

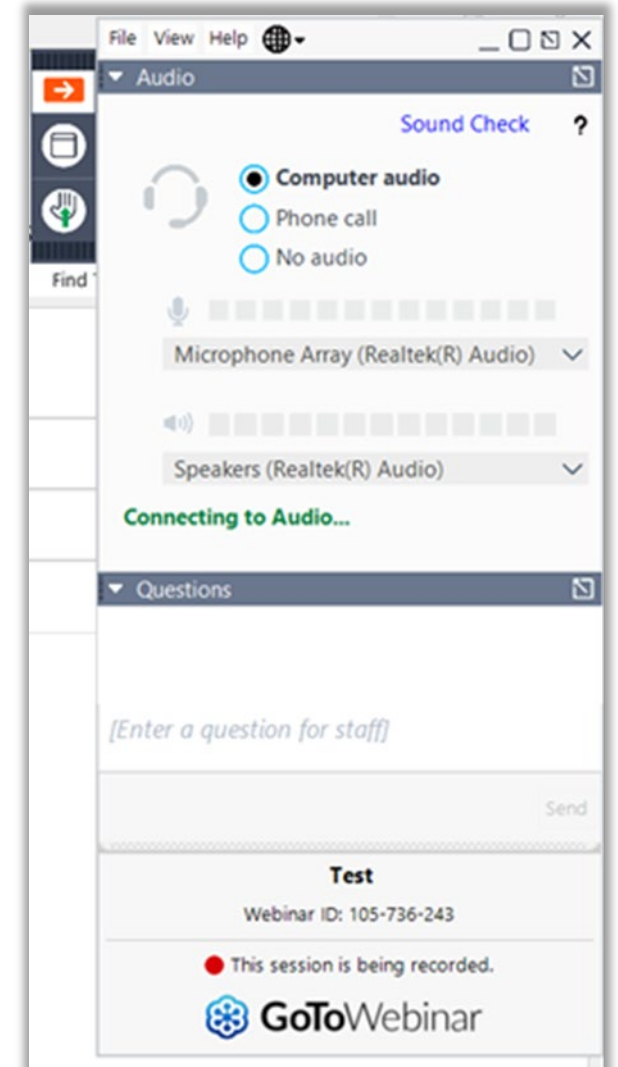
Q4'23 ECONOMIC IMPACTS ON KANSAS MANUFACTURING WEBINAR



KANSAS
MANUFACTURING
SOLUTIONS

Webinar Housekeeping

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- We will ask as many questions as we can at the end of the presentation.
- This webinar is being recorded. The link to the recording will be included in a follow-up email being distributed tomorrow.
- Please check our website www.wearekms.com frequently for new webinars and events. (or register to receive our quarterly KMS newsletter)



Kansas Manufacturing Solutions

As an experienced consultant dedicated to the Kansas manufacturing industry, Kansas Manufacturing Solutions provides a suite of problem-solving services so manufacturers can compete and grow in the domestic and global marketplace

Problems We Solve



People



Processes



Operations



Kansas Manufacturing Solutions

KMS's results are directly tied to our clients' results, validated and published by an independent third-party

“**This has been a business saving experience for a 23-year-old company. I have the confidence to take this company to the next level and maximize the potential.**”



Kari Wagner, CEO, Mid Star Lab





Dr. Chris Kuehl



**Managing Partner,
Armada Corporate Intelligence**

Economic Update Webinar for KMS

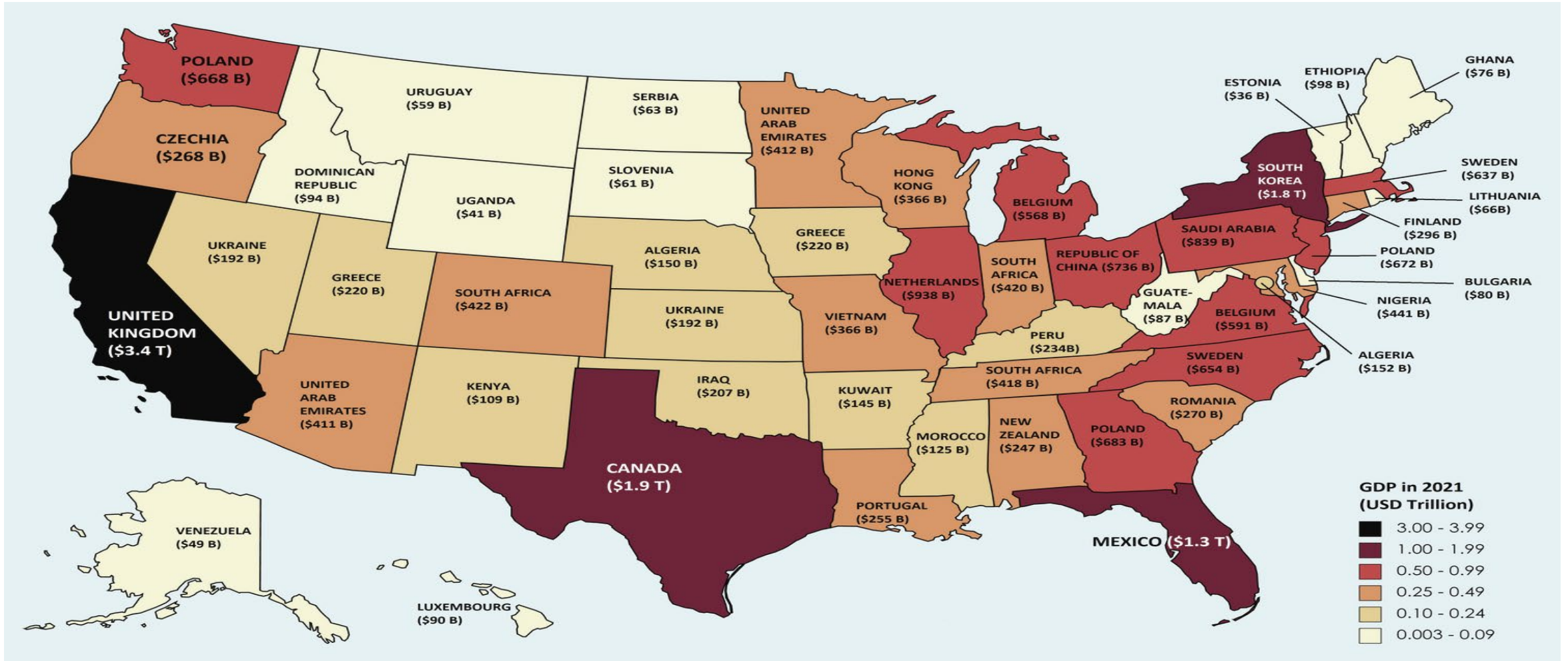
November 28, 2023

Chris Kuehl - Armada



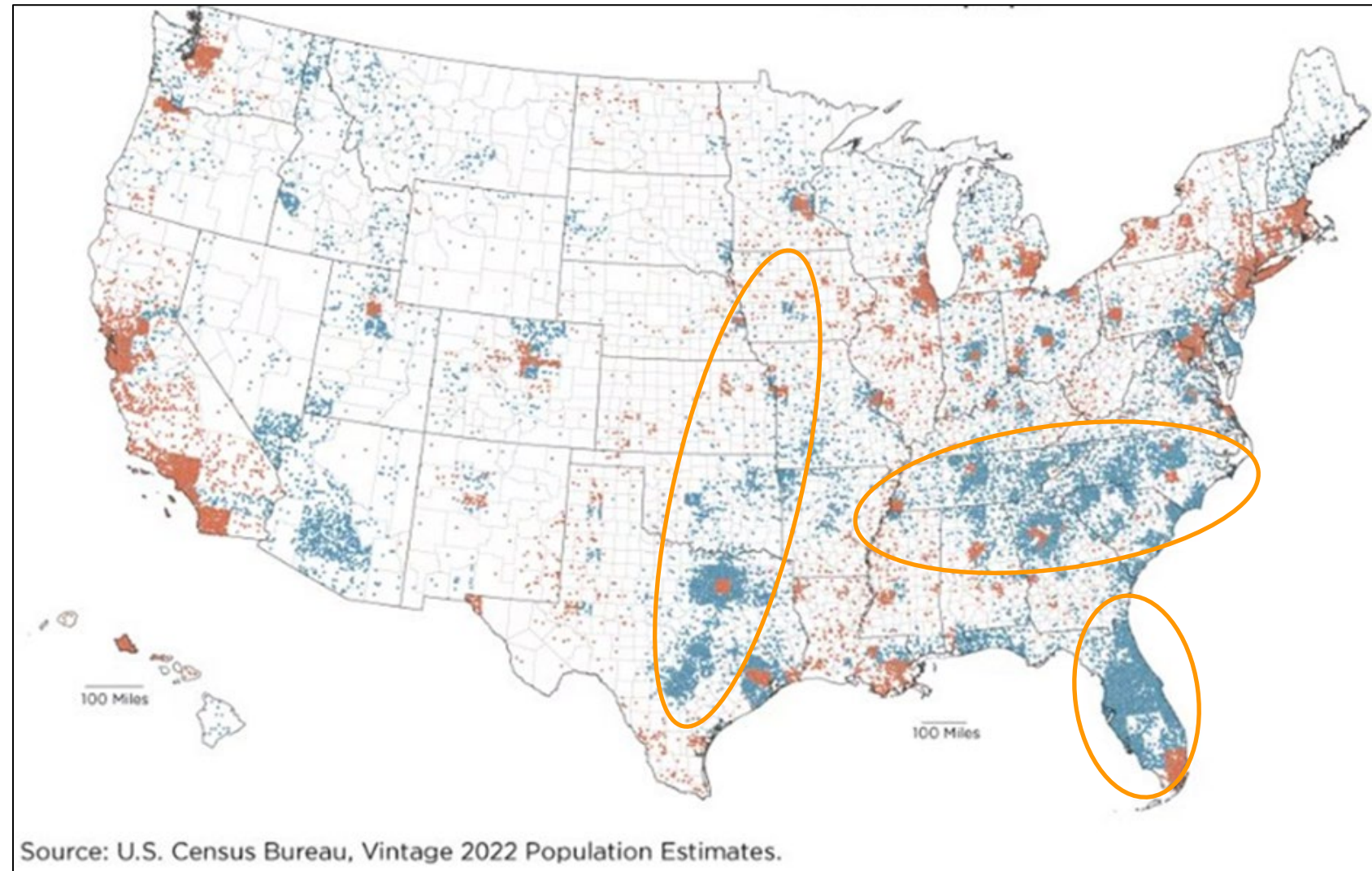
ARMADA

State GDP Compared to Nations



Population Changes 2021 – 2022

- Note the flight even out of popular (but dense) population centers like downtown Dallas and Miami, but flight to suburbs in those regions are among the fastest growth rates in the country.
- Corridors seem to be continuing to get population influxes...
 - I35 corridor
 - Tennessee Valley Region +Atlanta
 - And Florida



Macroeconomic Outlook

3. Back to sub-2% growth through '25

	2023				2024				2019	2020	2021	2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
Real GDP	1.1	2.4	4.9	1.0	-1.0	-0.7	2.2	2.3	2.3	-2.8	5.9	2.1	2.1	0.7	1.8
Unemployment rate (%)	3.5	3.6	3.8	4.0	4.5	4.5	4.4	4.3	3.7	8.1	5.4	3.6	3.8	4.3	4.5
PCE Inflation (%Y/Y)	4.6	3.6	3.1	3.1	3.1	2.5	2.1	2.0	1.5	1.1	4.0	5.6	3.1	2.2	2.0
Core PCE Inflation (%Y/Y)	4.7	4.3	3.8	3.5	3.1	2.5	2.1	2.0	1.7	1.3	3.5	4.8	3.5	2.2	2.0
Fed Funds Rate	4.9	5.1	5.3	5.6	5.6	5.2	4.7	4.0	1.6	0.1	0.1	4.4	5.5	4.0	3.1
Canada Real GDP	-	-	-	-	-	-	-	-	1.8	-5.2	4.5	3.4	1.3	1.5	-
Unemployment rate (%)	-	-	-	-	-	-	-	-	5.8	9.5	7.4	5.3	5.7	6.0	-
Mexico Real GDP	-	-	-	-	-	-	-	-	-1.8	-8.2	5.0	2.7	1.6	2.1	-
Unemployment rate (%)	-	-	-	-	-	-	-	-	3.6	4.4	4.1	3.3	3.4	3.3	-

