

November 2024 Economic Outlook

Keith Prather; Managing Director

Dirty Little Economic Secrets...



The Elephant in the Room – New Administration



- **With a tight House, use of Executive Order is #1 (R:218 / D:212 – 218 to control) (435 total)**
 - Could put his prior orders back in place (truly a unique situation in which a former president retakes office 4 years later).
 - In general, reducing regulation is priority #1 (helps fight inflation by reducing corporate overhead)
 - Energy and new leases for drilling...
 - Easing MPG? (challenges here without definitive, full control of Congress) With the House tight, it could be challenging to get draconian, permanent legislation passed.
- **First 100 days will be interesting, Musk and DOGE can make recommendations but can't change policy or spending directly. But they can expose a LOT.**
- **Tariffs are the big question. But there is a dirty little secret here...**
- **In the First 100 Days....could also need a “show” once again...and that could be the Red Sea.**

April 13, 2017...The MOAB



Red Sea Situation...maybe the “Show”?



- 130 attacks since 11/23 to 7/24.
- 77 commercial ships have taken damage.

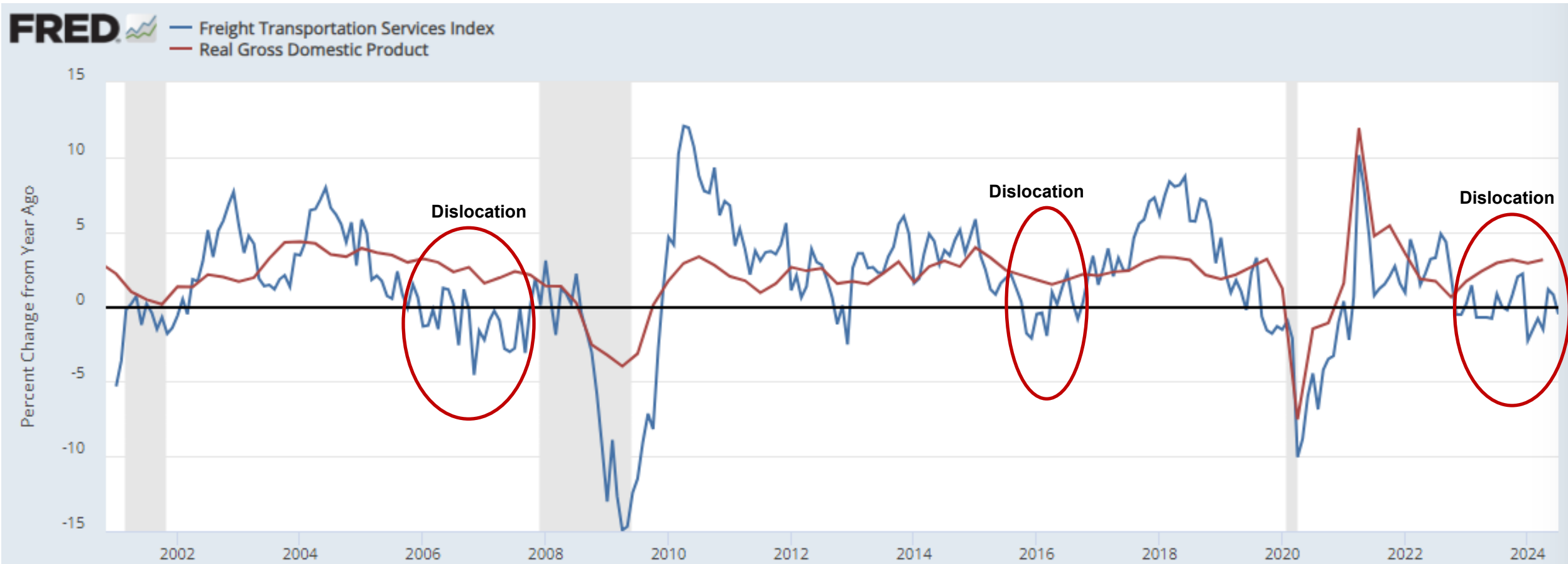


Route	Route code	24-Oct-24	31-Oct-24	07-Nov-24	Weekly change (%)	Annual change (%)
Composite Index	WCI-COMPOSITE	\$3,095	\$3,213	\$3,444	7% ▲	129% ▲
Shanghai - Rotterdam	WCI-SHA-RTM	\$3,132	\$3,396	\$3,954	16% ▲	211% ▲
Rotterdam - Shanghai	WCI-RTM-SHA	\$548	\$543	\$524	-3% ▼	14% ▲
Shanghai - Genoa	WCI-SHA-GOA	\$3,296	\$3,648	\$4,399	21% ▲	199% ▲
Shanghai - Los Angeles	WCI-SHA-LAX	\$4,814	\$4,839	\$4,806	-1% ▼	110% ▲
Los Angeles - Shanghai	WCI-LAX-SHA	\$710	\$718	\$720	0%	-6% ▼
Shanghai - New York	WCI-SHA-NYC	\$5,266	\$5,241	\$5,233	0%	97% ▲
New York - Rotterdam	WCI-NYC-RTM	\$761	\$760	\$785	3% ▲	30% ▲
Rotterdam - New York	WCI-RTM-NYC	\$2,663	\$2,664	\$2,624	-2% ▼	76% ▲

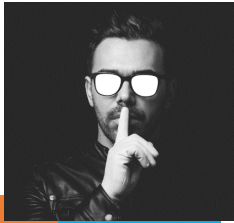
3 Periods in Last Two Decades That GDP Has Outpaced Transportation Services



- It has always come down to dramatic changes in the inventory-to-sales-ratio



Inventory to sales ratios are closer to 'balanced'



- 29.2% of inventories are understocked (36.2% lower against Aug 2019).
- 18.4% are balanced (17.8% balanced against Aug 2019).
- 52.5% are still overstocked (46.0% when compared against Aug 2019).
- But when stripping out the durable goods wholesalers (big ticket items that can skew the full insight), only 21.1% are overstocked. (14.7% against Aug 2019)

	Sector	September Sales (Millions)	9/12/09 - 09/12/19 10-YR Average	Sep-24	ISR Percent Above/Below Pre-pandemic	Aug-19	Percent Change
	Total Business		1.34	1.38	3.0%	1.42	-3%
1	Automotive		2.49	1.27	-49.0%	2.30	-45%
2	Retail		1.43	1.33	-7.0%	1.45	-8%
3	Merchant Wholesalers		1.29	1.34	3.9%	1.35	-1%
4	Manufacturing		1.35	1.46	8.1%	1.47	-1%
1	General Merchandise (ie. Walmart)	76,118	1.43	1.30	-9.1%	1.34	-3%
2	Drugs Wholesalers	95,220	1.09	1.00	-8.3%	1.11	-10%
3	Hardware, Plumbing, Heating Wholesalers	20,615	2.32	2.14	-7.8%	2.06	4%
4	Paper Wholesalers (ie. National Paper)	7,826	1.09	1.01	-7.3%	1.13	-11%
5	Food and Beverage Stores	84,108	0.78	0.74	-5.1%	0.79	-6%
6	Furniture, Appliance Stores (i.e NFM)	18,747	1.63	1.58	-3.1%	1.55	2%
7	Apparel Stores	26,285	2.39	2.33	-2.5%	2.40	-3%
8	Household Appliances/Electronics Wholesalers	76,145	1.10	1.10	0.0%	1.16	-5%
9	Chemical Wholesalers	12,651	1.17	1.17	0.0%	1.23	-5%
10	Grocery Wholesalers	75,603	0.68	0.70	2.9%	0.71	-1%
11	Building Material Stores (ie. Home Depot)	36,464	1.85	1.92	3.8%	1.82	5%
12	Department Stores (ie. Nordstrom's)	10,887	1.90	2.02	6.3%	2.03	0%
13	Commerical Equipment Wholesalers	52,416	1.09	1.16	6.4%	1.18	-2%
14	Computer Wholesale Distributors	25,011	0.79	0.85	7.6%	0.84	1%
15	Durable Goods Wholesalers	325,872	1.59	1.76	10.7%	1.72	2%
16	Lumber and Construction Material Wholesalers	17,739	1.49	1.73	16.1%	1.52	14%
17	Machinery Wholesalers (ie. John Deere, Vermeer)	52,700	2.60	3.02	16.2%	2.82	7%
18	Furniture Wholesalers	8,804	1.71	1.99	16.4%	1.75	14%
19	Alcohol Wholesale Distributors	14,760	1.31	1.62	23.7%	1.35	20%

Global Manufacturing Slowing

- Preliminary data shows 15 countries had manufacturing sectors in contraction in September (a few had not yet reported at the time of the report)
- 10 out of 30 countries surveyed fell M/M.
- General Themes:
 - New orders were sluggish in October
 - Input prices were still high
 - Pushback on selling prices (customers not accepting hikes)
 - Hiring has stalled, some countries seeing reductions in headcount
 - And yet, most manufacturers remain optimistic about the future
- Services sectors typically account for 50-60% of most developed country's GDP, and almost every country was still experiencing expansion in services spending
- This seems to be a global phenomenon that services and experiential spending continues to grow while product spending remains sluggish

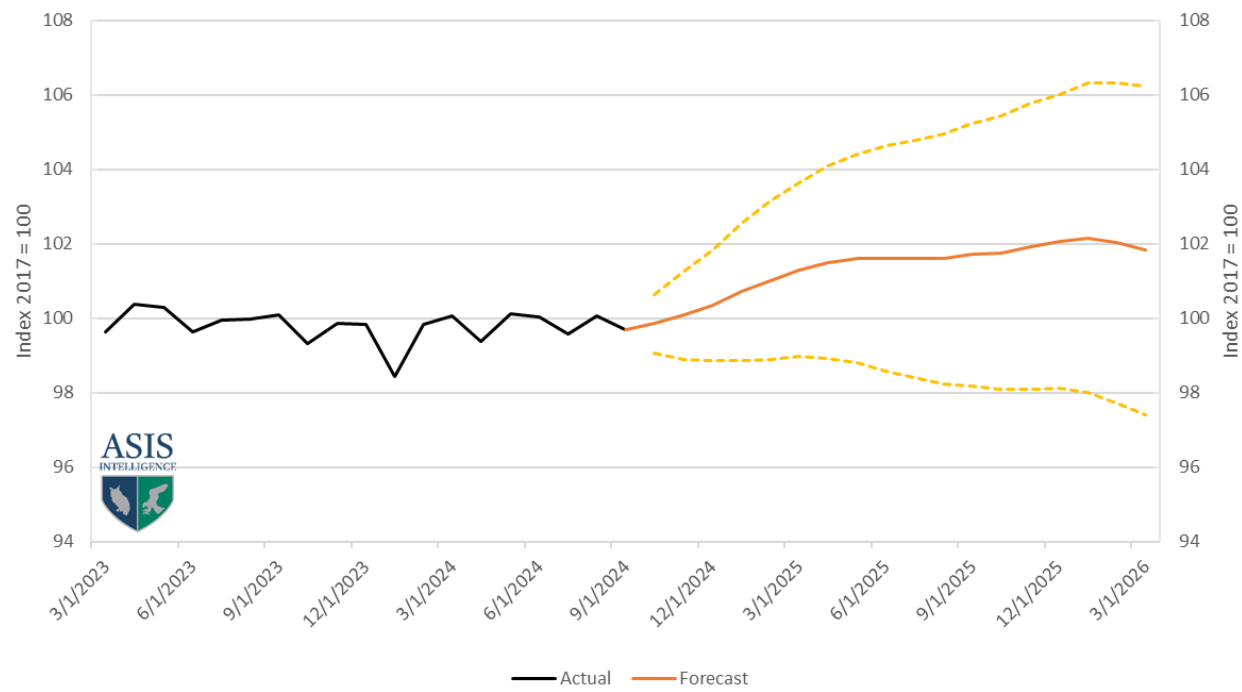
Manufacturing						Services			
Country PMI	Trade with US (in billions)	Current Month	Latest Month PMI	Prior Month PMI	M/M Change	Current Month	Latest Month PMI	Prior Month PMI	M/M Change
US		Oct	48.5	47.3	1.2	Oct	55.0	55.2	-0.2
Global PMI	\$ 4,700	Oct	49.4	48.7	0.7	Oct	53.1	52.9	0.2
Canada	\$ 665	Oct	51.1	50.4	0.7	Oct	50.4	46.4	4.0
Mexico	\$ 661	Oct	48.4	47.3	1.1				
China	\$ 655	Oct	50.3	49.3	1.0	Oct	52.0	50.3	1.7
Eurozone PMI	\$ 632	Oct	46.0	45.0	1.0	Oct	51.6	51.4	0.2
ASEAN	\$ 369	Oct	50.5	50.5	0.0				
Japan	\$ 210	Oct	49.2	49.7	-0.5	Oct	49.7	53.1	-3.4
Germany	\$ 201	Oct	43.0	40.6	2.4	Oct	51.6	50.6	1.0
South Korea	\$ 161	Oct	48.3	48.3	0.0				
UK	\$ 118	Oct	49.9	51.5	-1.6	Oct	52.0	52.4	-0.4
Taiwan	\$ 114	Oct	50.2	50.8	-0.6				
India	\$ 113	Oct	57.5	56.5	1.0	Oct	58.5	57.7	0.8
Vietnam	\$ 113	Oct	51.2	47.3	3.9				
Netherlands	\$ 88	Oct	47.0	48.2	-1.2				
Ireland	\$ 88	Oct	51.5	49.4	2.1	Oct	53.8	55.7	-1.9
Switzerland	\$ 87	Oct	49.9	49.9	0.0				
Italy	\$ 83	Oct	46.9	48.3	-1.4	Oct	52.4	50.5	1.9
France	\$ 80	Oct	44.5	44.6	-0.1	Oct	49.2	49.6	-0.4
Brazil	\$ 78	Oct	52.9	53.2	-0.3	Oct	56.2	55.8	0.4
Singapore	\$ 65	Oct	50.8	51.0	-0.2				
Thailand	\$ 60	Oct	50.0	50.4	-0.4				
Australia	\$ 39	Oct	47.3	46.7	0.6	Oct	51.0	50.5	0.5
Indonesia	\$ 37	Oct	49.2	49.2	0.0				
Russia	\$ 36	Oct	50.6	49.5	1.1	Oct	51.6	50.5	1.1
Spain	\$ 35	Oct	54.5	53.0	1.5	Oct	54.9	57.0	-2.1
Hong Kong	\$ 34	Oct	52.2	50.0	2.2				
Philippines	\$ 23	Oct	52.9	53.7	-0.8				
Poland	\$ 11	Oct	49.2	48.6	0.6				
Greece	\$ 3	Oct	51.2	50.3	0.9				

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

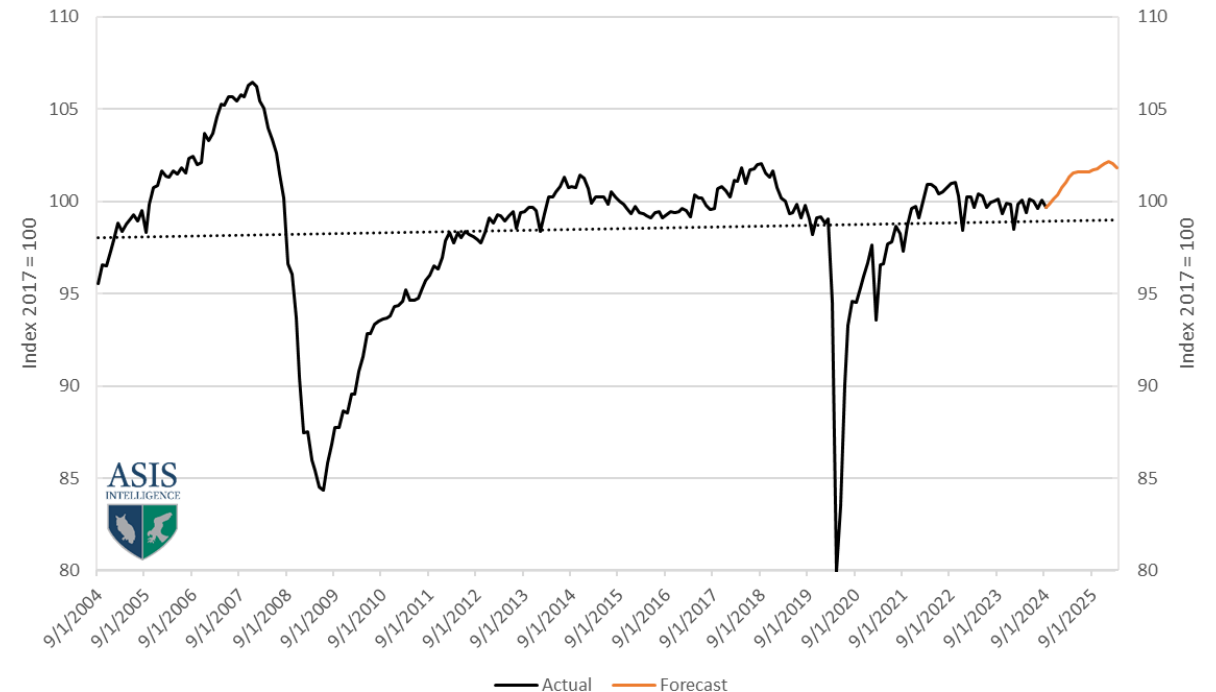
Industrial Production in Manufacturing



Industrial Production: Manufacturing (IPMAN)
Forecast as of 10/22/2024



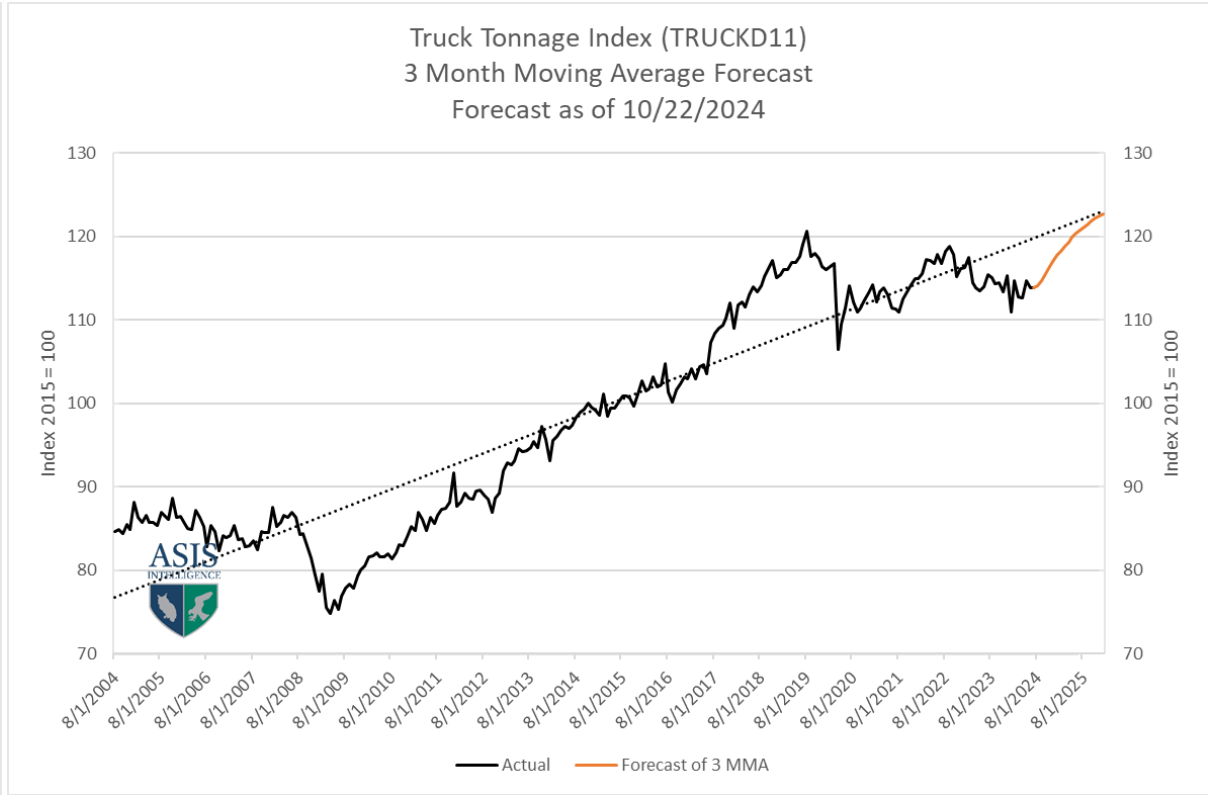
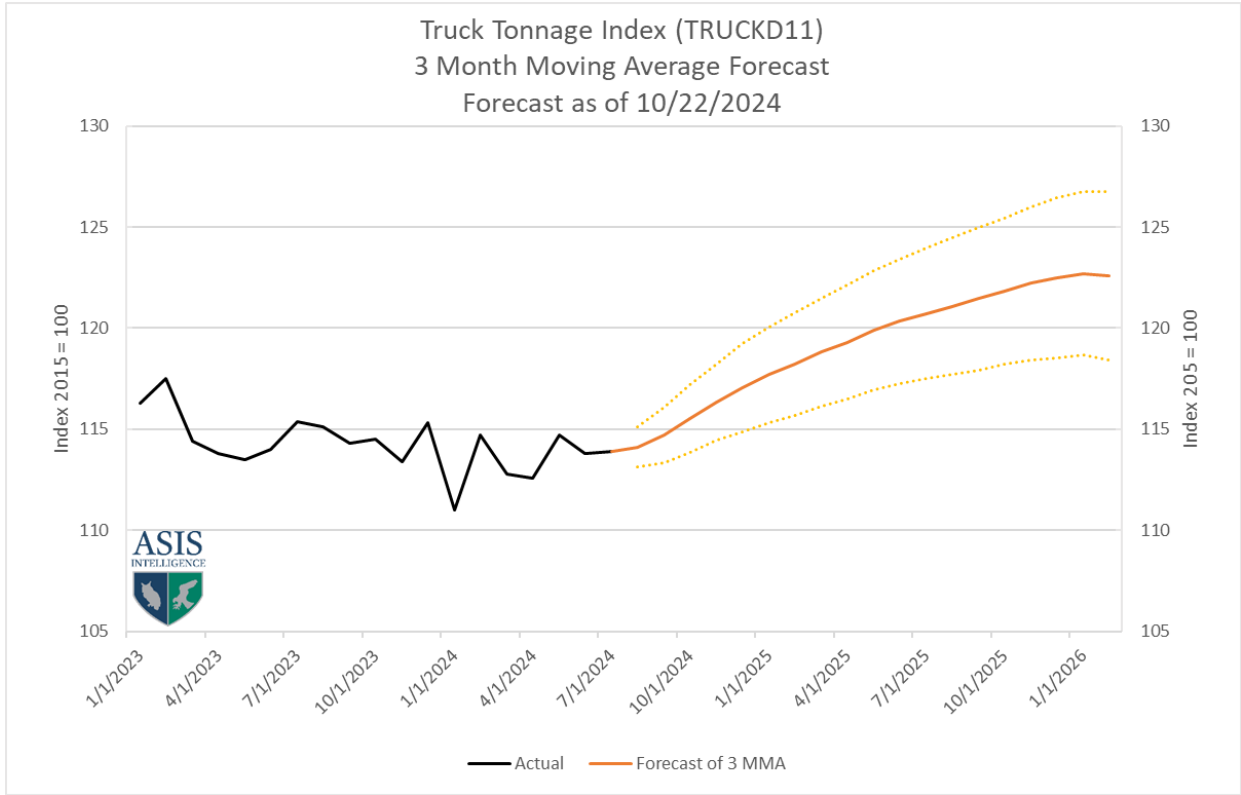
Industrial Production: Manufacturing (IPMAN)
Forecast as of 10/22/2024



