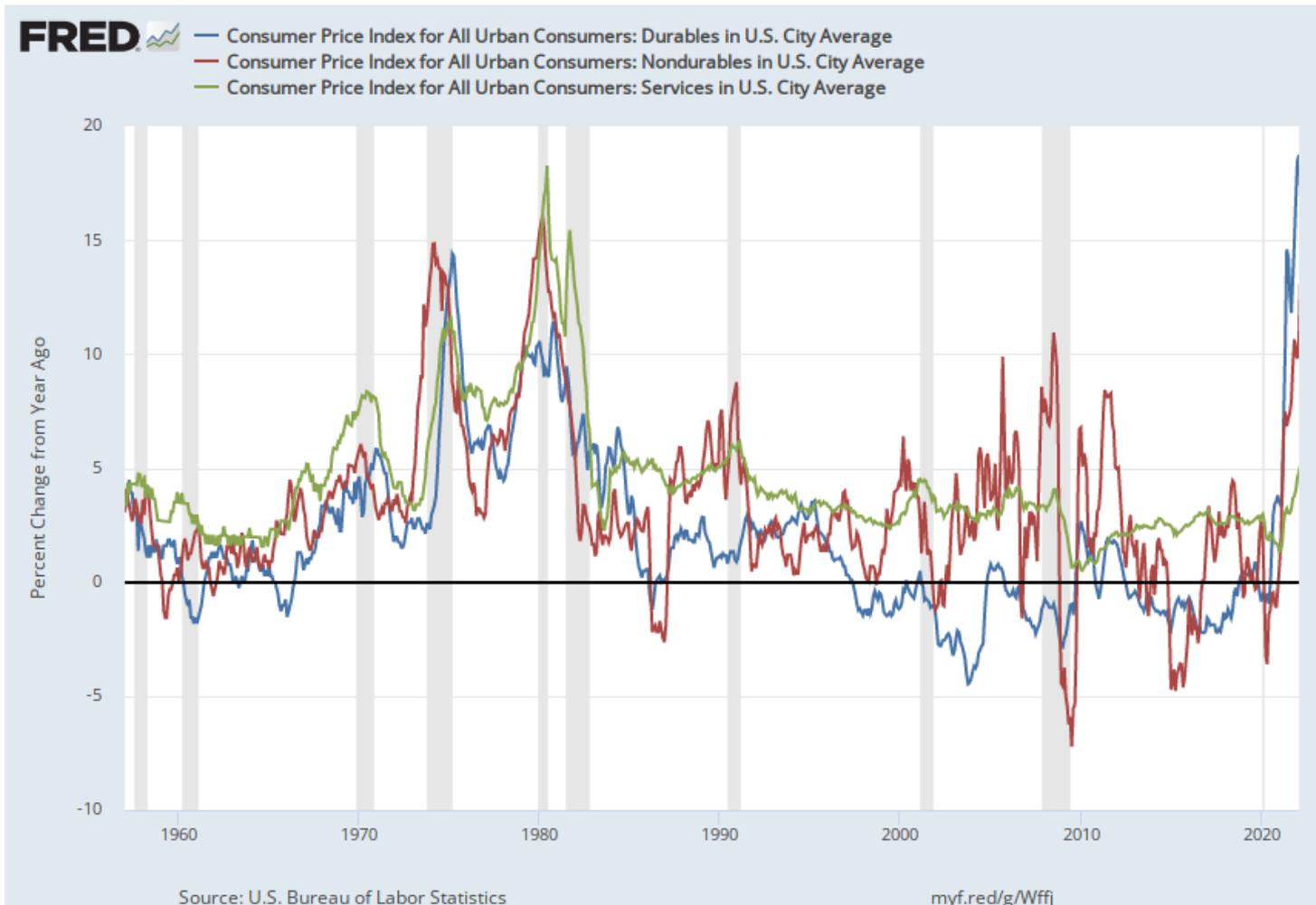
# Not just our problem...



# Inflation is just supply and demand



# As of February 2022 it was clear where the problem was

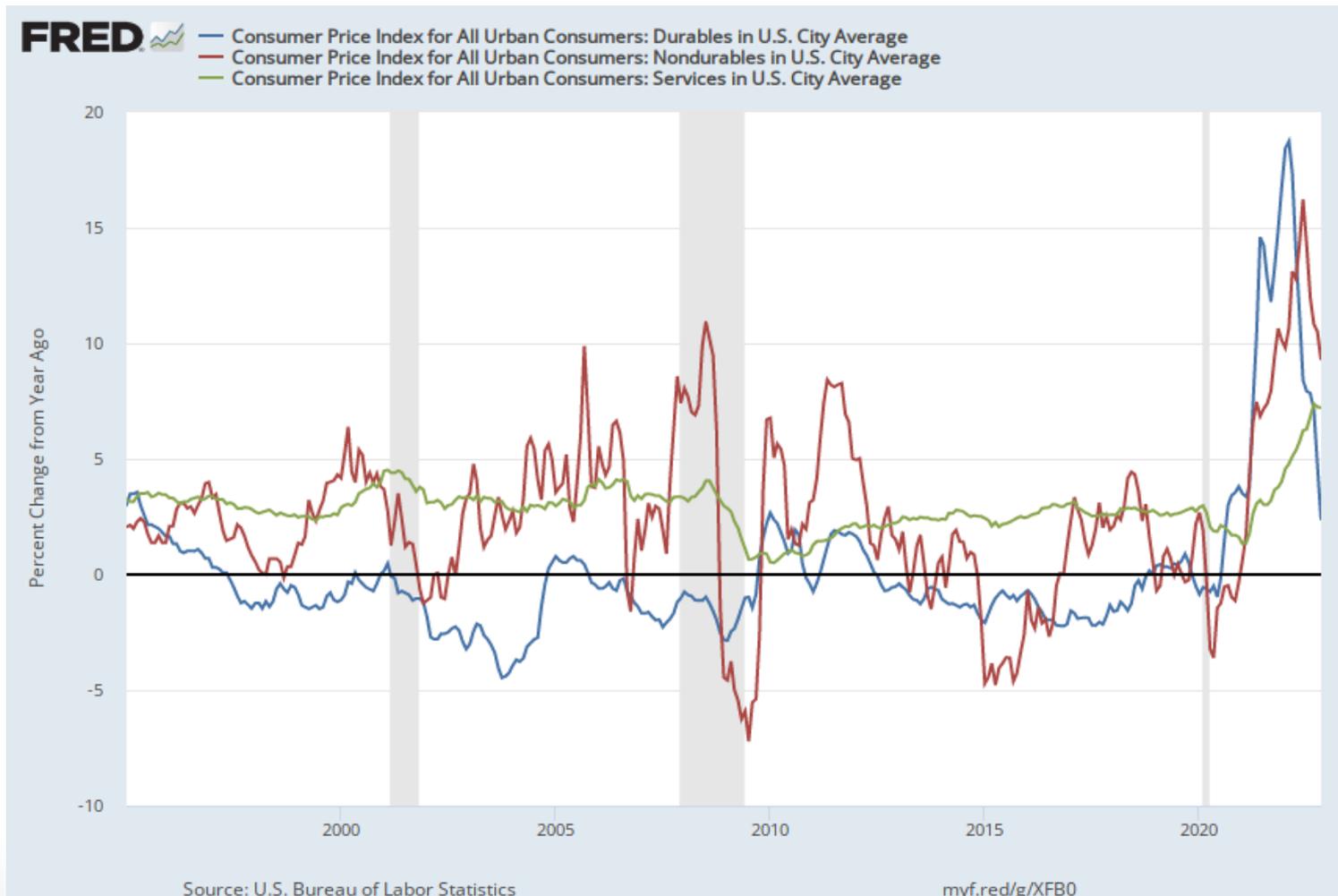


# Supply chain

- Efficient, but fragile, JIT supply chain was disrupted.
- COVID



# But now it seems different...



# Supply or demand?

- Services inflation now higher than for durables (and MoM would be more dramatic)
- “Cost push” or “demand pull”?