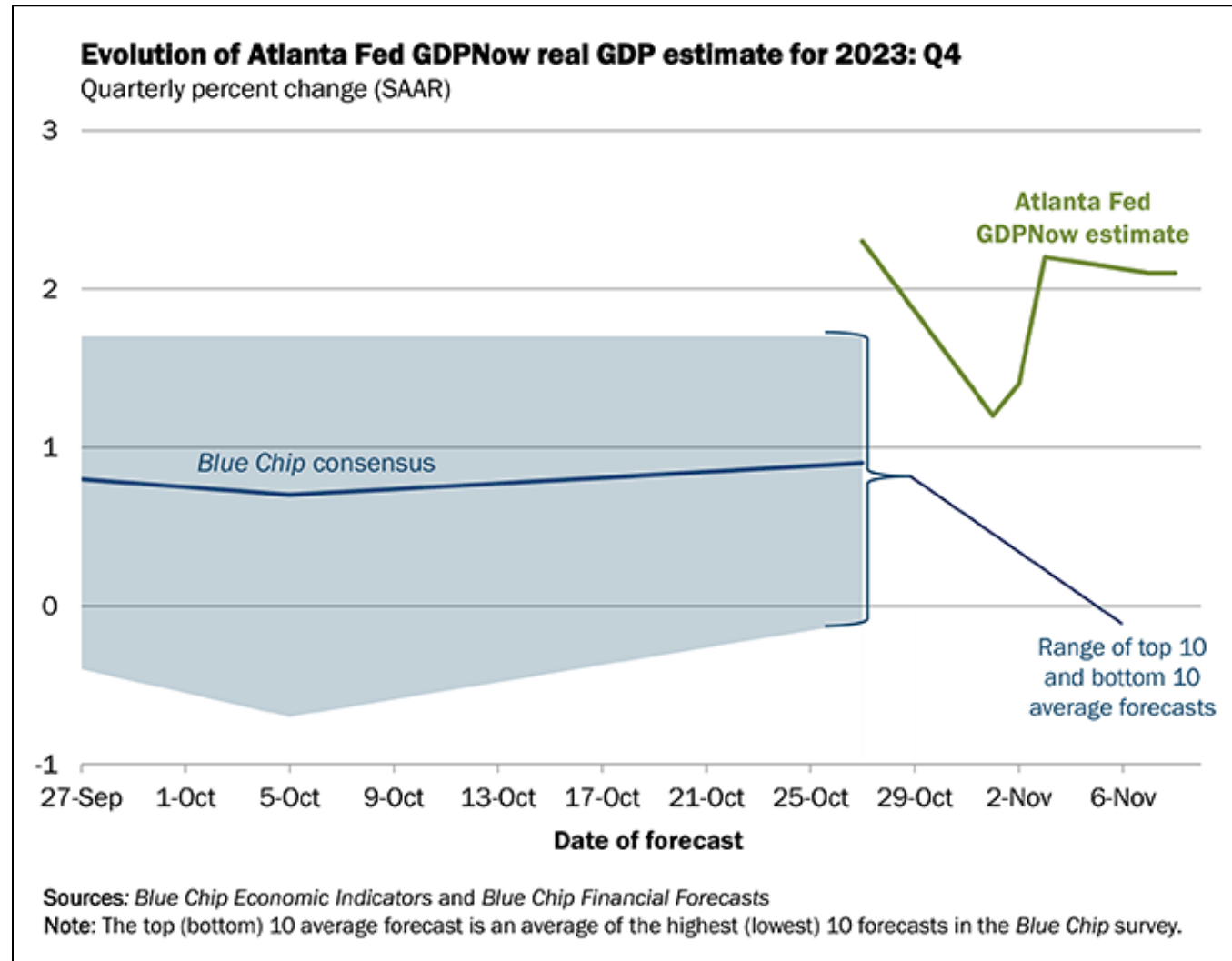
1. Greatest recession risk is being pushed further out, but it appears greatest between Q4 and Q2 of 2024.

2. Some estimates suggest that this could still easily get pushed out, depending on how quickly the unemployment rate rises (which will have a disinflation effect and reduce inflation risk).

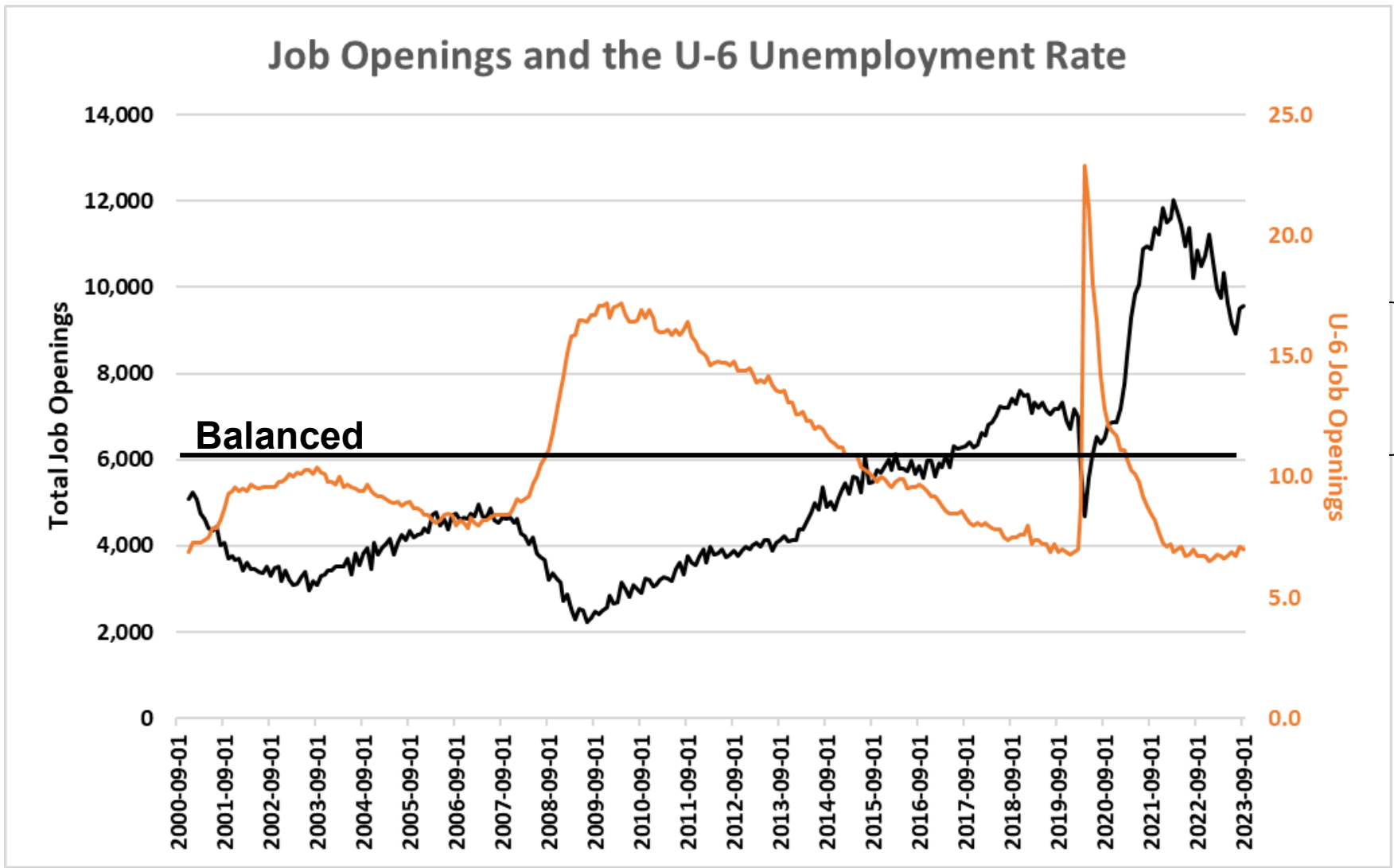
4. To hit 2% inflation target, estimates suggest the Fed will have to hit a peak Effective Funds Rate of 5.1% to 5.5% and unemployment will likely still approach 4.5%.

BLUF: Current Q4 GDP Trending at About 2.1%

- Q3 was boosted by inventory building activity (which we don't get in Q4).
- Q4 is typically a bit slower, but only because of lower inventory building activity.
- Pillars of growth in the current economic state:
 - Consumer spending
 - Nonresidential construction
 - Government spending
 - Inventory building



1. Quick Fed Update



Powell still has a 3.6M job opening buffer to work with.

And a U-6 rate near the lowest in history.

1. The War Could Affect the Fed's View of the Inflation World.

One-month PCE inflation, annual rate

	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sept-23
PCE	3.7	1.3	2.0	2.5	4.5	4.4
PCE ex F&E	3.7	3.5	2.1	2.6	1.4	3.6
Trimmed mean	4.0	3.2	2.5	2.5	2.8	4.0

Six-month PCE inflation, annual rate

	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sept-23
PCE	3.5	3.3	3.2	2.5	2.6	3.1
PCE ex F&E	4.5	4.5	4.0	3.4	2.9	2.8
Trimmed mean	4.4	4.3	4.0	3.4	3.2	3.2

12-month PCE inflation

	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sept-23
PCE	4.4	4.0	3.2	3.4	3.4	3.4
PCE ex F&E	4.8	4.7	4.3	4.3	3.8	3.7
Trimmed mean	4.9	4.7	4.3	4.2	3.9	3.8

- One of the impacts of conflict is: inflation. For now, US inflation is trending in the right direction.

