

FEBRUARY 7, 2023

ECONOMIC OUTLOOK

Tightening Into A Downturn

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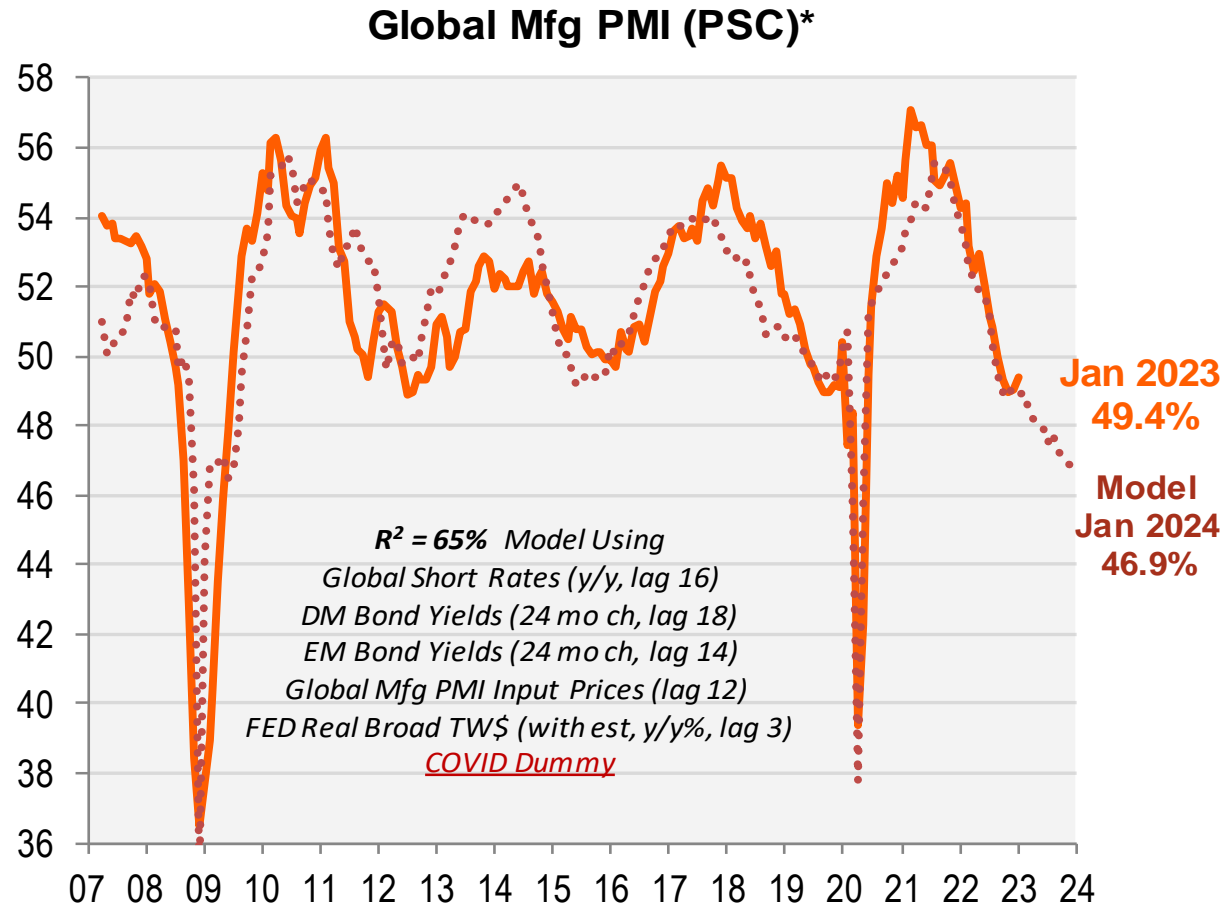
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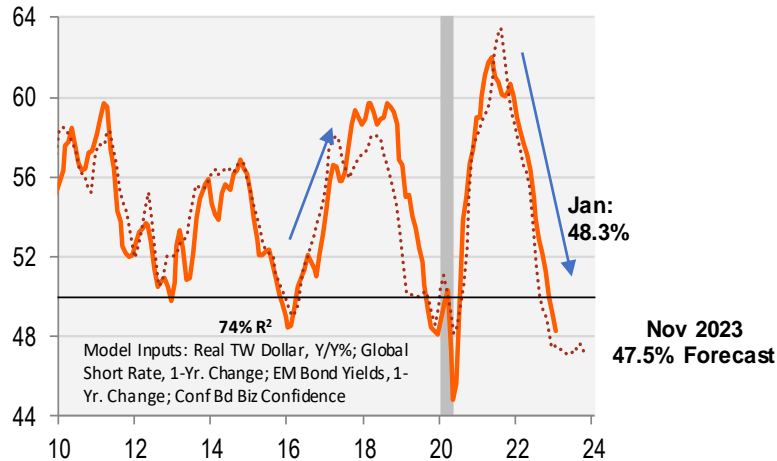
Property of Piper Sandler – Please do not forward.

GLOBAL GROWTH MOVING INTO RECESSION.

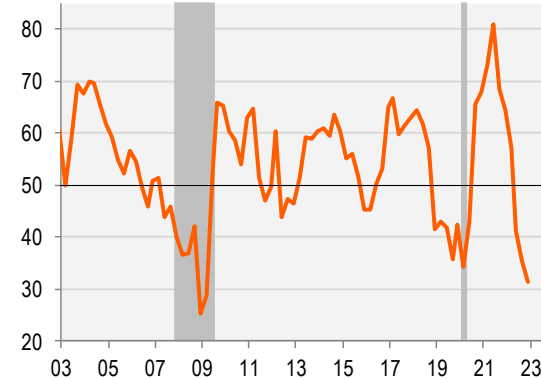


THE FED IS TIGHTENING INTO A SLOWDOWN.

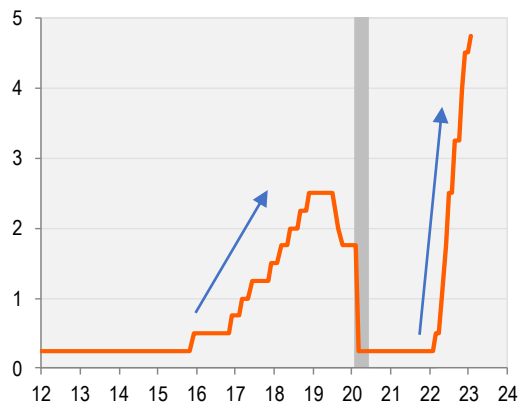
U.S. Mfg PMI (ISM), 3 Mo. Avg.



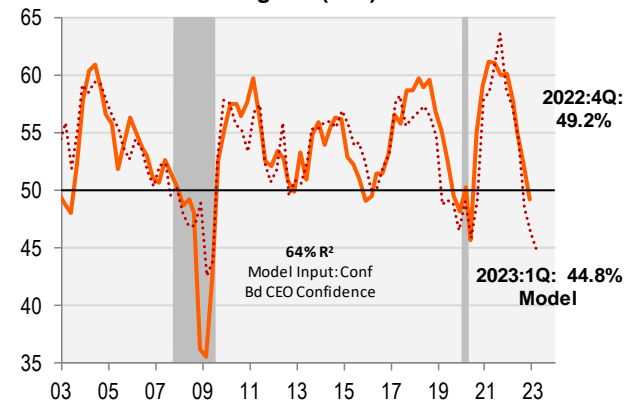
U.S. Business Confidence (Conf. Bd.)
Business Conditions
Seas. Adj. by PSC 2022:4Q: 31.4%



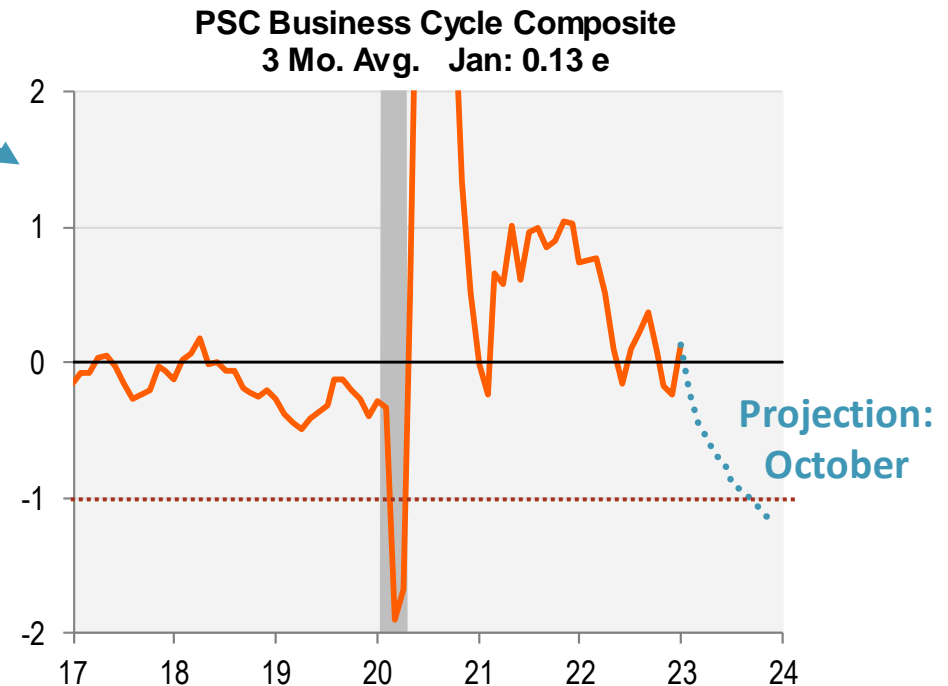
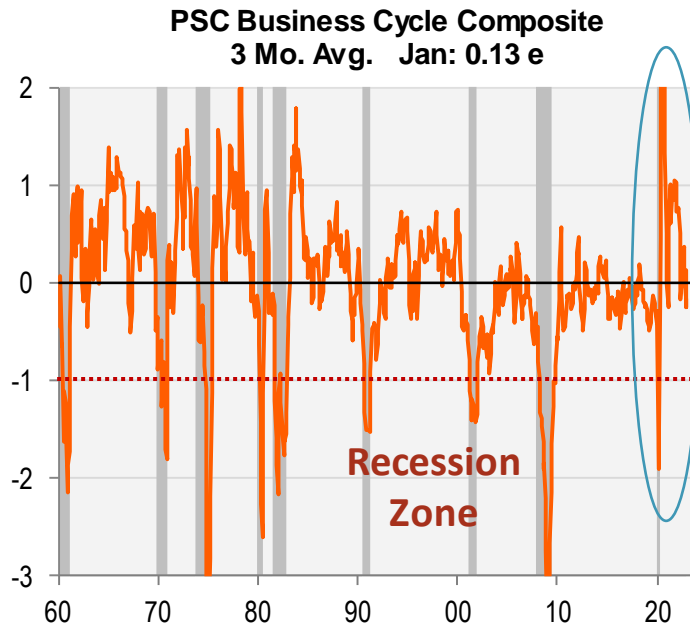
U.S. Fed Funds Rate
Feb: 4.75%