# Supply side: China imports are still not what they were. (There is a bright side to this)

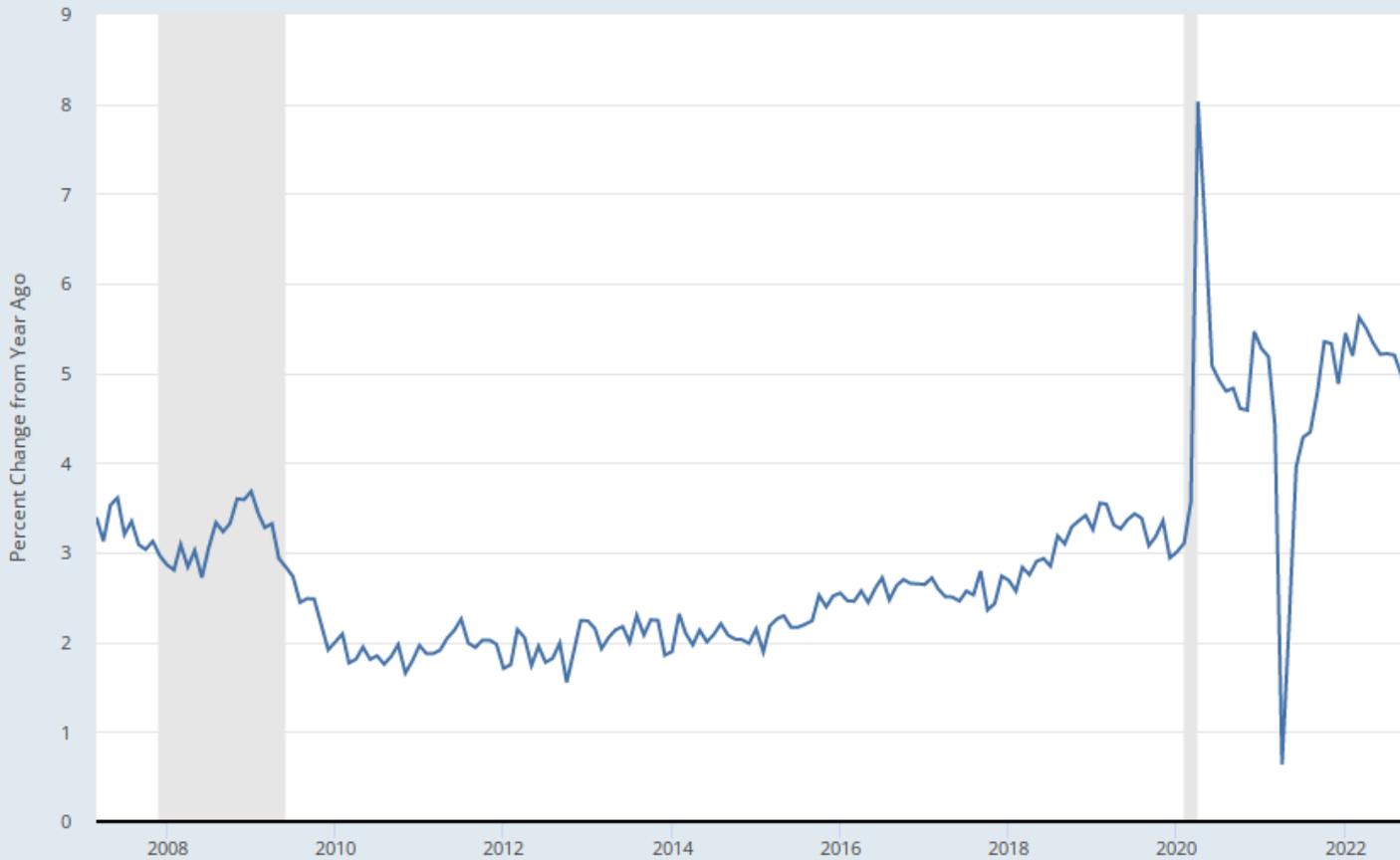


# Wages



**FRED**

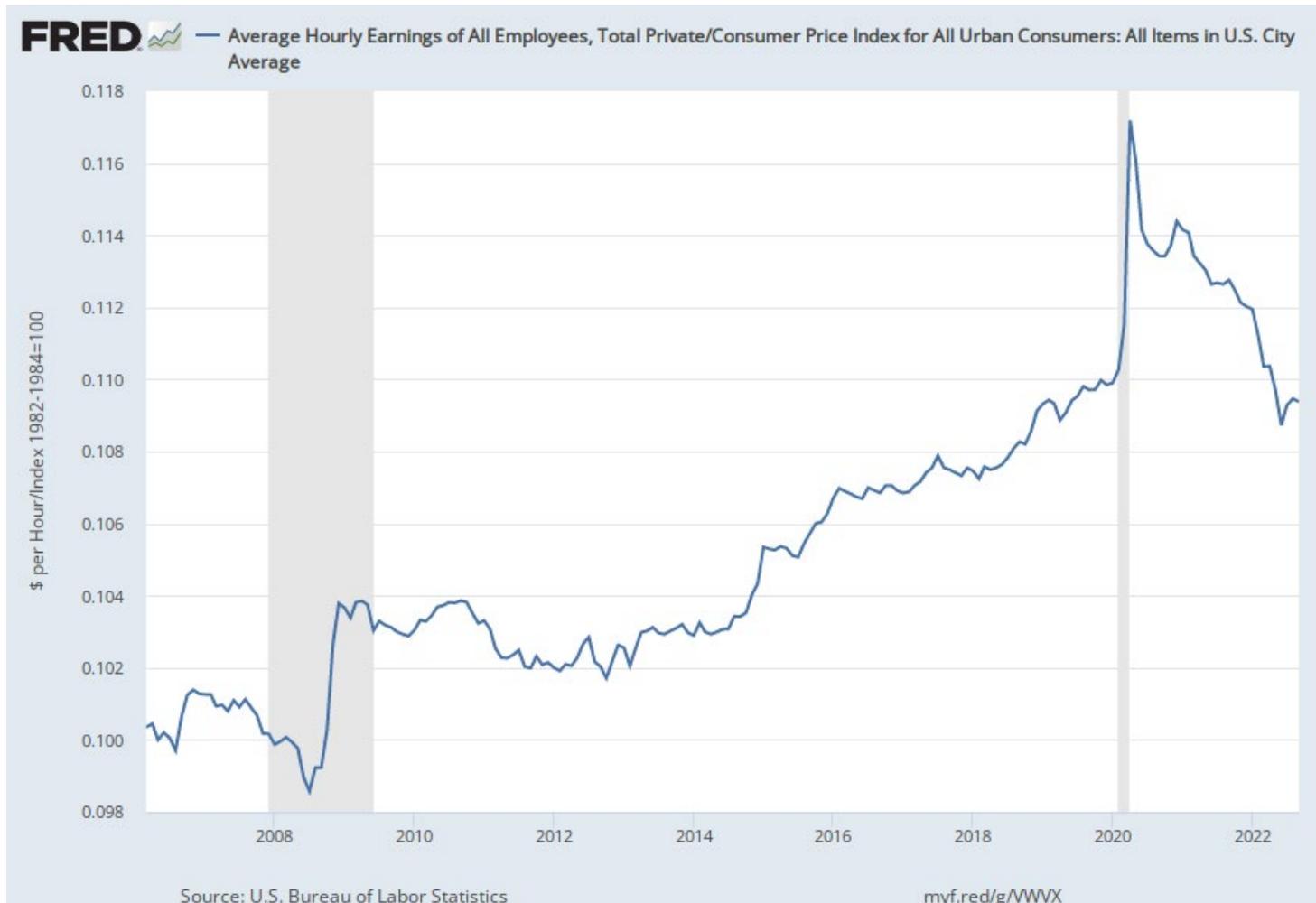
— Average Hourly Earnings of All Employees, Total Private