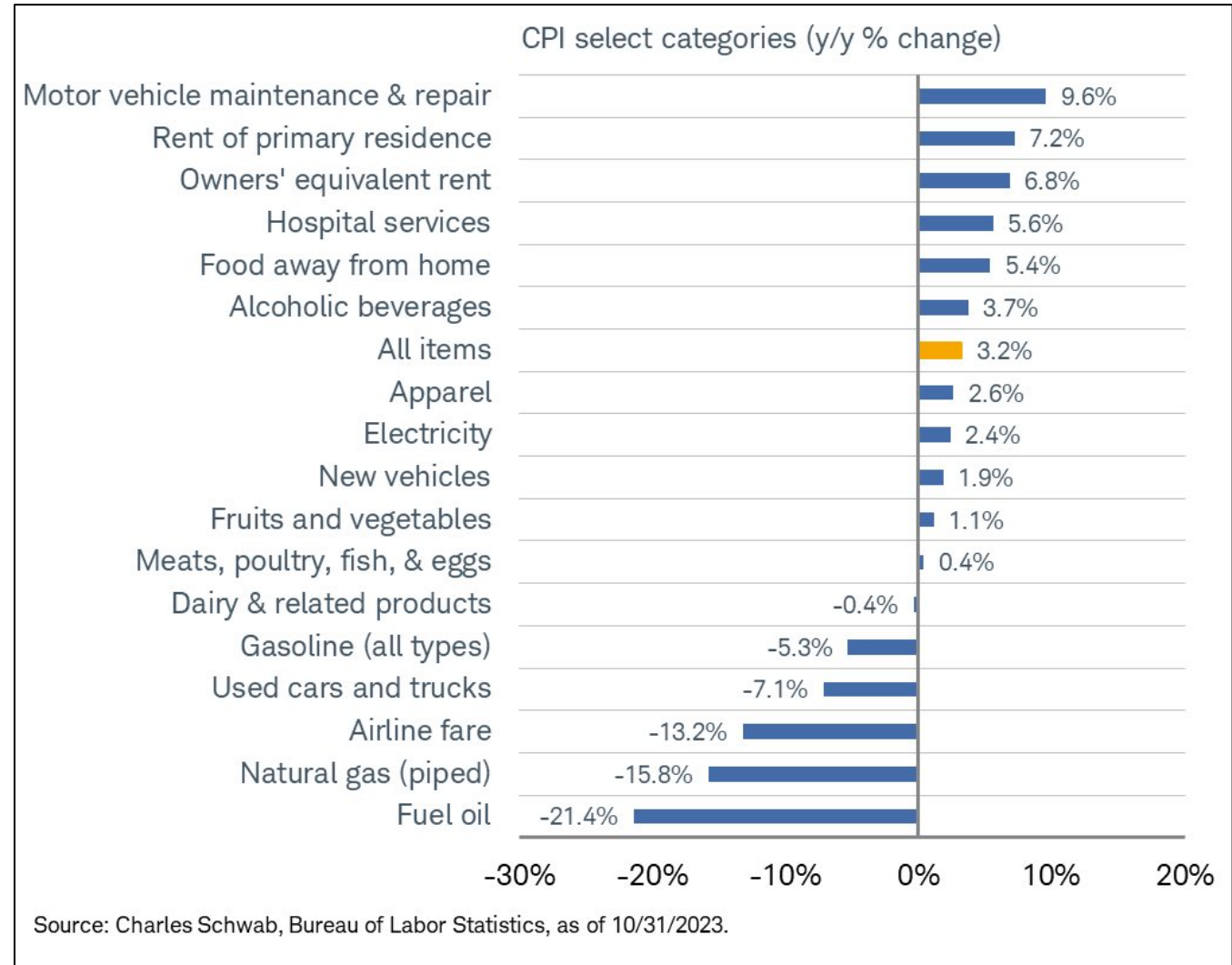
- **3.80% Sep**
- 3.90% Aug
- 4.20% July
- 4.34% June
- 4.71% May
- 4.91% Apr
- 4.88% Mar
- 4.67% Feb
- 4.63% Jan
- 4.68% Dec
- 4.70% Nov
- 4.75% Oct
- 4.73% Sep
- 4.75% Aug

Fed's Target Rate is 2%.

1. CPI: Where is the Inflation on a Granular Level?

Measures still above the Fed's target rate as a percentage of total CPI:

- **Shelter** **34.8%**
- **Food away** **4.8%**
- **Apparel** **2.6%**
- **Electricity** **2.6%**
- **Hospital** **1.9%**
- **Vehicle Maint.** **1.1%**
- **Alcohol** **0.8%**
- **Total of CPI** **48.6%**

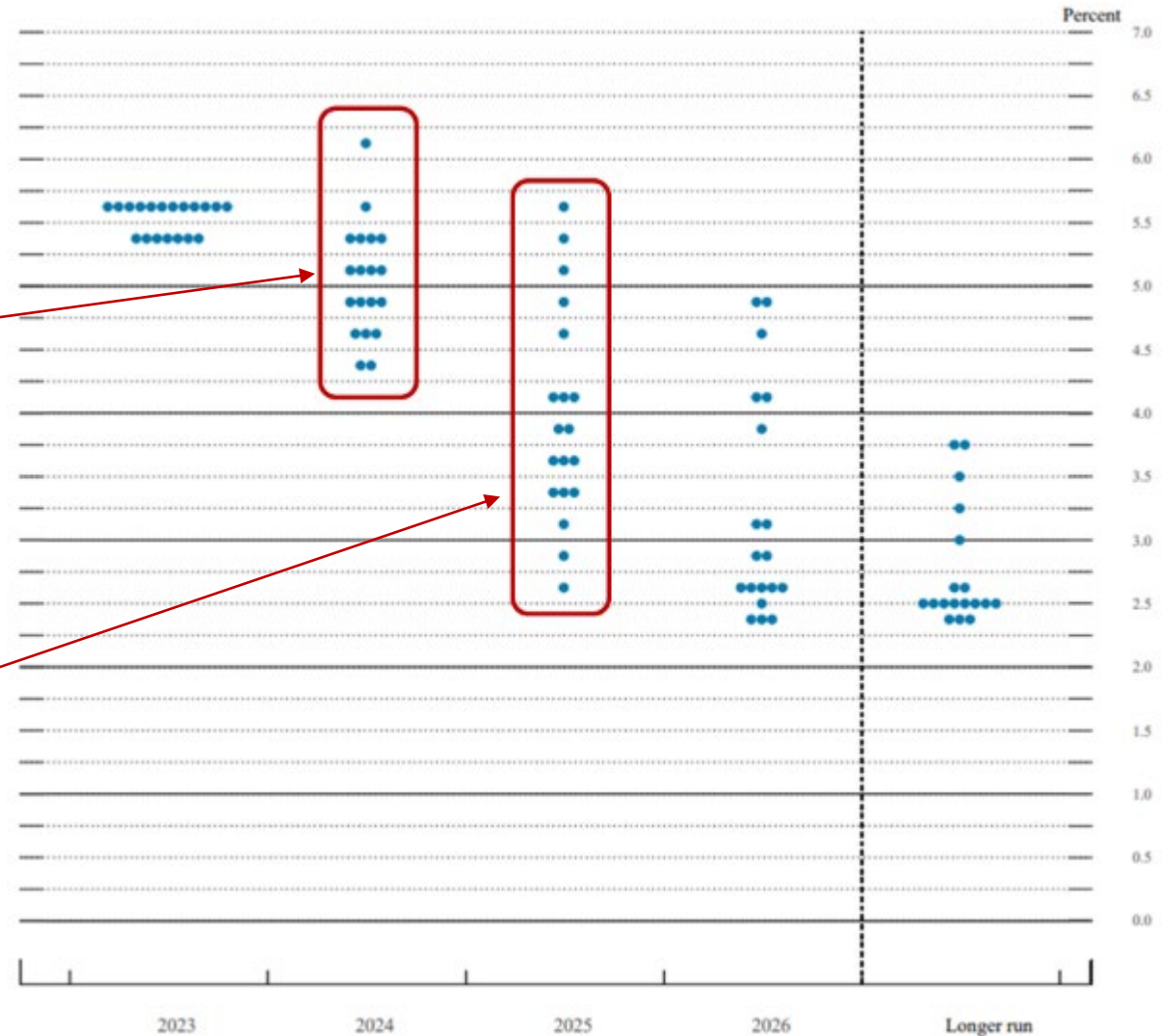


1. The Famous Fed Dot Plot...

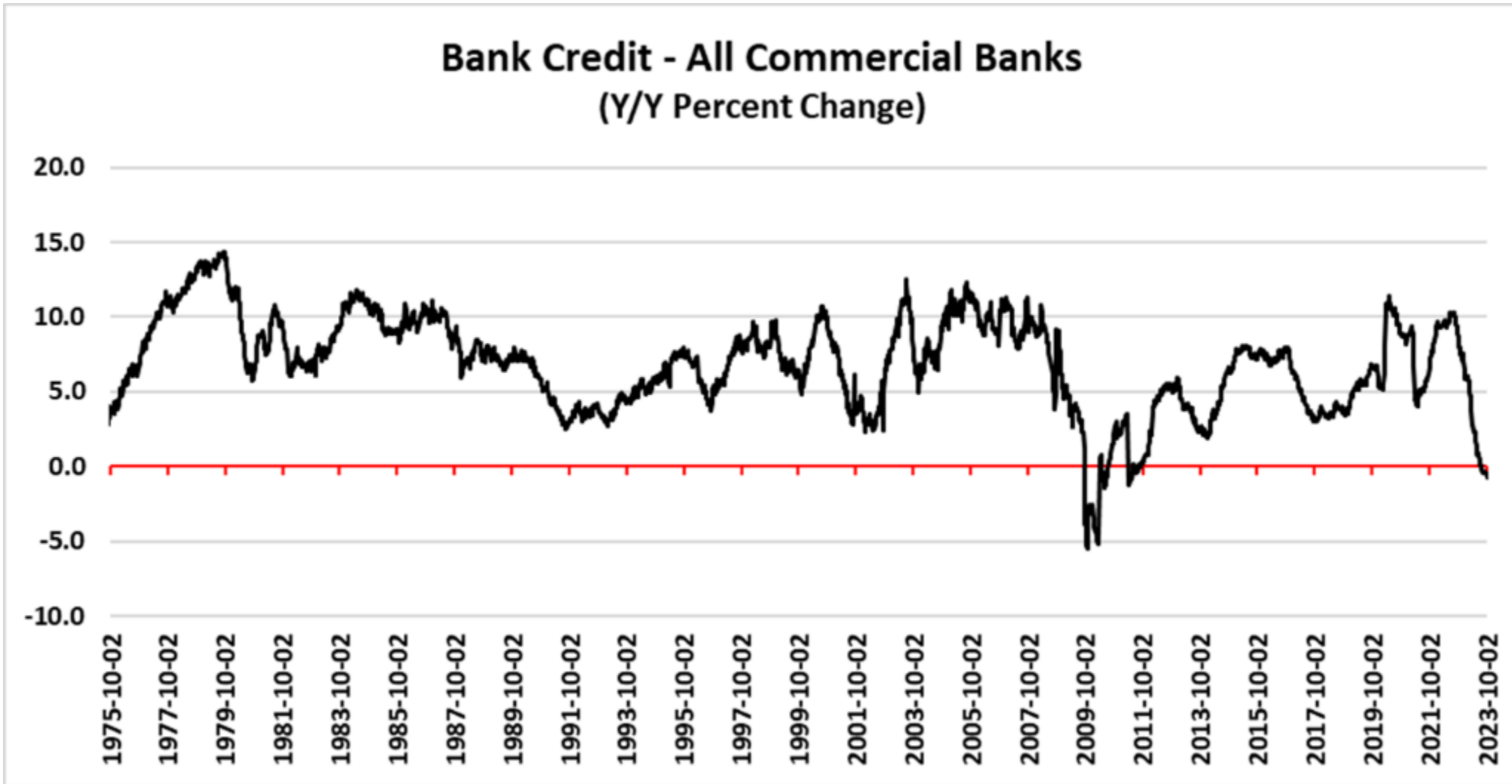
- Why are we not confident in the outlook?