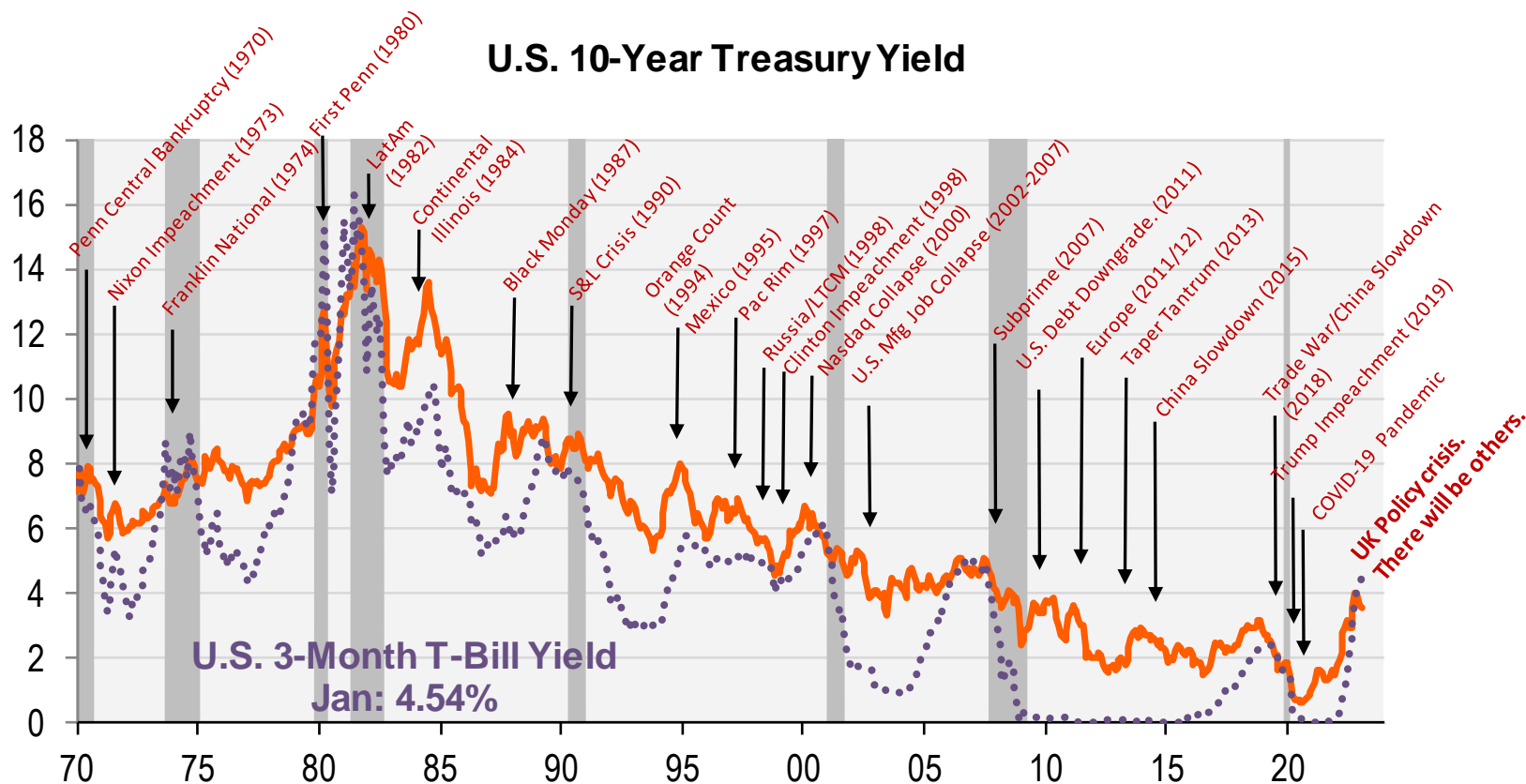
U.S. Mfg PMI (ISM)



RECESSION LIKELY IN 2H 2023.

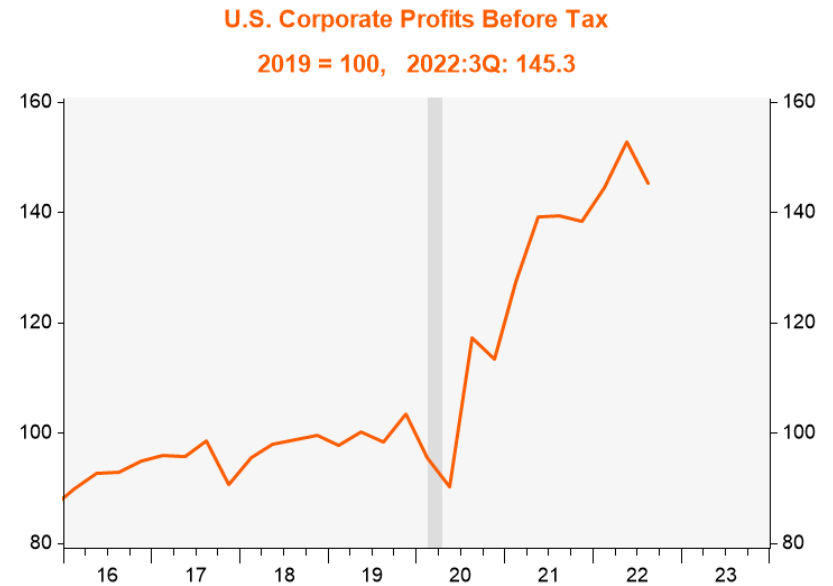
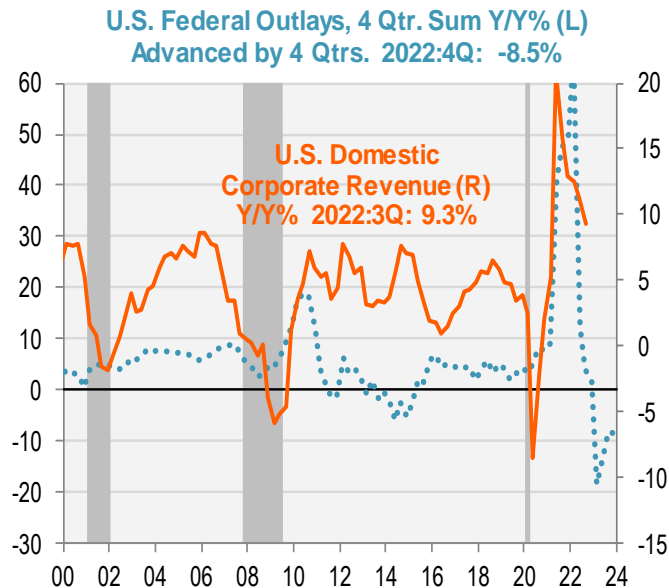


FINANCIAL STRAINS ALWAYS UNFOLD WITH HIGHER RATES.



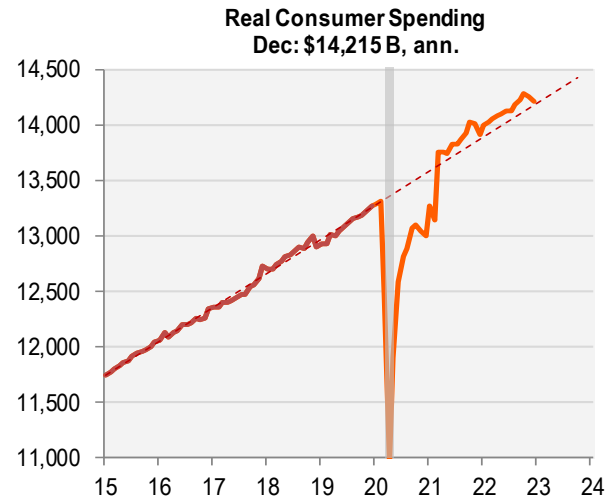
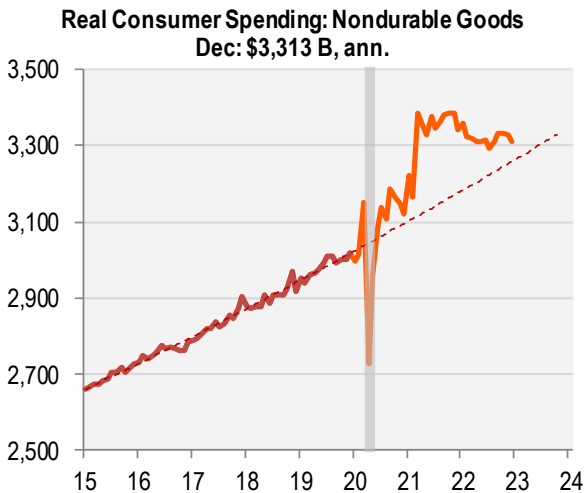
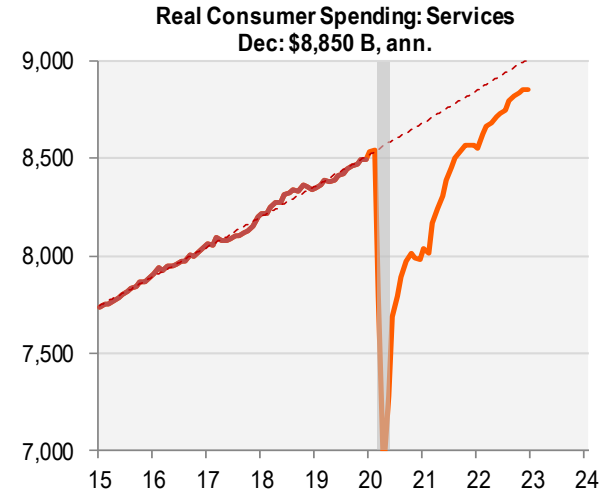
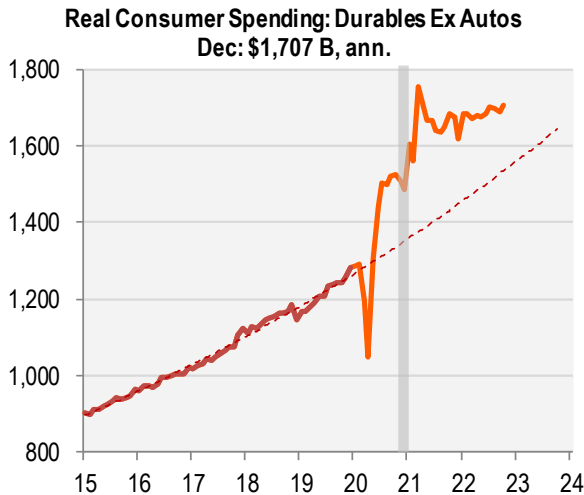
Financial shocks generally occur during periods of rising rates. Why? Because low rates mask problems in the real economy, e.g. too much investment, excessive debt burdens, deteriorating creditworthiness of businesses and households. When rates rise, these problems become apparent and often trigger financial shocks.

FISCAL STIMULUS ENGINEERED A PROFITS BUBBLE



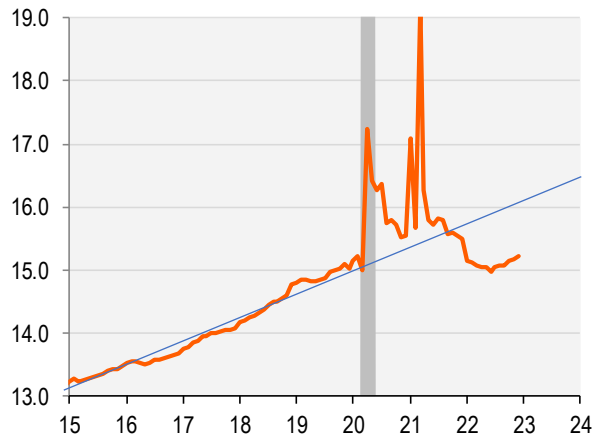
Source: Piper Sandler Economics/BEA/Haver

BIG PULL-FORWARD IN GOODS TO UNWIND FURTHER.

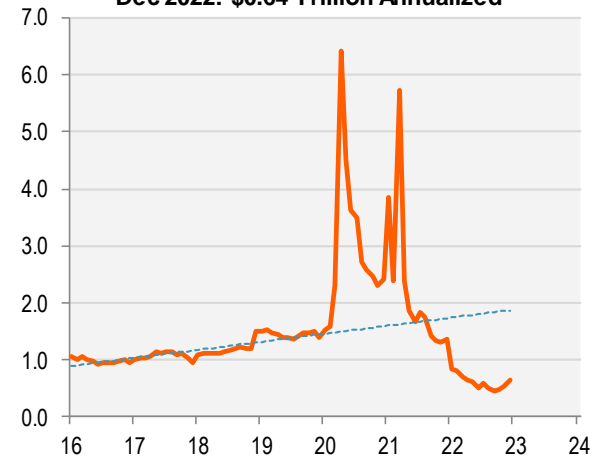


CONSUMERS SPENDING FROM SAVINGS...