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Industrial Production: Manufacturing	1.22%	0.01%	0.45%	-0.27%	0.24%	-0.03%	-0.34%	0.67%	0.95%	0.30%	0.10%		-2.53%	3.16%	-1.28%	1.41%	0.53%

Source: Armada Forecasts

Truck Tonnage Forecast

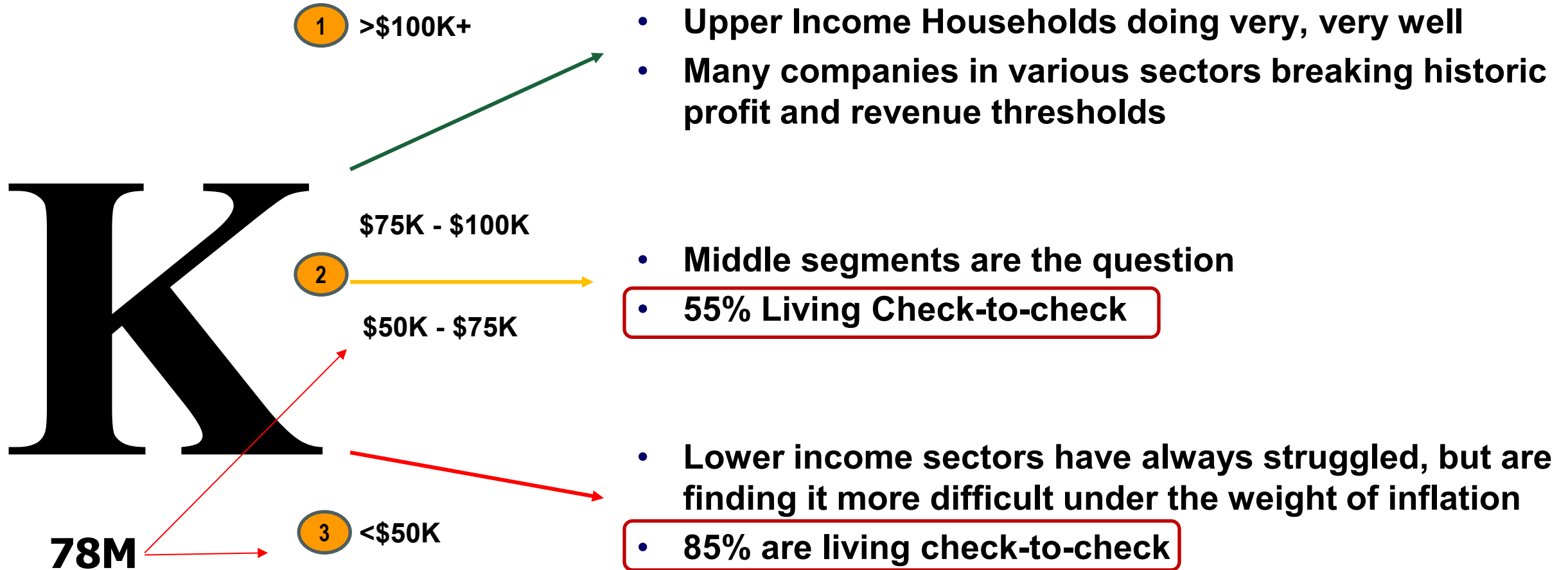


	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1 *	Q2*	Q3*	Q4*					
Truck Tonnage TRUCKD11	-1.46%	-0.35%	0.26%	0.87%	-2.17%	0.89%	0.80%	2.04%	1.50%	1.29%	0.93%		-2.75%	1.50%	1.04%	-0.69%	1.52%

Source: Armada Forecasts

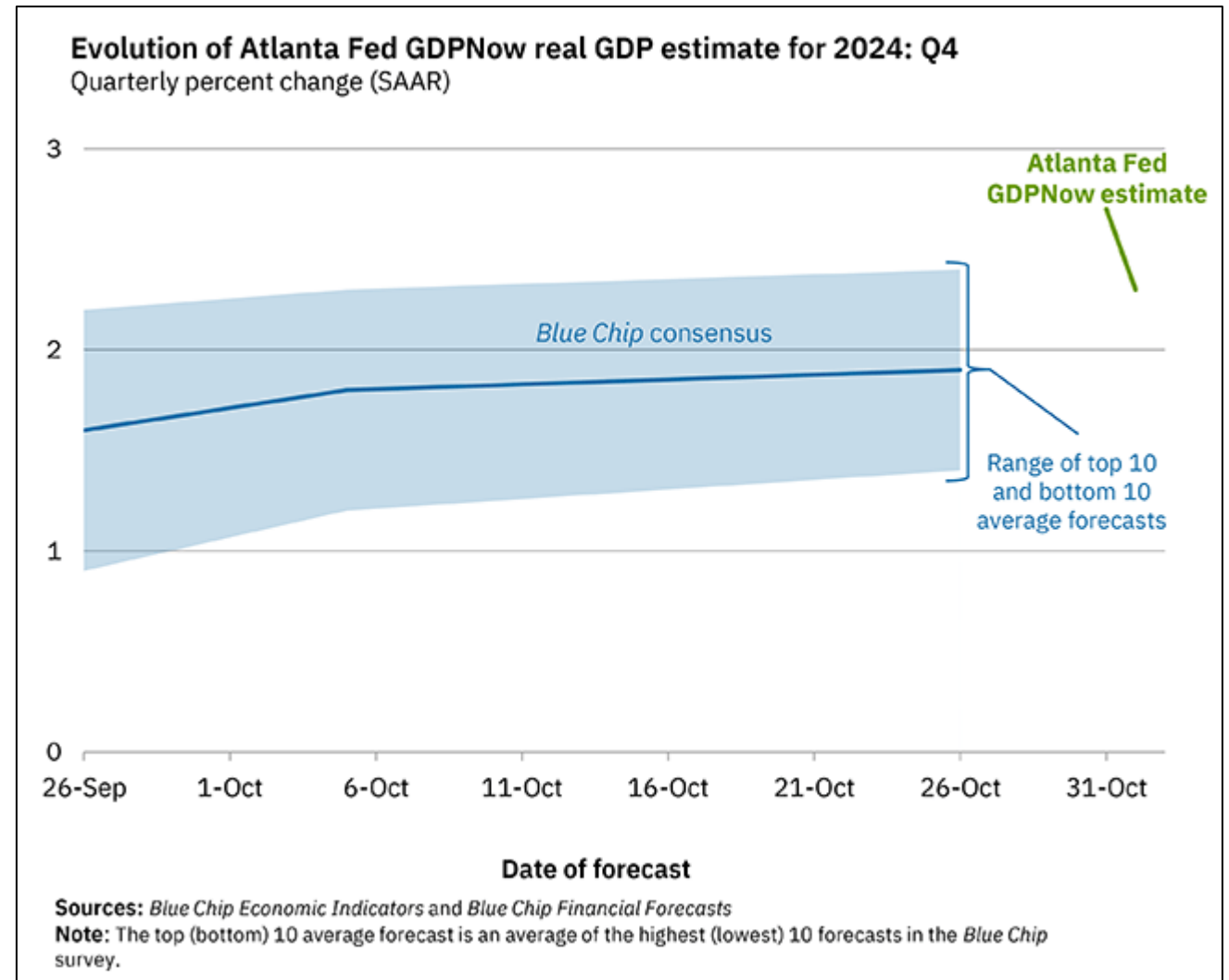
A Fundamental Principle, and How It Affects Everything

The Rare, K Shaped Recovery



Q4 In-Line with Estimates – Falling Back to “Normal”?

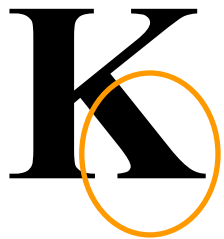
- Blue Chip Economists are expecting 1.9% growth for Q4, which is in-line with prior expectations. Initial Atlanta Fed estimates show it trending higher at nearly 2.3%.
- The economy is still being driven by:
 - **Consumer spending**
 - **Government spending**
 - **Business and Private Investment**
- 2023 Q4 GDP grew at 2.5%



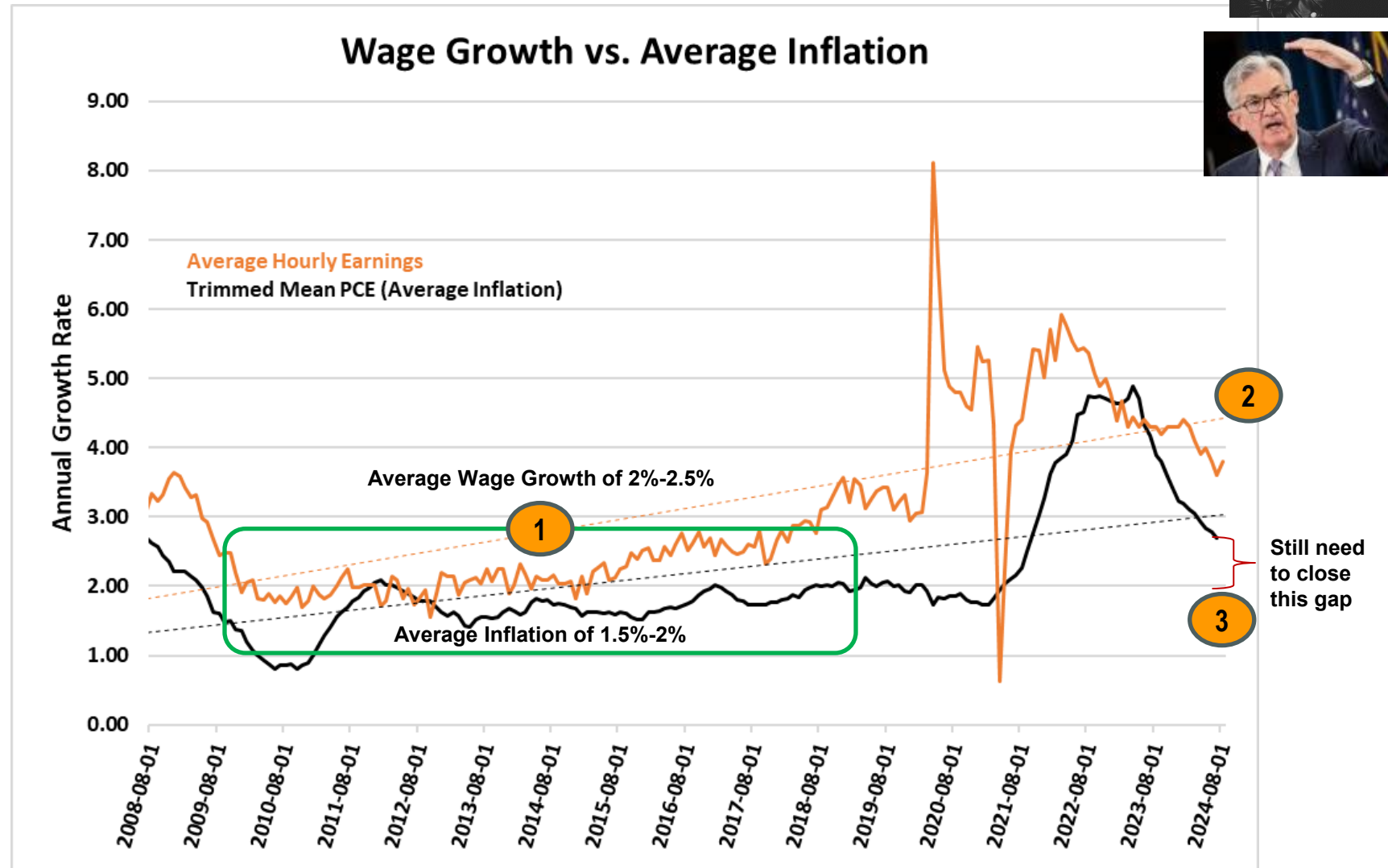
The Key Fed Relationship Powell is Managing Against



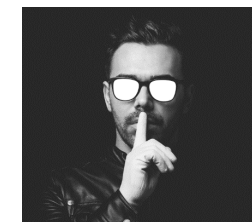
1. Historical wage growth of 2.5%-3.0%
2. Average inflation needs to be 2% in order to allow households to build some “headroom” between income and costs
3. 62% of US households still living check-to-check (28% in higher earning households):
78 million households



Lower inflation helps quickly activate the lower half of the K.



Average Inflation Still Coming Down



One-month PCE inflation, annual rate

	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sept-24
PCE	3.2	-0.1	1.4	2.0	1.4	2.1
PCE ex F&E	3.1	1.0	2.7	2.1	1.9	3.1
Trimmed mean	2.7	2.2	2.1	2.1	1.9	2.5

Six-month PCE inflation, annual rate

	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sept-24
PCE	3.0	3.0	2.9	2.4	2.0	1.7
PCE ex F&E	3.3	3.2	3.3	2.6	2.5	2.3
Trimmed mean	3.1	3.2	3.2	2.6	2.4	2.2

12-month PCE inflation

	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sept-24
PCE	2.7	2.6	2.4	2.5	2.3	2.1
PCE ex F&E	2.9	2.7	2.6	2.7	2.7	2.7
Trimmed mean	3.0	2.9	2.8	2.8	2.7	2.7

Fed's Target Rate is 2%.

- **2.70% Sept '24**
- 2.70% Aug '24
- 2.70% July '24
- 2.80% June '24
- 2.80% May '24 ← Pause
- 2.90% Apr '24
- 3.00% Mar '24
- 3.10% Feb '24
- 3.20% Jan '24
- 3.20% Dec '23
- 3.40% Nov '23
- 3.60% Oct '23
- 3.80% Sep '23
- 3.90% Aug '23
- 4.20% July '23
- 4.34% June '23
- 4.71% May '23
- 4.91% Apr '23
- 4.88% Mar '23
- 4.67% Feb '23
- 4.63% Jan '23
- 4.68% Dec '22
- 4.70% Nov '22
- 4.75% Oct '22
- 4.73% Sep '22
- 4.75% Aug '22

1

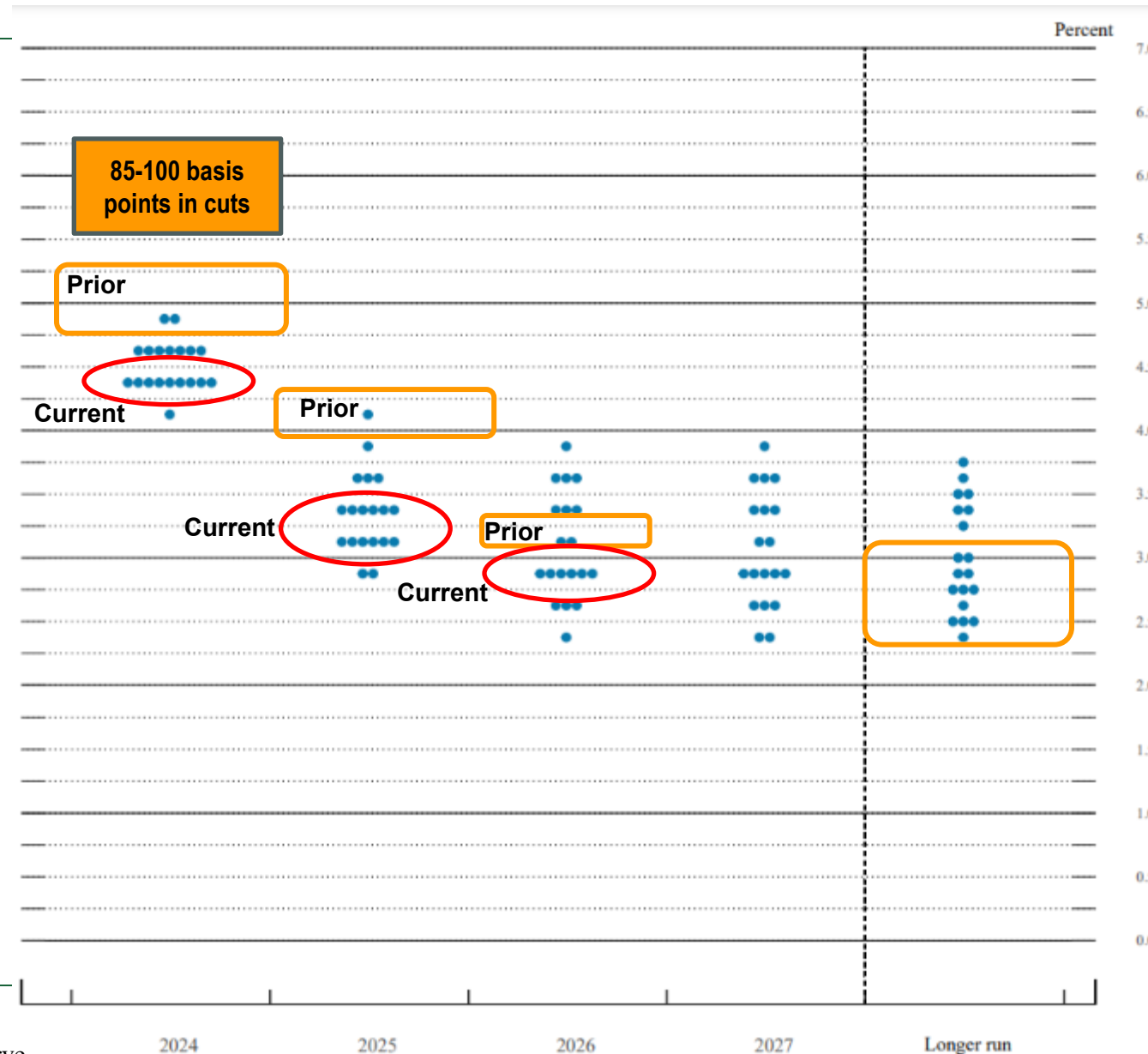
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3

Latest Fed Dot Plot Estimates for Interest Rates Moving Forward



- GDP Growth is stable, but pockets of weakness are showing.
- Inflation is easing, and within striking distance of the Fed target.
- Employment levels are still not easing enough to give it full confidence that inflation is fully under control. But they are realizing that it is perhaps a “new normal” with Baby Boomer retirements accelerating.



1 Prior 5.25%

2 2024: 4.4%

2025: 3.4%

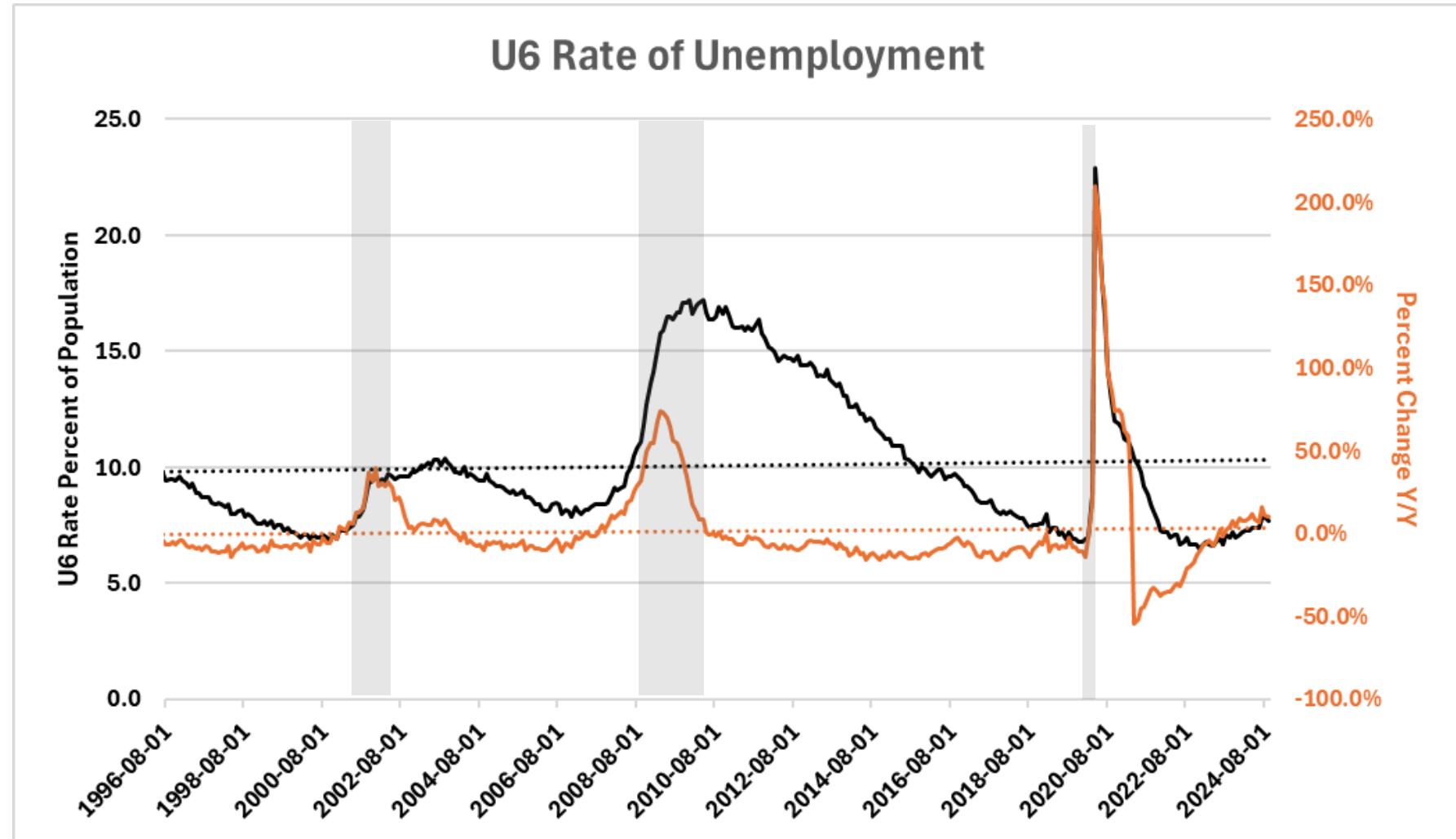
2026: 2.9%

3 Long-term 2.9%

What Spooked the Fed?