1. 2024 range!
4.3% - 6.2%

2. 2025 range!
2.6% - 5.4%



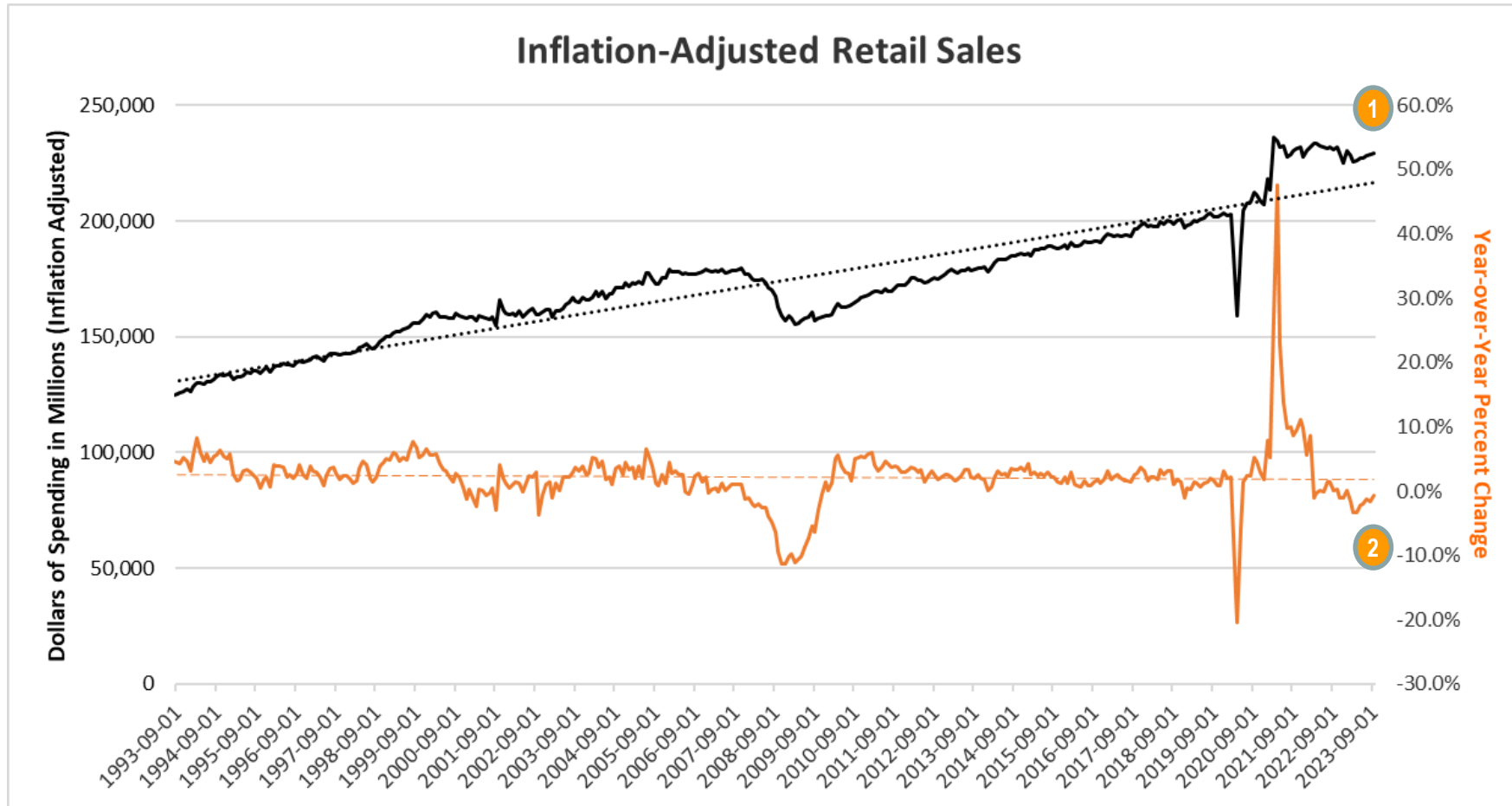
1. Concern: Slowing of Lending (Overtightening?)



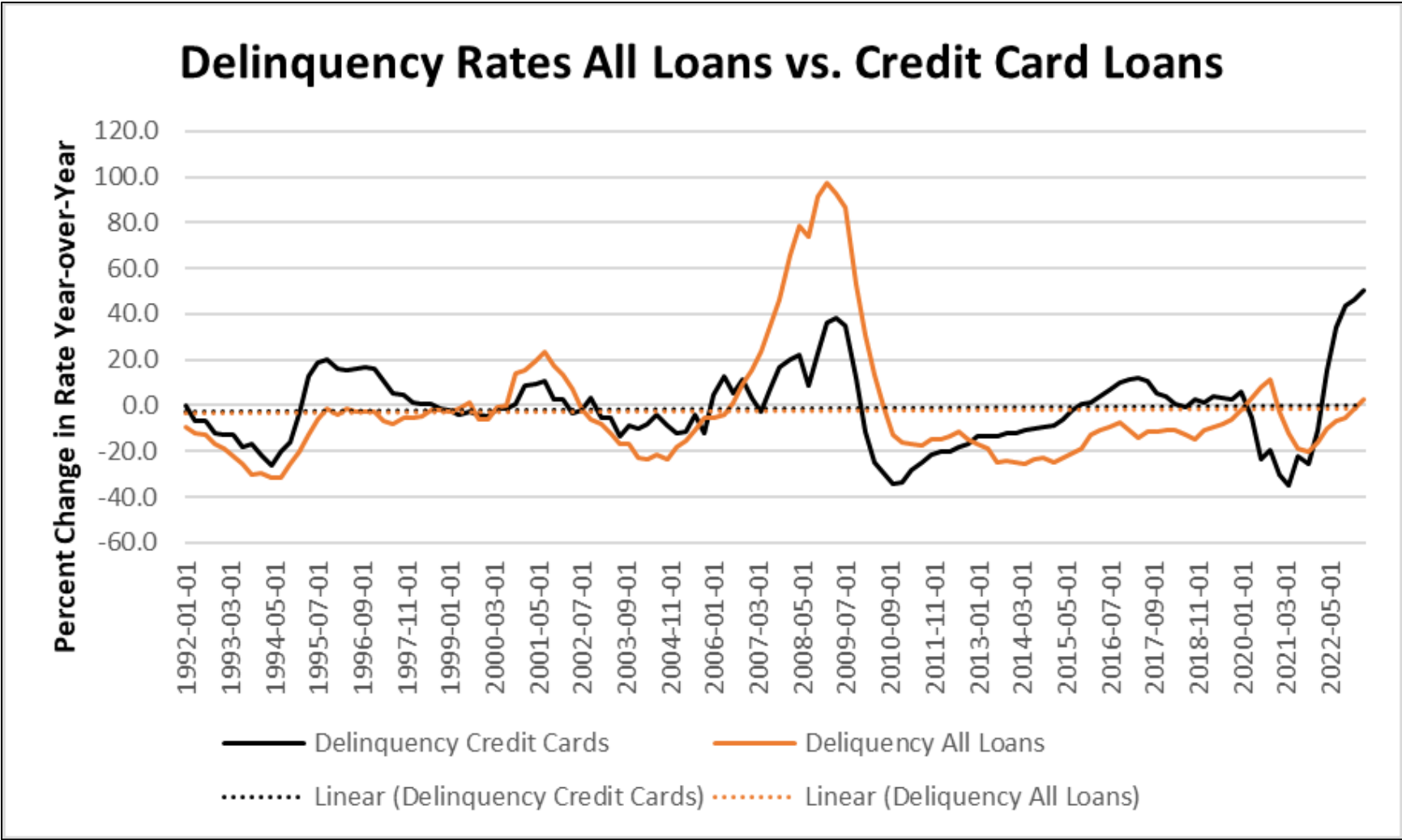
- A year ago, supply chain and labor shortages 70% of project start delays.
- Today: 70% due to lack of project funding.

2. Inflation-Adjusted Retail Spending Continued to Remain Stable and Near Historical Highs Through September

1. Inflation-adjusted retail sales continued to outpace the 30-year trend through September.
2. Inflation-adjusted sales were essentially flat Y/Y

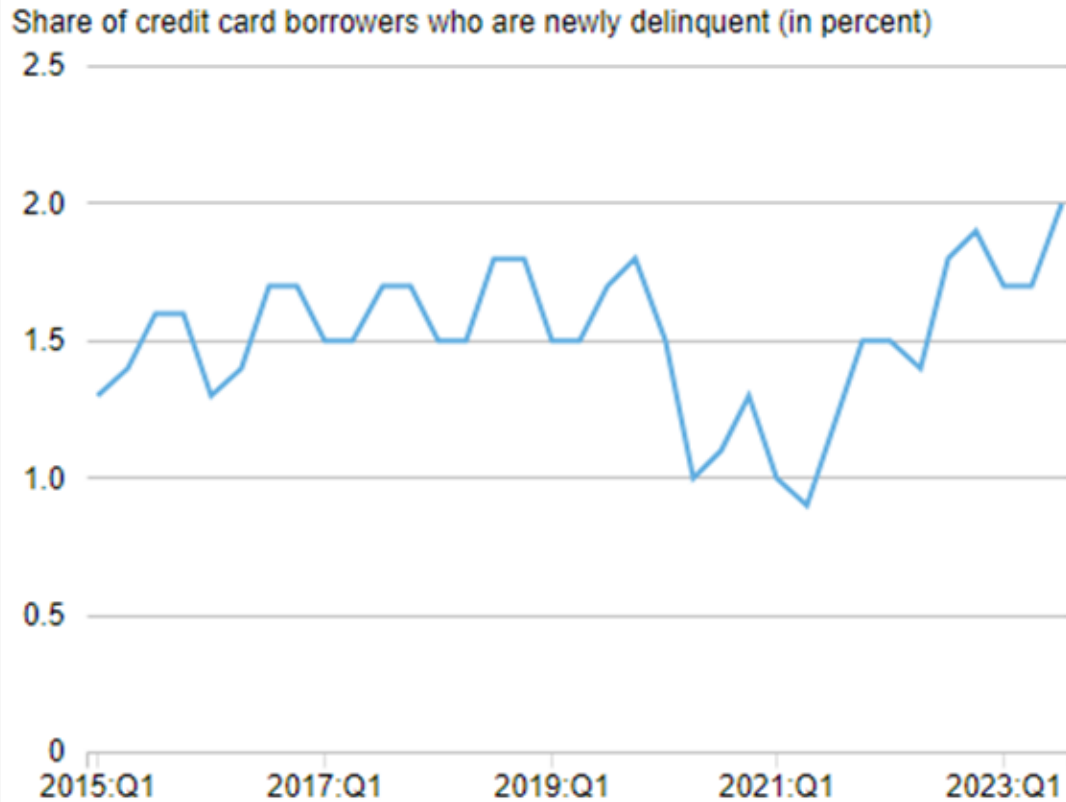


2. Risk: Delinquency Rates Increasing on Credit Card Loans



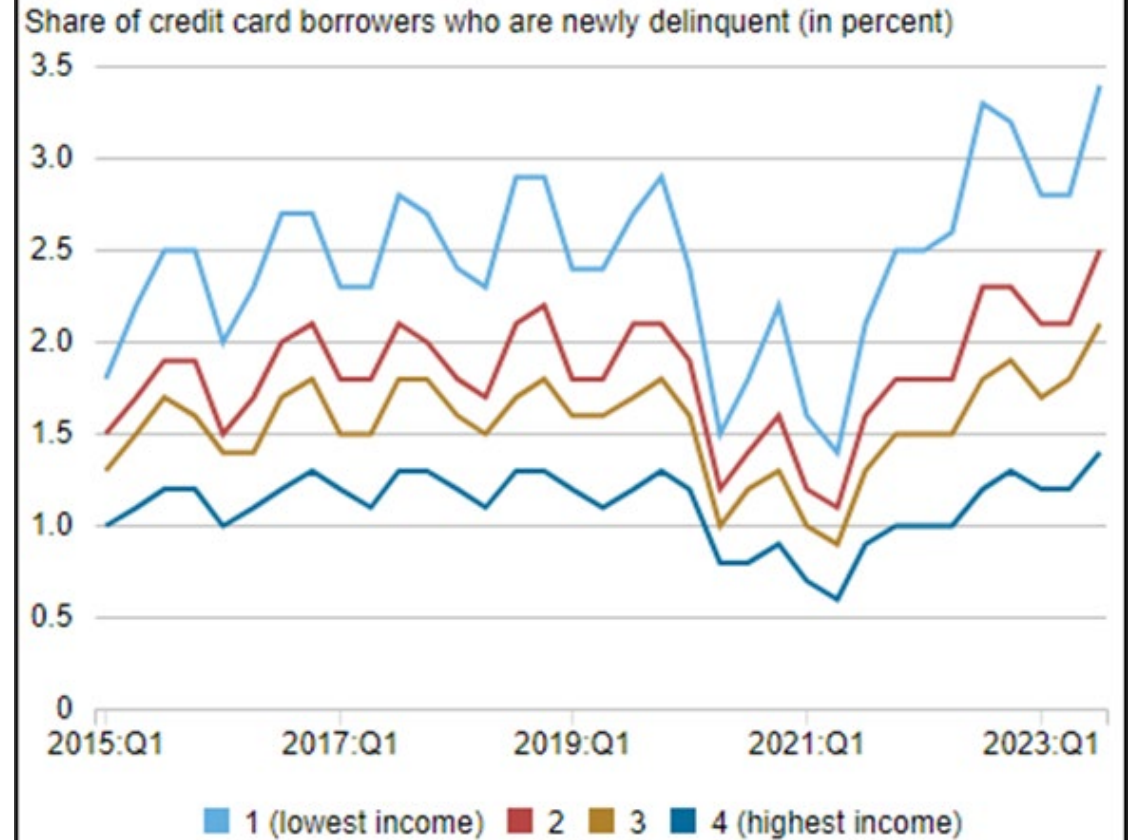
2. Risks: Consumer Debt Perspectives Changing