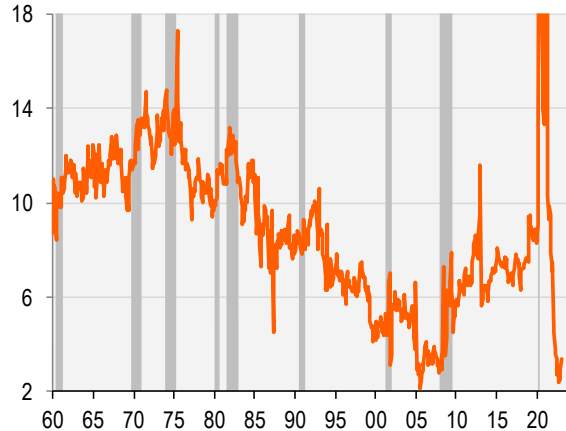
U.S. Real Disposable Personal Income
Dec: \$15.2 Trillion



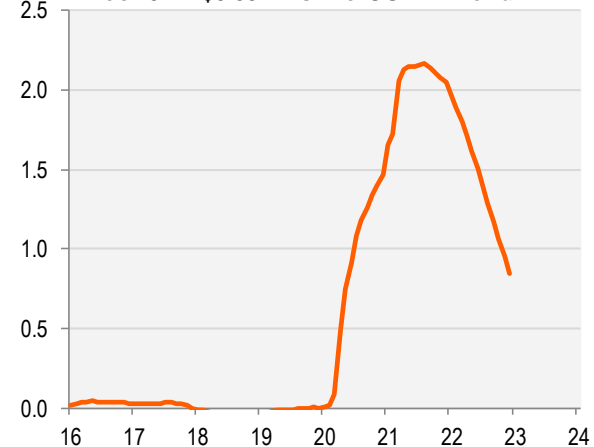
U.S. Personal Savings
Dec 2022: \$0.64 Trillion Annualized



U.S. Saving Rate
Dec: 3.4%

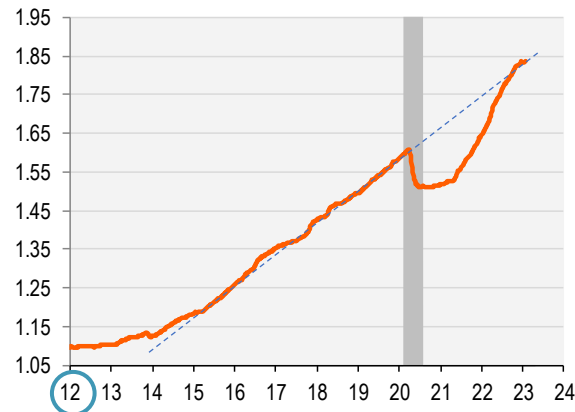


U.S. Personal Savings (Cumulative)
Dec 2022: \$0.85 T vs Pre-COVID Trend

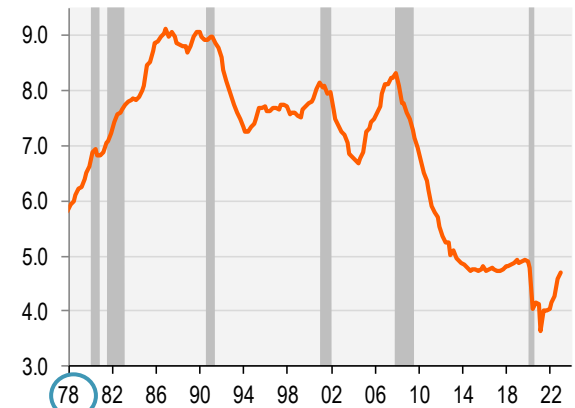


AND CREDIT... BUT NOT FOR LONG.

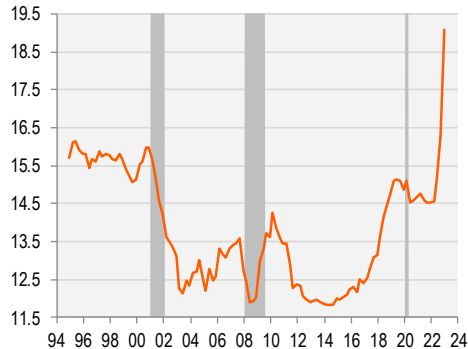
U.S. Bank Consumer Loans
Adjusted for FASB Accounting Change
4 Wk. Avg. Jan 25: \$1.84 Trillion



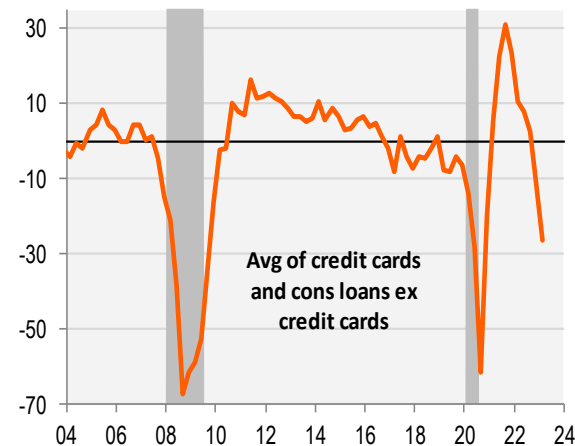
U.S. Nominal Consumer Interest Payments
% U.S. Nominal DPI
2022:4Q: 4.7%



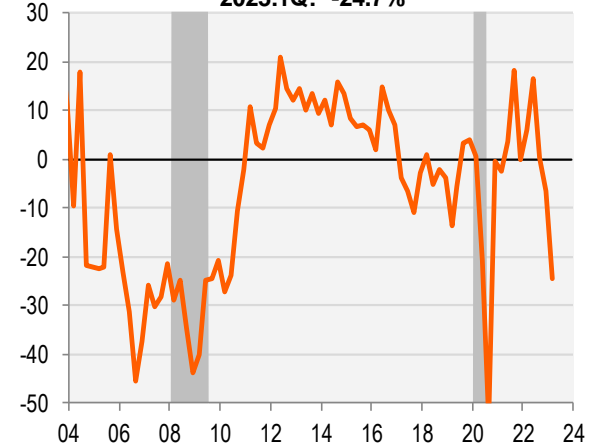
Credit Card Interest Rates
2022:4Q: 19.00%



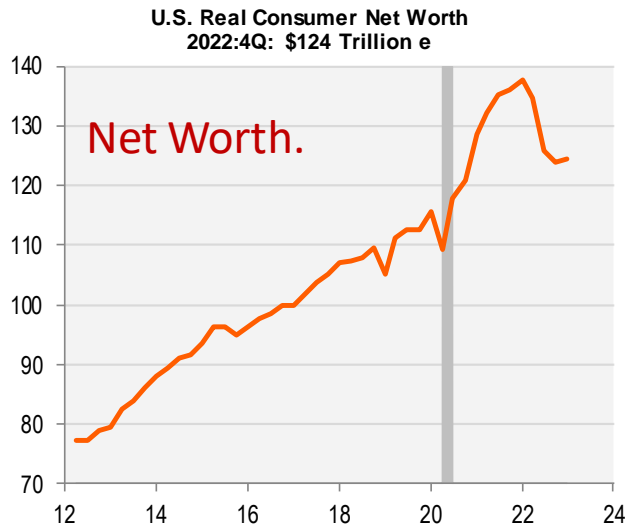
U.S. Bank Willingness to Make Consumer Loans
Net % of Banks Easing
2023:1Q: -26.4%



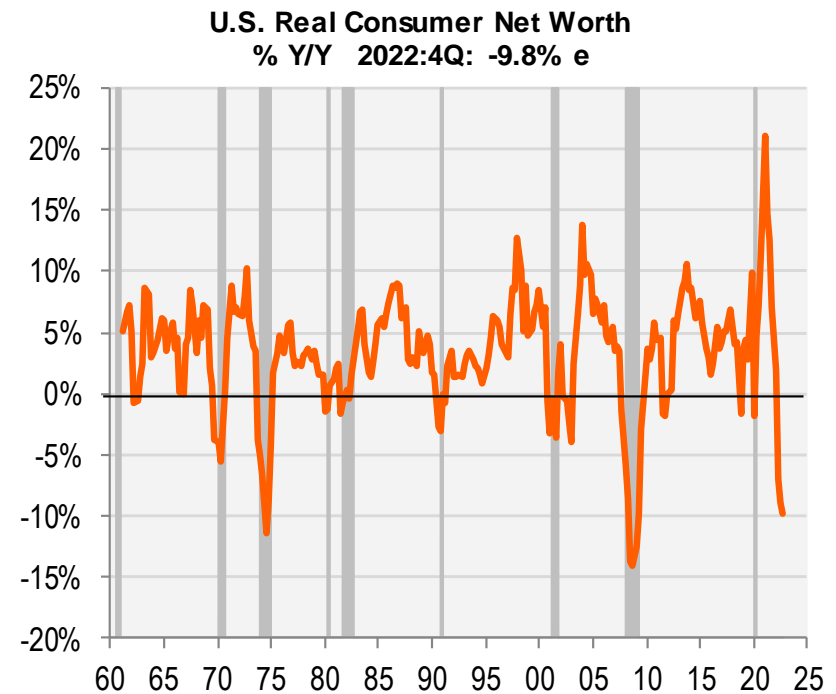
U.S. Net Banks Reporting Stronger Demand
Consumer Loans
2023:1Q: -24.7%



NET WORTH FALLING.

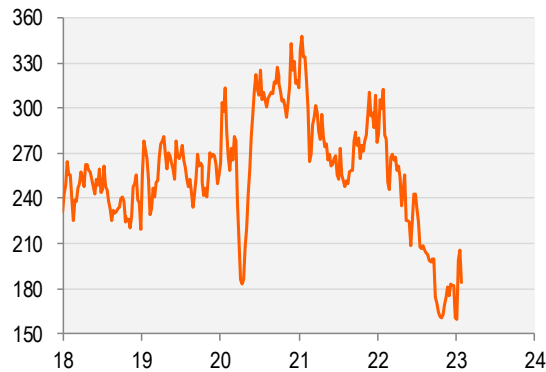


Whenever real consumer net worth has declined -10% y/y, the economy has been in a deep recession.

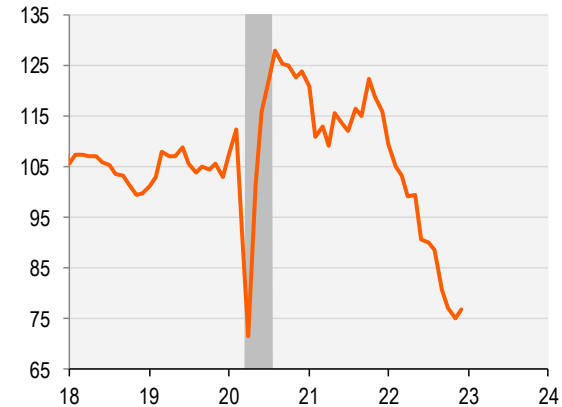


MORE DOWNSIDE TO NET WORTH AS HOUSING NOW IN RECESSION.

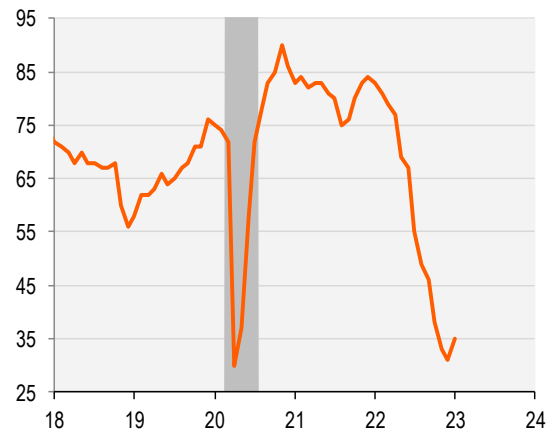
U.S. Mtg Apps For Purchase (MBA)
Jan 27: 184