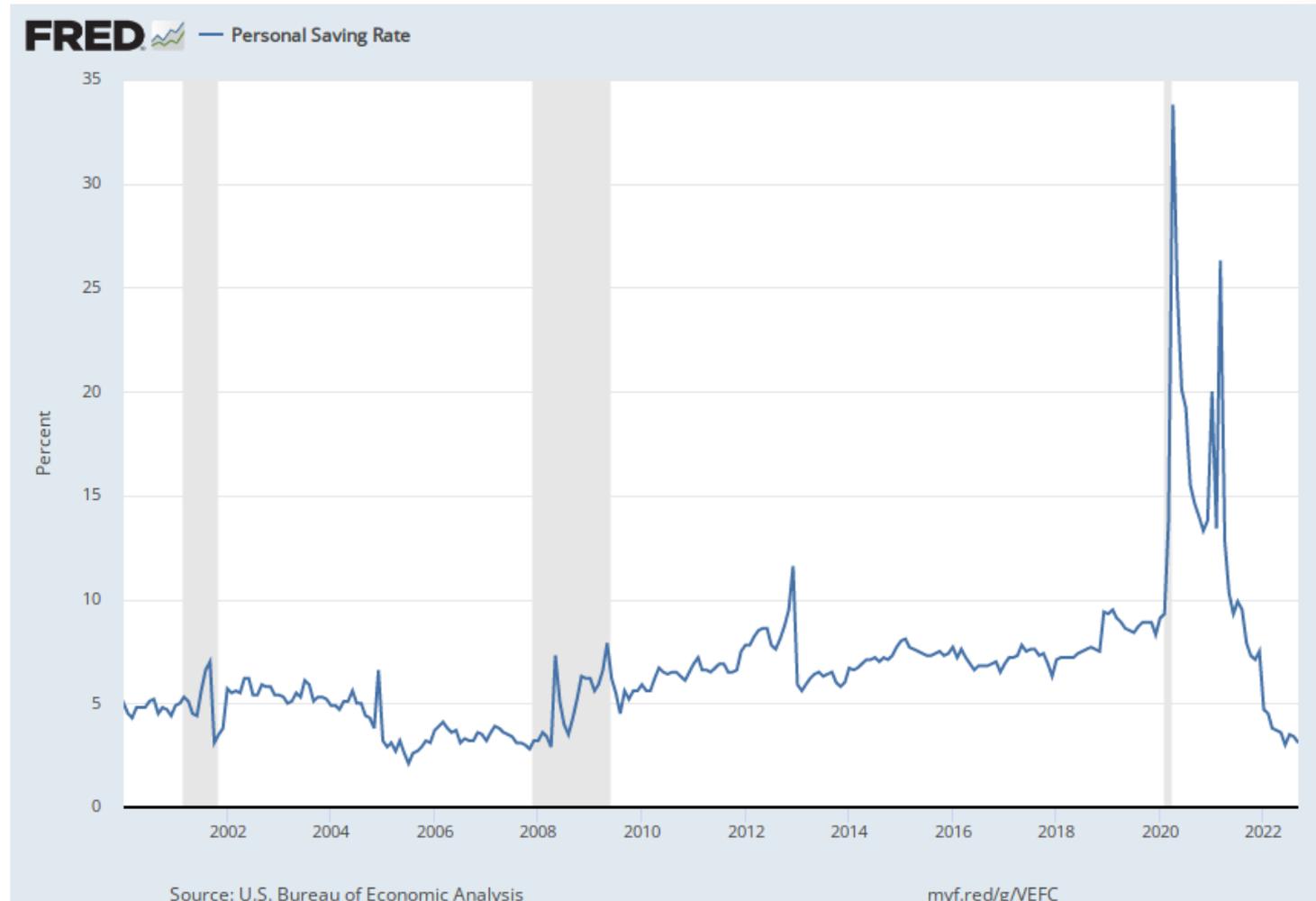
Source: U.S. Bureau of Labor Statistics

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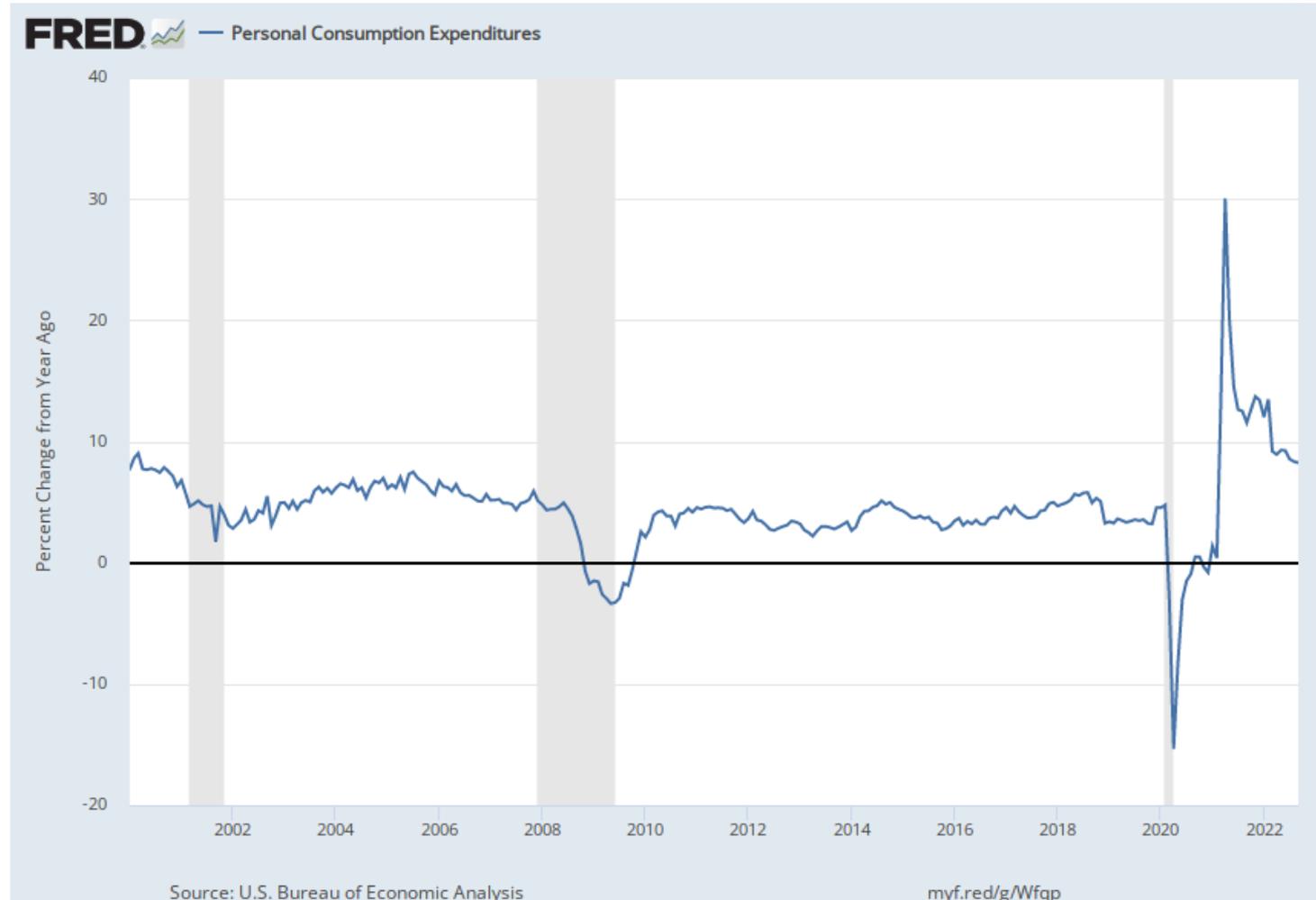
And while wages and prices form a circular bond, clearly wages have not really kept up with prices.



# And demand: the role of stimulus payments



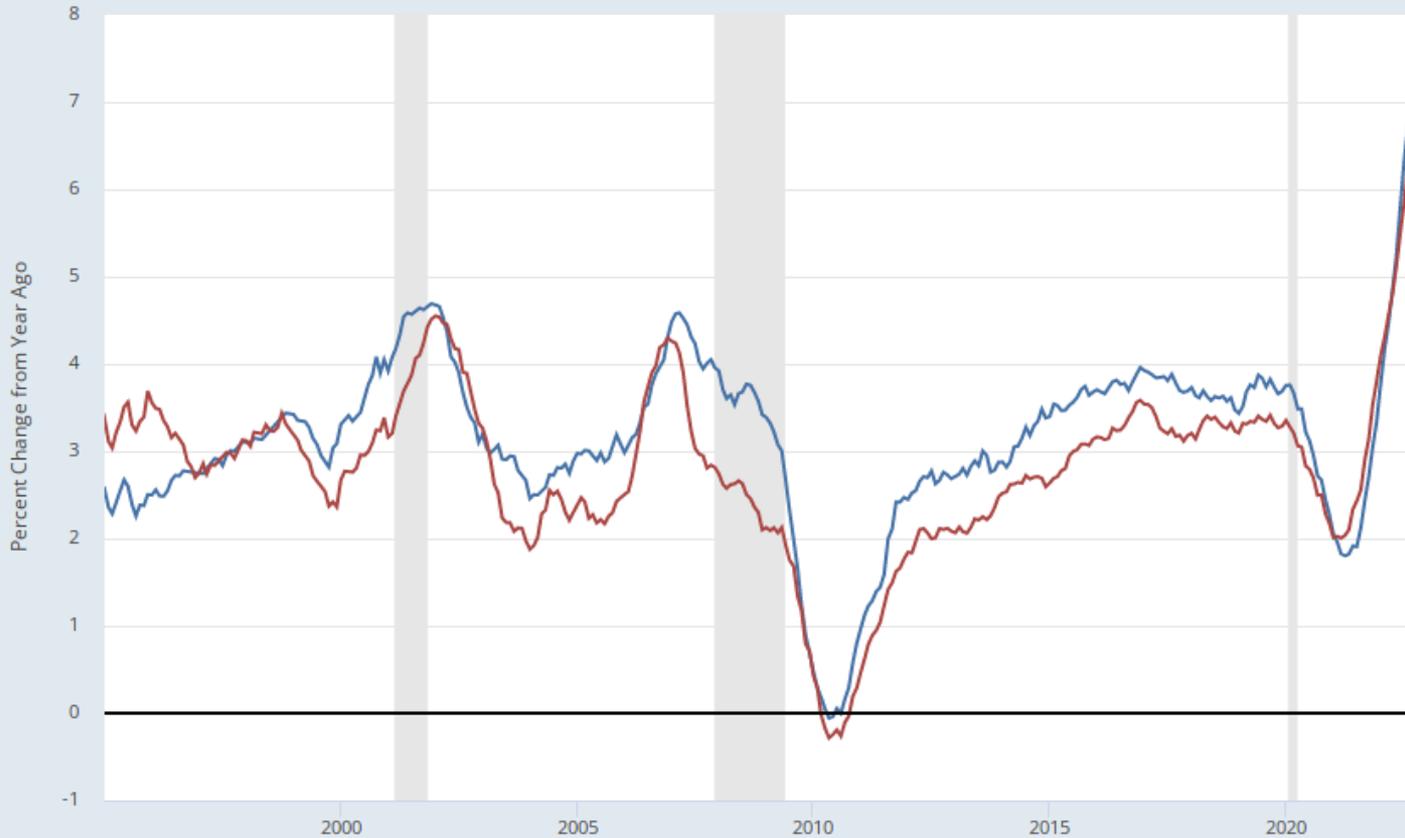
A lot of spending chasing a lot of goods (which makes for a healthy economy!)



What's missing so far?

FRED

- Consumer Price Index for All Urban Consumers: Rent of Primary Residence in U.S. City Average
- Consumer Price Index for All Urban Consumers: Owners' Equivalent Rent of Residences in U.S. City Average



Source: U.S. Bureau of Labor Statistics

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# Rent

- Rent is the biggest component in the CPI, and it has the worst measurement problems
  - Panels of rotating households report their current rent (from leases that were signed months previously).
  - This is not real time rent data, inadequate for macro policy
  - The ACY research agenda is here to help!

# We have been harping on this since 2015, finally getting attention paid.

## THE REPEAT RENT INDEX

Brent W. Ambrose, N. Edward Coulson, and Jiro Yoshida\*

*Abstract*—We employ a weighted repeat rent estimator to construct quarterly indexes that expand the profession's ability to make cross-sectional comparisons of housing markets. Our analysis shows that there is considerable heterogeneity in the behavior of rents across cities over the 2000–2010 decade, but the number of cities and years for which nominal rents fell is substantial: rents fell in many cities following the onset of the housing crisis in 2007; and the repeat rent and Bureau of Labor Statistics indexes differ due to sampling and construction methods.

### Reassessing Taylor rules using improved housing rent data<sup>☆</sup>

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#### ARTICLE INFO

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#### ABSTRACT

There is a debate whether the federal funds rate deviated from the Taylor rule. We present evidence that standard inflation measures do not reflect the contemporaneous state of housing rents, which are a large part of price indexes. Using a new housing rent index (RRI) developed by Ambrose et al. (2015), we compute the RRI-based Taylor rule for the period from 2000 to 2010. The modified Taylor rule indicates that seemingly large deviations are better understood as delays due to the stale information regarding housing rents. It also provides a justification for Quantitative Easing and a better alternative to other versions of Taylor rules.