The Share of Newly Delinquent Credit Card Users Rose in the Third Quarter and Exceeds the Pre-Pandemic Average

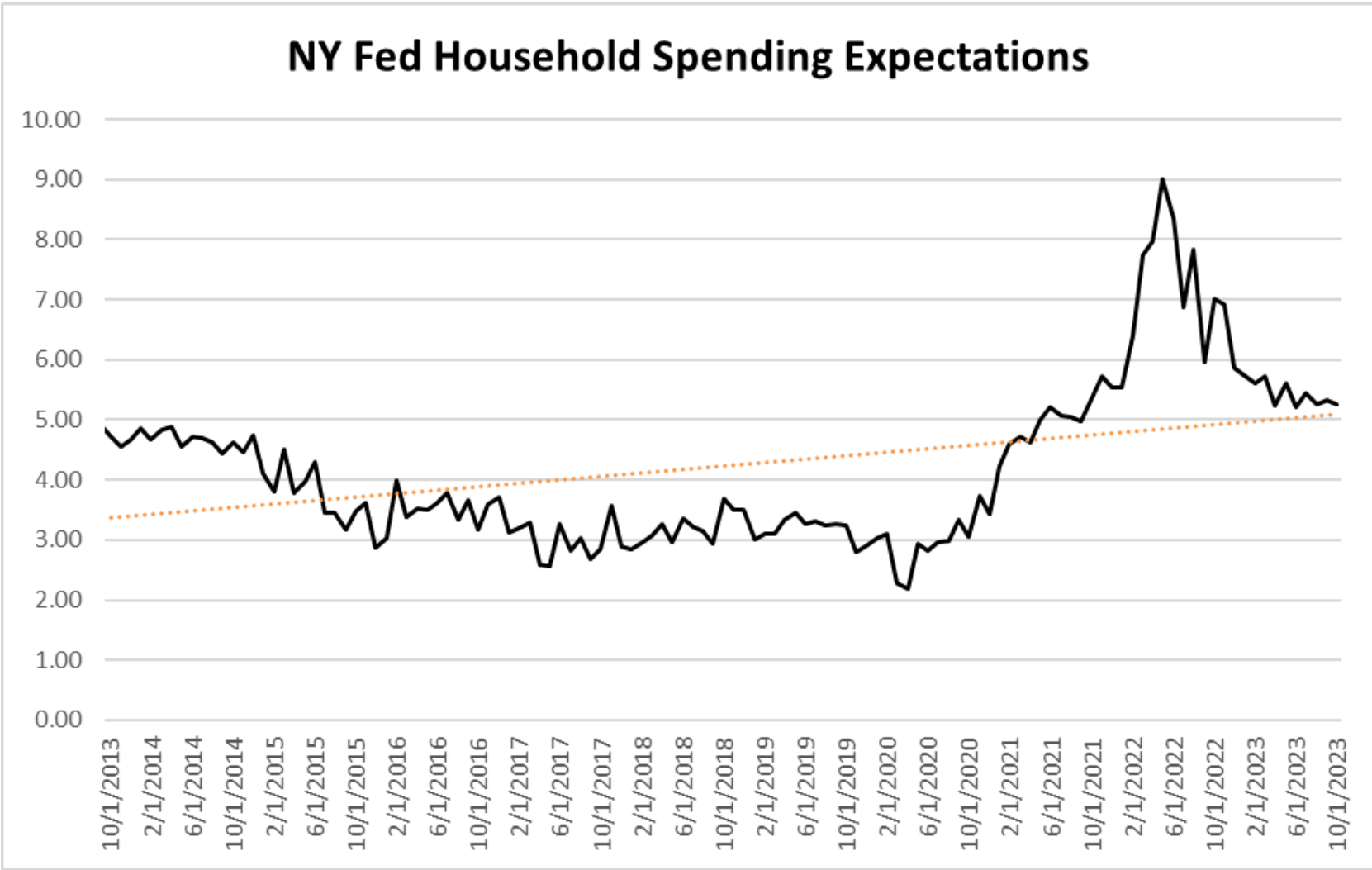


Source: New York Fed Consumer Credit Panel/Equifax.

Delinquency Rates Are Rising Fastest for Lower-Income Areas, but Each Income Quartile Area Has Rates at or above Their 2019 Levels

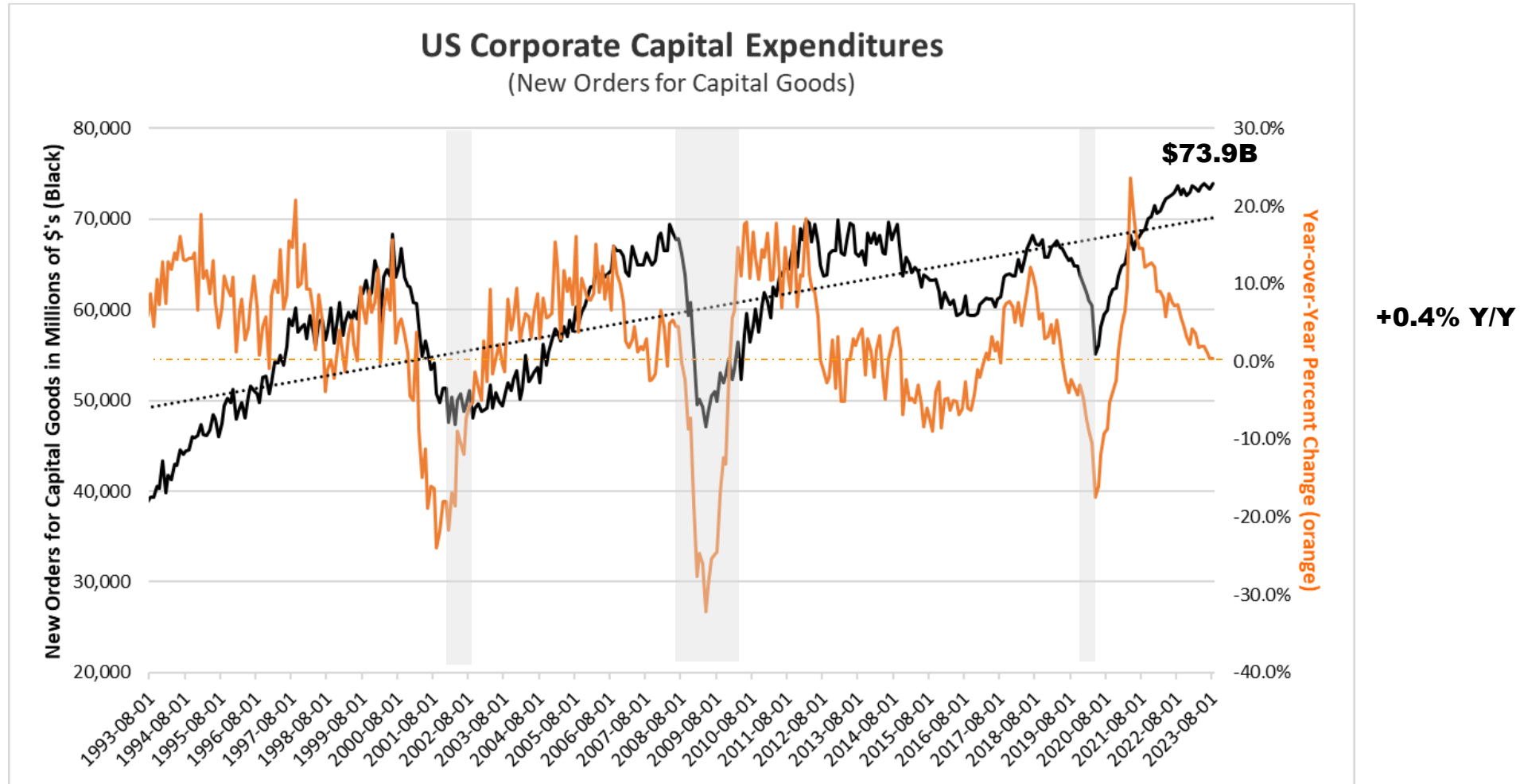


2. Risk: Consumer Spending Expectations Flattening – New York Fed

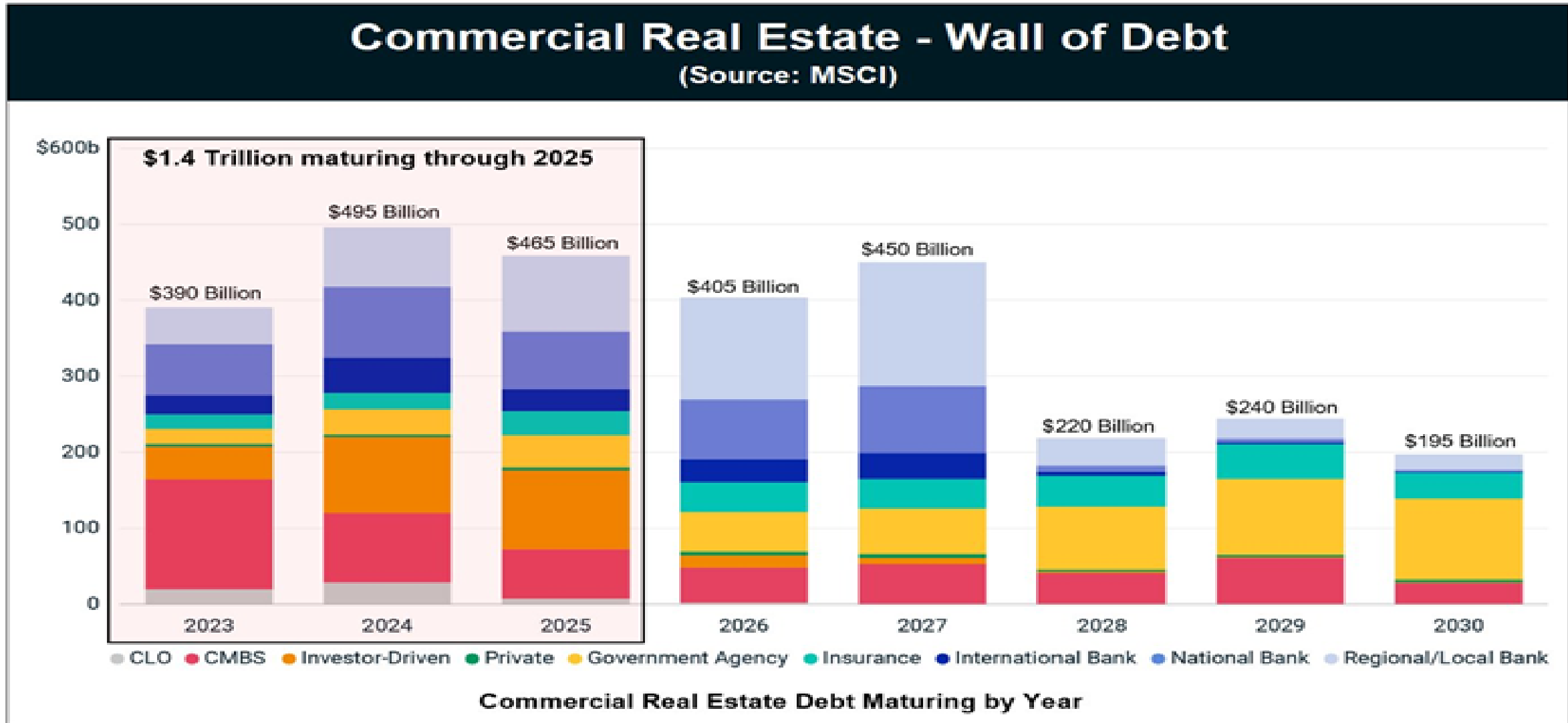


3. Corporate Investment Remains Steady

- Small business surveys show investment has started to decline, but still not showing in this view of the national data yet