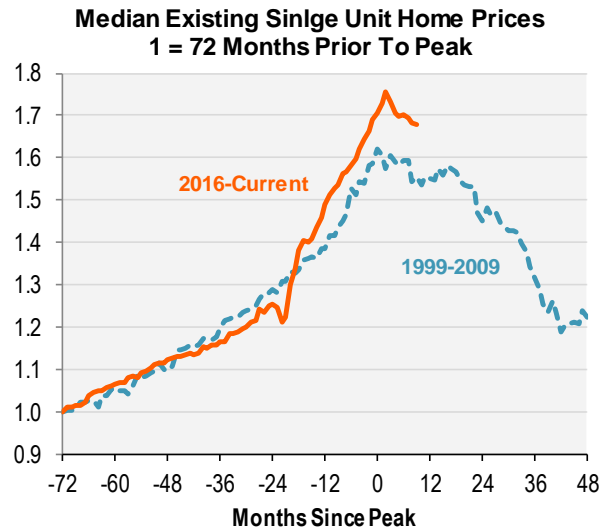
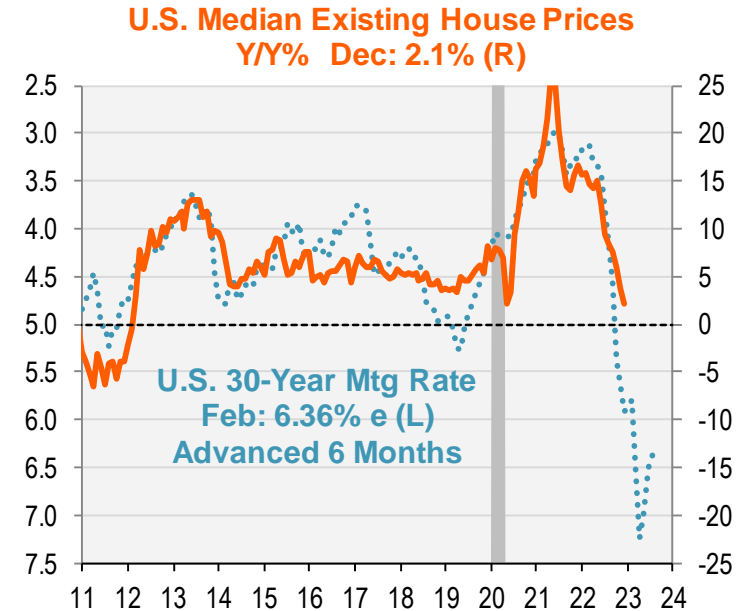
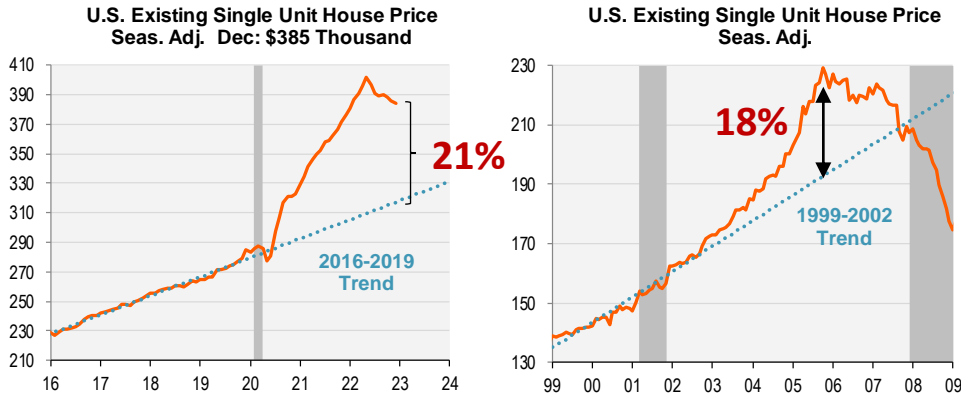
U.S. Pending House Sales
Dec: 76.9



U.S. NAHB Housing Market Index
Jan: 35.0

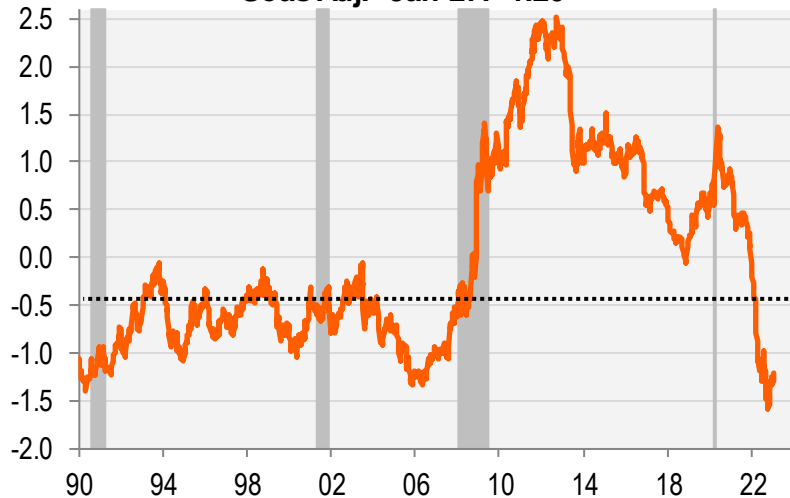


HOME PRICES FINALLY DECLINING... MORE TO COME.



AND THE AFFORDABILITY SQUEEZE CONTINUES.

PSC Weekly Housing Affordability Index
Seas Adj. Jan 27: -1.20*



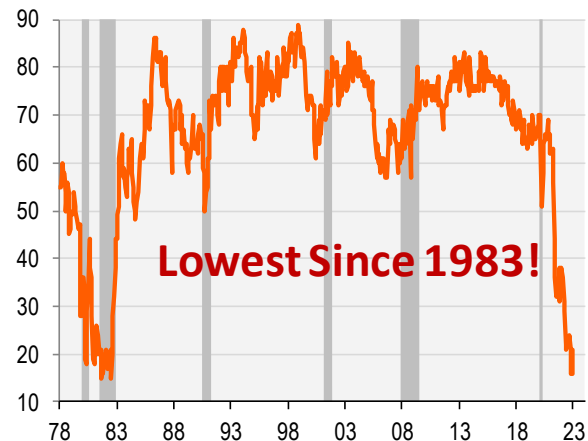
*Z-score of production worker wages relative to theoretical mortgage payment (30yr fixed, median existing home price, 20% down).

***Monthly payment based on a 30-year mortgage given monthly price data and weekly 30-year mortgage rate data.**

Hypothetical Monthly Payment *
Median Single Unit Home
Jan 27: \$2,400



Good Time to Buy a House (U of Mich)
Jan: 21.0

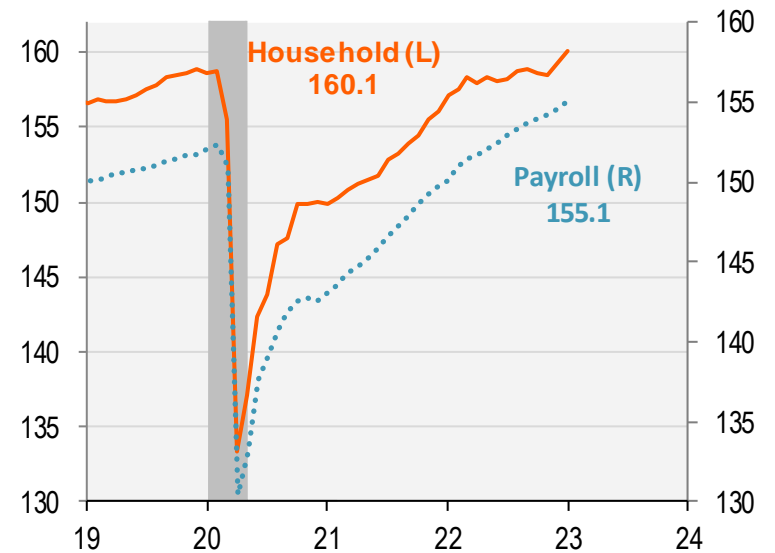


LABOR IS STILL TIGHT.

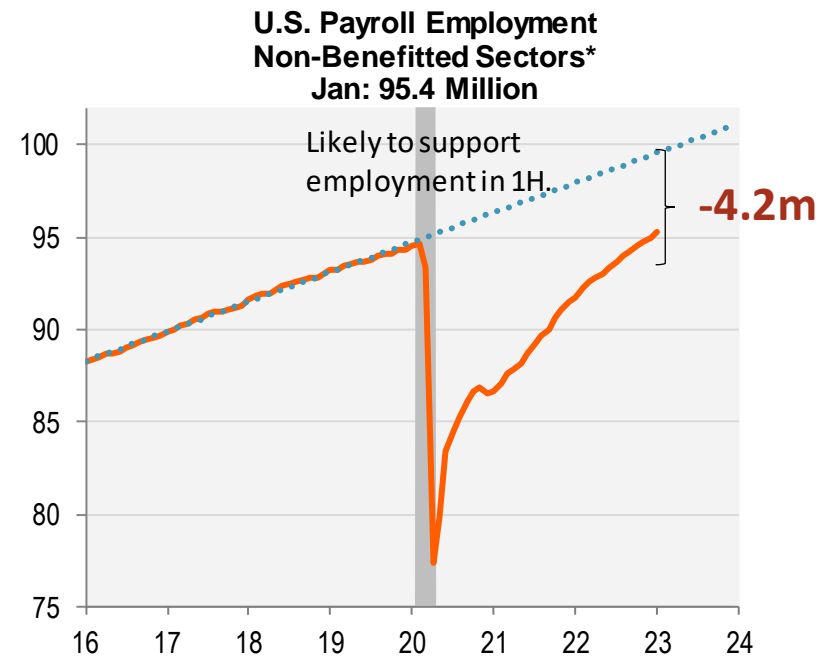
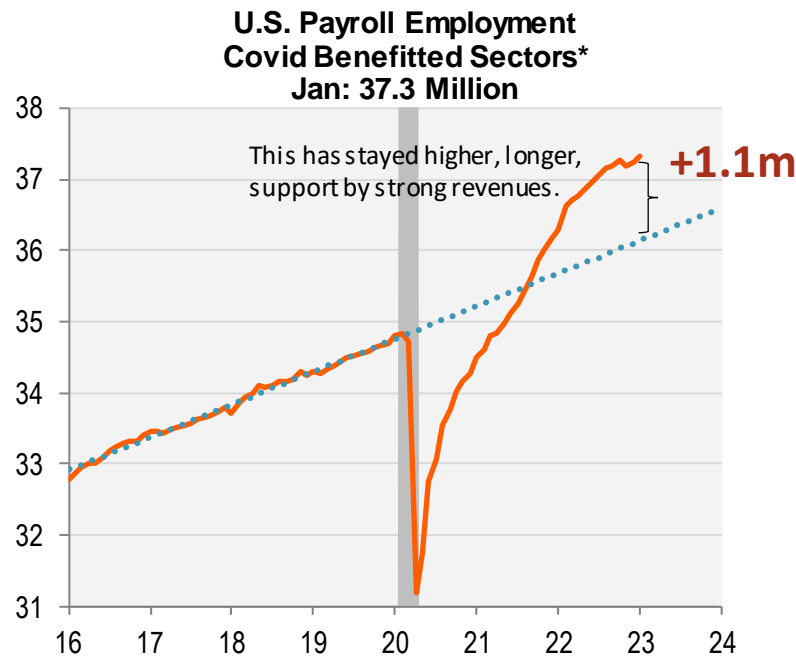
U.S. Initial Unemployment Claims
Jan 28: 183



U.S. Employment
Jan

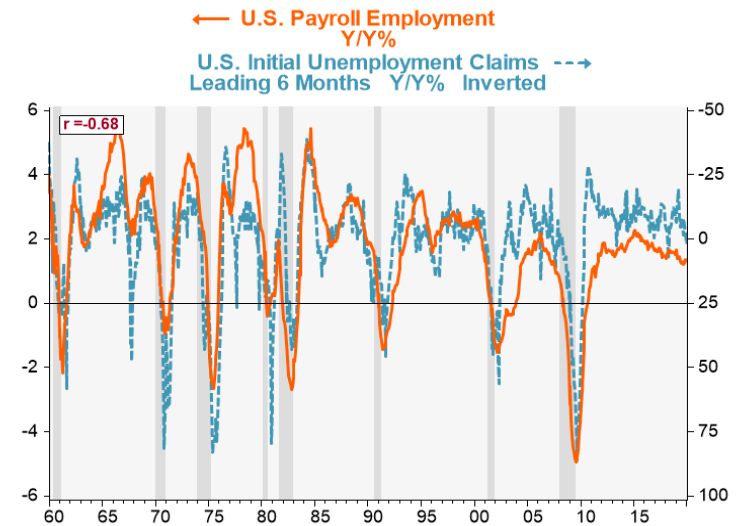
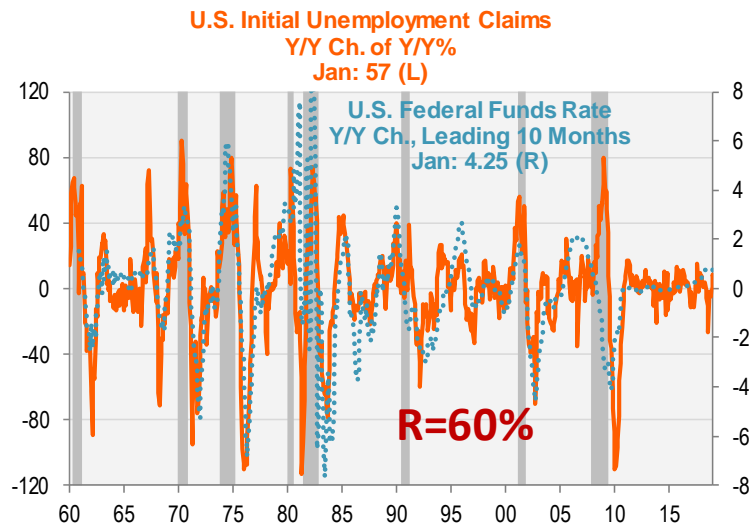


LABOR TUG-OF-WAR.