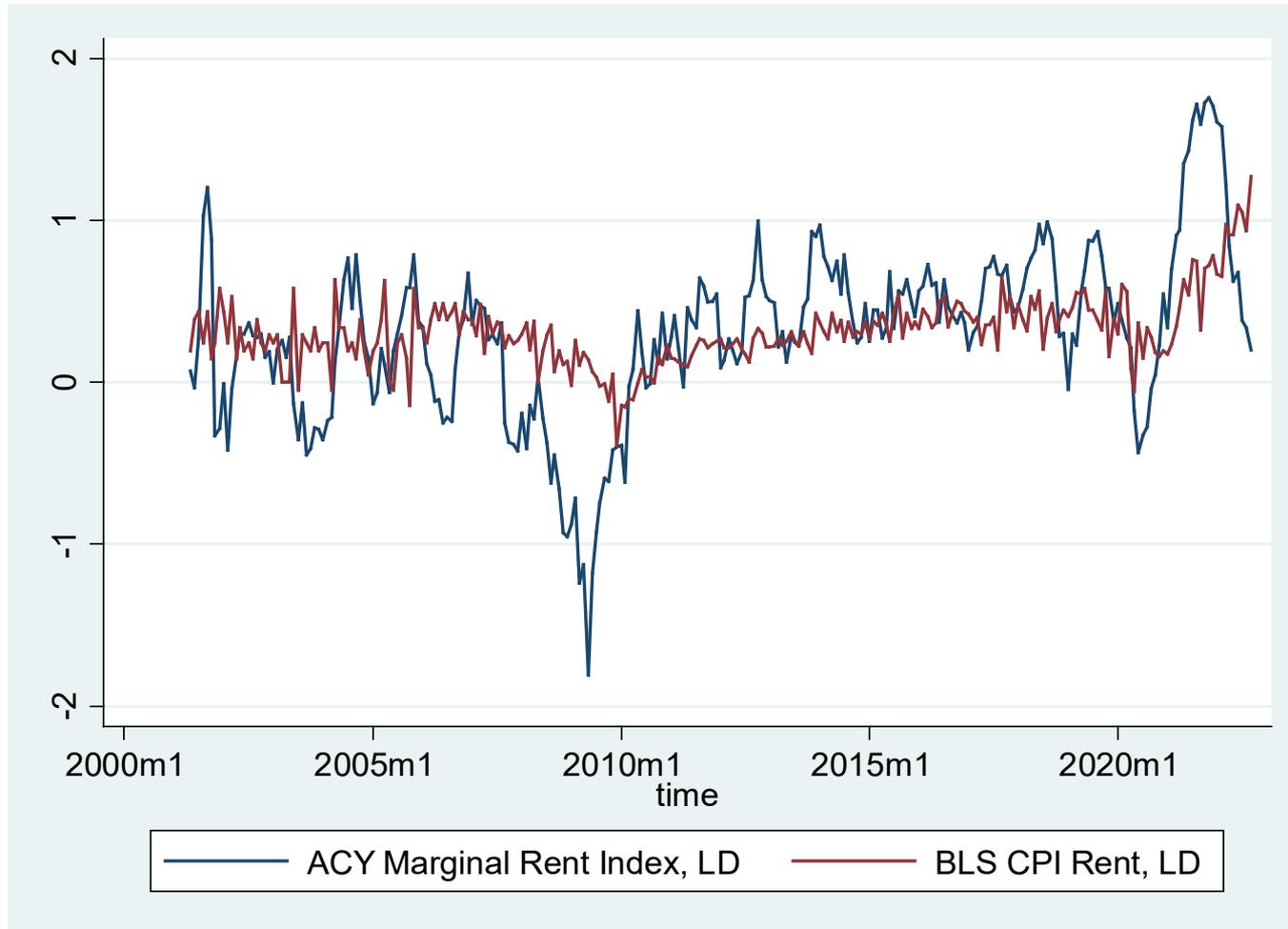
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BRENT W. AMBROSE  
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## Housing Rents and Inflation Rates

This paper develops a quality-adjusted measure of marginal housing rents using a monthly statistic of landlord net rental income. The marginal rent index (MRI) exhibits deflation during recessions and leads the official rent index by 7 months. The modified inflation rate based on MRI suggests that the annual official inflation rate was overestimated by 1.7–4.1% during the Great Recession but underestimated by 0.3–0.7% during the subsequent expansionary period.

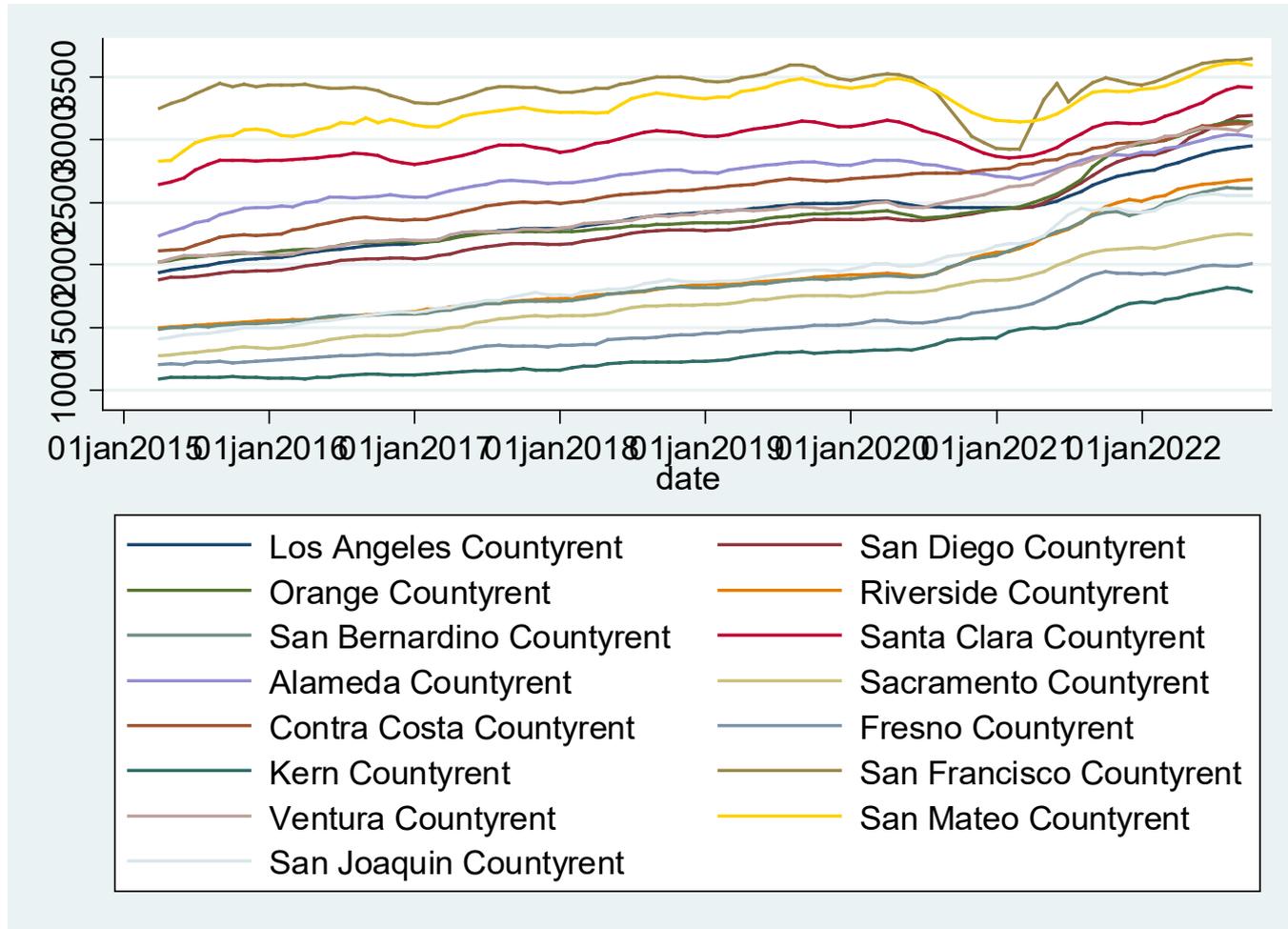
# Month over month rental inflation: ACY vs. BLS