Commercial Real Estate “Wall of Debt” Risk



3. Nonresidential Construction Spending Still Very Strong.

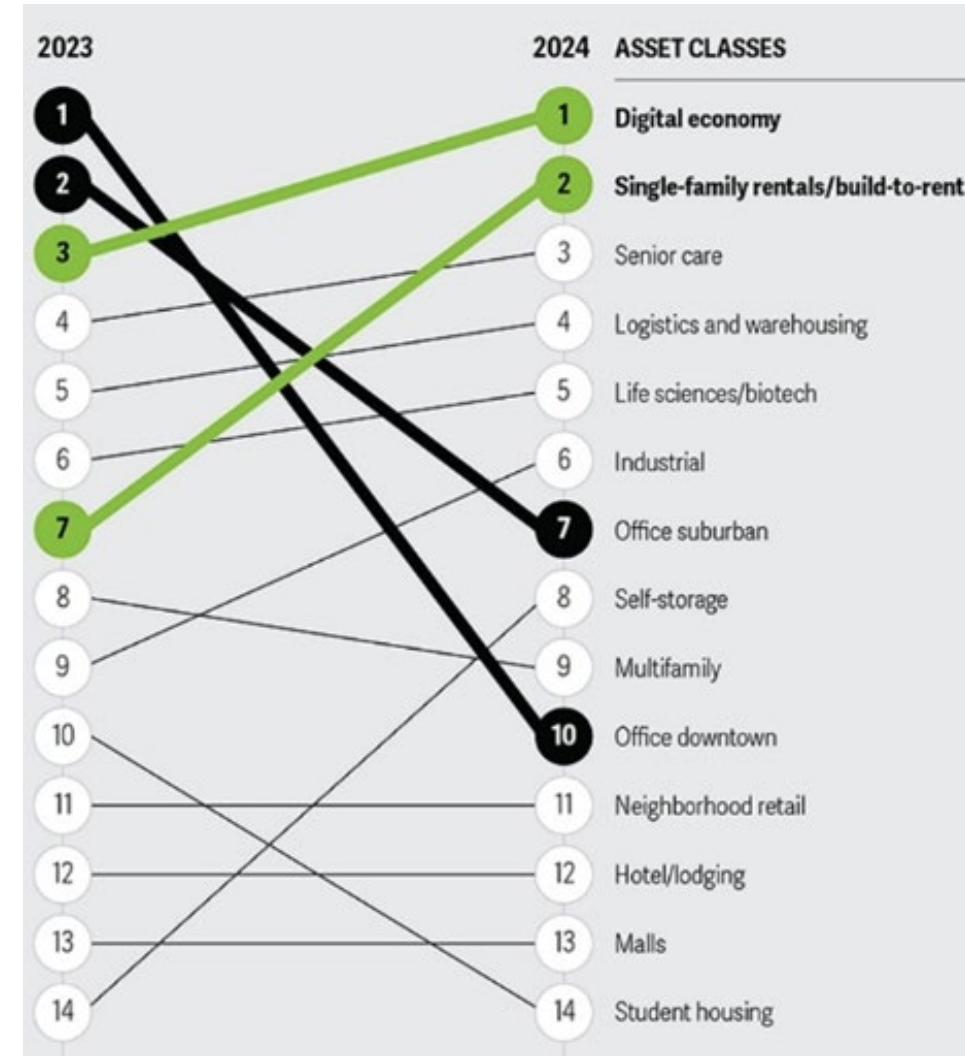
- Spending remains stable and many sectors still setting records (or near record) spending levels.
- As mentioned prior, the question remains whether spending can survive higher interest rates through 2024.
- CHIPS Act, Inflation Reduction Act, and Infrastructure Bill will all see accelerated spending in 2024.

Type of Construction	Sep 2023 ^P	Aug 2023 ^r	Jul 2023 ^r	Jun 2023	May 2023	Sep 2022	Percent change Sep 2023 from -	
							Aug 2023	Sep 2022
Total Construction	1,996,525	1,988,312	1,969,005	1,956,226	1,946,733	1,836,930	0.4	8.7
Residential	882,325	877,171	865,747	870,655	864,027	900,993	0.6	-2.1
New single family	402,319	397,249	390,679	379,422	371,929	427,625	1.3	-5.9
New multifamily	135,650	135,847	134,484	133,850	130,516	110,911	-0.1	22.3
Nonresidential	1,114,201	1,111,141	1,103,258	1,085,571	1,082,705	935,937	0.3	19.0
Manufacturing	198,926	199,765	197,225	192,970	200,258	122,877	-0.4	61.9
Conservation and Dev	11,678	11,533	10,900	11,585	11,559	9,155	1.3	27.6
Sewage and waste disposal	42,127	42,295	41,523	41,591	39,486	33,367	-0.4	26.3
Educational	118,221	116,109	114,881	112,990	112,404	99,494	1.8	18.8
Public safety	13,156	13,212	13,340	13,415	13,080	11,364	-0.4	15.8
Power	123,236	122,080	120,906	117,274	118,003	106,593	0.9	15.6
Health care	62,296	62,568	62,282	61,848	61,852	54,079	-0.4	15.2
Amusement and recreation	33,592	33,171	33,179	32,978	31,994	29,221	1.3	15.0
Lodging	24,266	24,430	24,132	23,520	23,145	21,177	-0.7	14.6
Water supply	27,780	27,870	27,545	27,506	26,204	24,878	-0.3	11.7
Highway and street	132,132	132,228	131,712	130,025	129,654	119,677	-0.1	10.4
Office	99,937	99,742	99,215	98,346	96,838	91,727	0.2	9.0
Commercial	134,118	133,129	134,614	129,768	127,761	124,415	0.7	7.8
Transportation	64,331	64,562	63,502	64,014	62,987	60,297	-0.4	6.7
Religious	3,155	3,233	3,329	3,216	2,998	2,993	-2.4	5.4
Communication	25,252	25,213	24,974	24,527	24,483	24,624	0.2	2.6

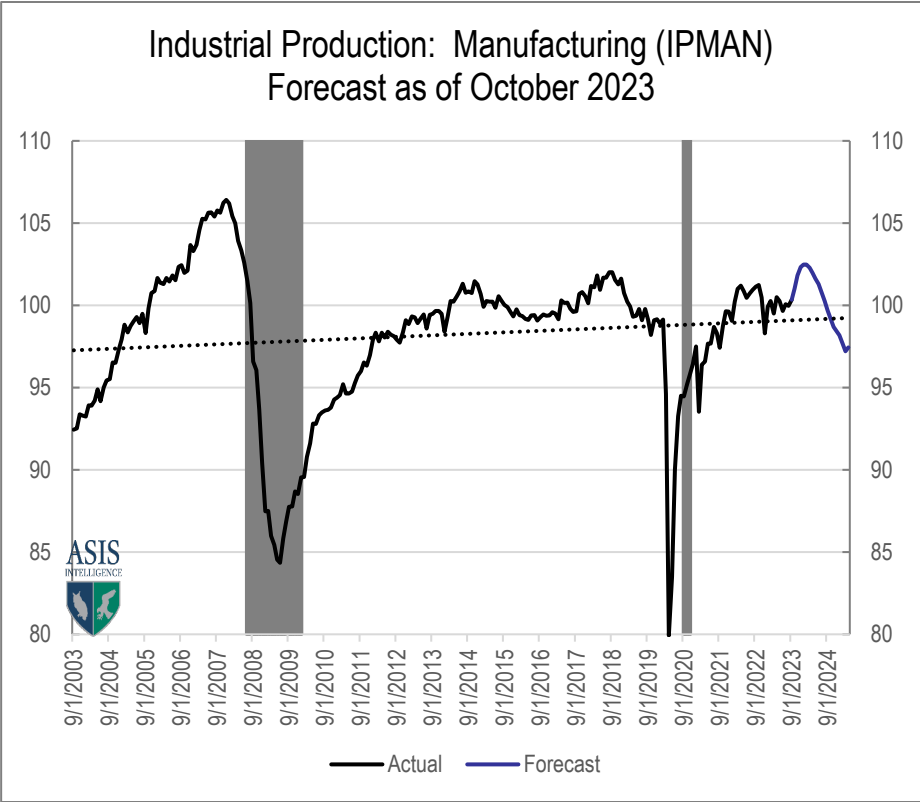
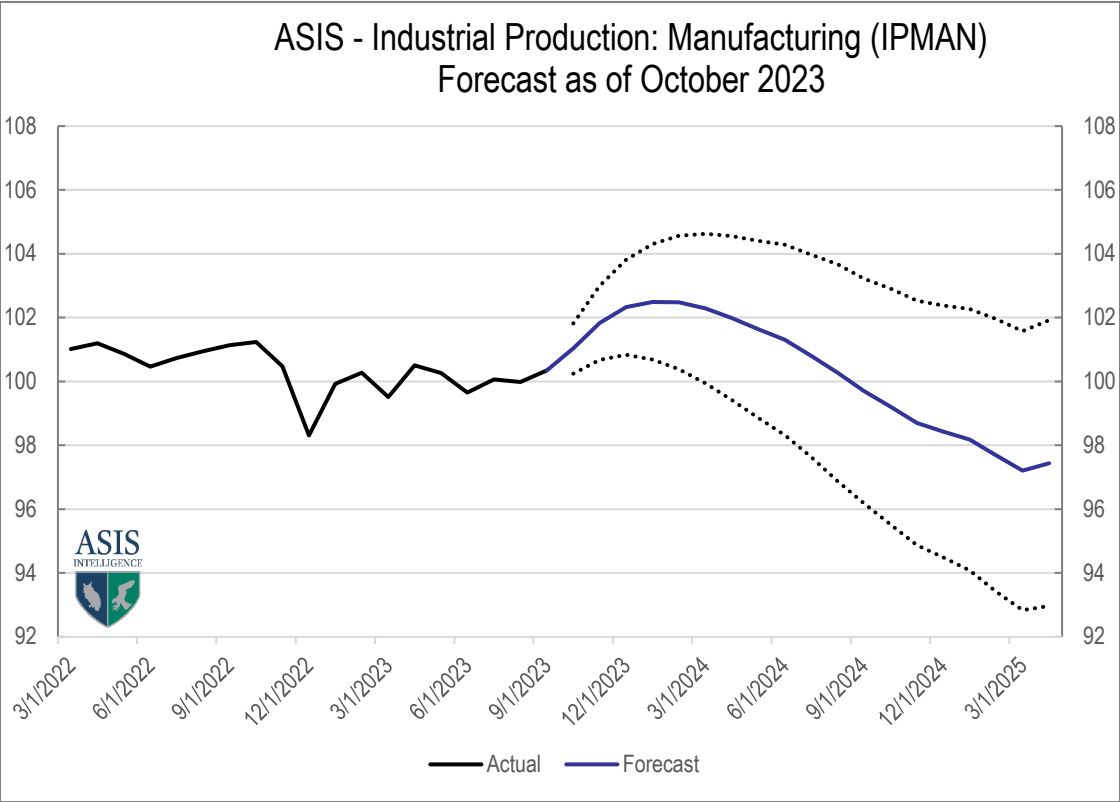
Data Source: US Census Bureau