- The Fed dropped rates by 50 basis points, the market was largely looking for one quarter point.
- 50 – 75 more basis points by the end of the year is possible!
- Historically, when the U6 has inched up year-over-year, recession risk rises with it.
- The U6 rate is 10% higher year-over-year, still well below the historical signal of 20-25% (recession trigger), but if the trend continues, it would be a warning sign.



US Deficit – Impact on the Fed

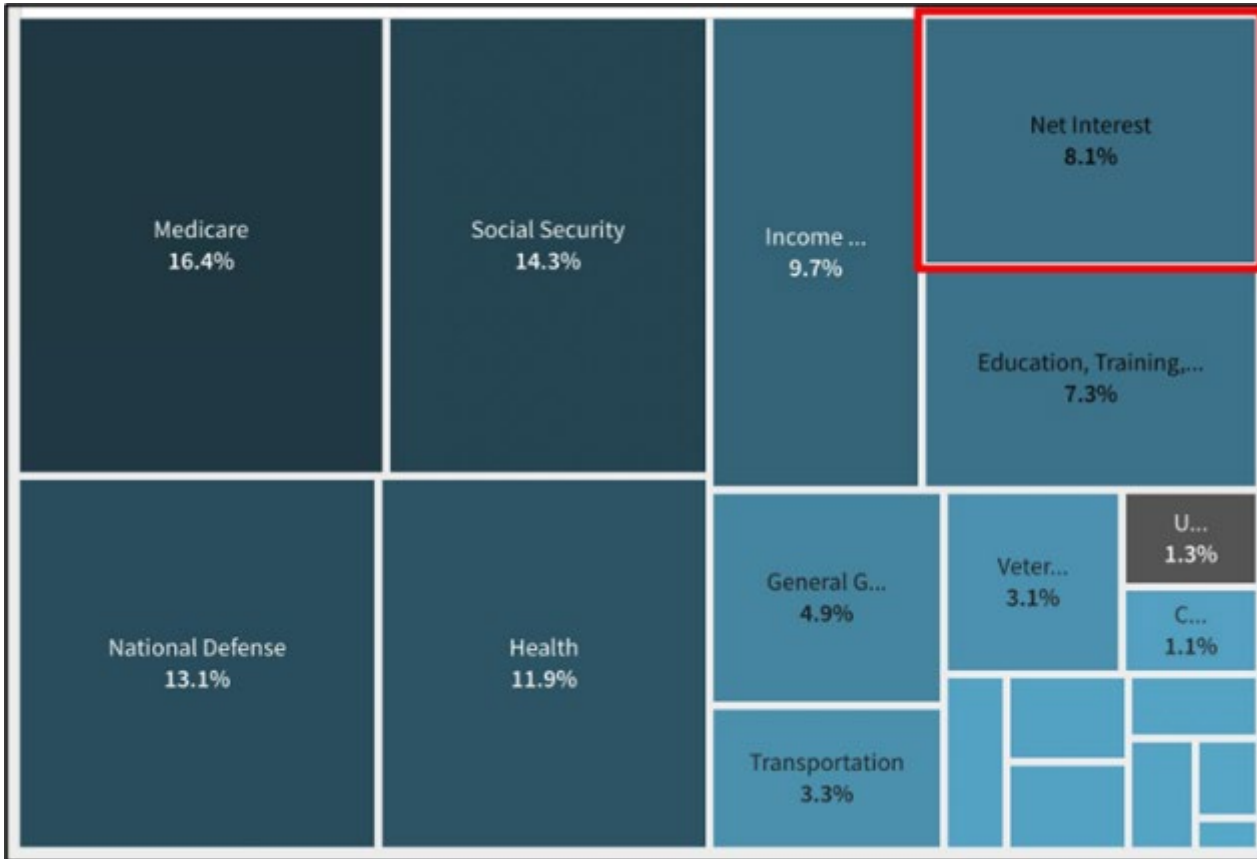
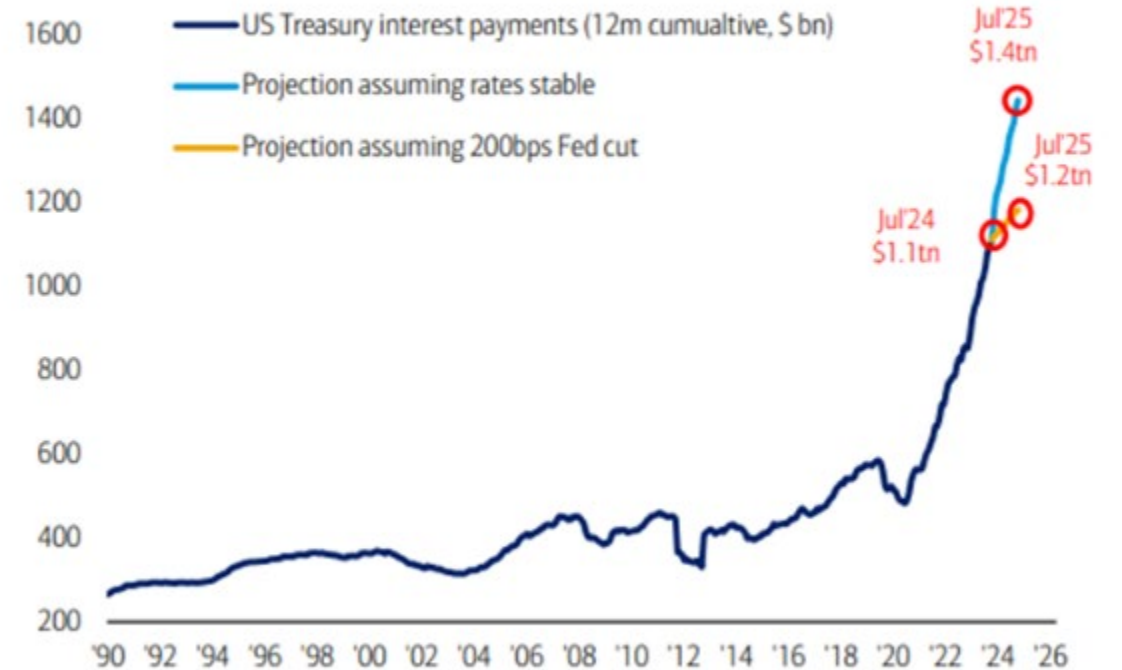


Chart 5: Debt dynamics suggest interest payments to rise
US Treasury interest payments (12m cumulative) and projections



Source: BofA Global Investment Strategy, Bloomberg

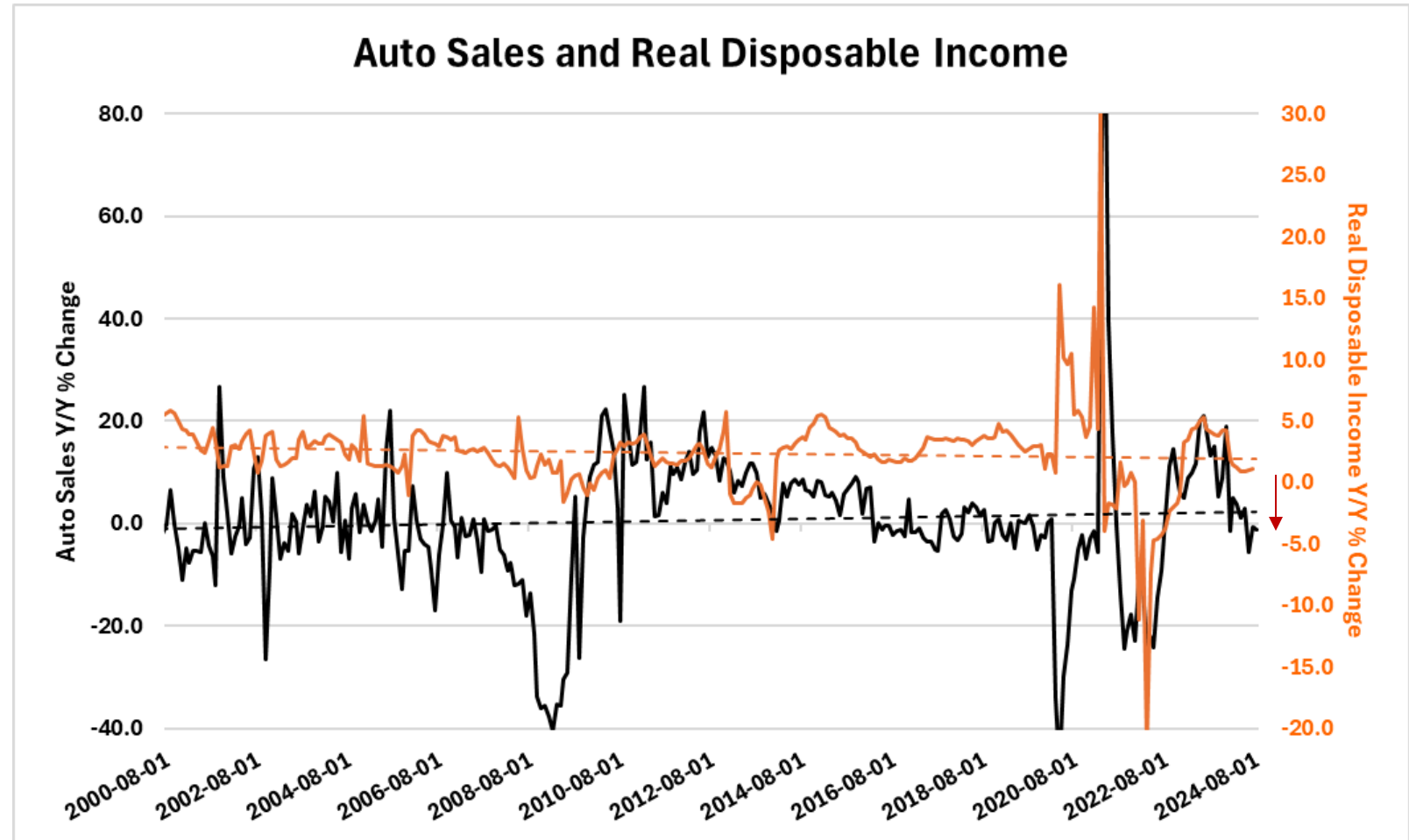
BofA GLOBAL RESEARCH

Real Disposable Personal Income Critical for Durables Like Auto Sales

- Inflation-adjusted disposable personal income is now trending at 3.1%.
- Ending tax cuts would further dig into disposable income and could push it negative on a Y/Y basis.

2021:	3.5%
2022:	-5.6%
2023:	5.1%
2024 Q3:	3.1%
2024:	1.4% (F)
2025:	1.4% (F)

2019: 3.1%

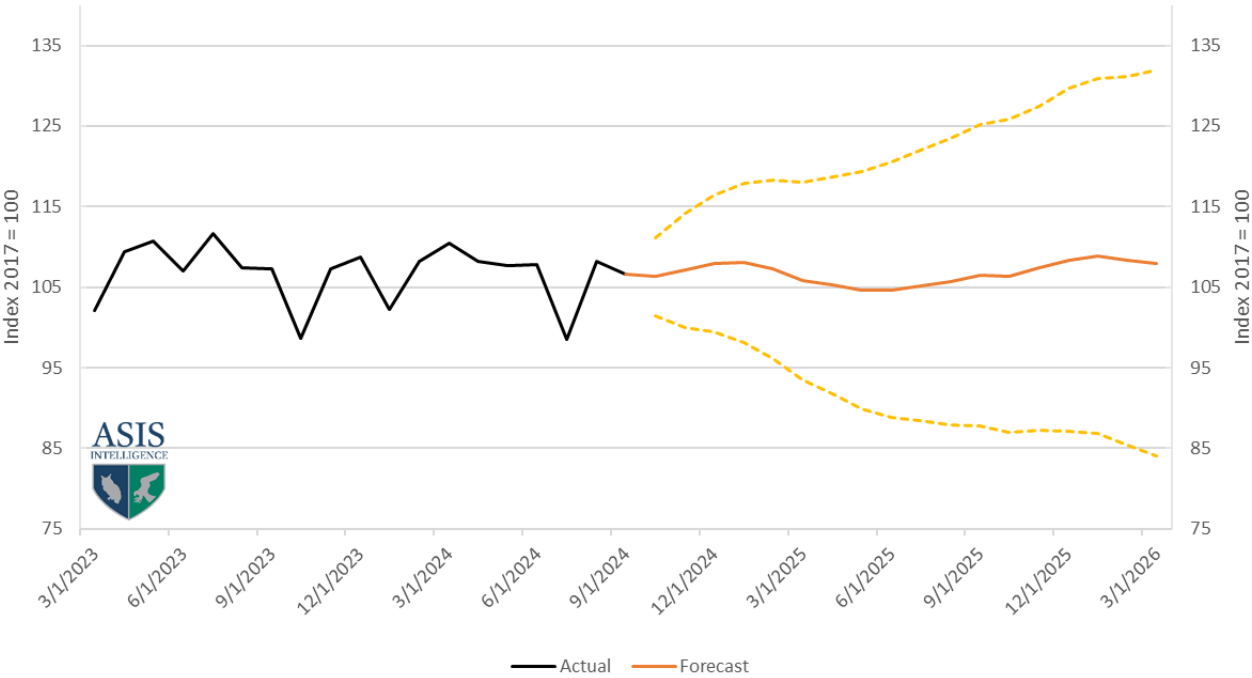


Decade Averages: 1960s: 4.6% 1970s: 3.5% 1980s: 3.2% 1990s: 3.0% 2000s: 2.6% 2010s: 2.4% 2020s: 2.0%

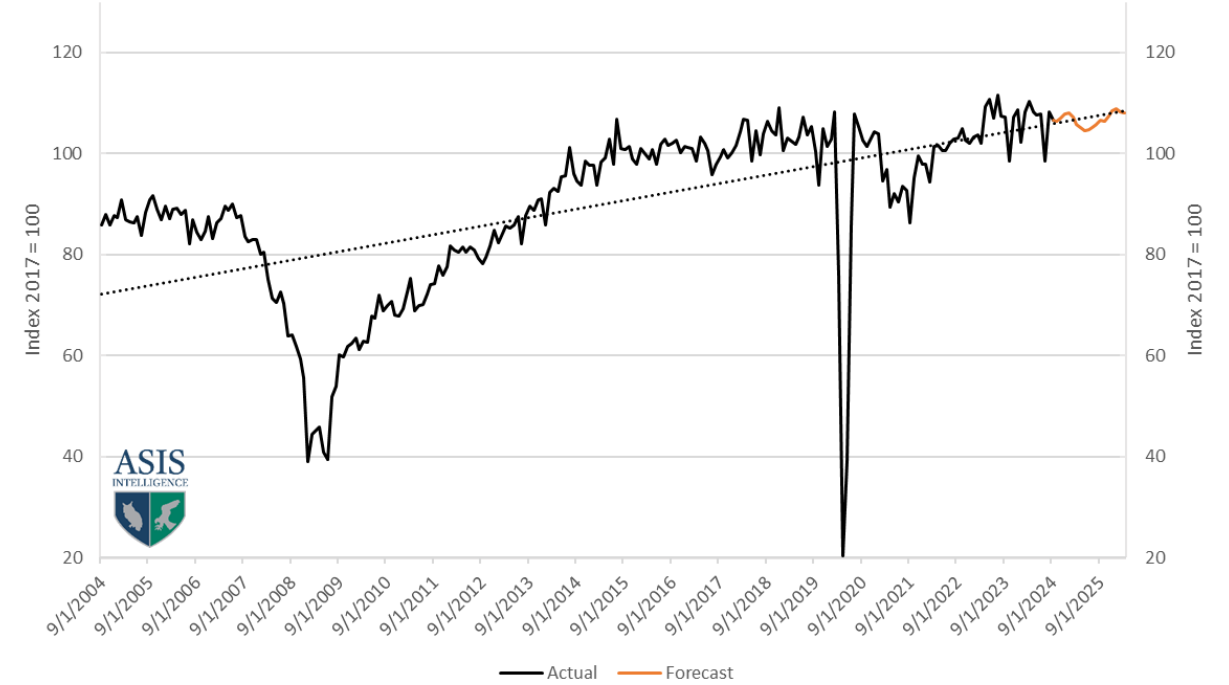
Automotive Production Forecast



Industrial Production: Motor Vehicles and Parts (IPG3361T3S)
Forecast as of 10/22/2024



Industrial Production: Motor Vehicles and Parts (IPG3361T3S)
Forecast as of 10/22/2024



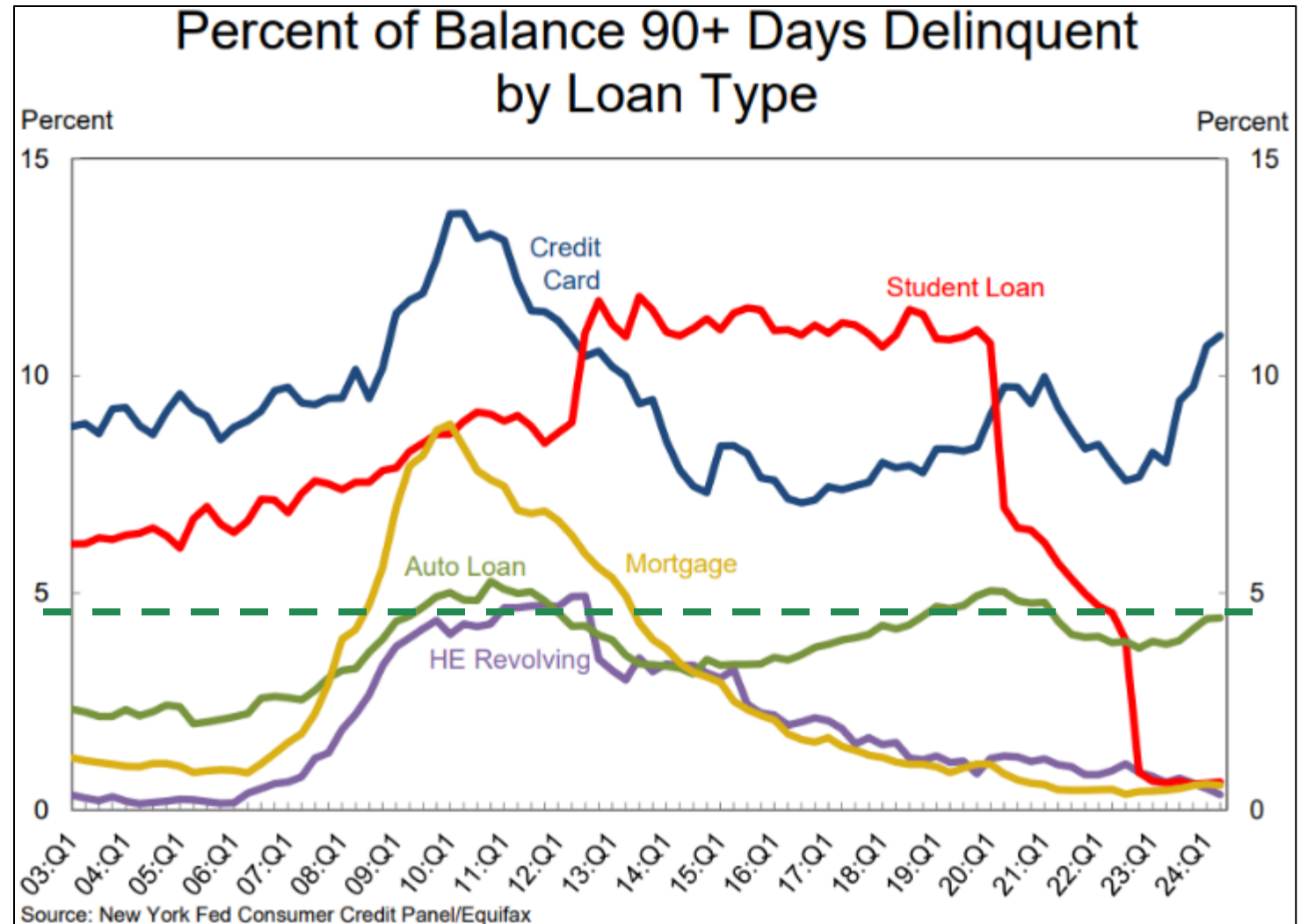
	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Motor Vehicles and Parts IPG3361T3S	0.14%	4.84%	0.16%	1.38%	1.60%	-2.37%	-1.18%	1.28%	-1.99%	-1.04%	1.76%		2.83%	-6.11%	4.19%	6.60%	-0.72%

Source: Armada Forecasts

	3-month	6-month
Motor vehicles and parts IPG3361T3S	90.5%	98.7%

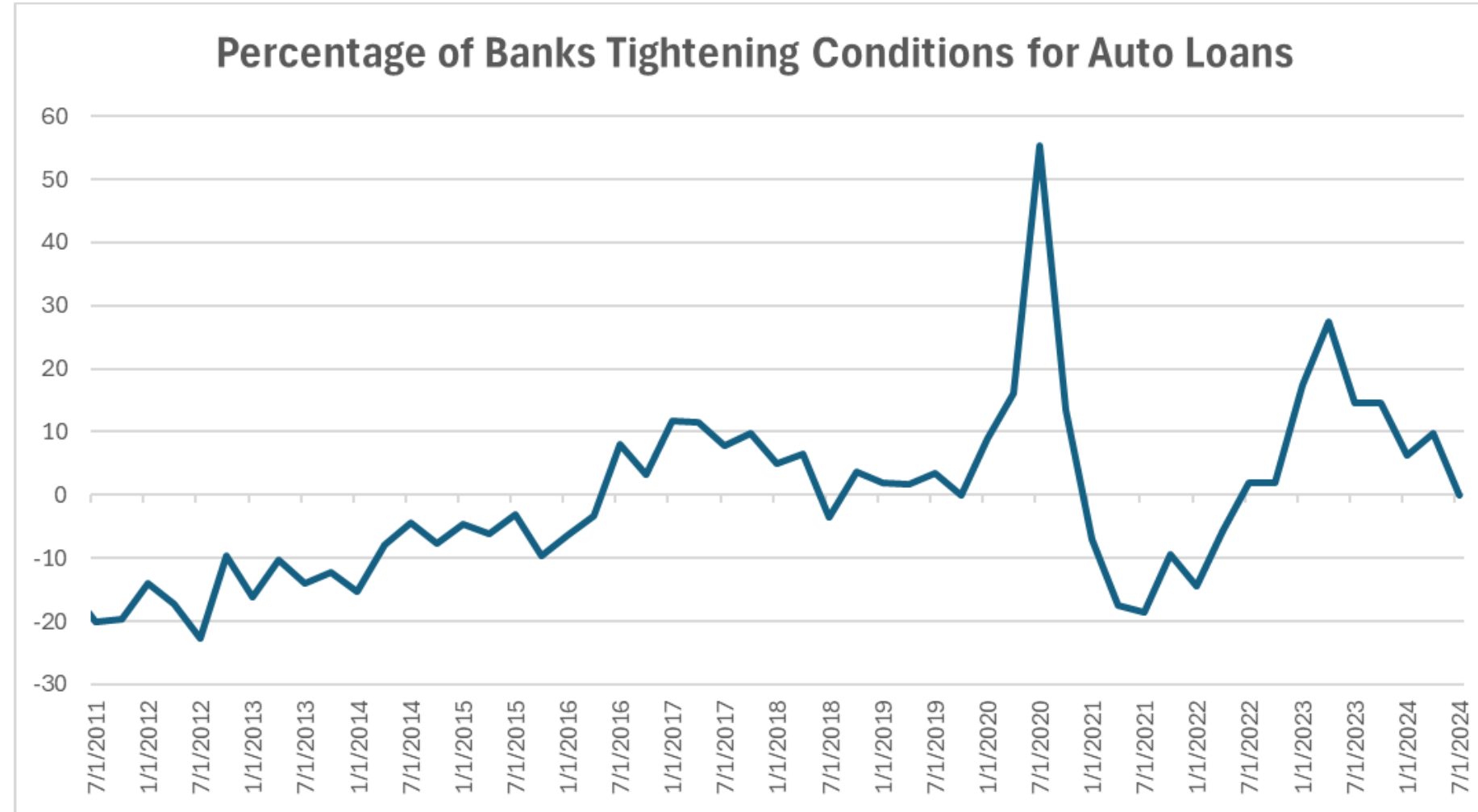
Delinquency by Loan Type

- Institutions are not required to report student loan delinquencies until December 2024...after the election.
- Credit card debt delinquencies have risen to their highest rate since 2011.
- Auto loan delinquencies are at their highest rate since the lockdown.