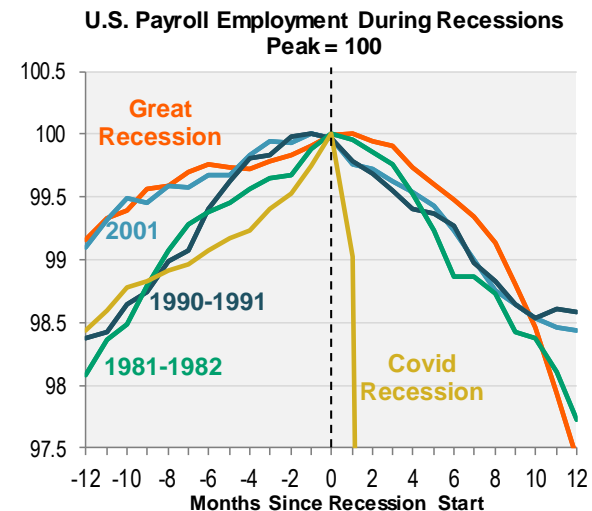
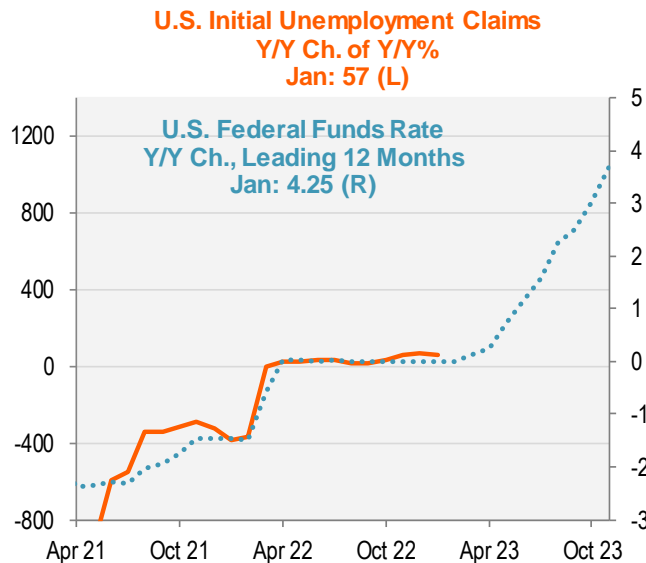


*Residential construction, residential specialty trade, retail ex autos, transportation & warehousing, information, professional & technical services.

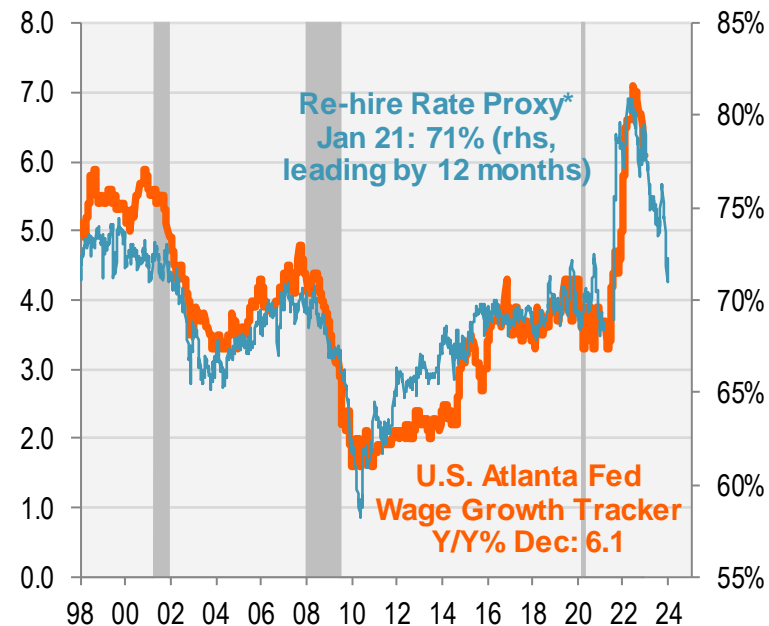
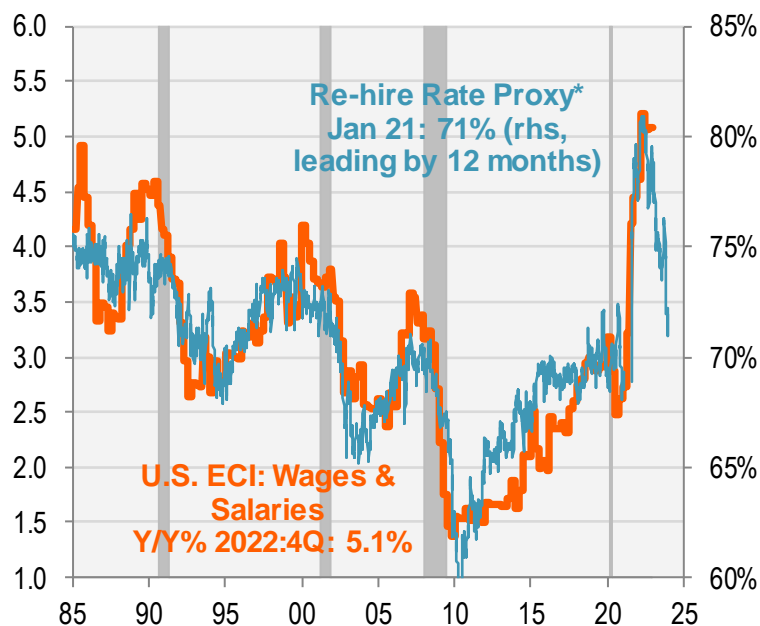
BUT HIGHER RATES AFFECT EVERYONE.



Sources: Piper Sandler Economics/BLS, DOL/Haver



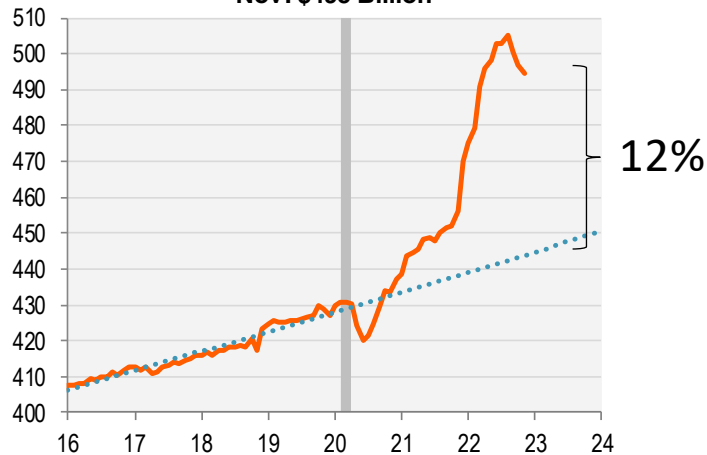
WAGE GROWTH IS ALREADY DECELERATING.



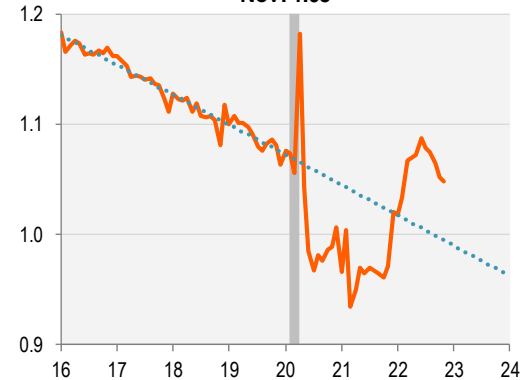
***Re-hire Rate Proxy = (Total Initial Claims In Last 6 Months – Current Continuing Claims)
/ (Total Initial Claims In Last 6 Months)**

THE GOODS SPACE IS PRIMED FOR DEFLATION.

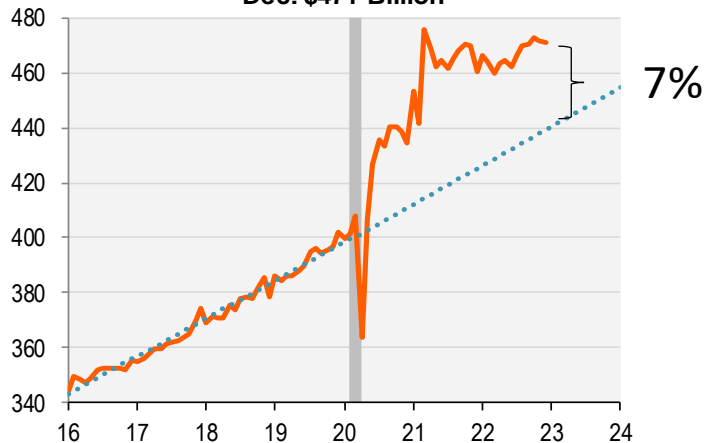
U.S. Real Retail Trade Inventories
Total Ex Motor Vehicles
Nov: \$495 Billion



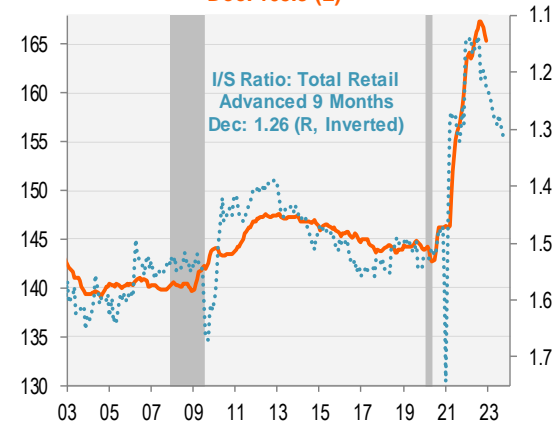
U.S. Real Retail Trade I/S Ratio
Total Ex Motor Vehicles
Nov: 1.05



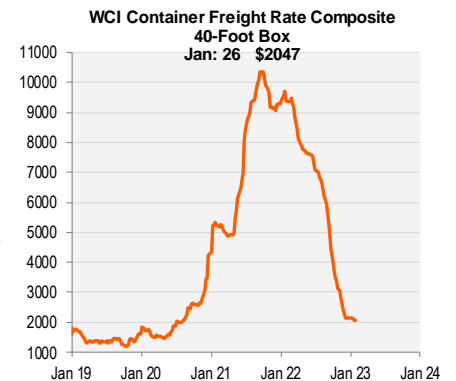
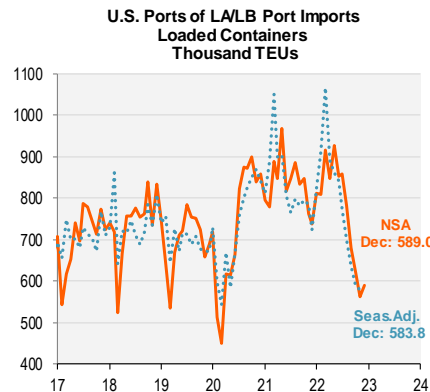
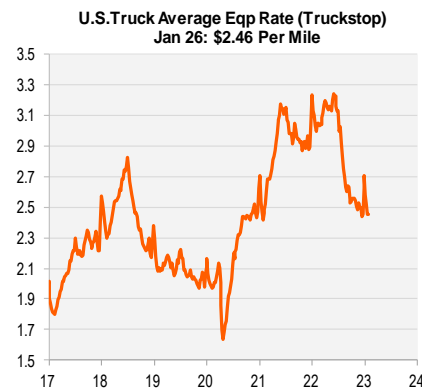
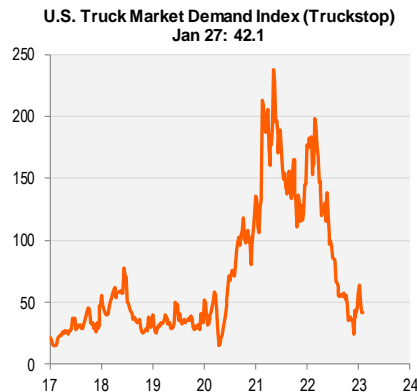
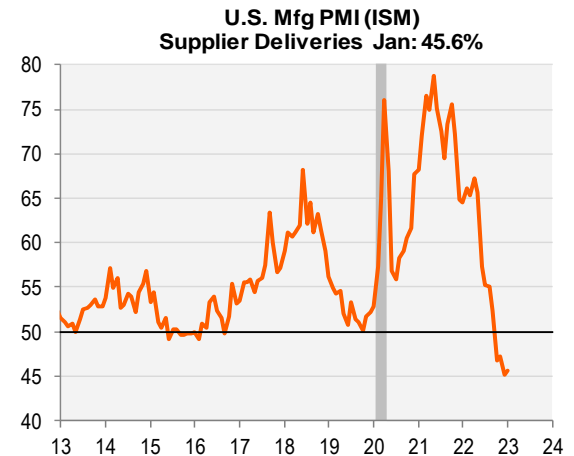
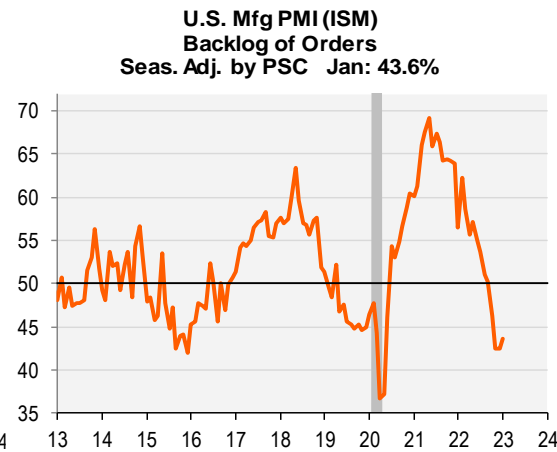
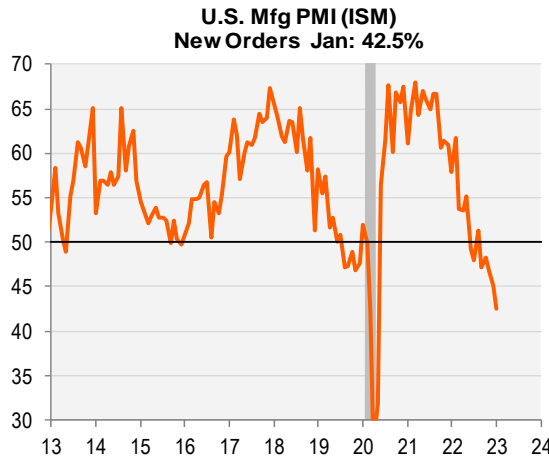
U.S. Real Retail Trade Sales
Total Ex Motor Vehicles
Dec: \$471 Billion