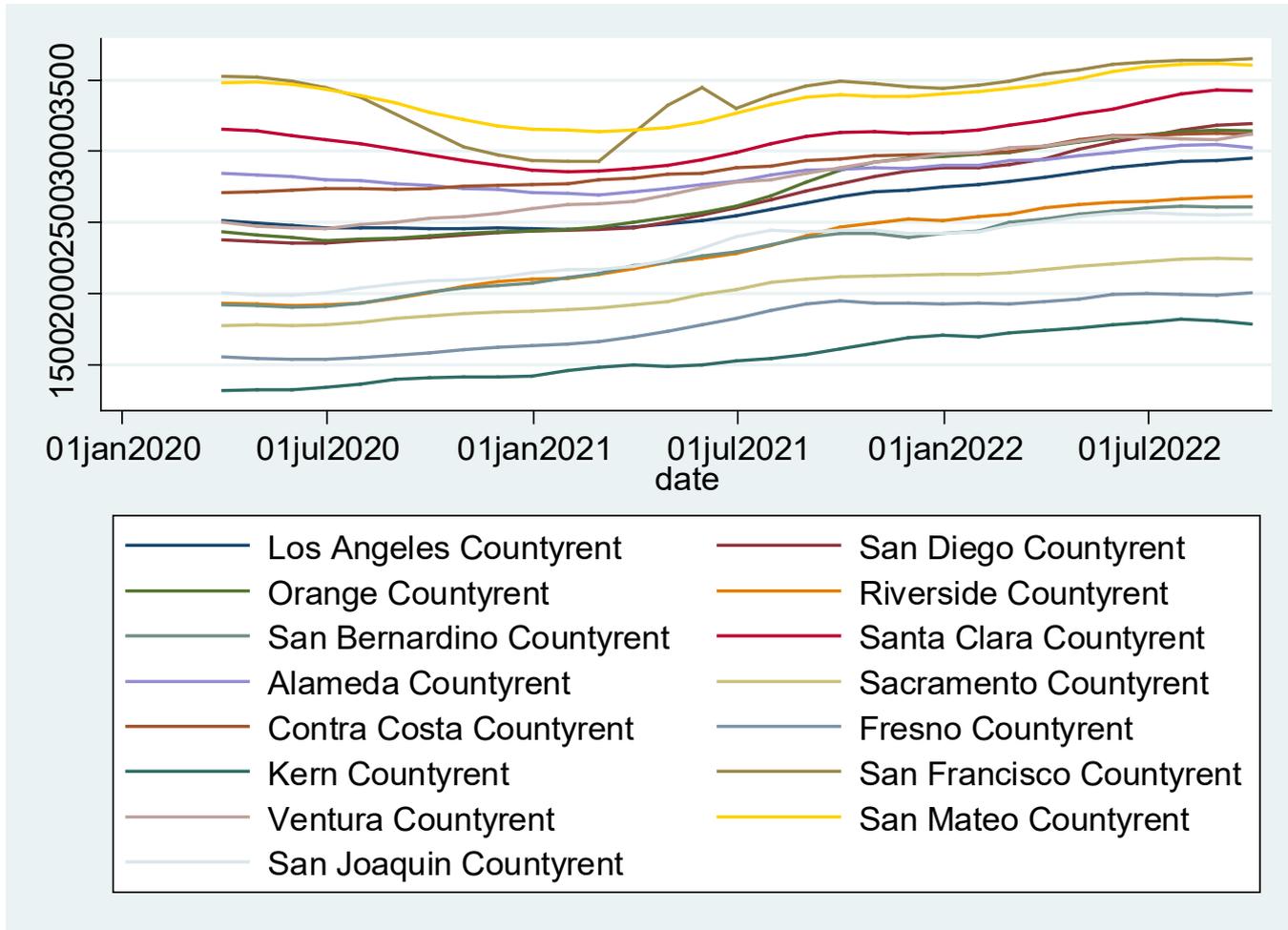
# Don't take our word for it!

Let's check with Zillow!

# Rents in California are already exhibiting this trend

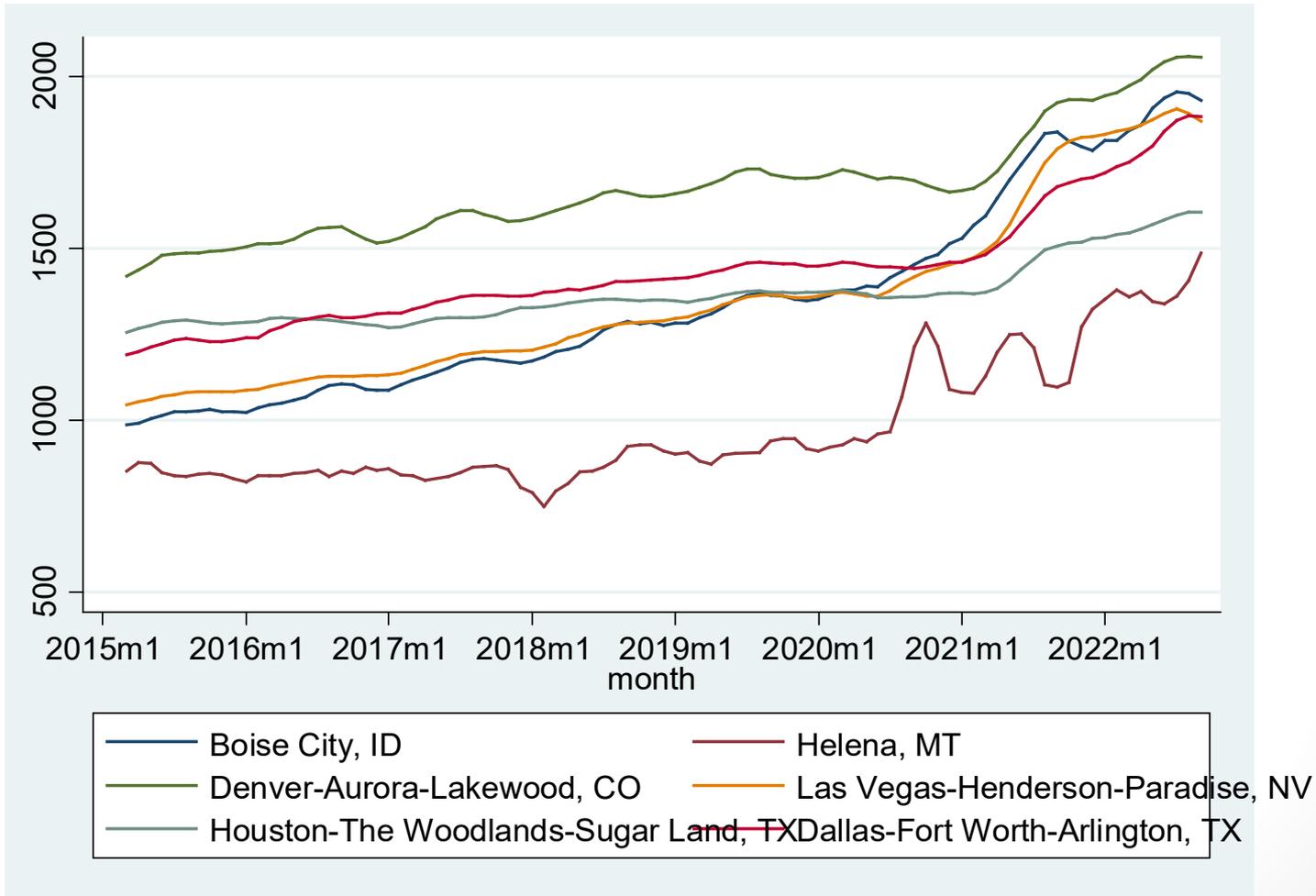


# A closeup since the pandemic



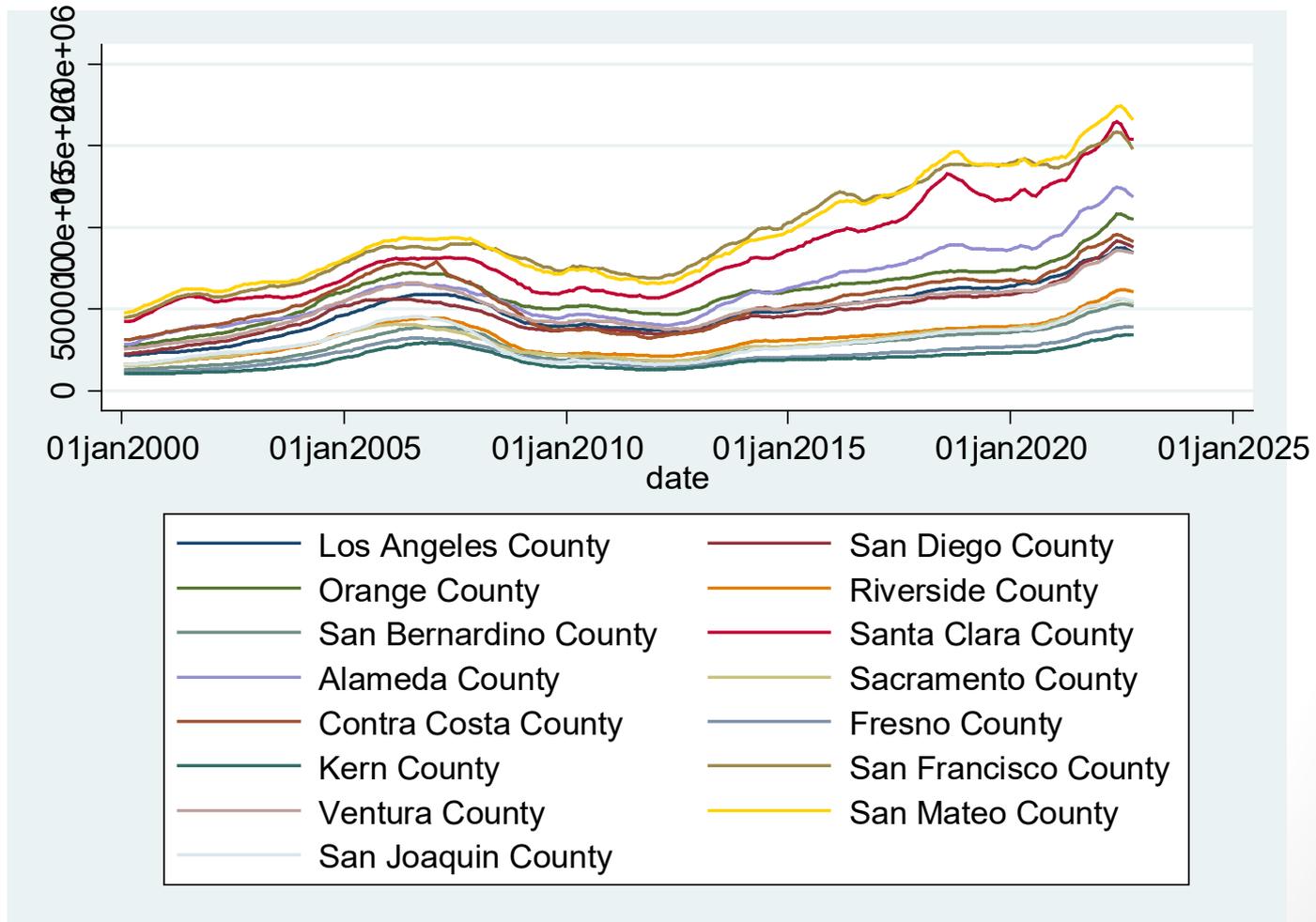
- The story of rents:
  - Through 2020, rising demand and unresponsive supply
  - Pandemic:
    - Initial panic, especially in Norcal/Silicon Valley
    - Super strong recovery
      - COVID induced
      - Again, demand is not met with increased supply
  - But we have worked through that.
    - Some equilibration with other places
    - California is expensive and not everybody thinks that it's worth it.
    - Sorting out who really values the good life!
    - But these other places (mostly) have very similar histories.