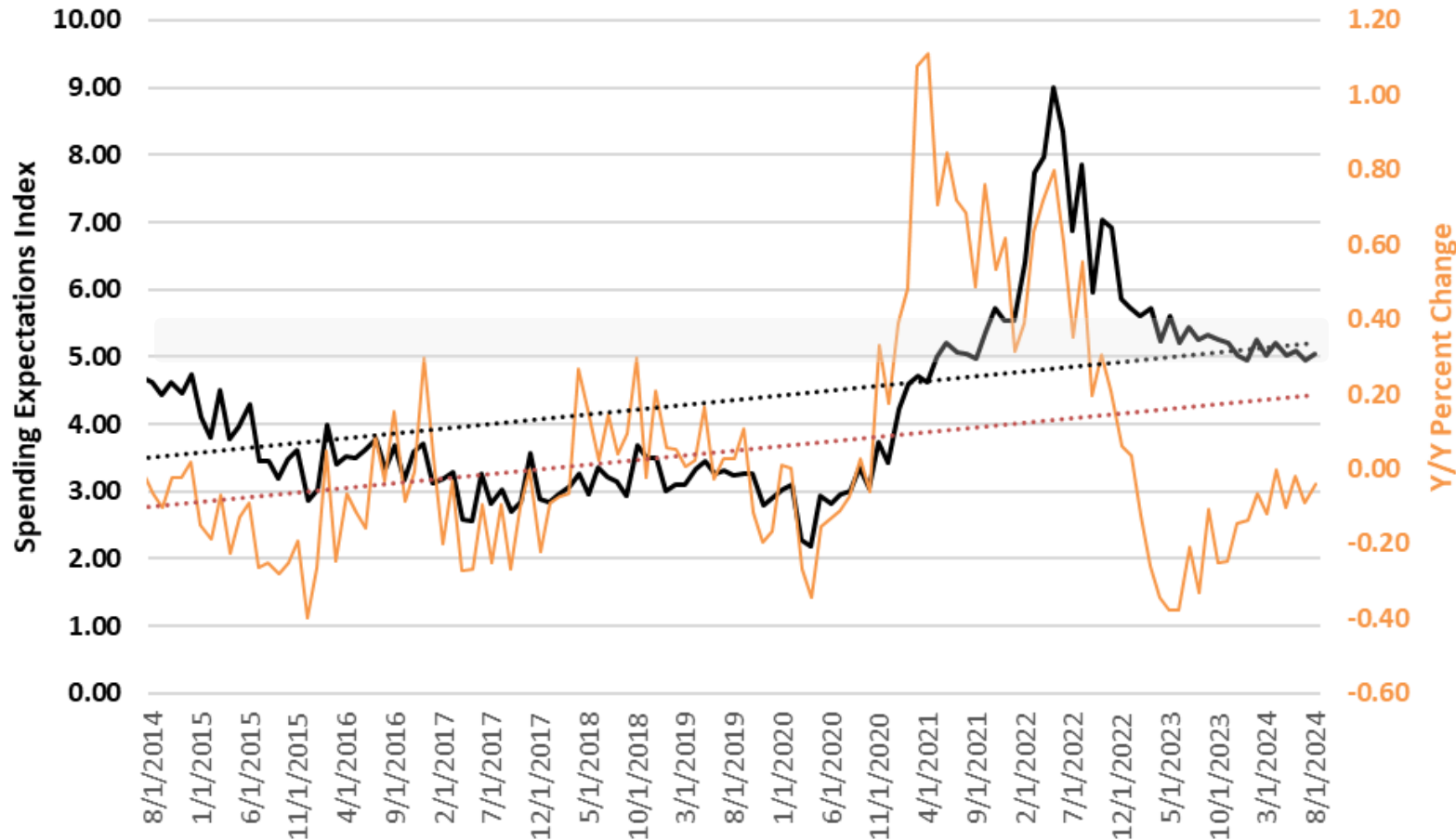
Banks Not Tightening Standards for Auto and Other Automotive Types of Loans

- There were no banks reporting tightening conditions for auto loans through July.
- Primarily because they have set so much cash aside for mortgage and home equity defaults, which haven't started as of yet.



Despite All of That: Consumer Spending Expectations Remain Historically High

NY Fed Household Spending Expectations



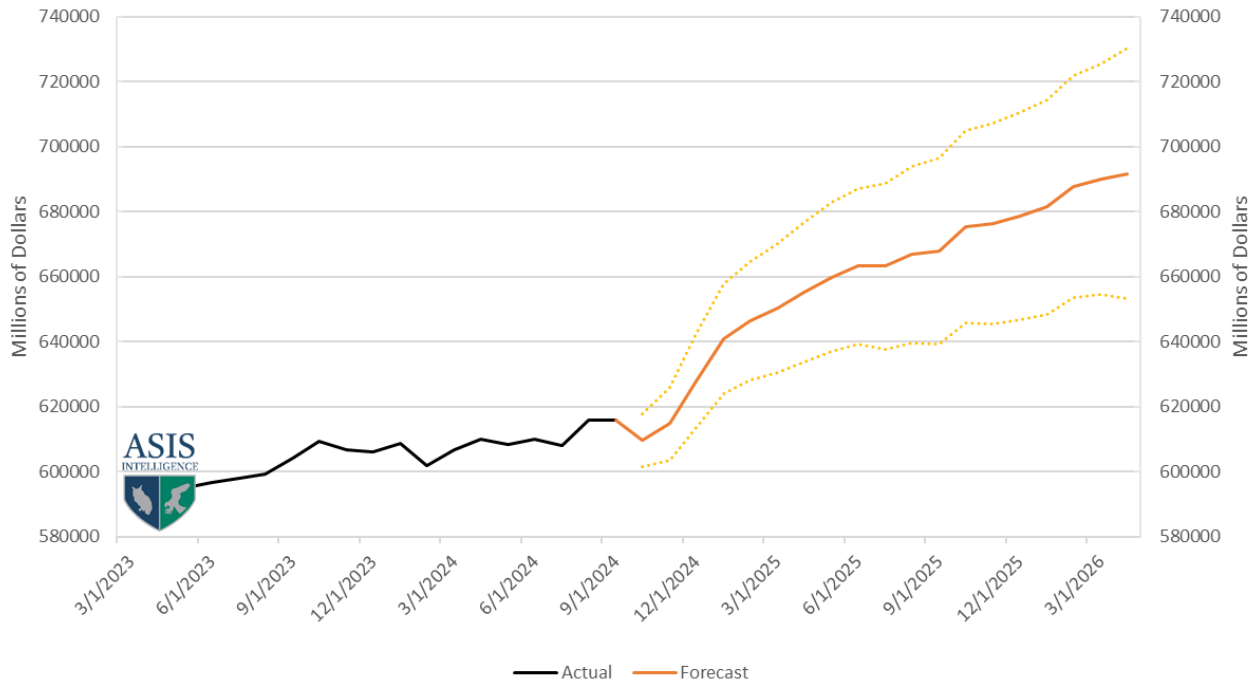
1. Historically, spending expectations remain high.
2. This could be a good sign for the peak retail season and help complete sell-through.
3. Again, some of this might be the 'K' shaped recovery in which some households are doing very well, but others are really struggling under the weight of inflation.

K

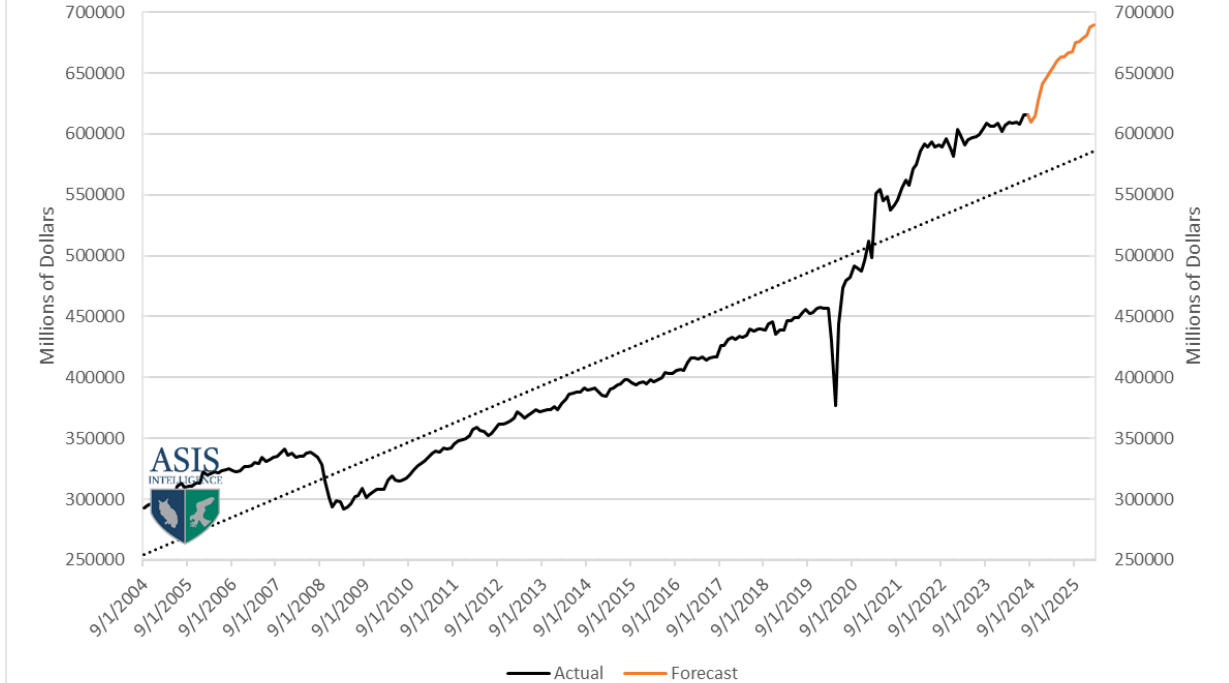
Retail Forecast



Advance Retail Sales: Retail Trade (RSXFS)
Forecast as of 10/22/2024



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Forecast as of 10/22/2024

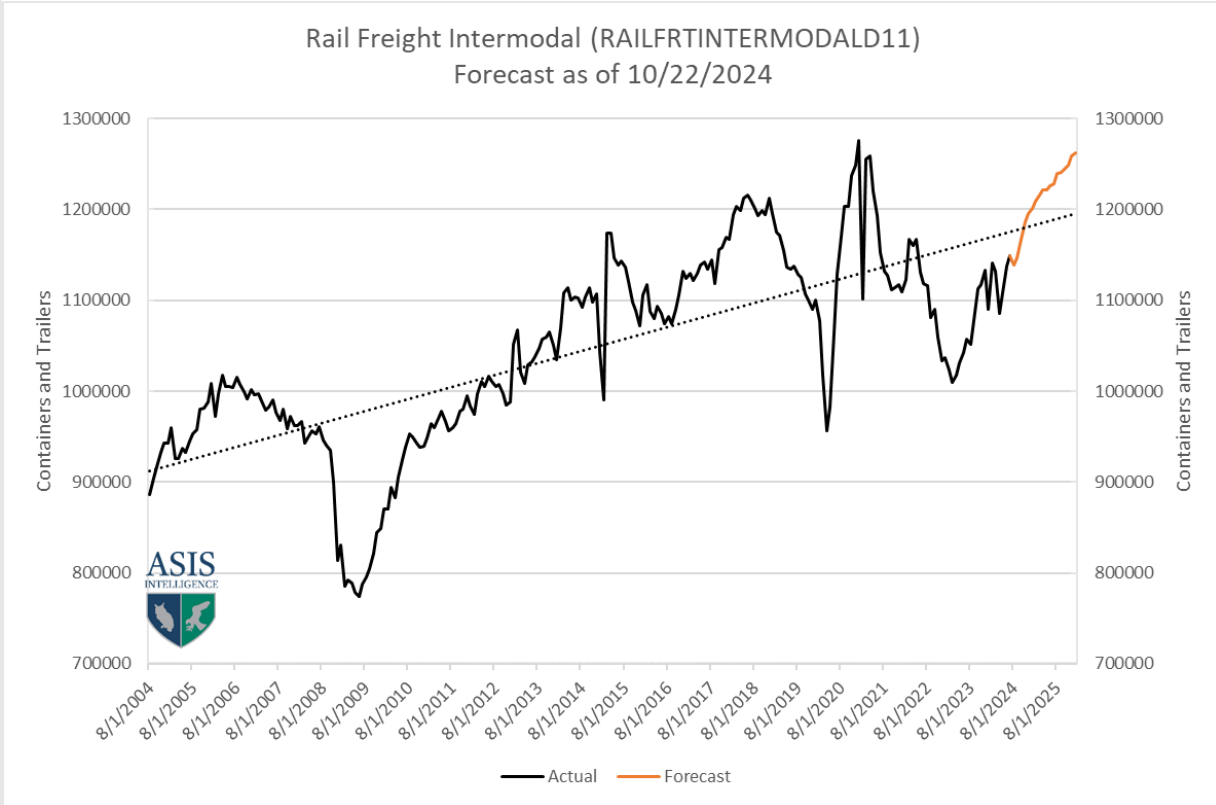
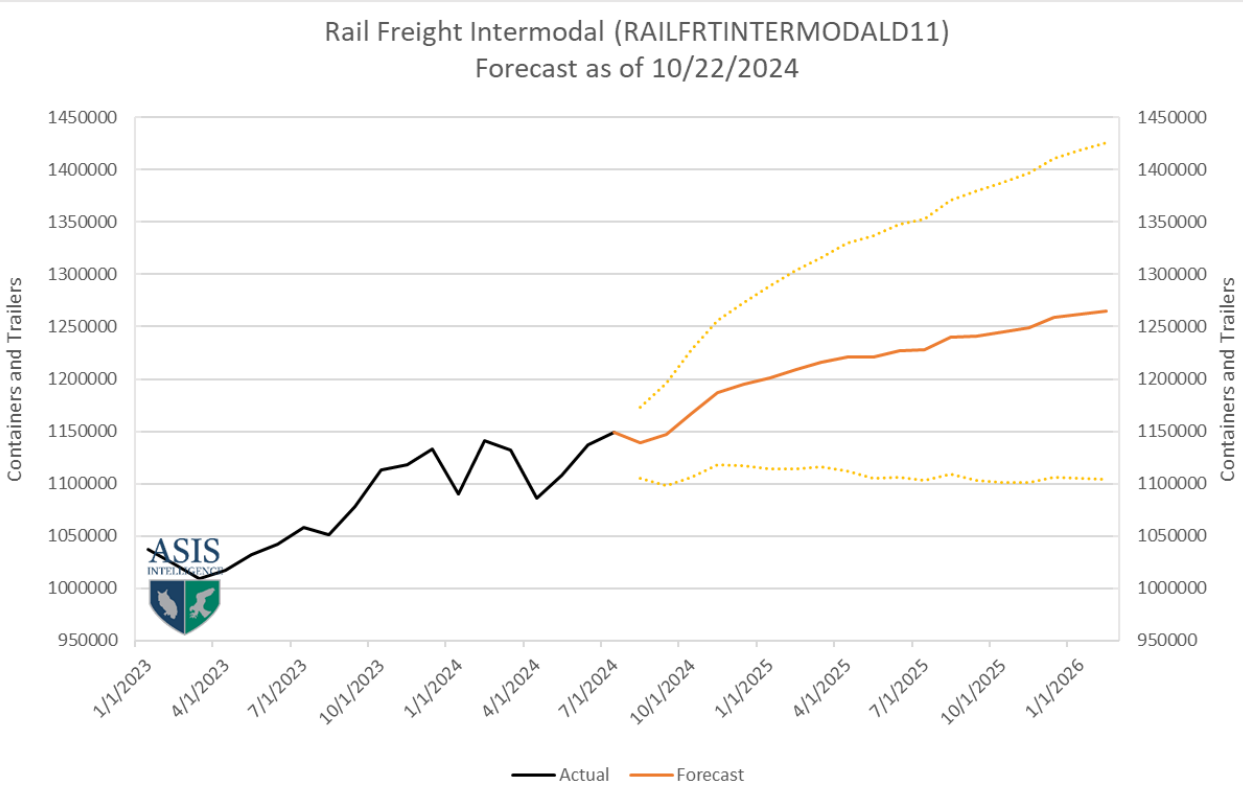


	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1*	Q2*	Q3*	Q4*					
Advanced Retail Sales RSXFS	1.52%	1.25%	1.87%	-0.07%	0.22%	-0.34%	0.29%	5.09%	2.24%	1.23%	1.85%		8.37%	12.64%	4.23%	4.64%	5.27%

Source: Armada Forecasts

	3-month	6-month
Advanced Retail Sales RSXFS	94.6%	96.4%

Rail Intermodal Forecast



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1*	Q2*	Q3*	Q4*					
Rail Freight Intermodal RAILFRTINTERMODALD11	-2.28%	3.24%	3.46%	5.05%	-0.07%	0.51%	0.83%	4.22%	1.72%	0.88%	1.19%		14.60%	-10.53%	-7.58%	9.64%	5.54%

Source: Armada Forecasts

	3-month	6-month
Rail Freight Intermodal RAILFRTINTERMODALD11	97.4%	97.6%

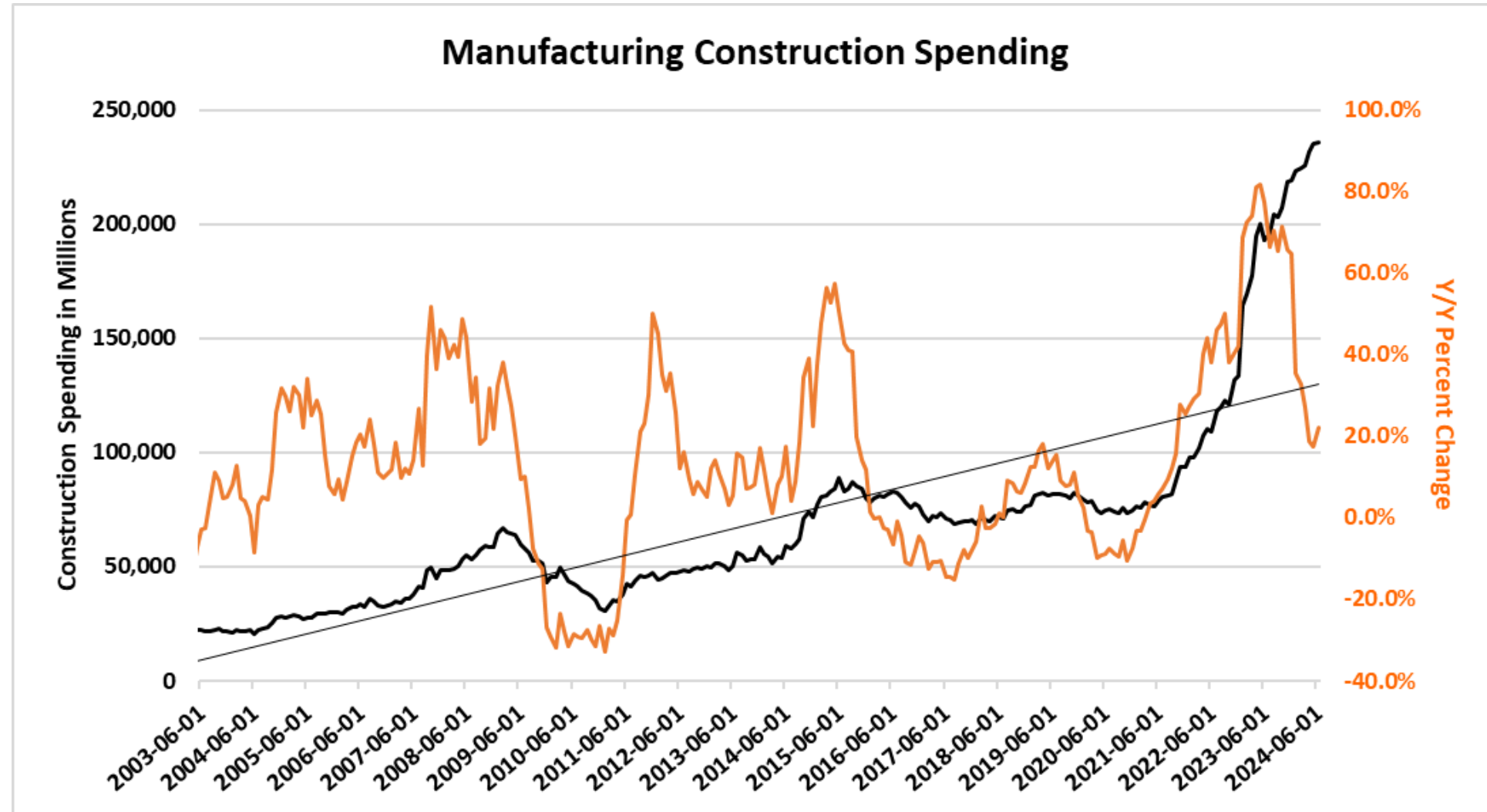
Construction Spending Stable

- Spending remains stable and many sectors still setting records (or near record) spending levels.
- Private sector funding and spending is strongest in manufacturing (largely due to reshoring activity), but is slowing in other categories. When adjusted for inflation, all categories from Office construction to commercial are lower year-over-year.
- Sectors dependent upon government spending is among the fastest growing sectors outside of manufacturing
- CHIPS Act, Inflation Reduction Act, and Infrastructure Bill will all continue to see spending in 2025 before slowing in 2026 and beyond.