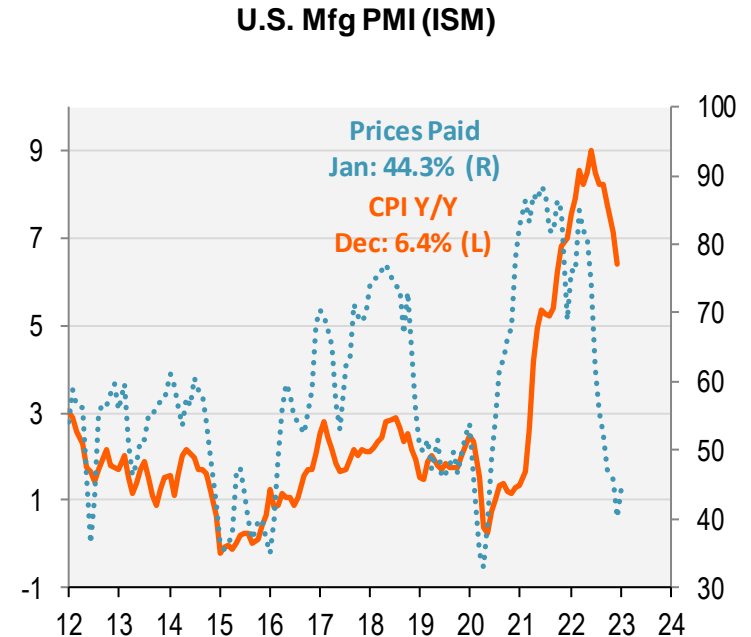
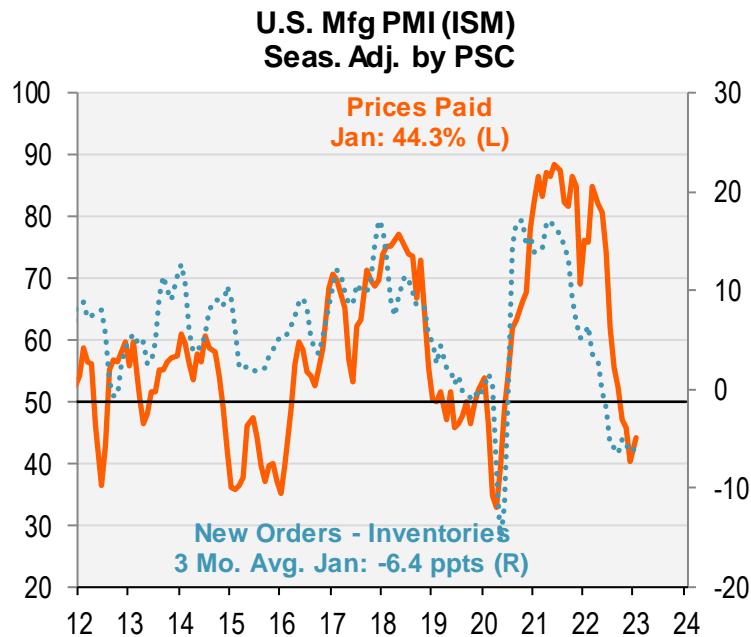
U.S. CPI Core Goods
Dec: 165.3 (L)



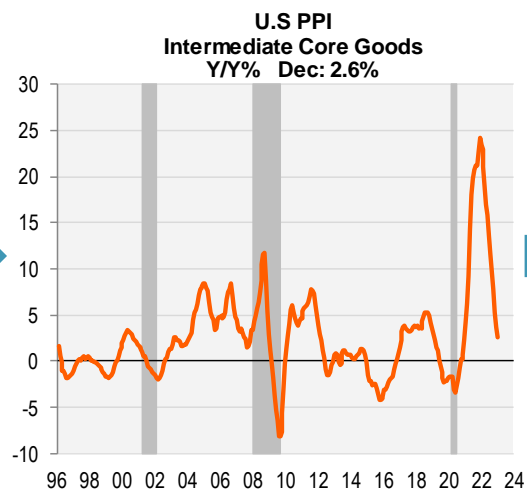
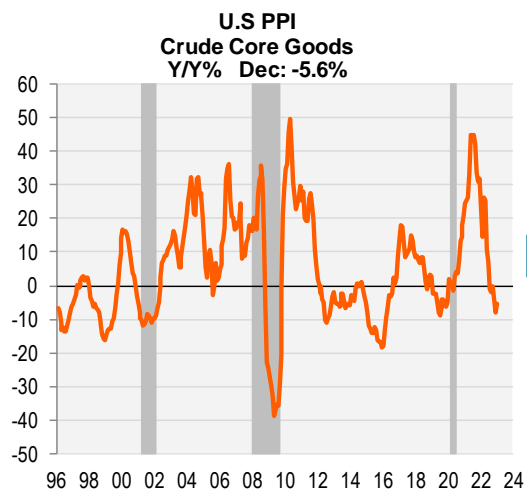
DEMAND DESTRUCTION BEING FELT UPSTREAM, WITH PRICING FOLLOWING LOWER.



DESTROYING PRICING POWER.



DEFLATION IN THE PIPELINE.

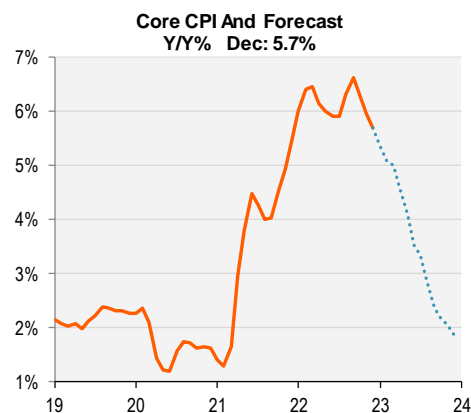
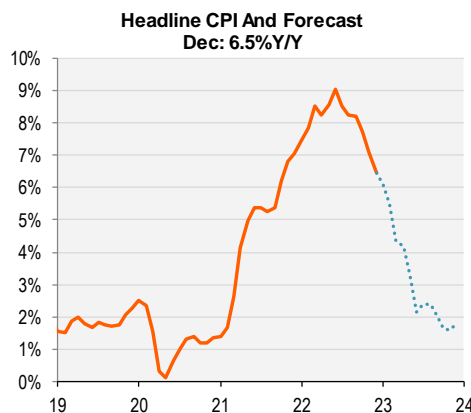


SHELTER INFLATION MOVES WITH A BIG LAG.



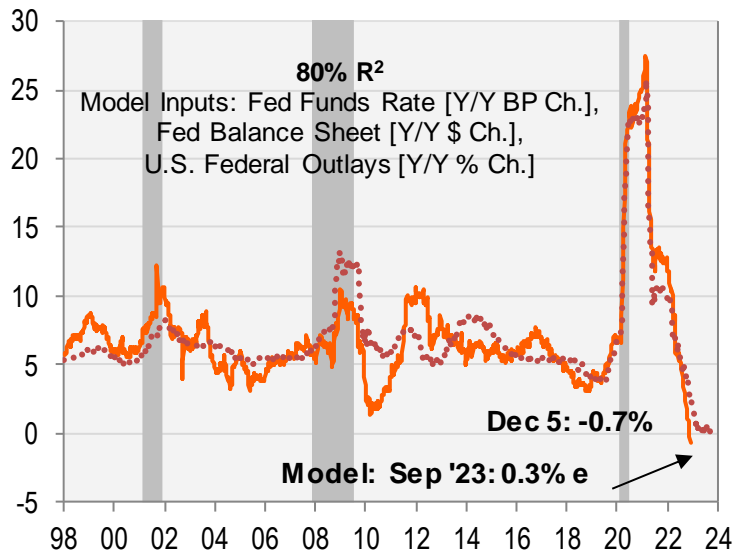
FED'S 2% TARGET VERY ACHIEVABLE IN 2023.

	Year/Year % Changes							
	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
Headline CPI	8.0%	8.6%	8.3%	7.1%	5.3%	3.3%	2.3%	2.0%
Energy Goods (5%)	42.0%	51.9%	30.6%	10.6%	-6.4%	-21.7%	-14.7%	-4.6%
Energy Services (3%)	13.1%	16.5%	19.6%	15.1%	10.3%	8.9%	6.7%	0.5%
Groceries (8%)	8.7%	11.6%	13.2%	12.1%	10.0%	6.4%	3.1%	1.7%
Restaurants (5%)	6.7%	7.4%	8.0%	8.4%	7.9%	6.7%	5.0%	3.2%
Core (78%)	6.3%	6.0%	6.3%	6.0%	5.1%	4.1%	2.9%	2.0%
Core Goods (21%)	11.9%	8.4%	6.9%	3.7%	1.1%	0.3%	-1.1%	-0.6%
Core Goods Ex Autos (13%)	5.6%	5.3%	5.6%	4.4%	2.2%	1.2%	0.0%	-0.2%
New Vehicles (4%)	12.4%	12.4%	10.0%	7.2%	6.0%	4.3%	2.7%	2.2%
Used Vehicles (4%)	39.0%	15.3%	7.2%	-3.4%	-8.3%	-7.4%	-9.5%	-5.3%
Core Services (56%)	4.4%	5.2%	6.1%	6.9%	6.7%	5.6%	4.5%	3.2%
Shelter (33%)	4.7%	5.4%	6.2%	7.2%	7.8%	7.6%	6.9%	5.5%
Medical Services (7%)	2.7%	4.1%	5.8%	4.6%	2.4%	-0.4%	-3.4%	-4.4%
Transportation Services (6%)	6.4%	8.5%	11.8%	14.7%	11.6%	4.8%	2.4%	0.1%

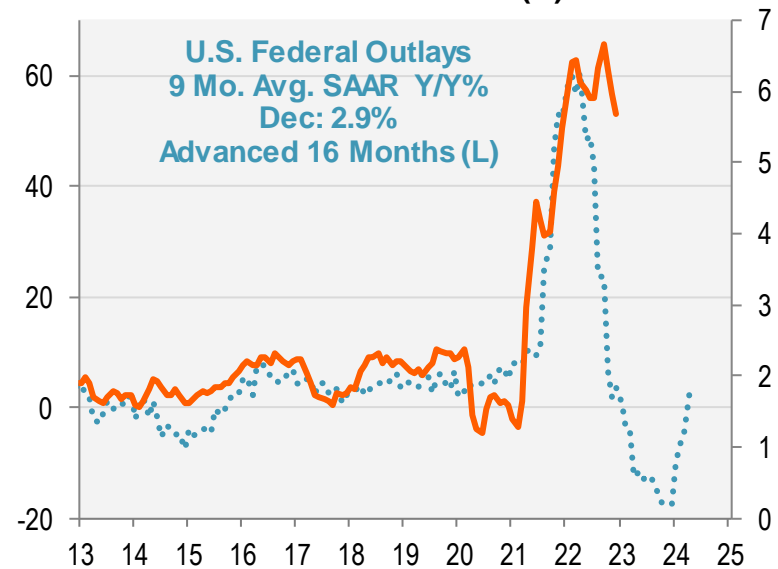


MONEY “CLIFFS” SHOULD BE DEFLATIONARY.