3. Deloitte Survey: Where Are Investments Taking Place?

- **750 CFOs controlling investments in CRE.**
 - Kansas City region will follow similar trends, but may see industrial and logistics/warehousing higher on the list
- **Only touches on explaining spending intentions.**
 - Hotel Lodging 12th on this list, but actual spending shows it 4th fastest growing construction spending segment
- **Kastle: only 50.3% return to office rate at this time. Office demand will be situation by situation, no large national trends pushing demand.**



Slump Showing Up in 2024



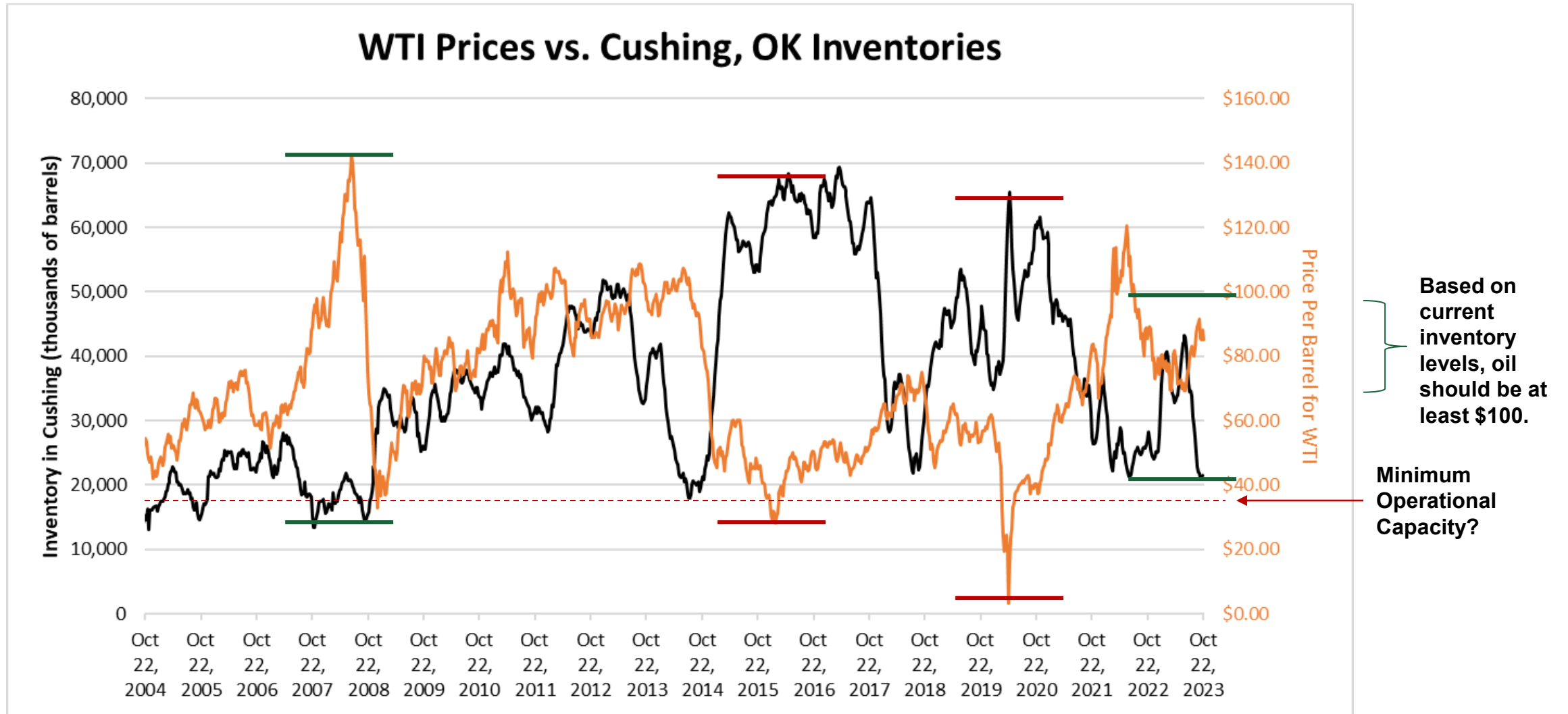
Headwind BLUF: Global Manufacturing Highlights

- 21 countries had manufacturing sectors in contraction in Oct
- Europe still in recession.
- Asia is reeling from lack of demand in NA and Europe
- India is booming – because of shifting sourcing patterns
- Canada and the US in contraction, Mexico just barely hanging on.
- This could make some raw materials more plentiful, and help clear backlogs
- But from a global economy perspective, its not great news.

Country	Manufacturing				Services			
	Current Month	Latest Month PMI	Prior Month PMI	M/M Change	Current Month	Latest Month PMI	Prior Month PMI	M/M Change
Global PMI	Oct	48.8	49.2	-0.4	Oct	50.4	50.7	-0.3
Eurozone PMI	Oct	43.1	43.4	-0.3	Oct	47.8	48.7	-0.9
US	Oct	50.0	49.8	0.2	Oct	50.6	50.1	0.5
China	Oct	49.5	50.6	-1.1	Oct	50.4	50.2	0.2
Canada	Oct	48.6	47.5	1.1	Oct	46.6	47.8	-1.2
Mexico	Oct	52.1	49.8	2.3				
Japan	Oct	48.7	48.5	0.2	Oct	51.6	53.8	-2.2
Germany	Oct	40.8	39.6	1.2	Oct	48.2	50.3	-2.1
South Korea	Oct	49.8	49.9	-0.1				
UK	Oct	44.8	44.3	0.5	Oct	49.5	49.3	0.2
France	Oct	42.8	44.2	-1.4	Oct	45.2	44.4	0.8
India	Oct	55.5	57.5	-2.0	Oct	58.4	61.0	-2.6
Italy	Oct	44.9	46.8	-1.9	Oct	47.7	49.9	-2.2
Taiwan	Oct	47.6	46.4	1.2				
Brazil	Oct	48.6	49.0	-0.4	Oct	51.0	48.7	2.3
Spain	Oct	45.1	47.7	-2.6	Oct	51.1	50.5	0.6
Russia	Oct	53.8	54.5	-0.7	Oct	53.6	55.4	-1.8
Netherlands	Oct	43.8	43.6	0.2				
Ireland	Oct	48.2	49.6	-1.4	Oct	52.6	54.5	-1.9
Greece	Oct	50.8	50.3	0.5				
Poland	Oct	44.5	43.9	0.6				
ASEAN	Oct	49.6	49.6	0.0				
Vietnam	Oct	49.6	49.7	-0.1				
Philippines	Oct	52.4	50.6	1.8				
Australia	Oct	48.2	48.7	-0.5	Oct	47.9	51.8	-3.9
Switzerland	Oct	40.6	44.9	-4.3				
Hong Kong	Oct	48.9	49.6	-0.7				
Singapore	Oct	53.7	54.2	-0.5				

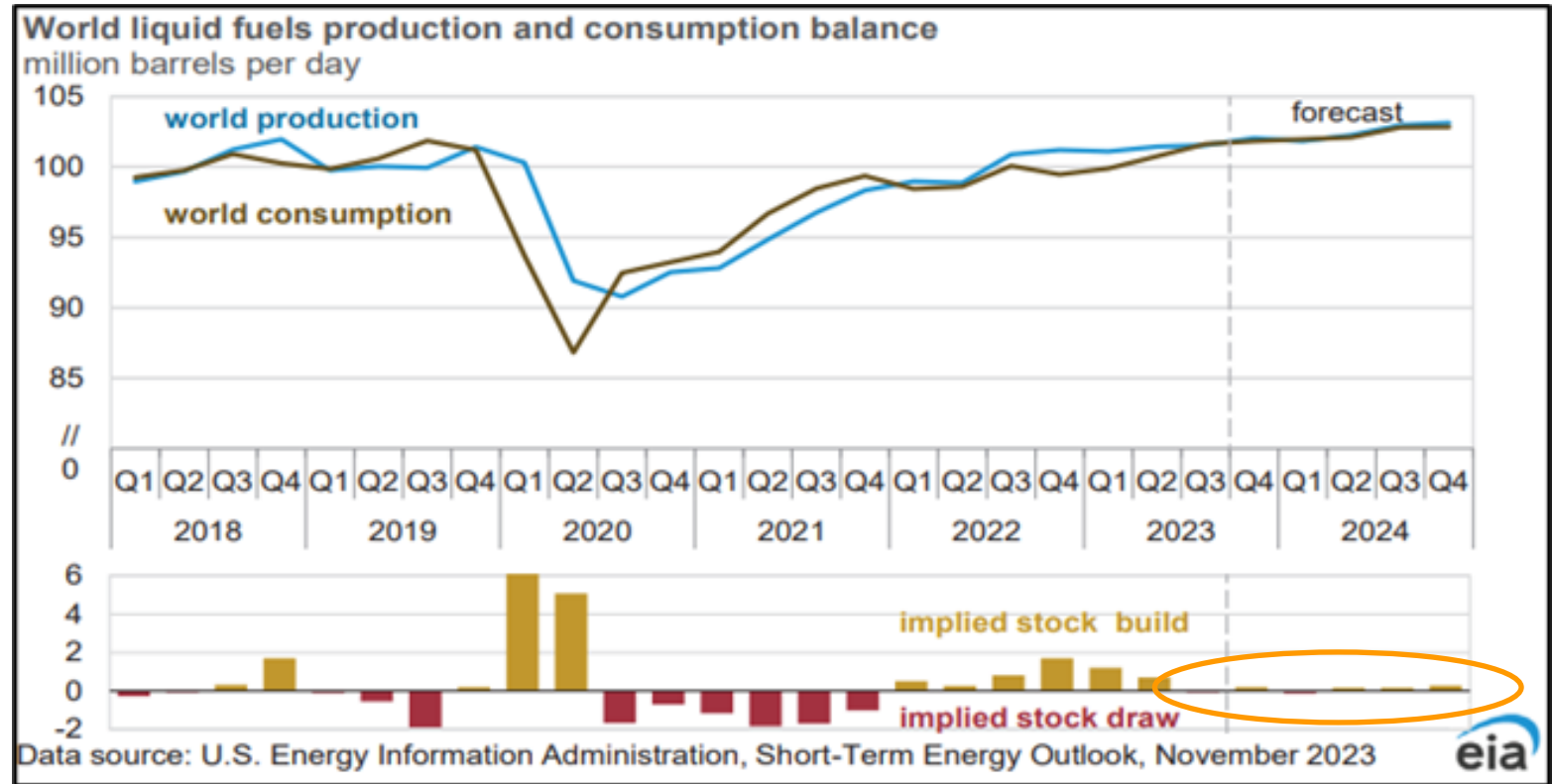
Sources: S&P Global, Caixin, JP Morgan, Jibun Bank, Nevi, BME, CIPS

Biggest Risk: Oil. Cushing Approaching Minimum Operational Levels?