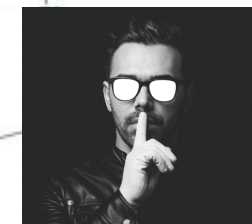
Type of Construction	Sep 2024 ^p	Aug 2024 ^r	Sep 2023	Percent change Sep 2024 from -	
				Aug 2024	Sep 2023
1 Total Construction	2,148,805	2,146,048	2,055,216	0.1	4.6
2 Residential ²	913,632	912,186	877,629	0.2	4.1
New single family	418,867	417,229	415,287	0.4	0.9
New multifamily	127,045	127,171	138,249	-0.1	-8.1
Nonresidential	1,223,447	1,222,402	1,166,763	0.1	4.9
Public safety	19,552	19,570	14,654	-0.1	33.4
3 Manufacturing	235,347	235,755	195,384	-0.2	20.5
Water supply	33,551	33,333	28,667	0.7	17.0
Amusement and recreation	41,525	41,570	37,261	-0.1	11.4
Transportation	70,127	69,552	65,400	0.8	7.2
Power	146,275	146,558	137,584	-0.2	6.3
Educational	129,245	128,825	124,592	0.3	3.7
Sewage and waste disposal	45,821	45,575	44,263	0.5	3.5
4 Office	100,546	100,598	98,950	-0.1	1.6
Highway and street	141,948	141,361	139,813	0.4	1.5
Health care	66,508	66,898	65,905	-0.6	0.9
Communication	28,551	28,649	28,480	-0.3	0.2
Religious	3,910	3,815	3,961	2.5	-1.3
Conservation and development	11,754	11,935	12,197	-1.5	-3.6
Lodging	23,483	23,411	25,202	0.3	-6.8
Commercial	125,304	124,999	144,449	0.2	-13.3

Manufacturing Construction Remains Among the Strongest

- Still higher by 22.1% Y/Y and remains higher against historical levels.
- Reshoring, expanding current capacity, moving to more accommodative states (taxes, water supply, electricity, labor) contributing trends



Regional Growth HotSpots



Potential Regional Blocks
and cumulative PIQ
Construction Potential
Scores.

1. 6,764.9
2. 2,318.9
3. 4,094.7
4. 3,996.9
5. 1,260.3

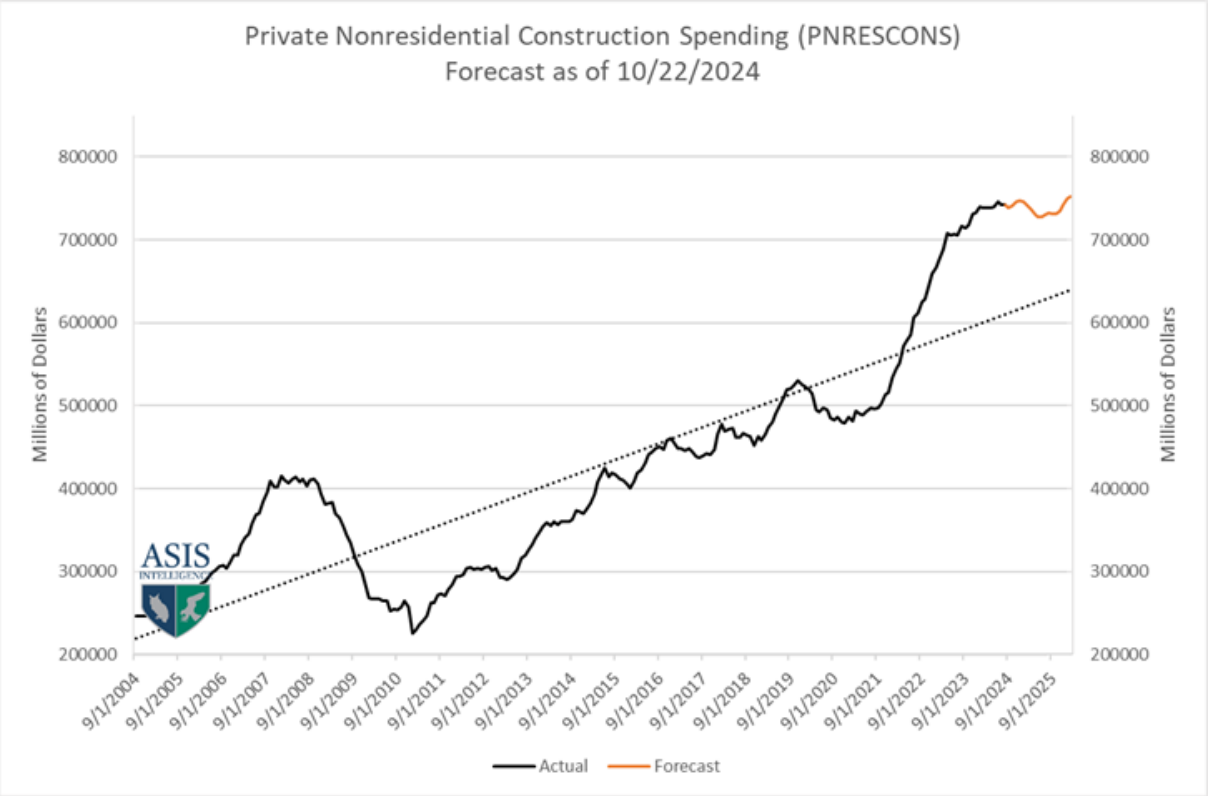
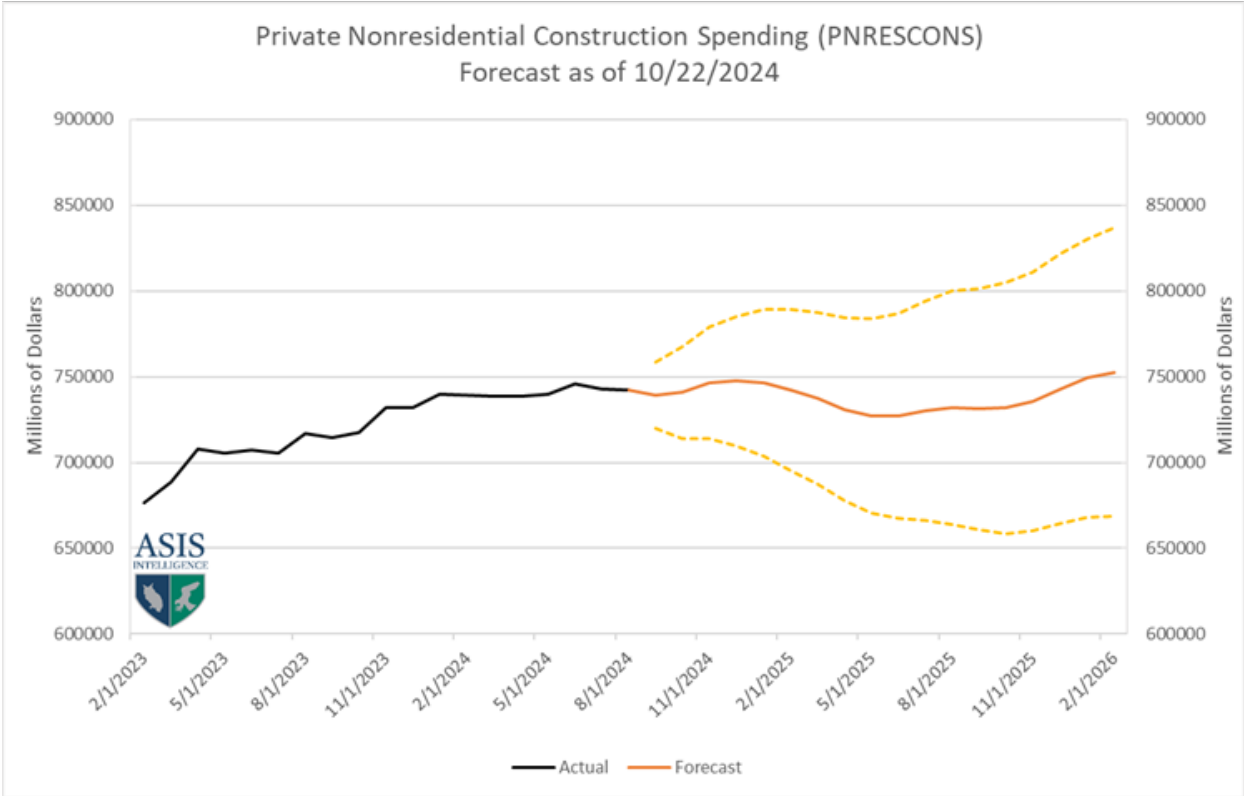
Single MSA Pockets:

6. Phoenix: 1,780.6

Note: Mileage between
major MSA's within each
corridor listed on the map.
Longer distances within a
corridor may have affected
the rankings (highest score
didn't always show up on
top).



Nonresidential Construction

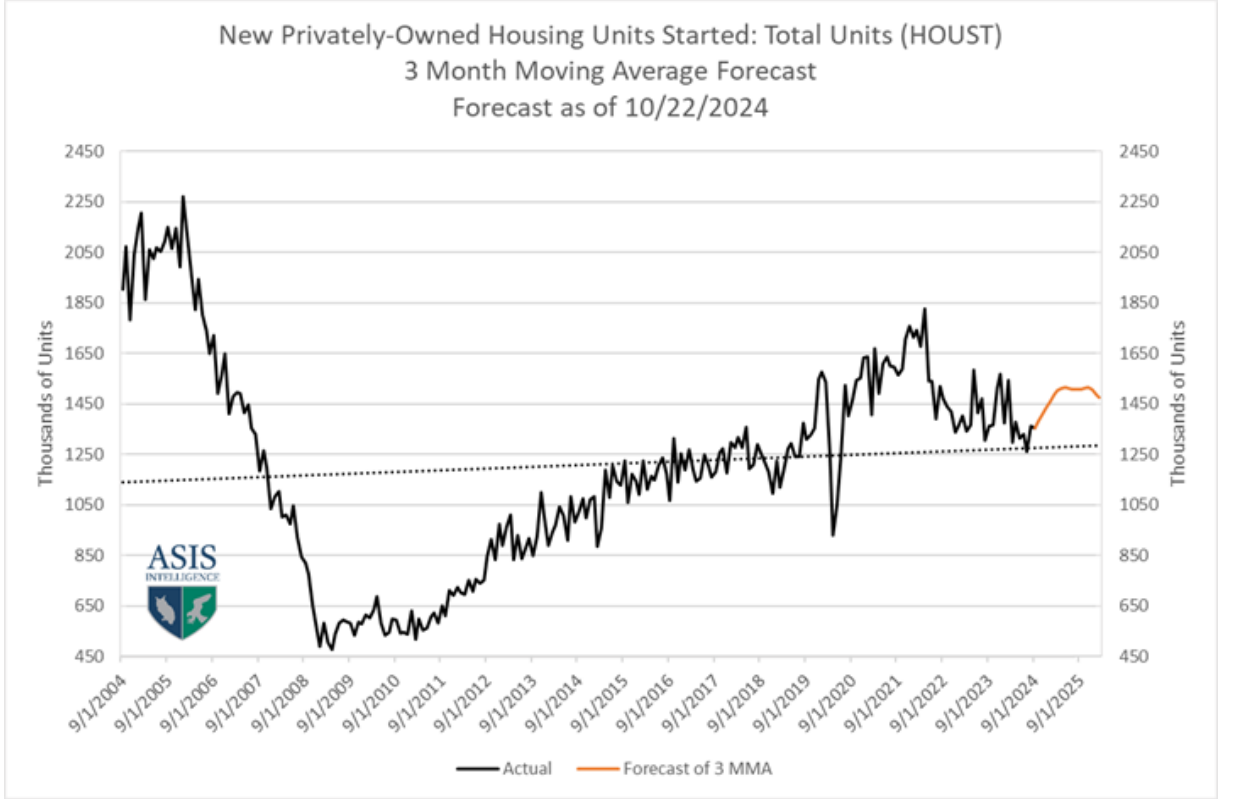
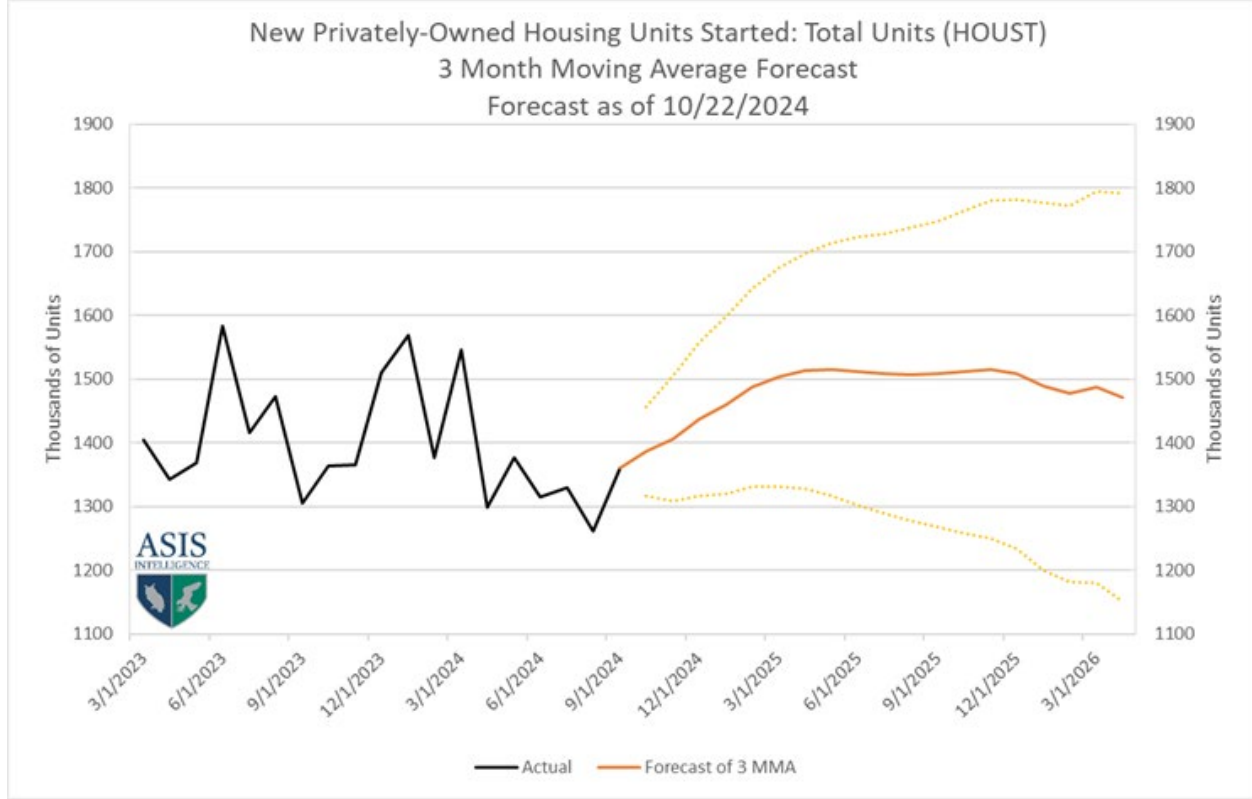


	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1*	Q2*	Q3*	Q4*					
Private Nonresidential Construction PNRESCONS	4.35%	2.74%	1.07%	2.41%	0.88%	1.02%	-0.90%	1.10%	-1.31%	-1.40%	0.53%		-8.84%	7.61%	27.97%	10.97%	2.11%

Source: Armada Forecasts

	3-month	6-month
Private Nonresidential Construction PNRESCONS	97.7%	99.9%

Residential Construction



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1*	Q2*	Q3*	Q4*					
New Privately-Owned Housing Units Started: Total Units HOUST	0.15%	5.44%	-3.67%	15.04%	-17.16%	2.31%	1.88%	6.13%	4.58%	0.62%	-0.29%		5.62%	7.46%	-23.73%	17.01%	-8.36%

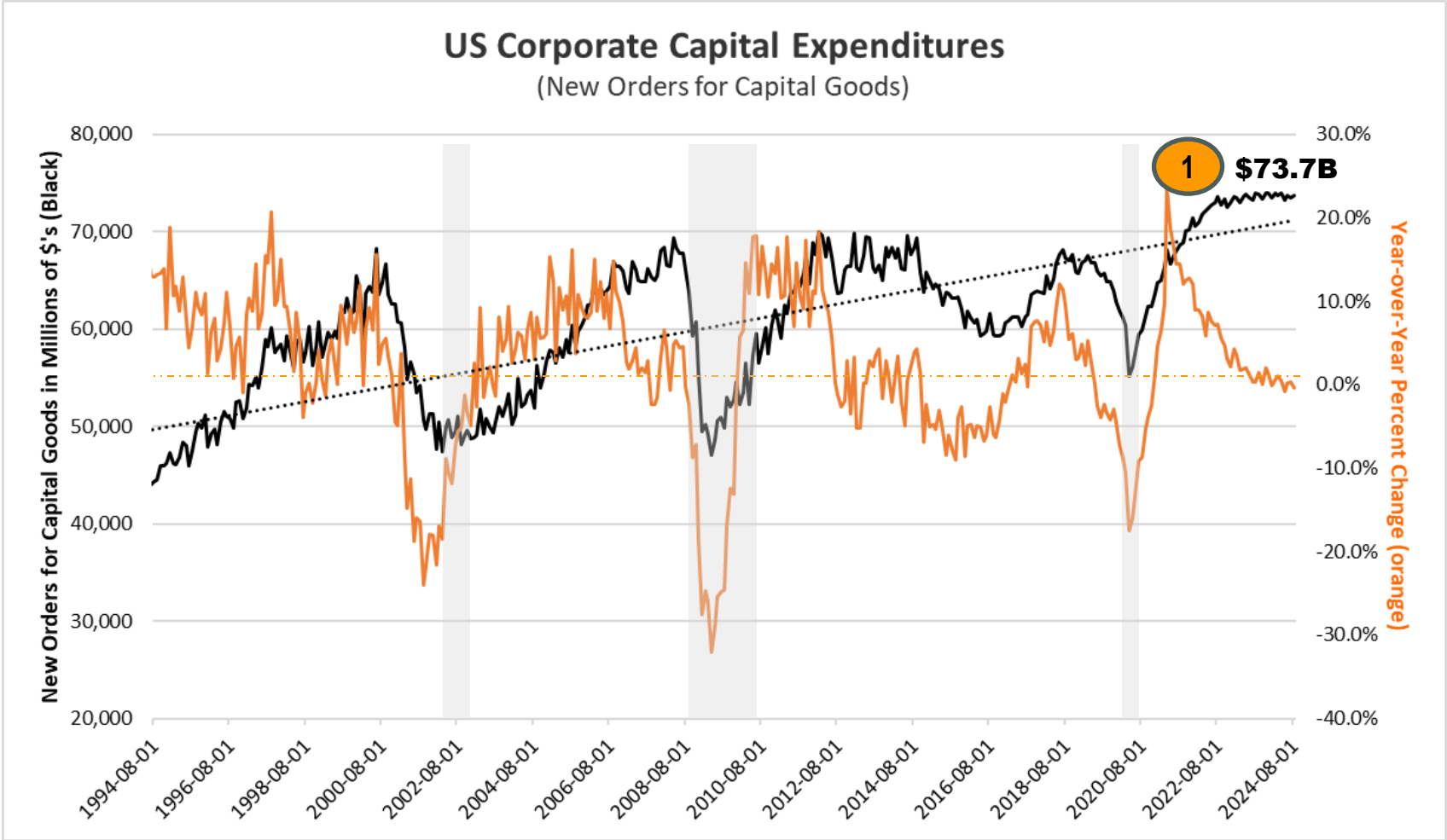
Source: Armada Forecasts

	3-month	6-month
New Privately-Owned Housing Units Started: Total Units HOUST	78.7%	92.6%

Growth: Corporate Investment Remains Steady



- Small business surveys show investment has started to decline, and is now showing in this view of the national data yet