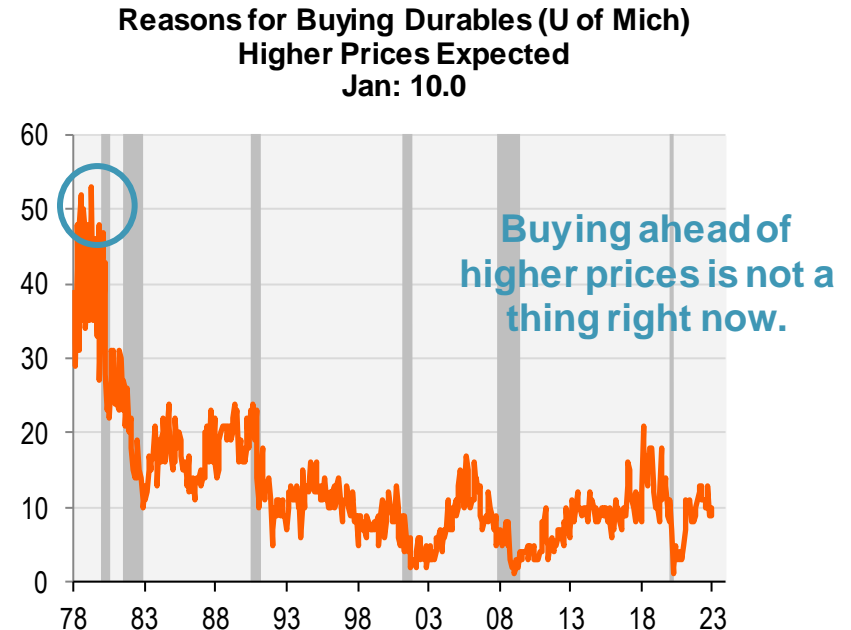
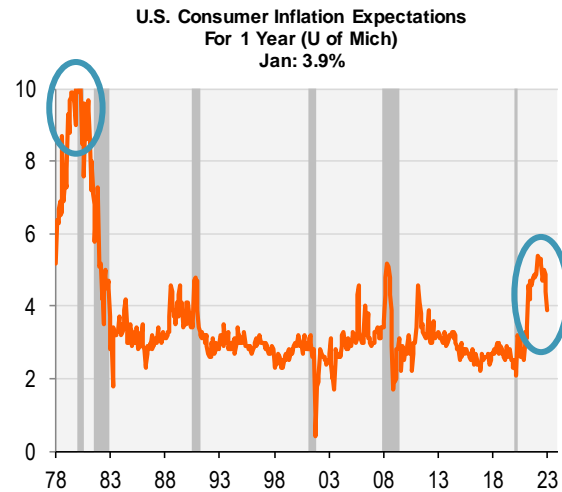
**U.S. Weekly M2
Y/Y%**



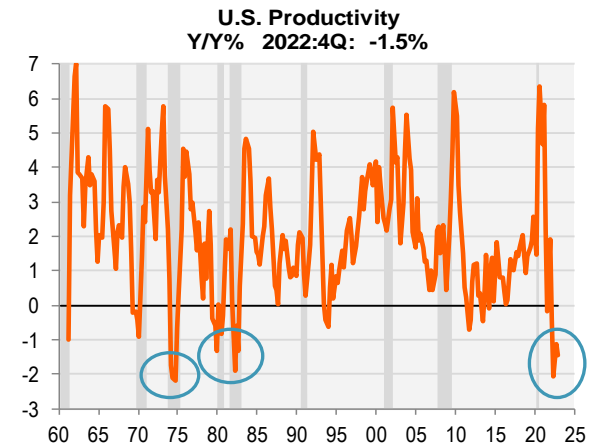
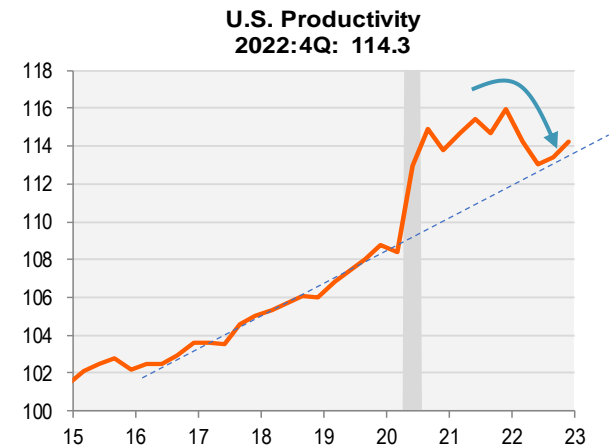
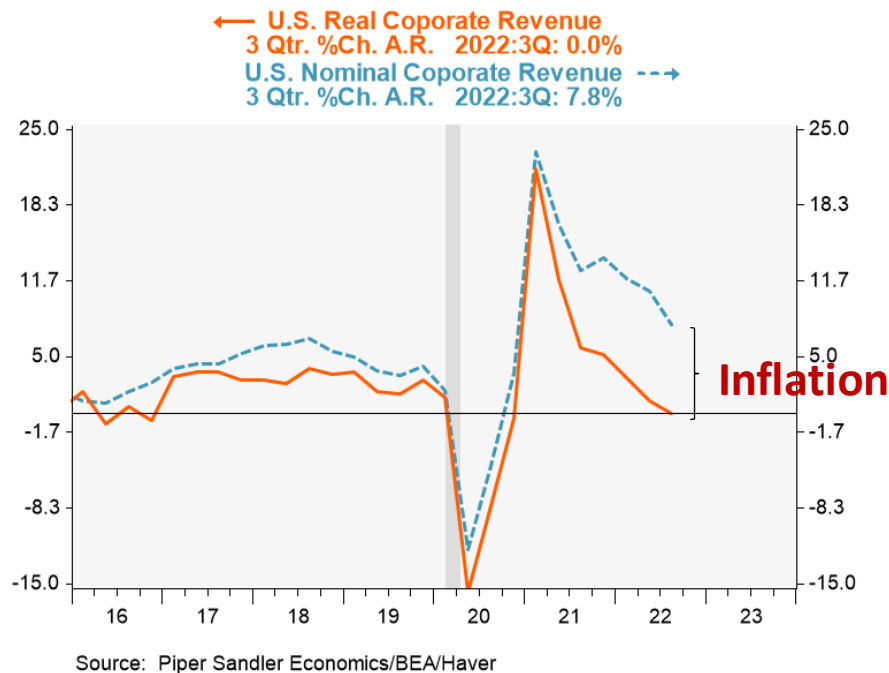
**U.S. Core CPI
Y/Y% Dec: 5.7% (R)**



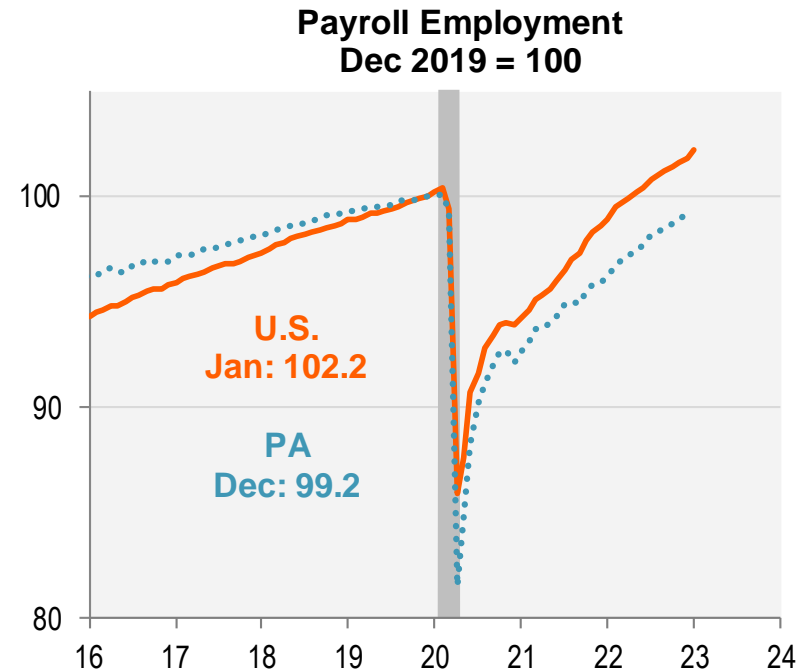
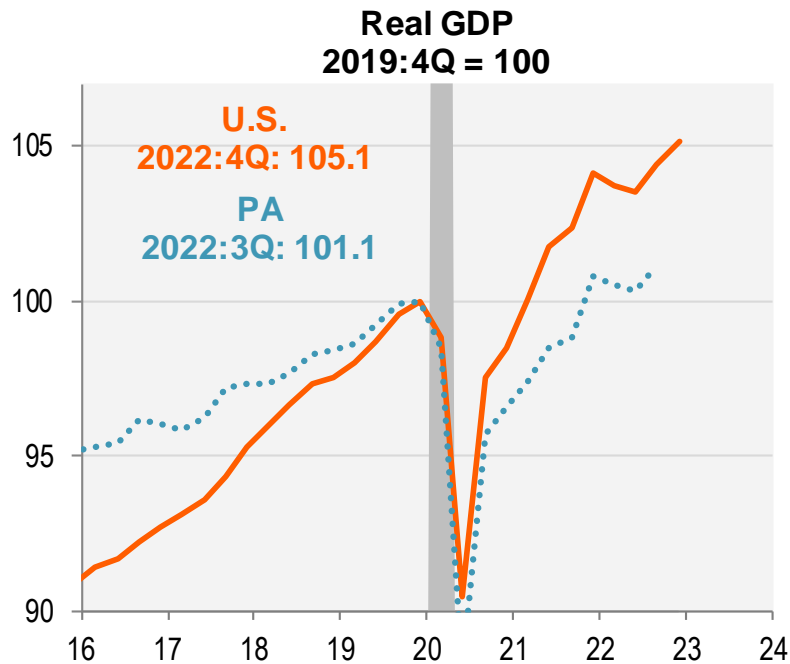
CONSUMERS DON'T SEE EMBEDDED INFLATION.



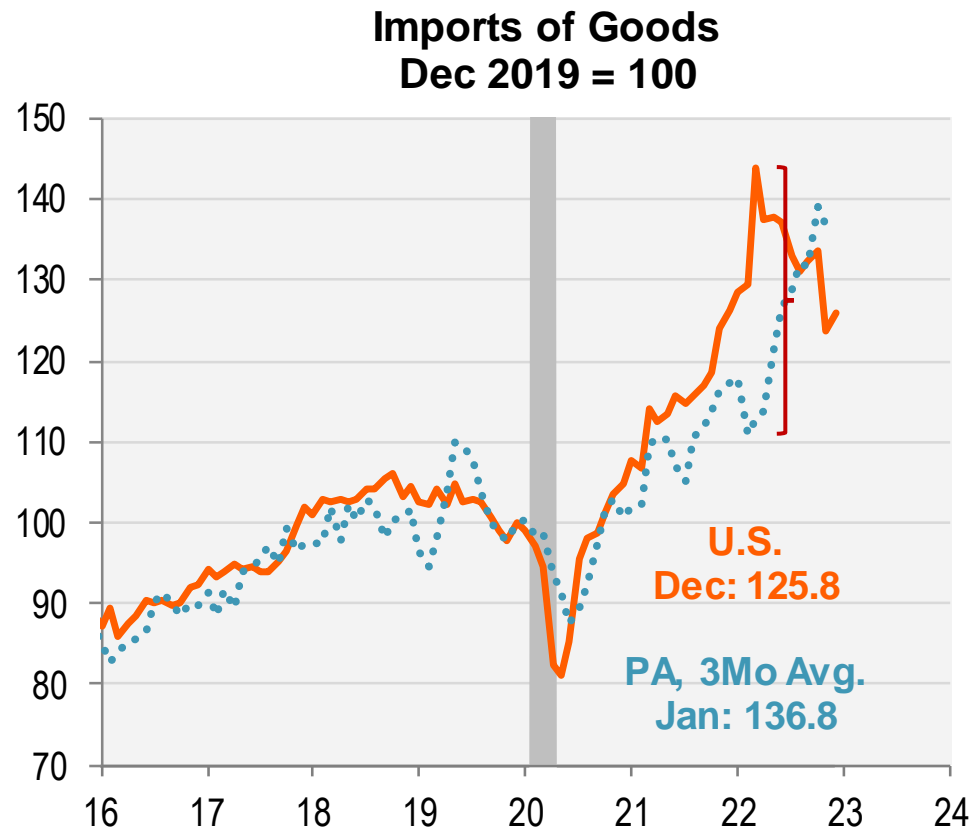
TOPLINE REVENUE IS ALL INFLATION NOW AND PRODUCTIVITY IS OFF ITS HIGHS... WHICH MEANS FIRMS WILL HAVE TO “RIGHT-SIZE”.