# Alternatives to California

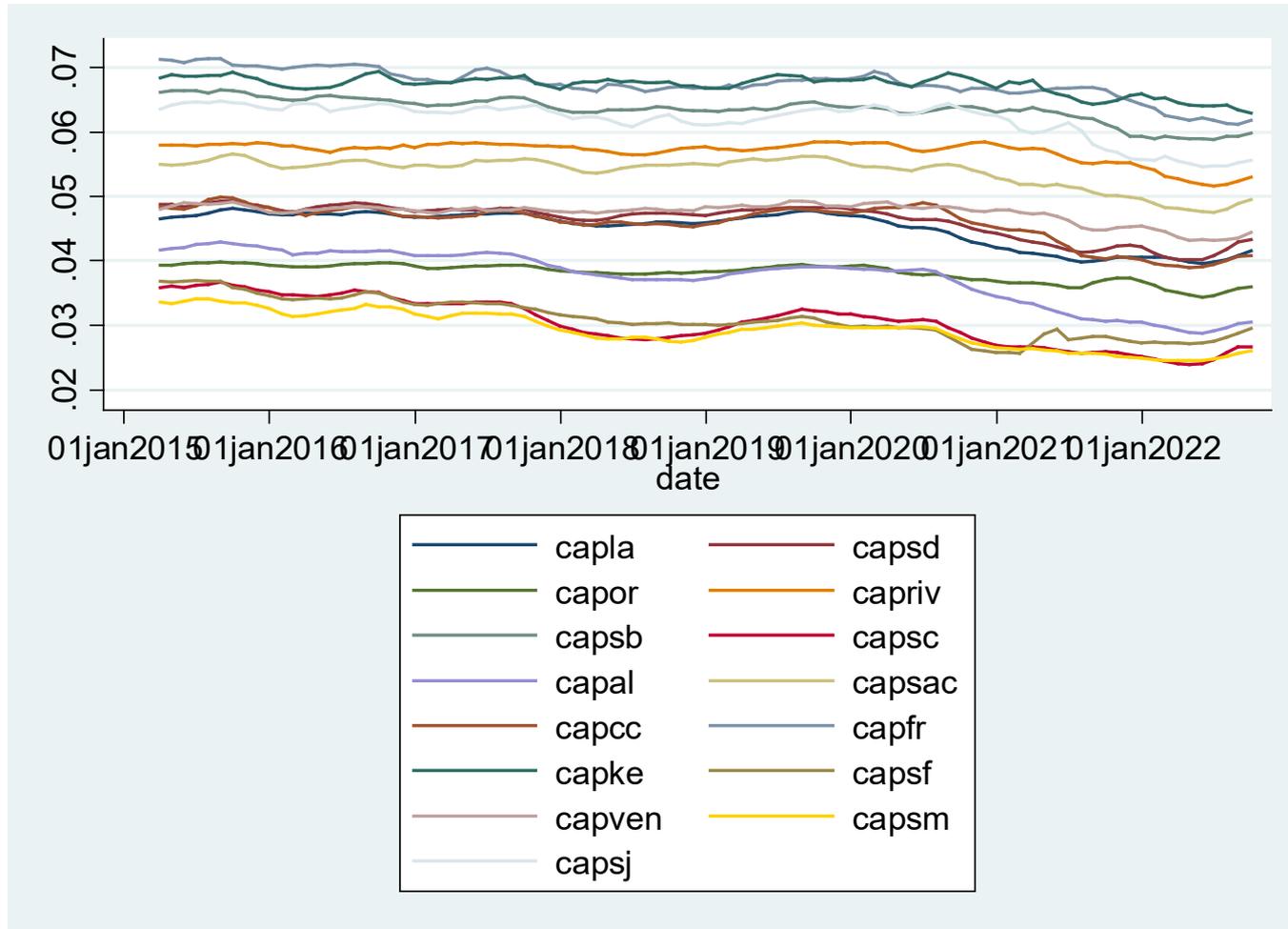


So what about home prices?

# Home price



# The first year gross rate of return (R/P)



# Three facts about prices

- The run up of prices from 2015-2020 was not a bubble, even though interest rates were quite low
- The steeper run up of prices from 2020 to early 2022, was bubblish.
  - Some was rents
  - Some was interest rates
  - Falling cap
- The decline is the result of both interest rate increases and flattening rents

# The (gross) cap rate model of housing

- Price = Rent/cap rate
- Cap rate = discount rate - forecasted appreciation rate
- Double trouble for real estate.

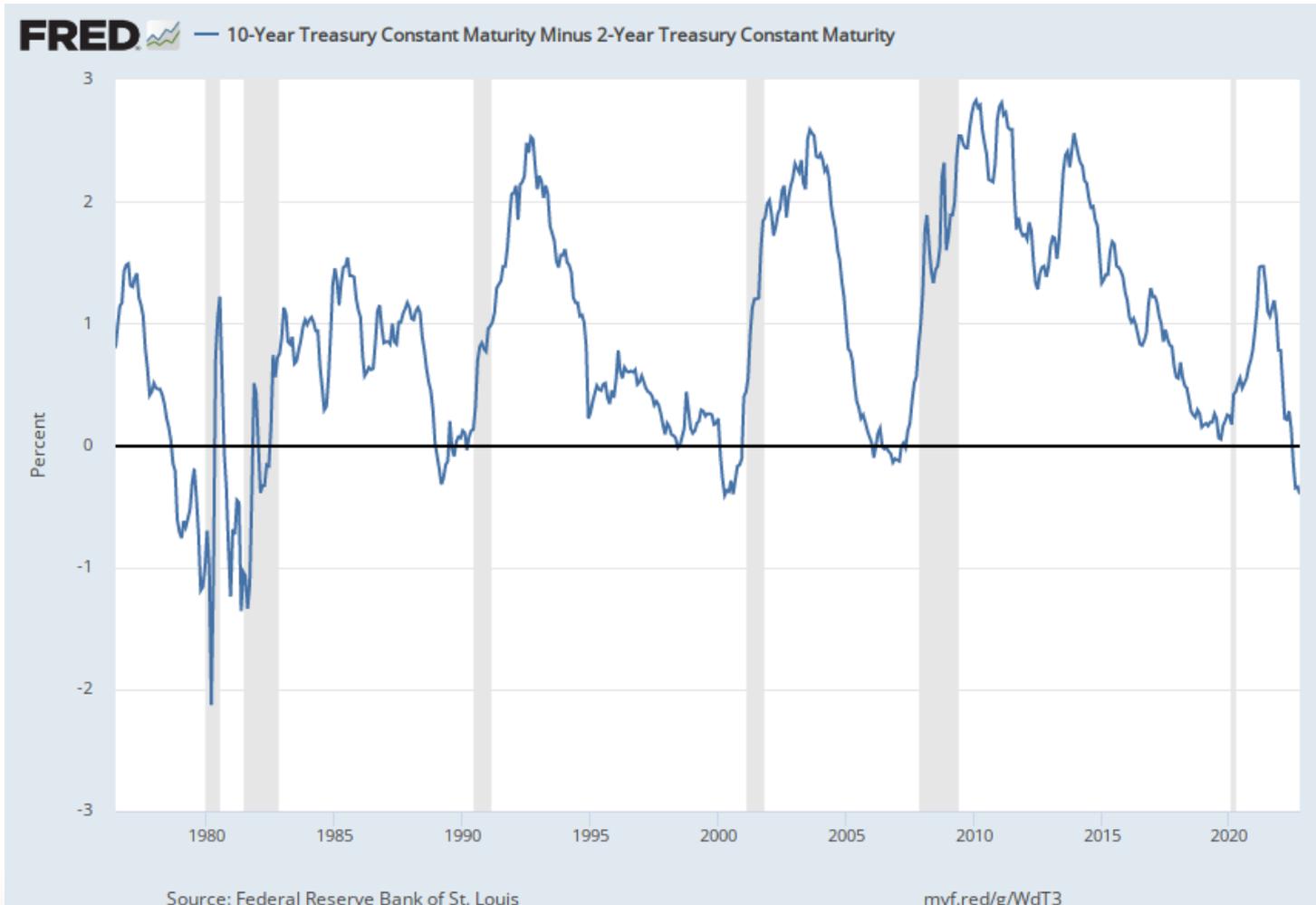
# The second major headwind for home prices

- Higher interest rates
- Thank you, Captain Obvious
  - This is especially bad for new homebuyers (and developers) but the impacts will leak into all home prices