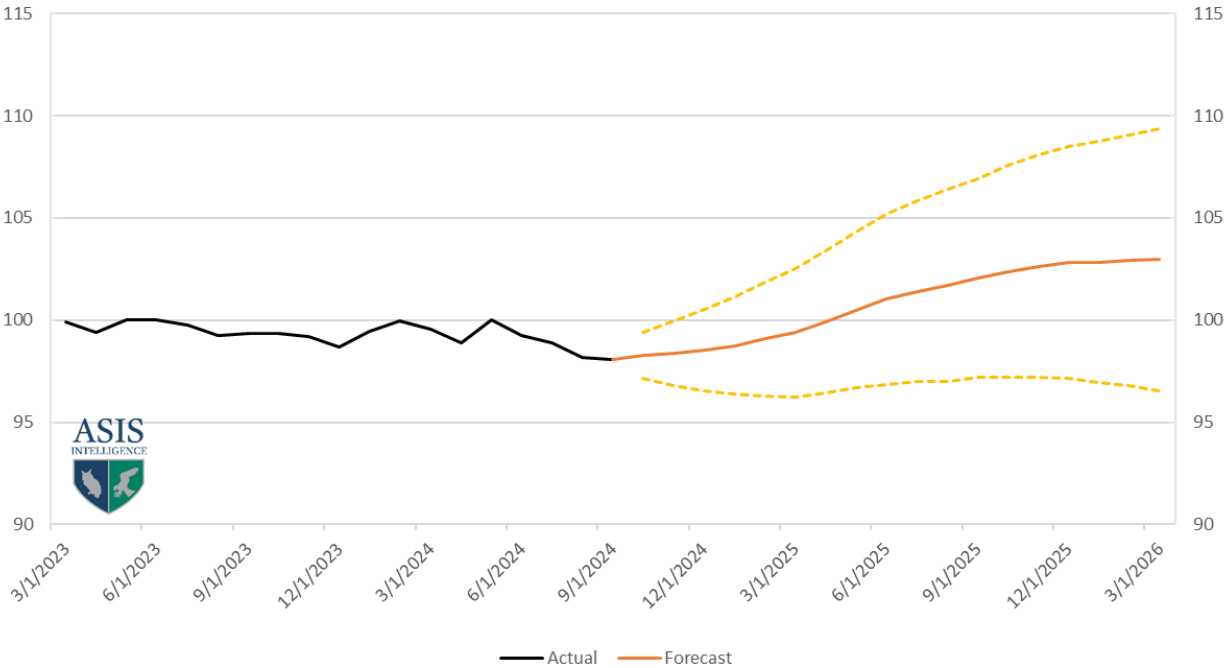


Source: Federal Reserve

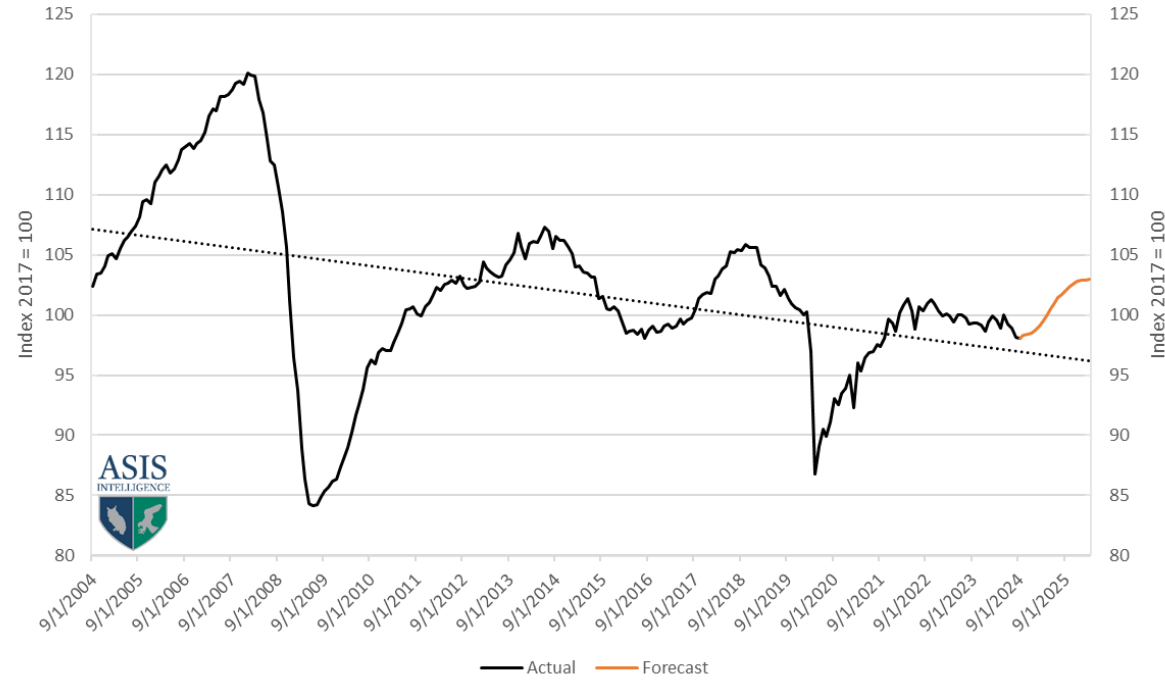
Fabricated Metal Forecast



Industrial Production: Fabricated Metal Product (IPG332S)
Forecast as of 10/22/2024



Industrial Production: Fabricated Metal Product (IPG332S)
Forecast as of 10/22/2024



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Fabricated metal product IPG332S	-0.45%	0.13%	-0.67%	-0.70%	0.89%	-0.31%	-1.16%	0.45%	0.87%	1.67%	1.01%		-6.48%	5.74%	1.02%	-1.68%	-0.15%

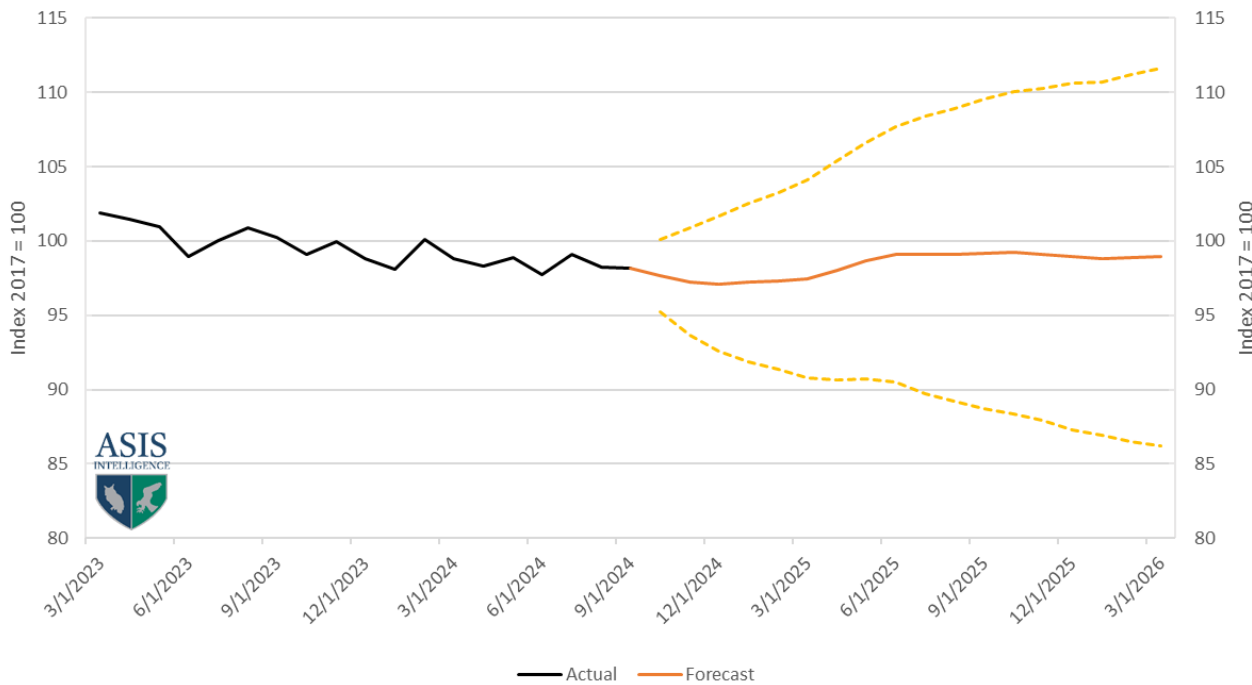
Source: Armada Forecasts

	3-month	6-month
Fabricated metal product IPG332S	97.0%	97.0%

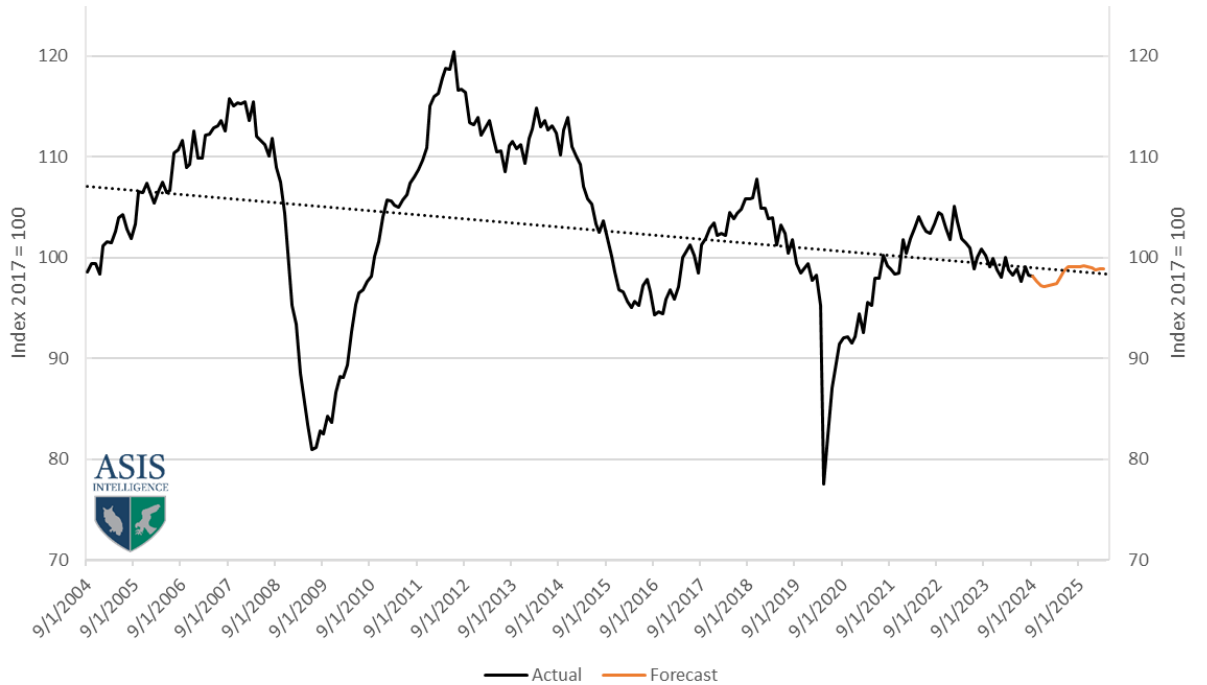
Machinery Production Forecast



Industrial Production: Machinery (IPG333S)
Forecast as of 10/22/2024



Industrial Production: Machinery (IPG333S)
Forecast as of 10/22/2024



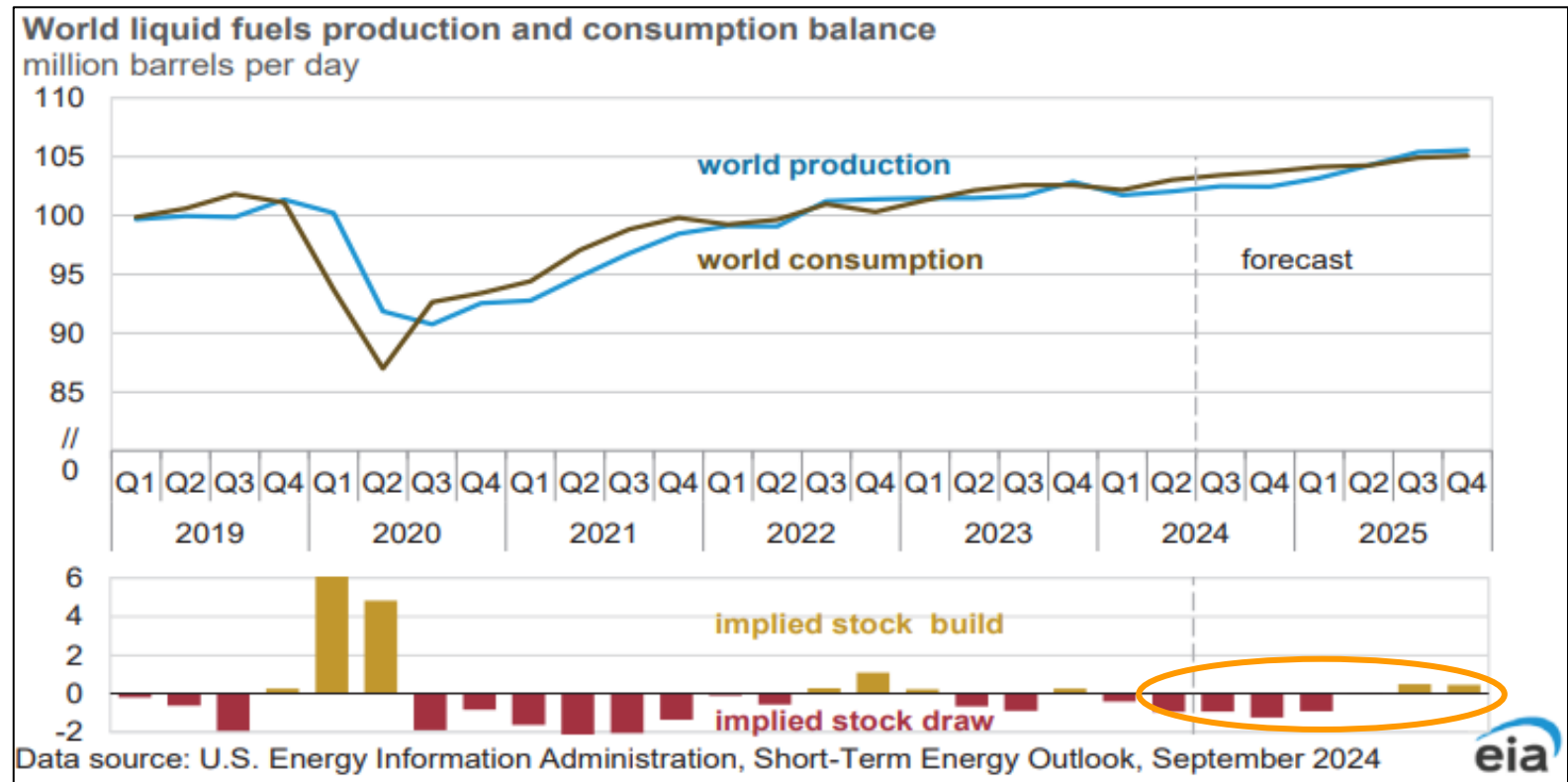
	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Machinery IPG333S	0.04%	-2.87%	1.31%	-1.43%	-0.03%	-1.09%	0.49%	-1.10%	0.34%	1.74%	0.02%		-7.27%	10.48%	0.01%	-2.96%	-1.74%

Source: Armada Forecasts

	3-month	6-month
Machinery IPG333S	98.0%	98.4%

Oil and Gasoline – Now an Implied Draw through Q1 2025

- The new forecast shows a net draw on inventories through Q1 of 2025 before returning to a neutral position.
- The EIA has adjusted its forecast for oil downward (prior to events in the Middle East and hurricane activity in the Atlantic)
- Gasoline and diesel prices are also remaining stable and relatively unchanged



Crude forecast:

• 2021	\$68.21
• 2022	\$94.91
• 2023	\$77.58
• 2024	\$78.80
• 2025	\$79.63

Diesel forecast:

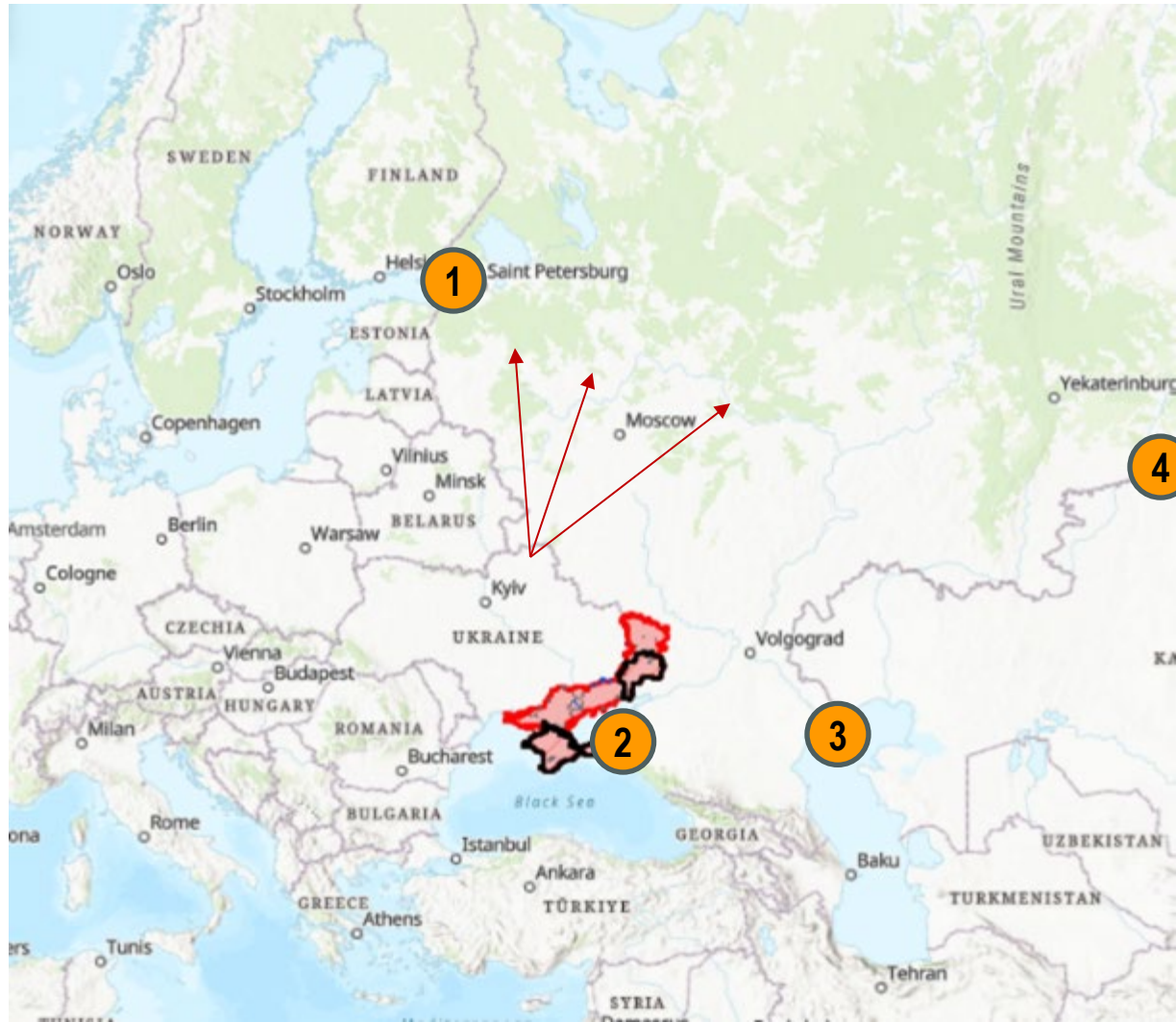
• 2021	\$3.29
• 2022	\$5.02
• 2023	\$4.22
• 2024	\$3.78
• 2025	\$3.73

Gasoline forecast:

• 2021	\$3.02
• 2022	\$3.97
• 2023	\$3.52
• 2024	\$3.33
• 2025	\$3.29

Source: EIA; Baker Hughes; Conoco-Philips

Ukraine – Don't Lose Site...



Assessed Control of Terrain in Ukraine and Main Russian Maneuver Axes as of September 12, 2024, 3:00 PM ET



Macroeconomic Outlook

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

	2023				2024				2019	2020	2021	2022	2023	2024	2025	2
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4								
Real GDP	1.1	2.4	5.2	2.5	1.3	2.8	3.0	1.3	2.3	-2.8	5.9	2.1	2.1	2.0	1.6	
Unemployment rate (%)	3.5	3.6	3.7	3.7	3.8	3.9	4.1	4.2	3.7	8.1	5.4	3.6	3.6	4.0	4.0	
PCE Inflation (%Y/Y)	4.6	3.9	3.3	2.8	2.8	2.8	2.5	2.5	1.5	1.1	4.0	5.6	3.7	2.5	2.5	
Core PCE Inflation (%Y/Y)	4.8	4.6	3.8	3.2	3.1	2.9	2.8	2.5	1.7	1.3	3.5	4.8	4.1	2.5	2.2	
Fed Funds Rate	4.9	5.1	5.3	5.4	5.4	5.2	5.0	5.0	1.6	0.1	0.1	4.4	5.4	5.0	3.0	
Canada Real GDP	2.0	1.3	0.7	1.0	0.5	-	-	-	1.8	-5.2	4.5	3.4	1.1	1.0	1.5	
Unemployment rate (%)	5.1	5.4	5.6	5.8	6.1	6.4	-	-	5.8	9.7	7.5	5.3	5.8	6.4	6.0	
Mexico Real GDP	3.5	3.4	3.0	2.4	-	-	-	-	-1.8	-8.2	5.0	2.7	1.6	2.4	1.4	
Unemployment rate (%)	3.6	3.6	3.8	4.0	3.9	3.8	-	-	5.0	7.9	7.1	4.1	3.8	3.8	4.0	

1. Low recession risk for now, barring a significant event.

- Labor conditions are slipping
- Leading Economic Indicators are also weak

3

Note: Consumer spending was boosted by stock market gains

- \$900B in new stock wealth created
- \$288B estimated in additional spending as a result
- \$1.3 trillion economic multiplier applied to that
- 76% of 2023 GDP contribution

Questions?