IN AGGREGATE, PA HAS RECOVERED SLOWER THAN THE COUNTRY.

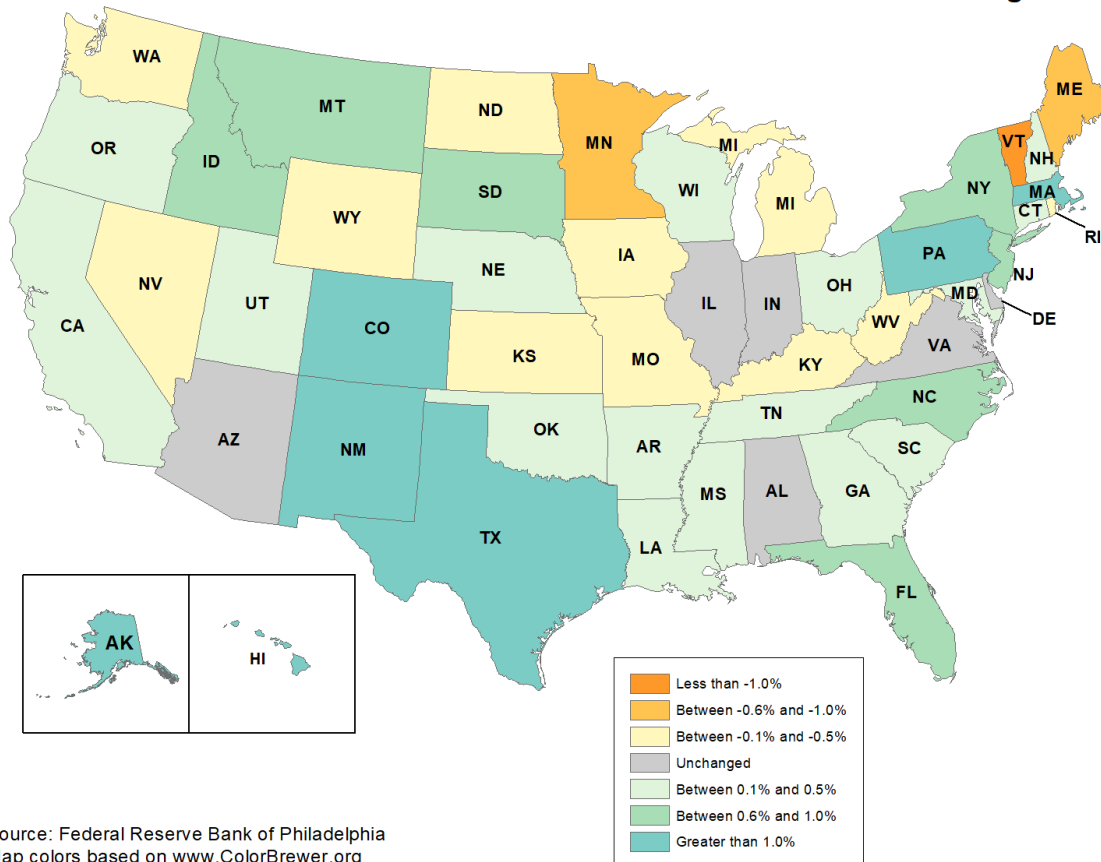


BUT PA WAS ALSO LESS EXPOSED TO THE STAY-AT-HOME BUBBLE.



LESS EXPOSURE TO THE STAY-AT-HOME BUBBLE MEANS PA WILL BE ONE OF THE MOST RESILIENT STATES IN A SLOWDOWN/RECESSION.

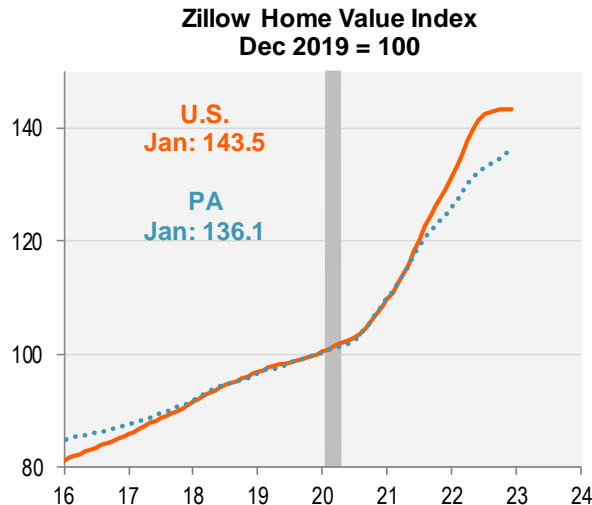
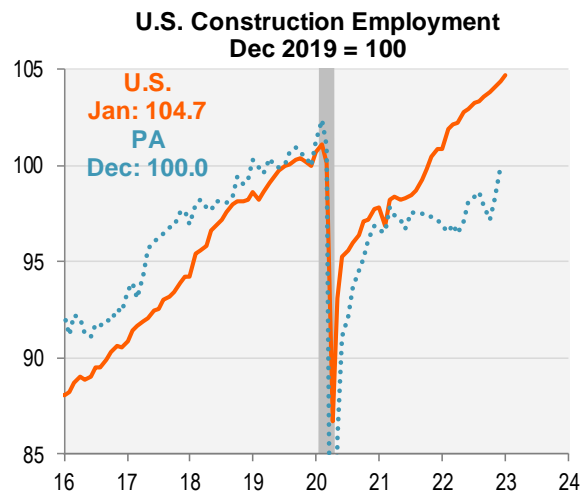
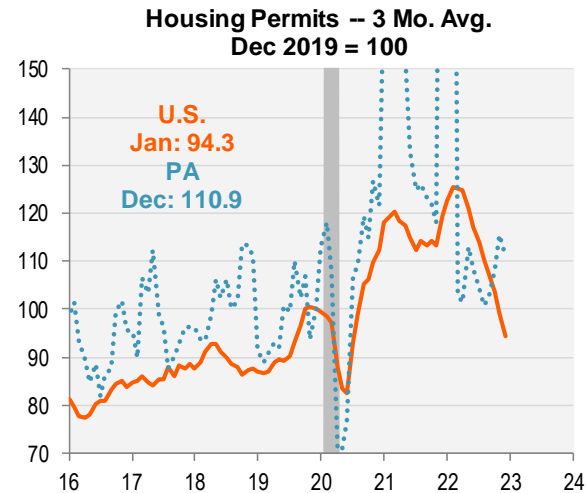
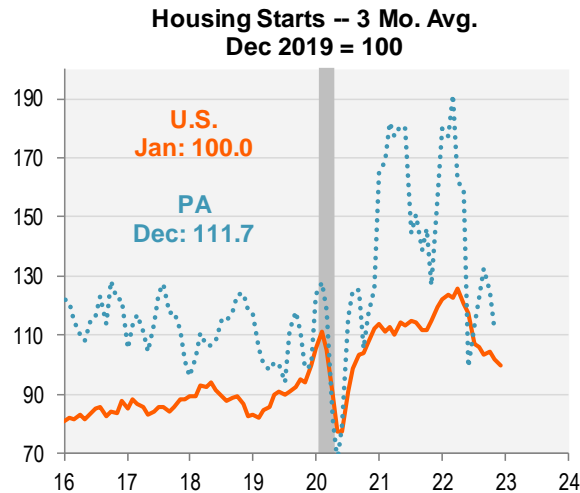
December 2022 State Coincident Indexes: Three-Month Change



Source: Federal Reserve Bank of Philadelphia
Map colors based on www.ColorBrewer.org

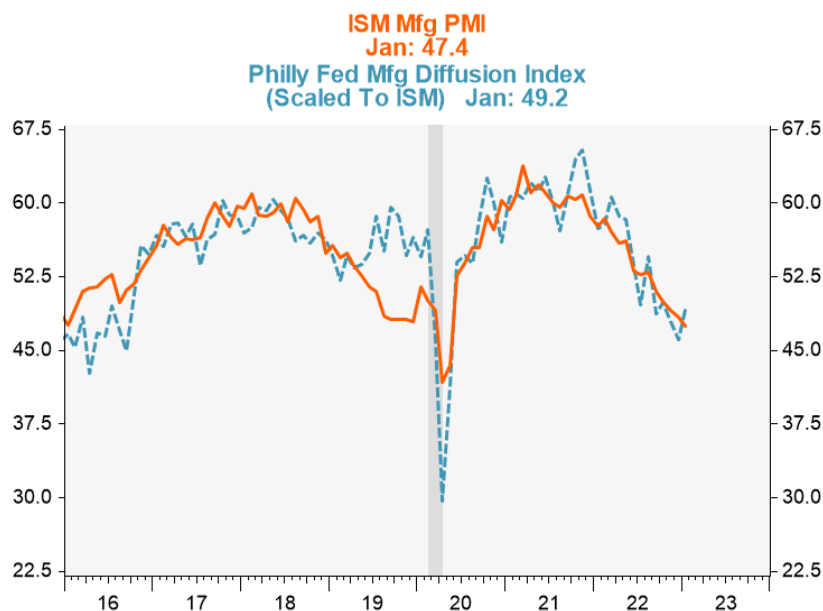
THE HOUSING BUBBLE HIT PA DIFFERENTLY.

MORE BUILDING, SMALLER PRICE BUBBLE, FEWER BUILDERS?

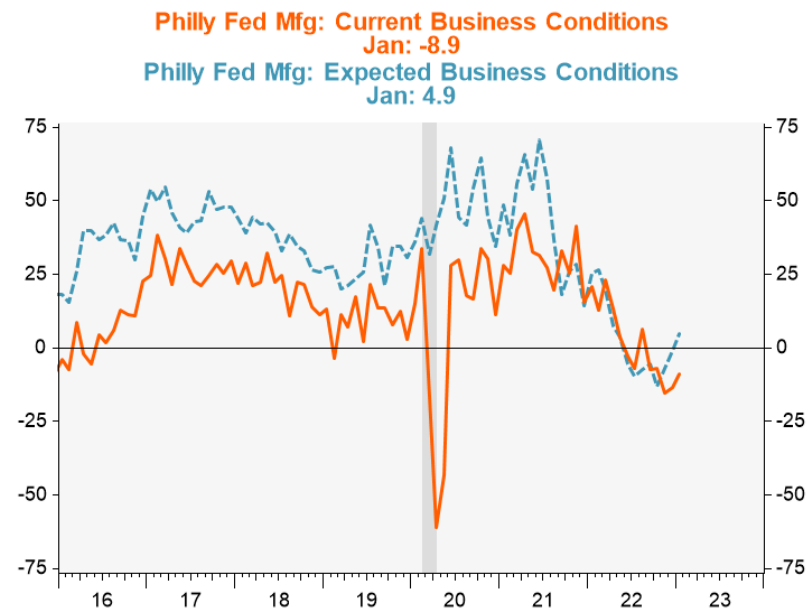


REGIONAL MFG ON TRACK WITH COUNTRY.

SOME RECENT OPTIMISM, BUT THE NORM IS OVERLY OPTIMISTIC.



Sources: Piper Sandler Economics/ISM, FRBPHI/H/Haver



Source: Piper Sandler Economics/FRBPHI/Haver

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