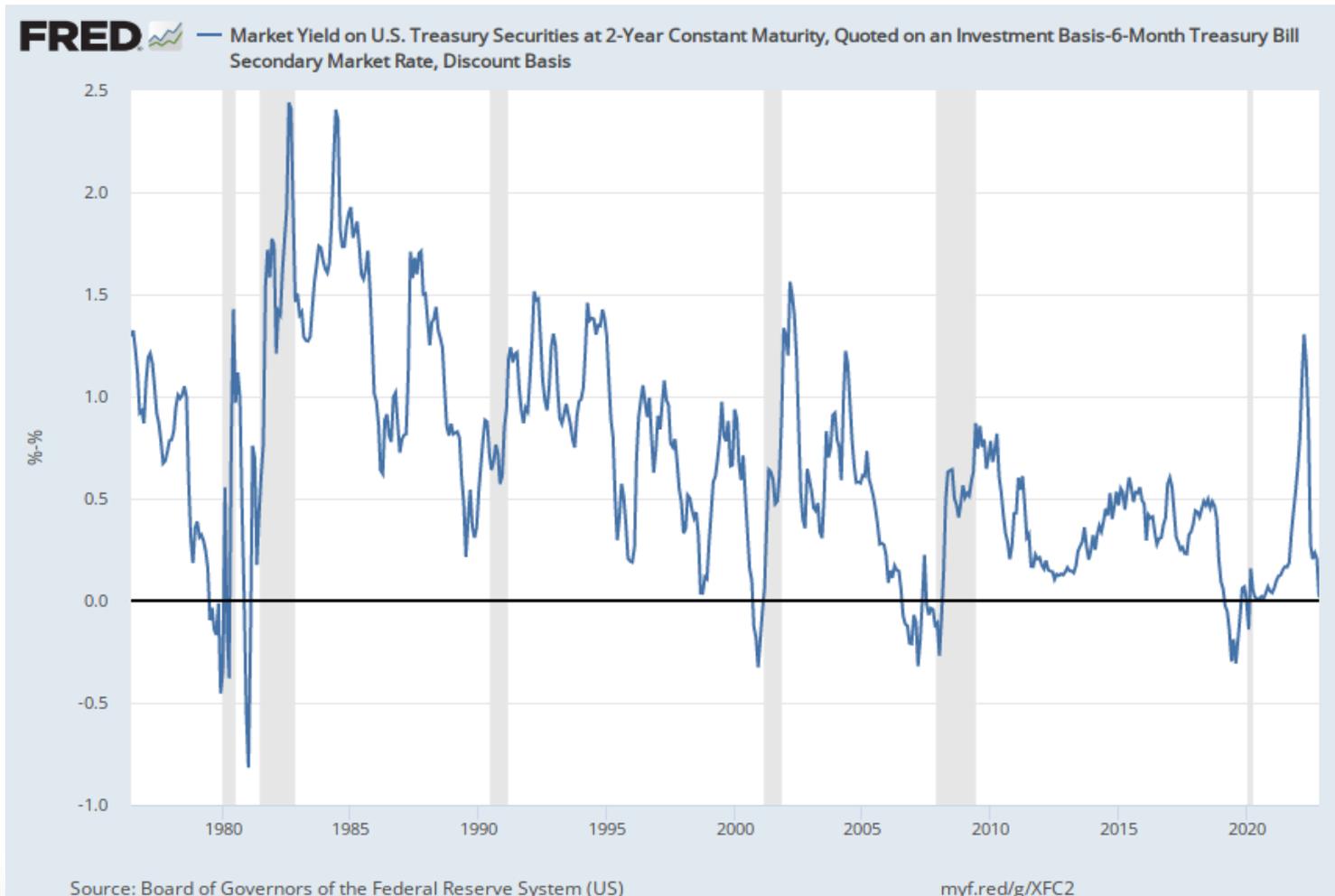


- Nobody will want to move (refinance). Stifles the economy.