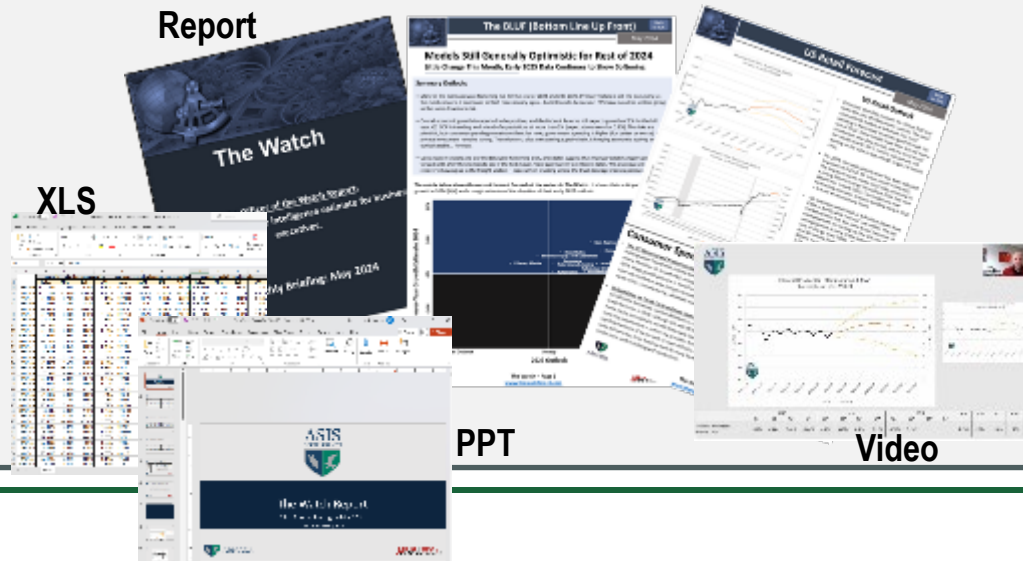
- **Like this content? Check out the ASIS: all of it for about the price of a cup of coffee.**

Armada Strategic Intelligence System (ASIS): All This Below for Just \$7 / Month

The Flagship – 3 Days a Week.



The Watch – Once a Month.



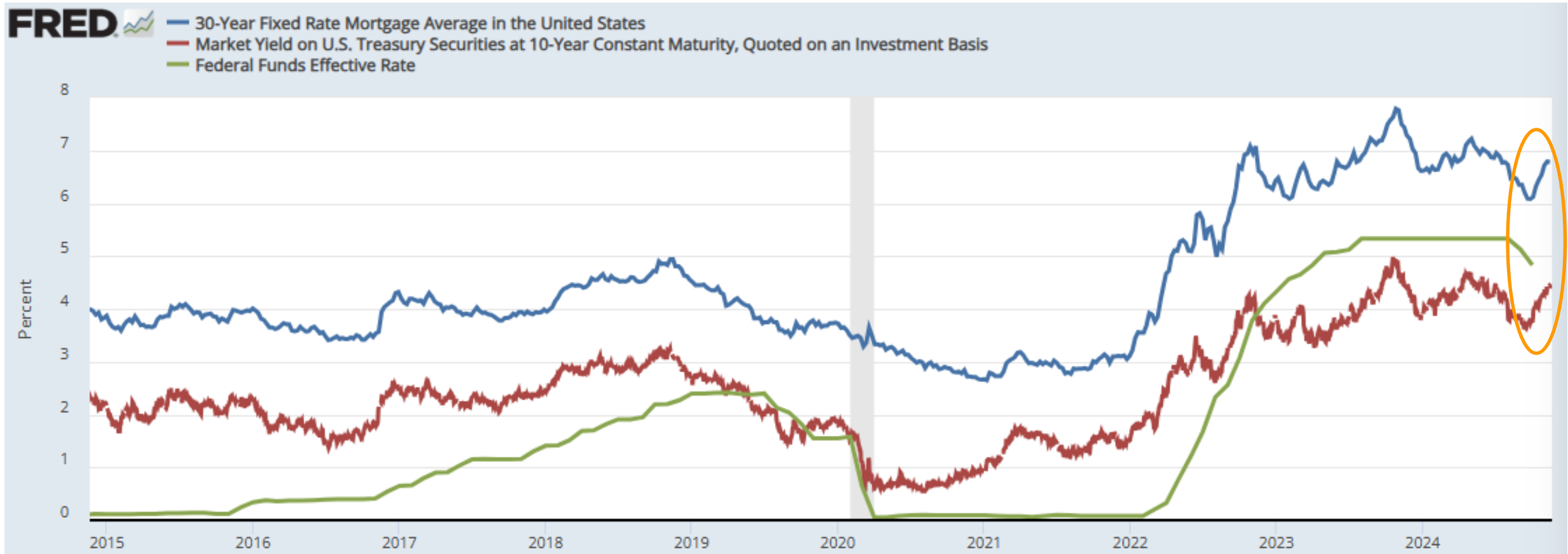
Inside the Executive Suite – Once a Week.



10-Year Treasury is Flip-Flopping; And Taking Mortgages With It



- US issued \$1 Trillion in Bonds in 2023, \$2 T in new issues this year and refinancing \$8 T (estimated).
- A lot of supply, demand is moderate. We'll see if this relationship holds...



US Production Touching New All-Time Highs at 13.31M BPD

- Prior record was 13M BPD in Nov of 2019. The EIA believes production could hit 13.7M by 2026.
- Significant shut-in capacity is ready and could be tapped at any time. Again, oil prices remaining in the \$70-\$80 per barrel range is optimum for producers.
- SPR inventories still at 1980's lows. Officials state that it can only be refilled at a specific rate because of limitations on storage facilities.

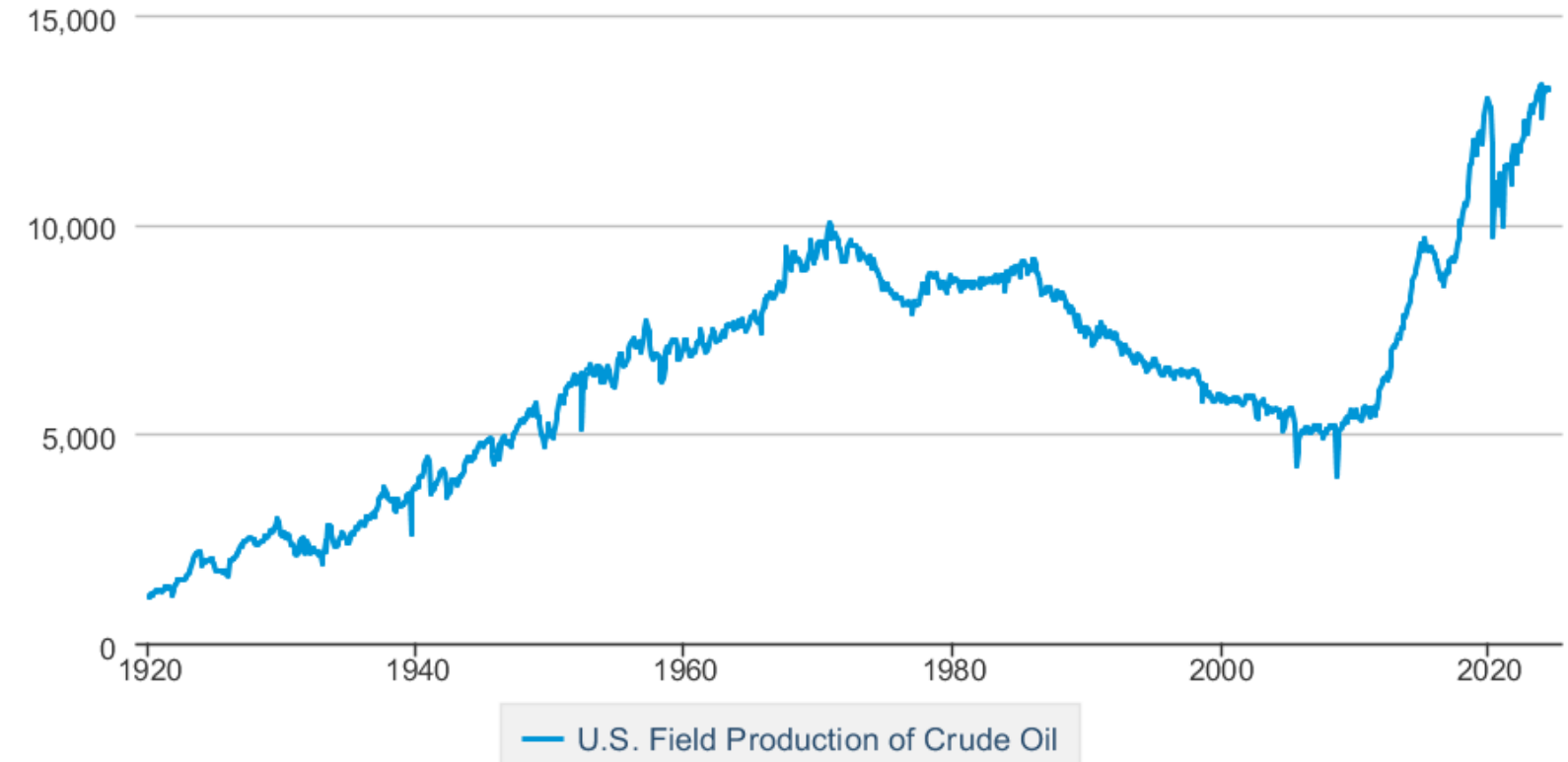
Weekly U.S. Ending Stocks of Crude Oil in SPR



eia Data source: U.S. Energy Information Administration

U.S. Field Production of Crude Oil

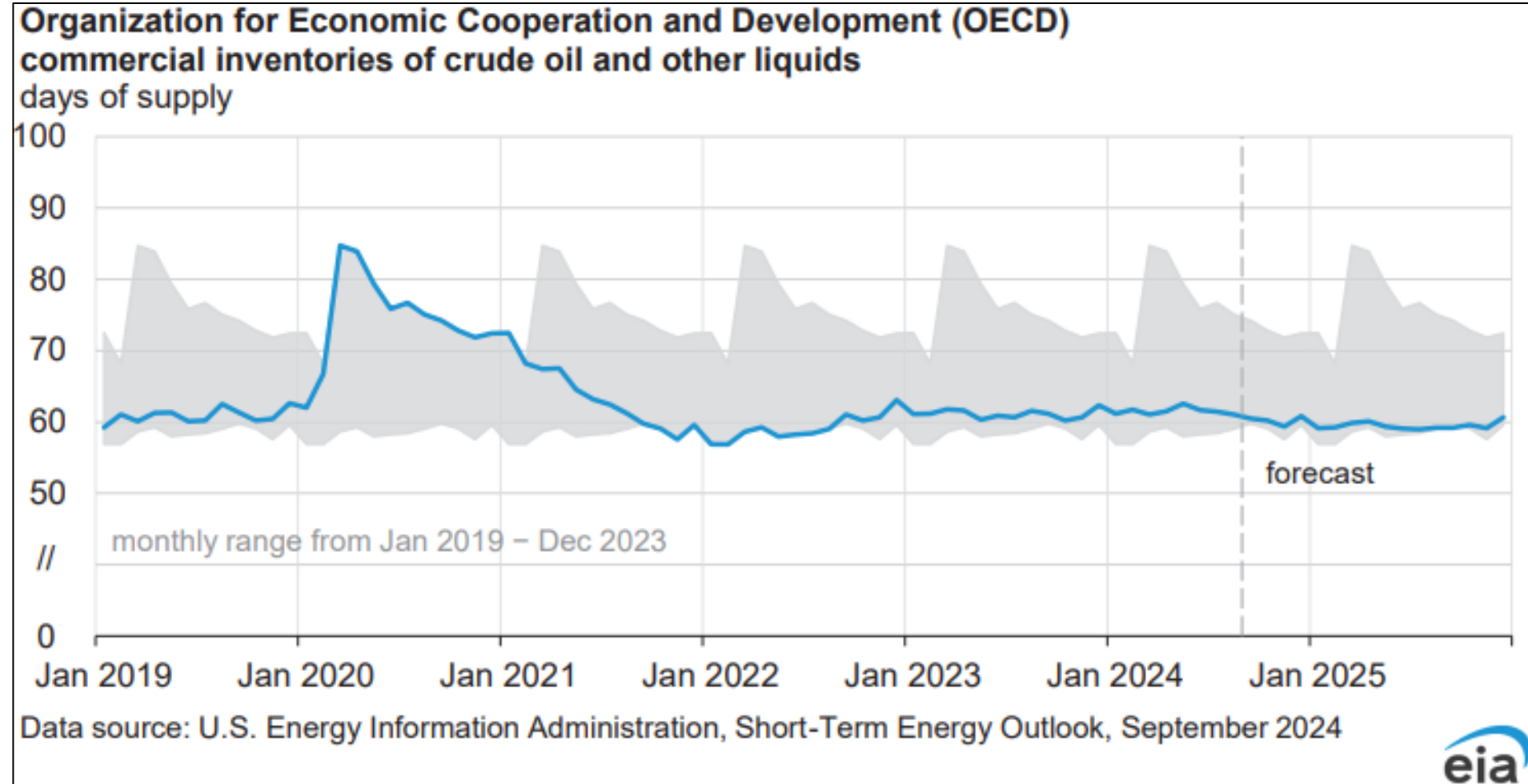
Thousand Barrels per Day



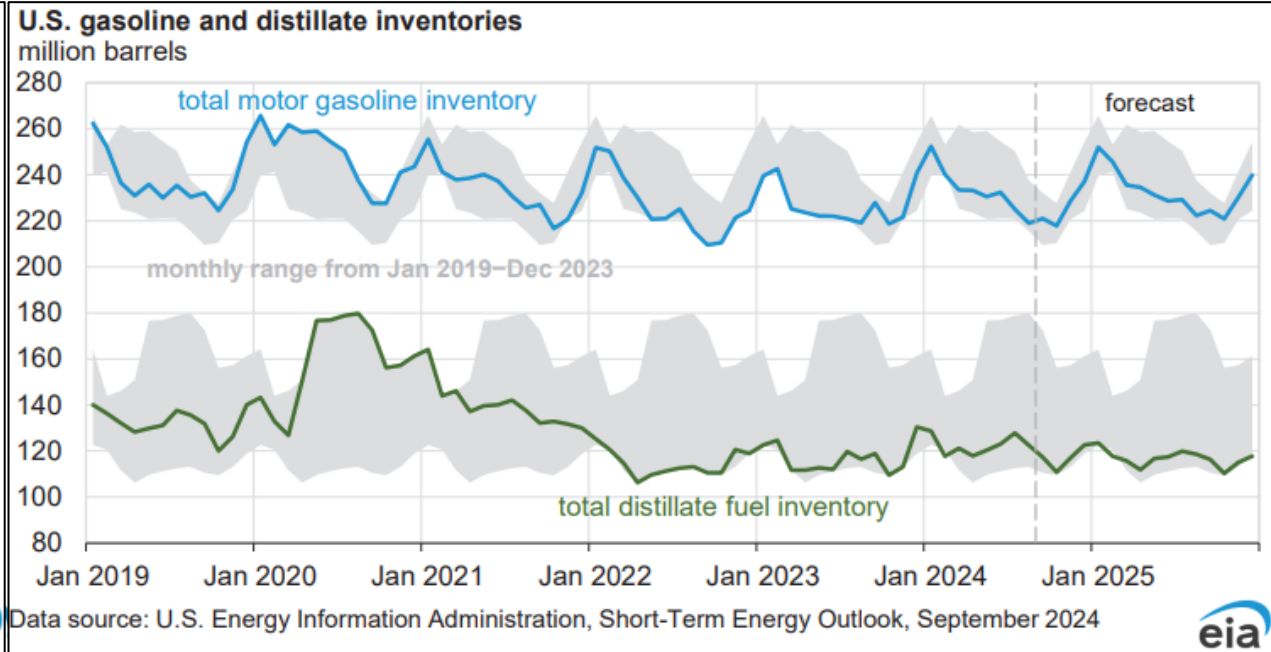
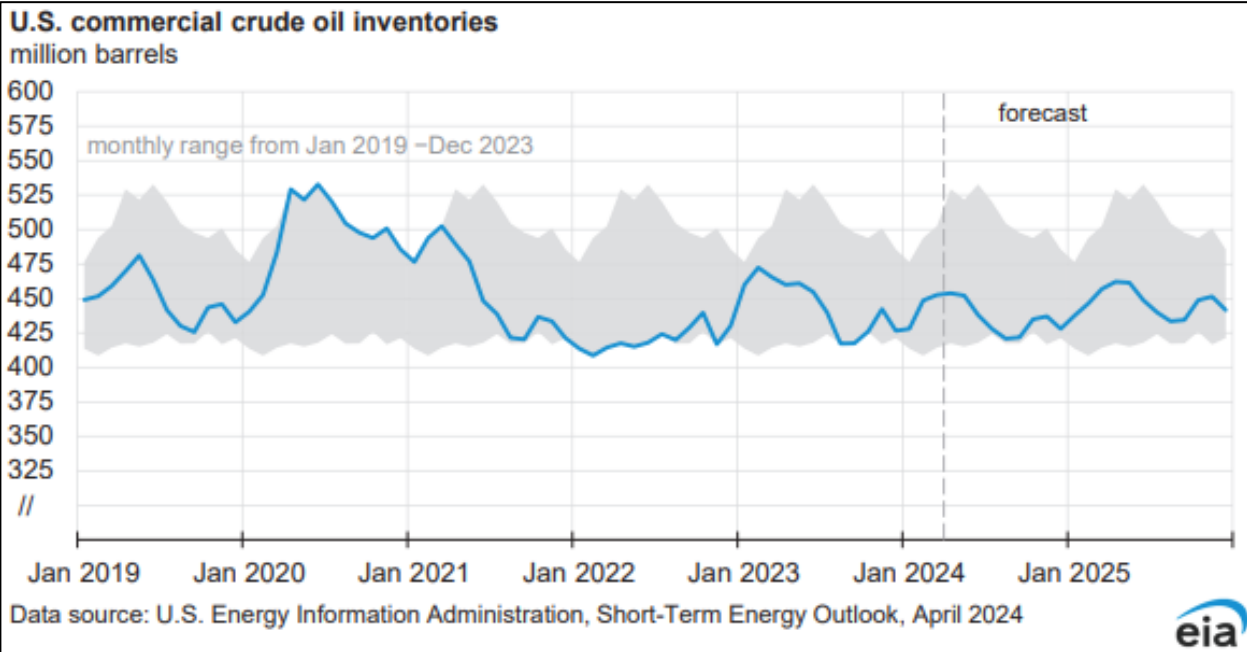
eia Data source: U.S. Energy Information Administration

The Big Story is Inventory...and production will continue to be stable

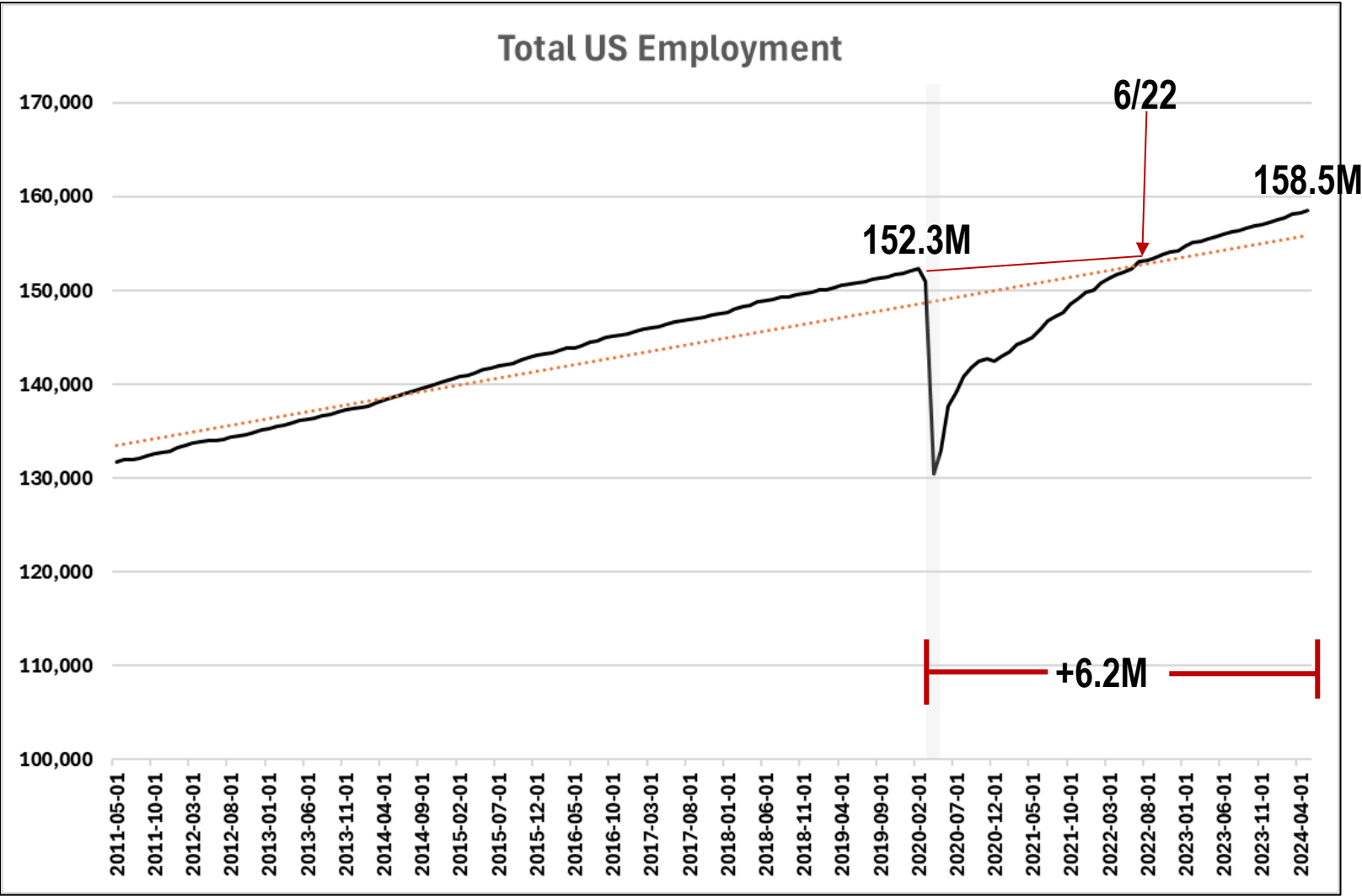
- At best, the OECD sees them staying at the bottom of the five-year trend throughout 2025. Very little recovery here.
- Of course, events in Ukraine/Russia and the Middle East could quickly change this.
- This is the latest forecast from the September outlook, and inventories were unchanged.



EIA still has inventories generally remaining at the bottom of the 5-year averages



Also Looking at Other Areas for Forecast Insights...