EIA forecast is balanced between supply/demand. This does not include replacing the SPR

- Now an implied net draw through 2023/2024 according to EIA
 - Consumption is still 20M Bpd currently with US production at 12.5M Bpd; 7M Bpd gap must still be imported
 - The US will start rebuilding the SPR in 2023 and 2024?
 - Concerns that global excess capacity is still just 1.2% higher currently, when China and Europe are largely consuming less.



Crude forecast:

- 2021 \$68.21
- 2022 \$94.91
- 2023 \$77.79
- 2024 \$81.48

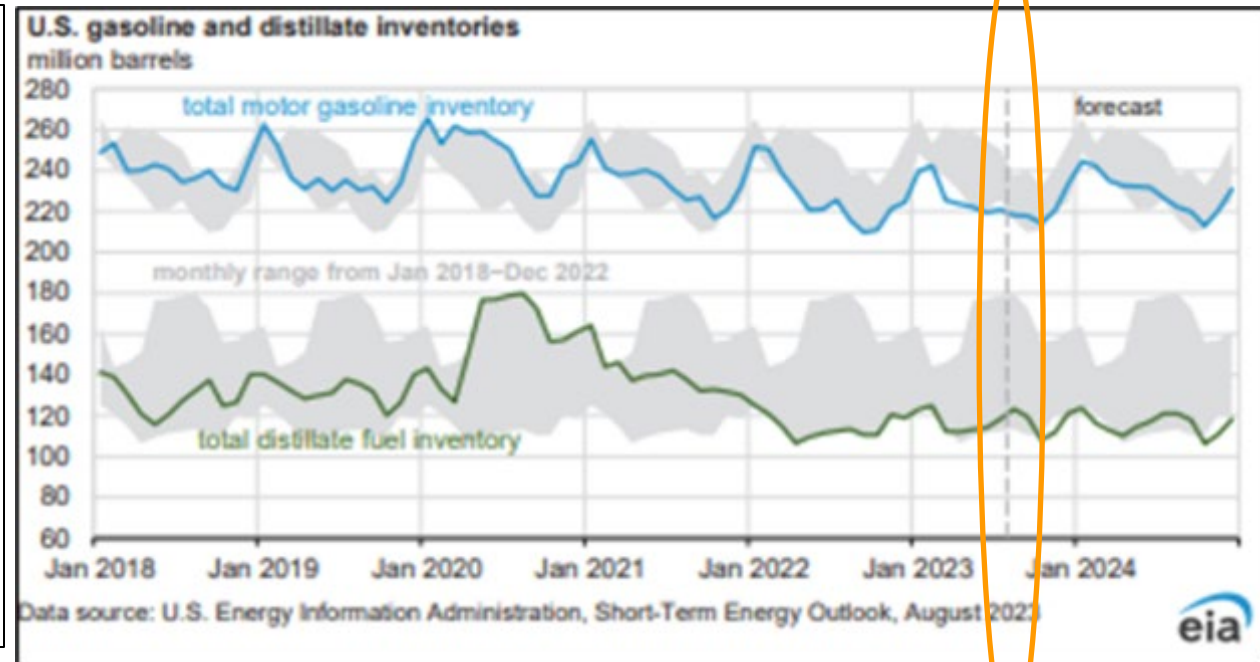
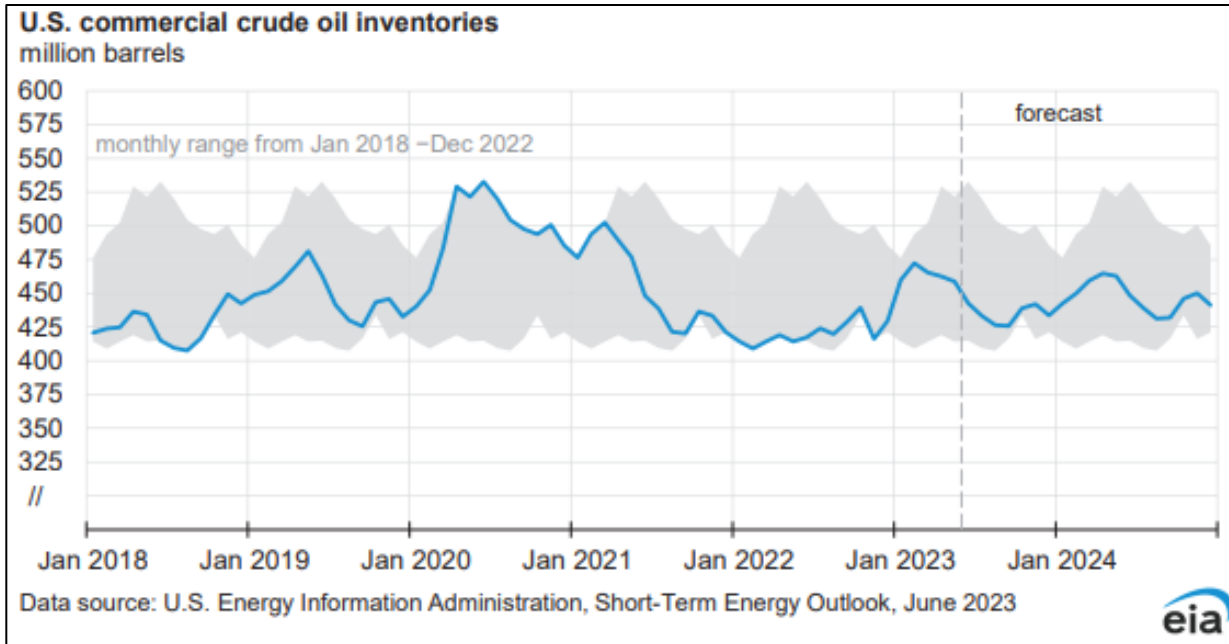
Diesel forecast:

- 2021 \$3.29
- 2022 \$5.02
- 2023 \$4.17
- 2024 \$3.94

Gasoline forecast:

- 2021 \$3.02
- 2022 \$3.97
- 2023 \$3.56
- 2024 \$3.45

EIA forecasting gasoline and petroleum inventories to remain at midpoint in 5year average; distillates at the bottom of the average.



Macroeconomic Outlook

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	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
Real GDP	1.1	2.4	4.9	1.0	-1.0	-0.7	2.2	2.3	2.3	-2.8	5.9	2.1	2.1	0.7	1.8
Unemployment rate (%)	3.5	3.6	3.8	4.0	4.5	4.5	4.4	4.3	3.7	8.1	5.4	3.6	3.8	4.3	4.5
PCE Inflation (%Y/Y)	4.6	3.6	3.1	3.1	3.1	2.5	2.1	2.0	1.5	1.1	4.0	5.6	3.1	2.2	2.0
Core PCE Inflation (%Y/Y)	4.7	4.3	3.8	3.5	3.1	2.5	2.1	2.0	1.7	1.3	3.5	4.8	3.5	2.2	2.0
Fed Funds Rate	4.9	5.1	5.3	5.6	5.6	5.2	4.7	4.0	1.6	0.1	0.1	4.4	5.5	4.0	3.1
Canada Real GDP	-	-	-	-	-	-	-	-	1.8	-5.2	4.5	3.4	1.3	1.5	-
Unemployment rate (%)	-	-	-	-	-	-	-	-	5.8	9.5	7.4	5.3	5.7	6.0	-
Mexico Real GDP	-	-	-	-	-	-	-	-	-1.8	-8.2	5.0	2.7	1.6	2.1	-
Unemployment rate (%)	-	-	-	-	-	-	-	-	3.6	4.4	4.1	3.3	3.4	3.3	-

1. Greatest recession risk is being pushed further out, but it appears greatest between Q4 and Q2 of 2024.

2. Some estimates suggest that this could still easily get pushed out, depending on how quickly the unemployment rate rises (which will have a disinflation effect and reduce inflation risk).

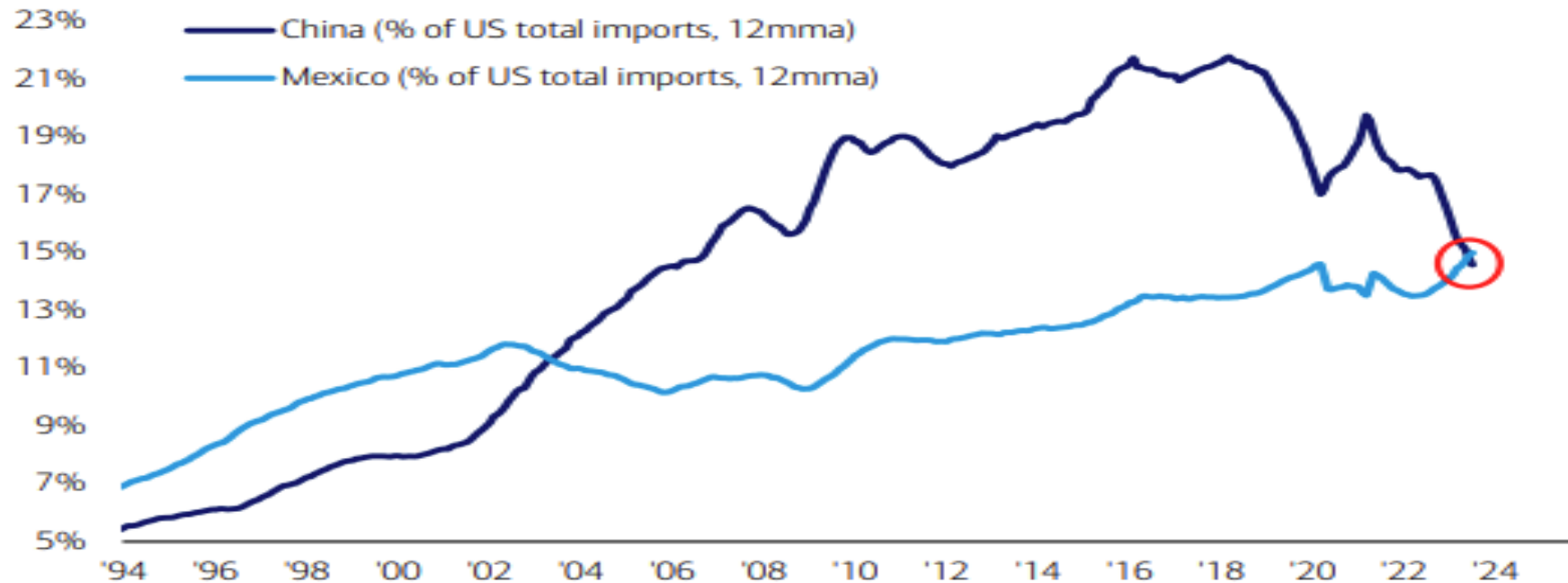
4. To hit 2% inflation target, estimates suggest the Fed will have to hit a peak Effective Funds Rate of 5.1% to 5.5% and unemployment will likely still approach 4.5%.

Source: Conference Board; Federal Reserve

Mexican Growth at China's Expense

Chart 4: US importing more from Mexico than China for first time since 2003

China and Mexico as % of US imports (12-month moving average)



Source: BofA Global Investment Strategy, Bloomberg

Mexico Makes History – Xochitl Galvez or Claudia Scheinbaum

BLUF: Is This a Game-Changer? Ching Tien Missile...

- Domestically built (no reliance on US appropriating funds or transferring munitions).
- Does it change US/China relations?
- Does it ensure MAD doctrine?
- Could it open up the region to trade and sharing resources once again?
- Or does it expedite the South China Sea conflict potential?



For More Enlightenment

Chris.kuehl@armadaci.com

Flagship – Three times a week
(MWF). \$7 per month

Strategic Intelligence System –
\$44 monthly

Wrap Up

- This webinar has been recorded. A link to the webinar replay and the presentation deck will be included in a follow-up email to you tomorrow.
- In 6 months, you may be asked to provide feedback about the value of today's event.
- Have a great Holiday Season and start to 2024!