# The inversion of the yield curve(s)



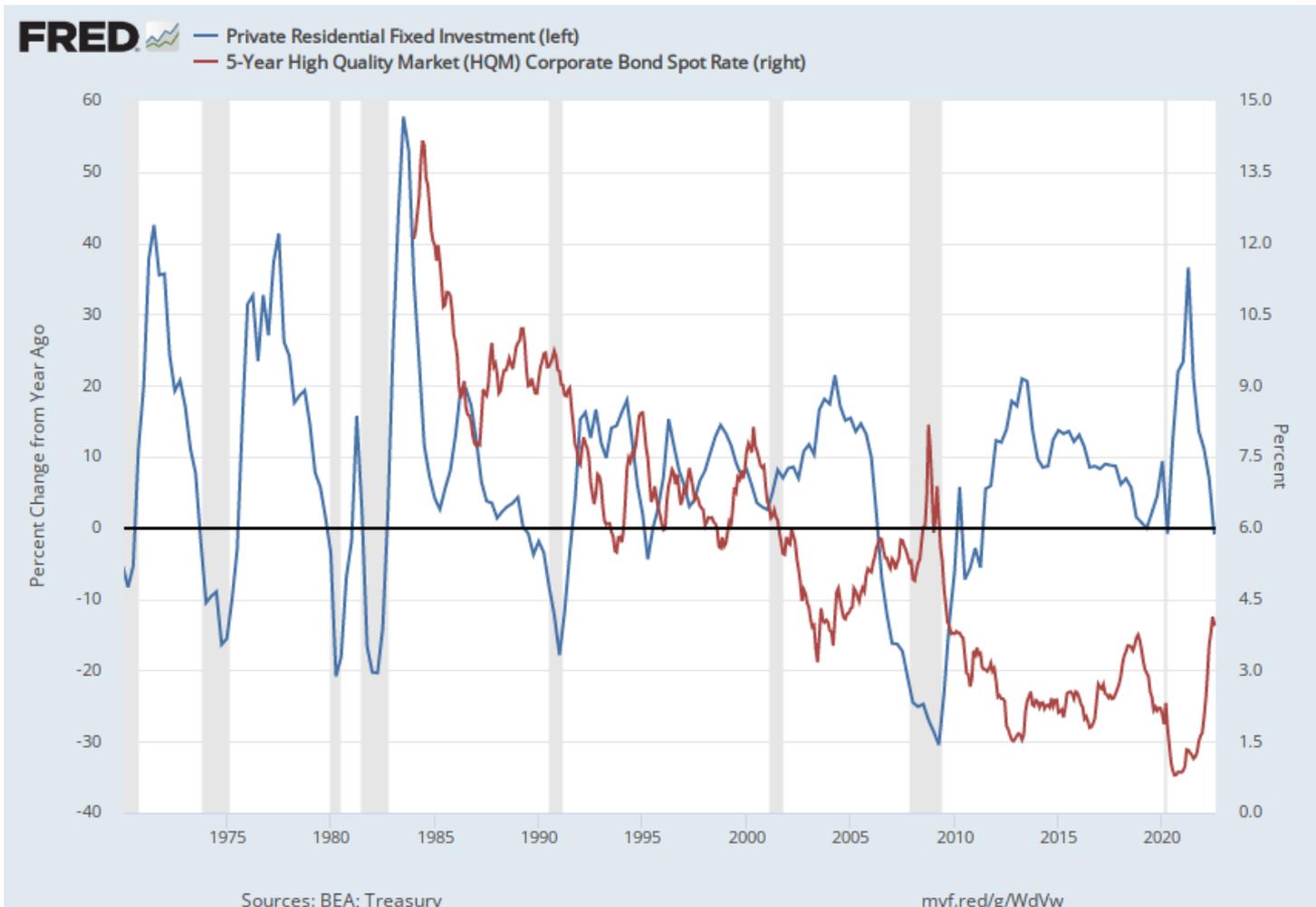
# Alternative yield curve inversion



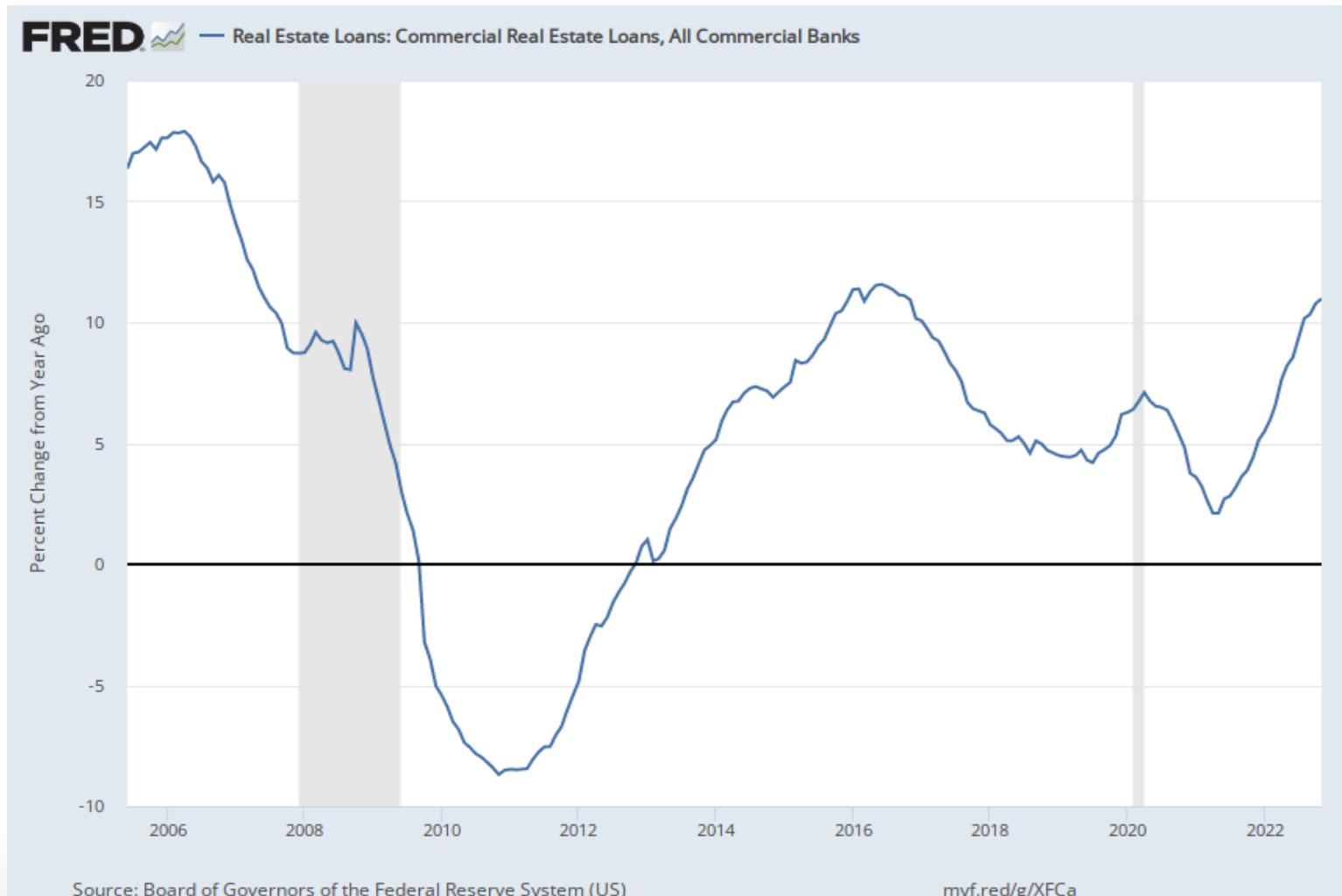
# The Chairman will not rest

- Powell's signals are that this inequality should be reversed.
- Suggests that rates increases will continue until this happens, either because rates keep rising or inflation subsides
- If I am right about housing element of market basket, this will happen sooner rather than later.
- Many other signals of easing inflation (gas, cars, not eggs!)

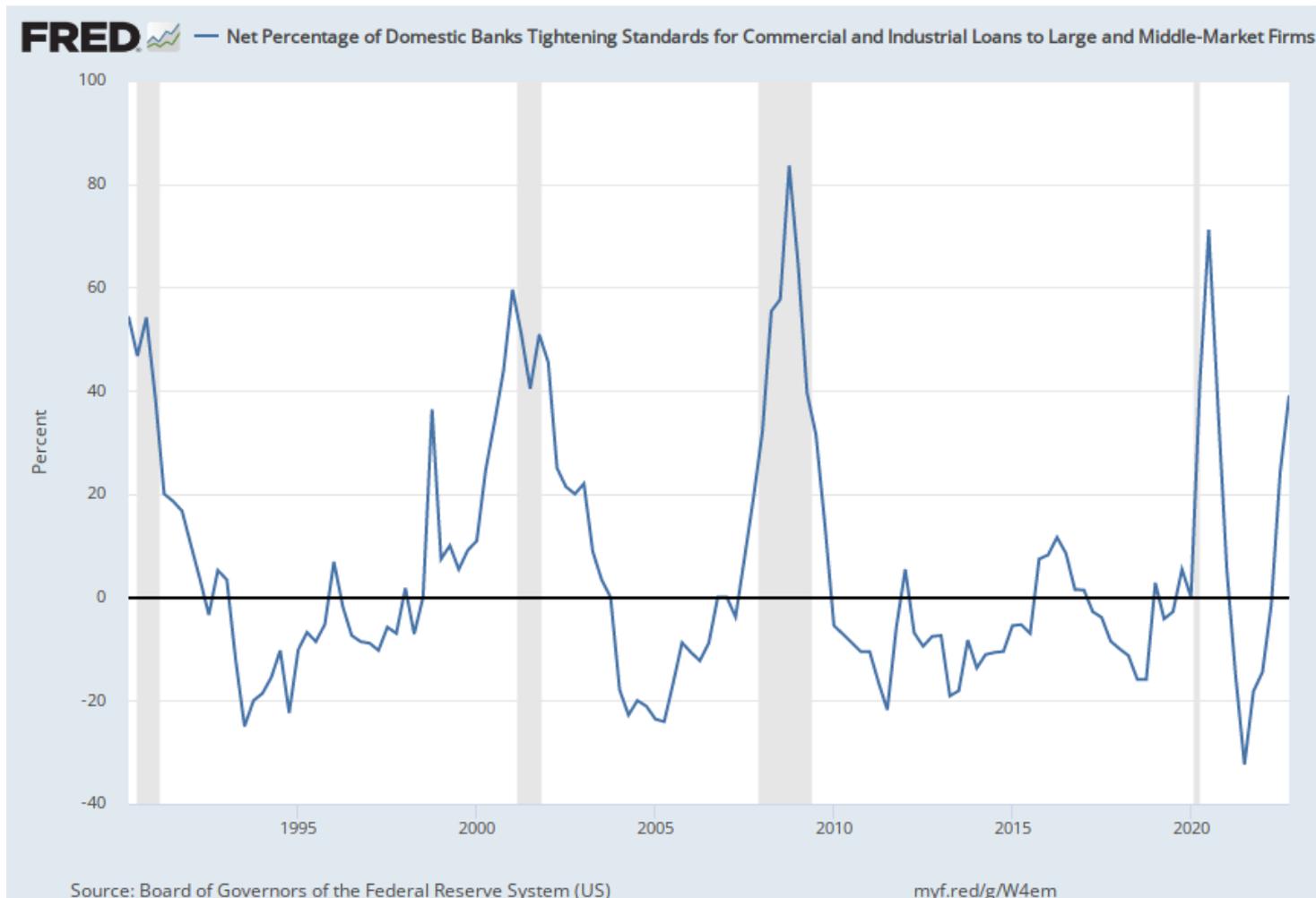
# Construction activity will flatten



# Lending is still healthy,

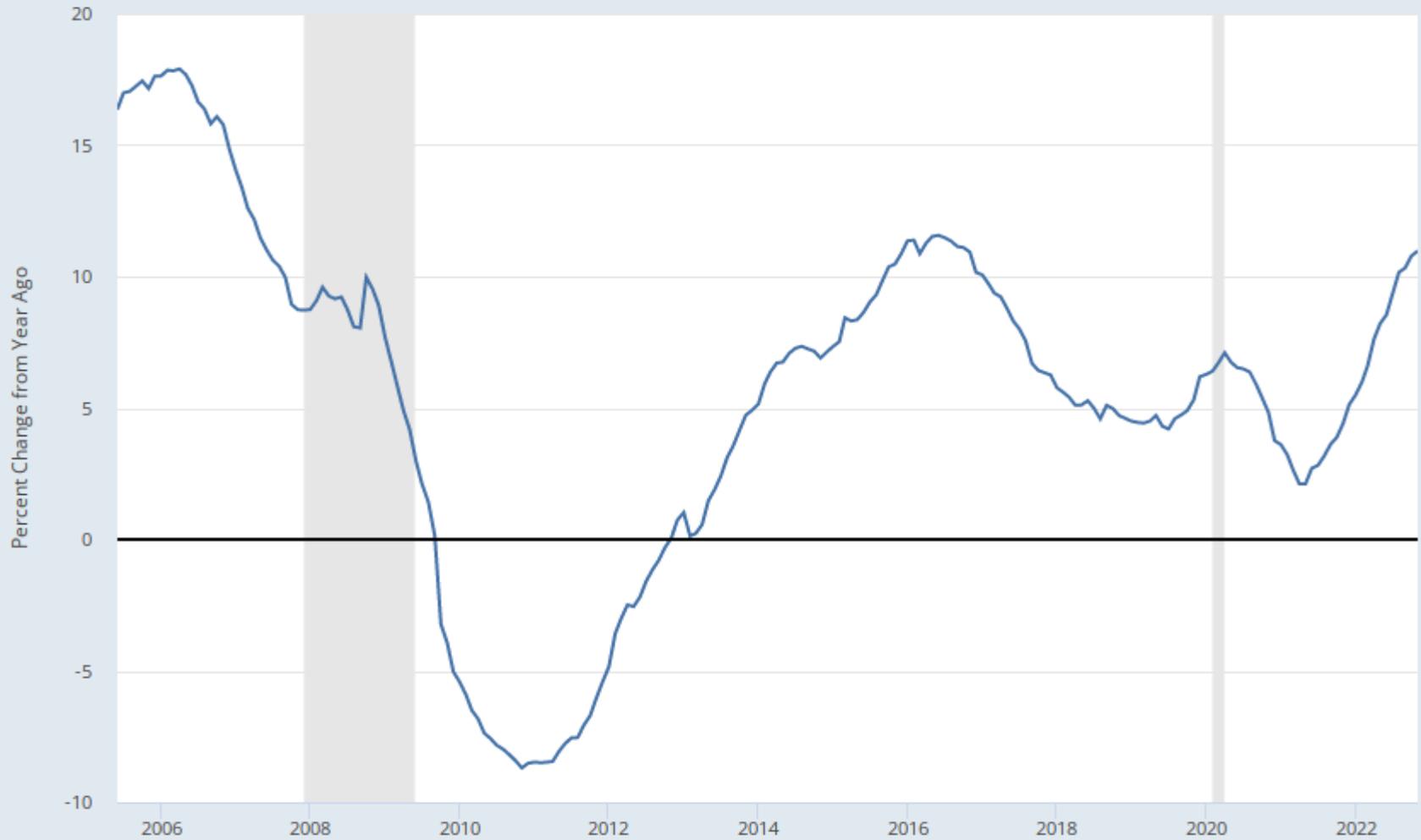


# But lenders are concerned



## So, predictions

- Inflation will slacken, and sooner rather than later (sort of coming true now!)
- But probably not quick enough for Powell to change his mind about (milder) rate hikes.
- So there will be major pull backs in residential construction
- And later, commercial development.
- Could be over pretty soon



Source: Board of Governors of the Federal Reserve System (US)

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