Annual Growth Rate

- 2020: 1.5% Y/Y
- 2024: 1.5% Y/Y
- Historic avg: 1.5% Y/Y

June 22 – May 24

- Full Time: 737,000
- Part Time: 2,400,000

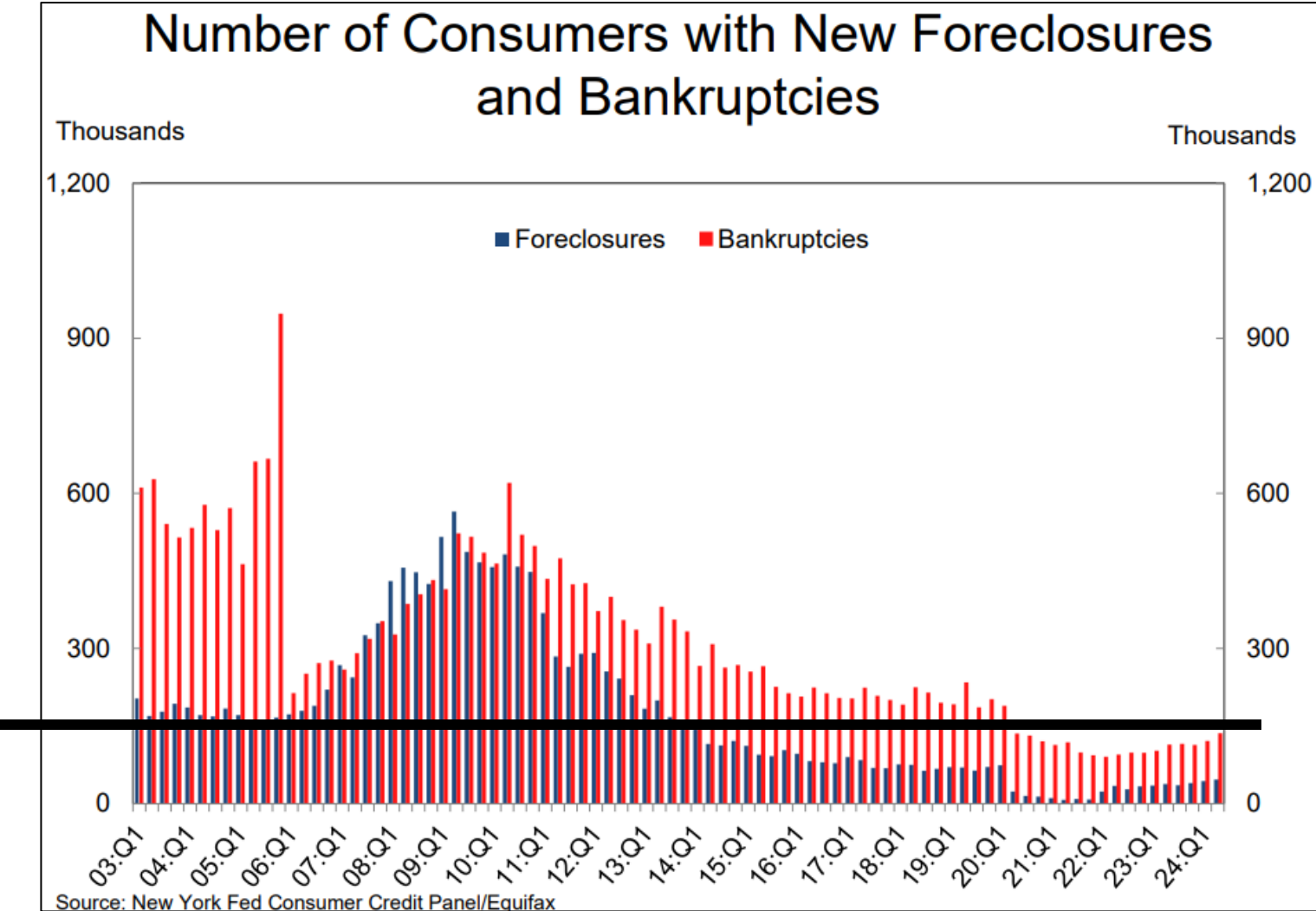
Vs. Long-Term Trendline

- 2020: @4K above
- 2024: @4K above

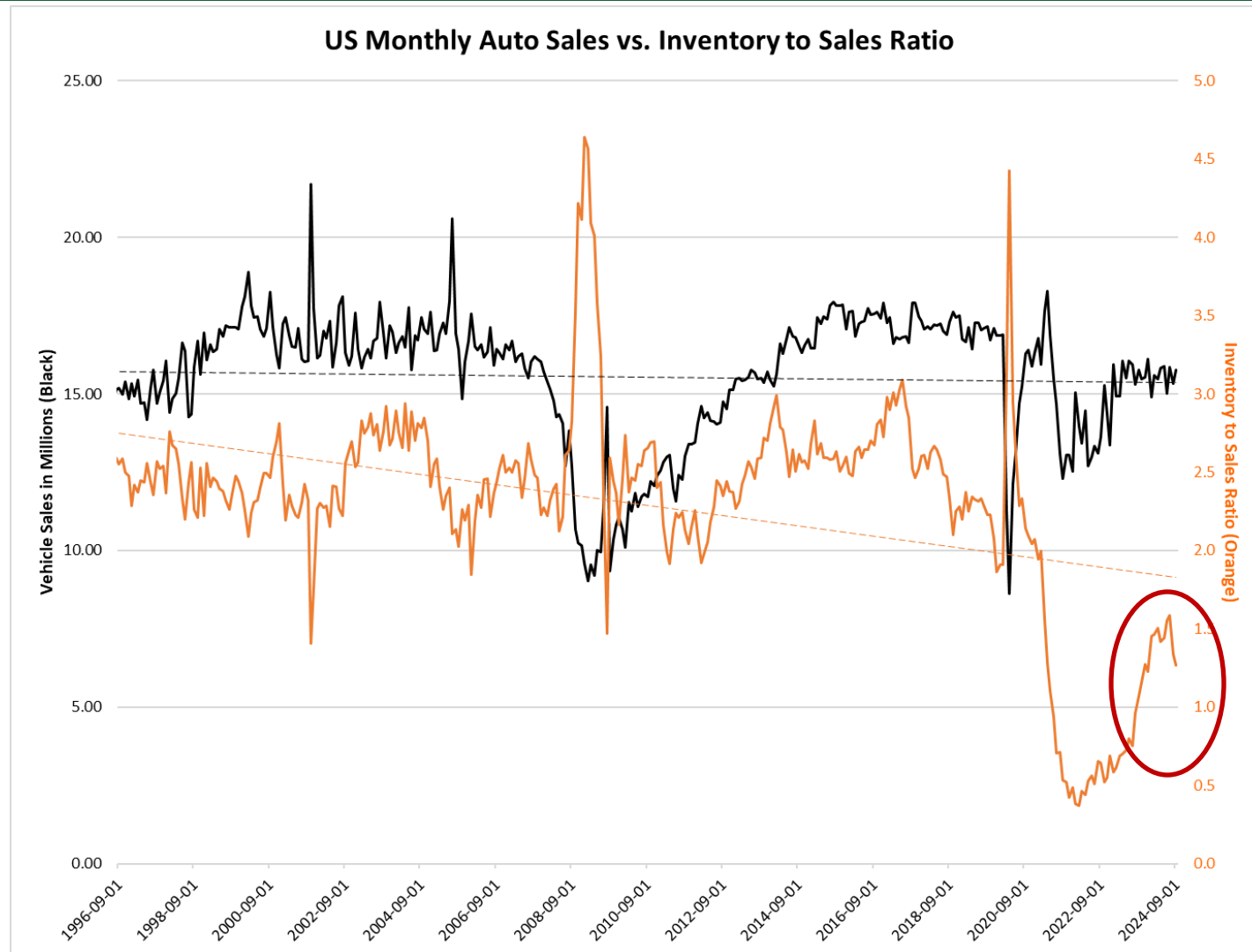
For Your Sector, I'll Focus on a Few Things

- Health of consumers (for independent travel and tourism)
- Health of corporations (for business travel, conventions, etc.)
- Universities and sports travel
- General macroeconomic conditions (is the economy generally good or bad)
- Maybe a few big risks or geopolitical items to watch that could create unexpected changes

Foreclosures and Bankruptcies Historically Low



Automotive Moving Back to “Normal”?

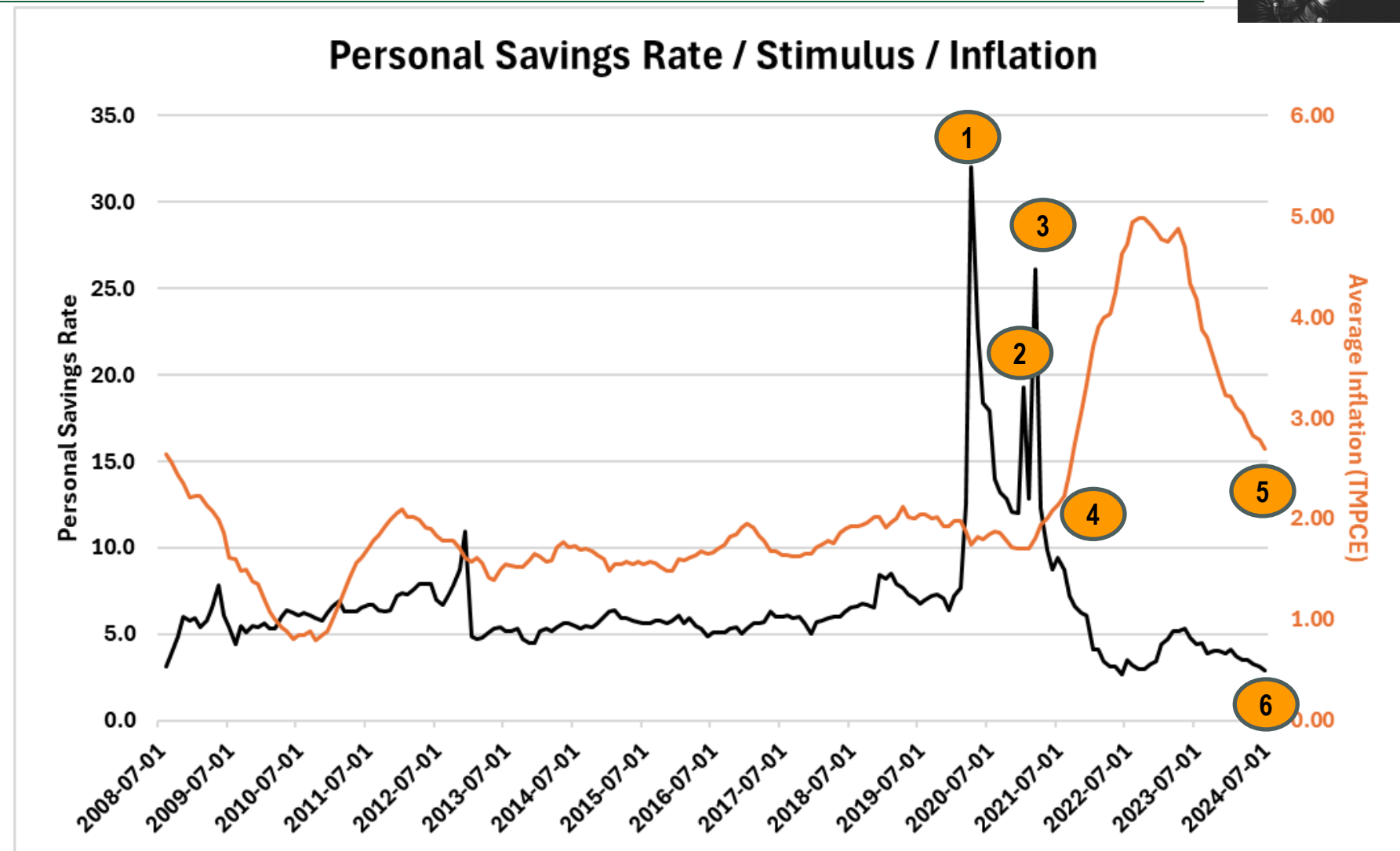


1. Sales slightly weaker at 15.77 million units through Sept
2. Inventories still 43.1% lower than pre-pandemic levels
3. Inventories Still Underweight

Truth on Inflation



1. First infusion.
2. Second infusion.
3. Third infusion.
4. Surge in average inflation between the second and third infusion of liquidity
5. Average inflation is finally coming down, but still historically high.
6. But the savings rate is falling further, approaching new all-time lows.

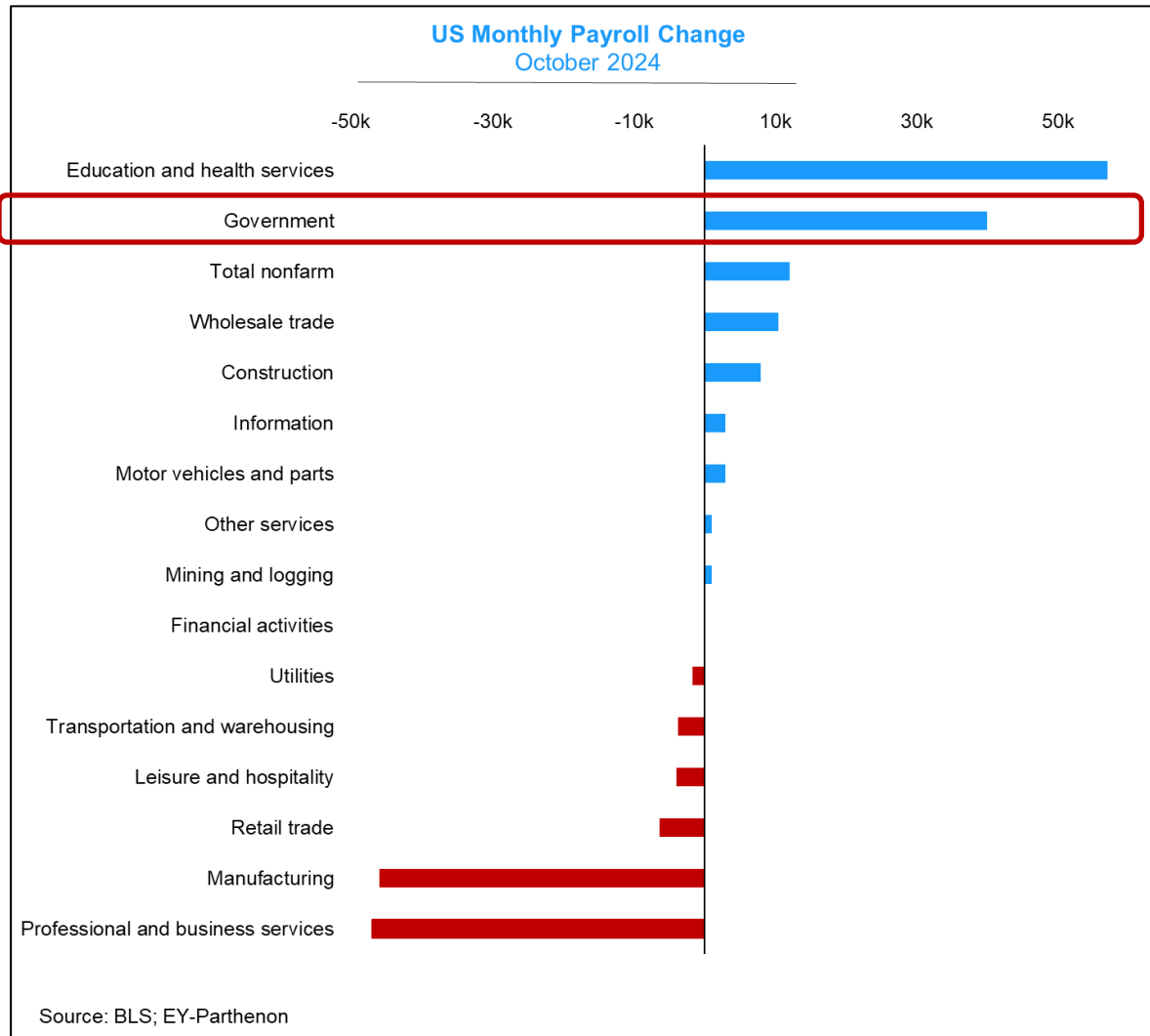


Extra Slides

The Spratly's



The Jobs Being Created

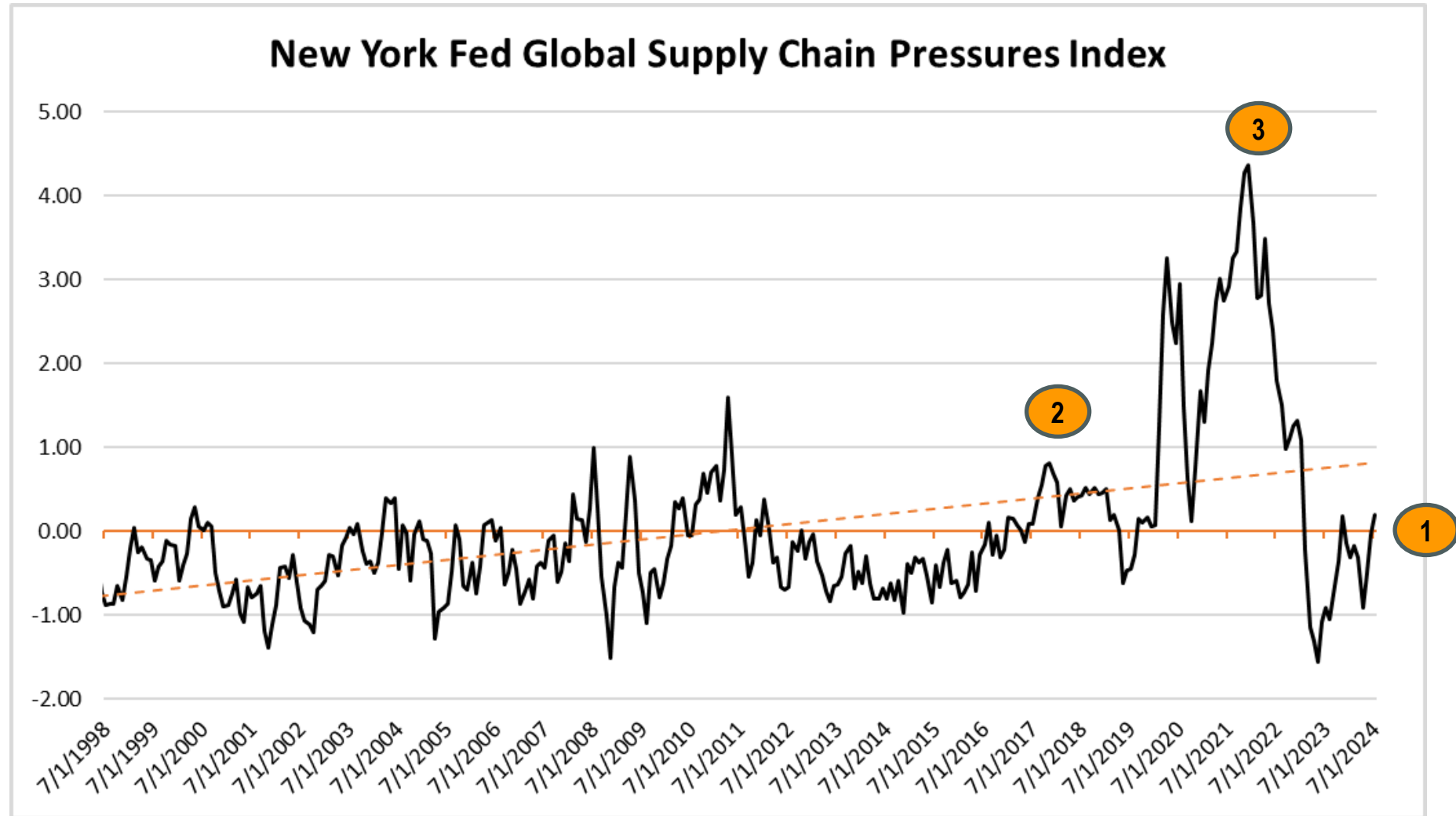


JOBS REPORT

MONTH	INITIAL READING	FIRST REVISION	SECOND REVISION	DIFFERENCE FROM ORIGINAL READING
January 2023	517,000	504,000	482,000	-35,000
February 2023	311,000	326,000	287,000	-24,000
March 2023	236,000	165,000	146,000	-90,000
April 2023	253,000	294,000	278,000	25,000
May 2023	339,000	306,000	303,000	-36,000
June 2023	209,000	185,000	240,000	31,000
July 2023	187,000	157,000	184,000	-3,000
August 2023	187,000	227,000	210,000	23,000
September 2023	336,000	297,000	246,000	-90,000
October 2023	150,000	150,000	165,000	15,000
November 2023	199,000	173,000	182,000	-17,000
December 2023	216,000	333,000	290,000	74,000
January 2024	353,000	229,000	256,000	-97,000
February 2024	275,000	270,000	236,000	-39,000
March 2024	303,000	315,000	310,000	7,000
April 2024	175,000	165,000	108,000	-67,000
May 2024	272,000	218,000	216,000	-56,000
June 2024	206,000	179,000	118,000	-88,000
July 2024	114,000	89,000	144,000	30,000
August 2024	142,000	159,000	78,000	-81,000
September 2024	254,000	225,000		-31,000
October 2024	12,000			

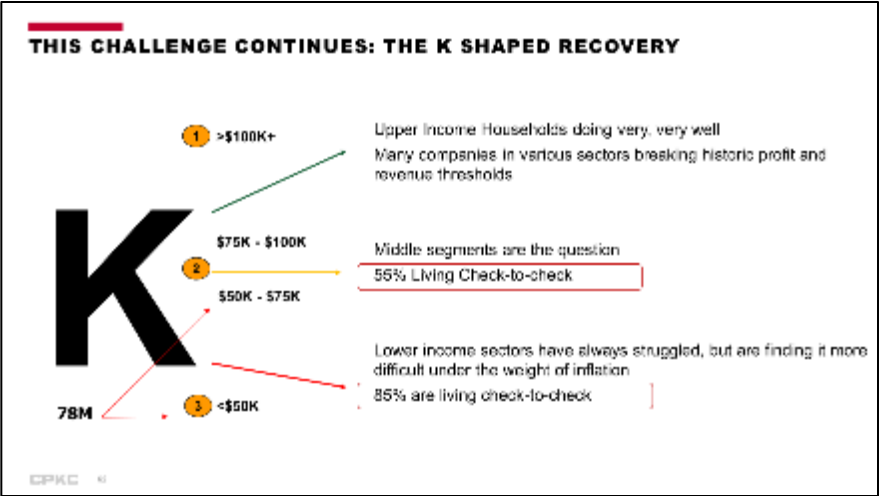
Global Supply Chain Pressures Index Rising Through August

- Supply chain pressures have now pivoted to the carrier side of the equation – primarily on the global maritime front.
- A ratio of 0.5 to 1.0 would suggest broader, critical supply chain tightness.
- The period during the Pandemic is a Black Swan type of event and is abnormal and extreme in the long-term.



Advanced Retail Sales

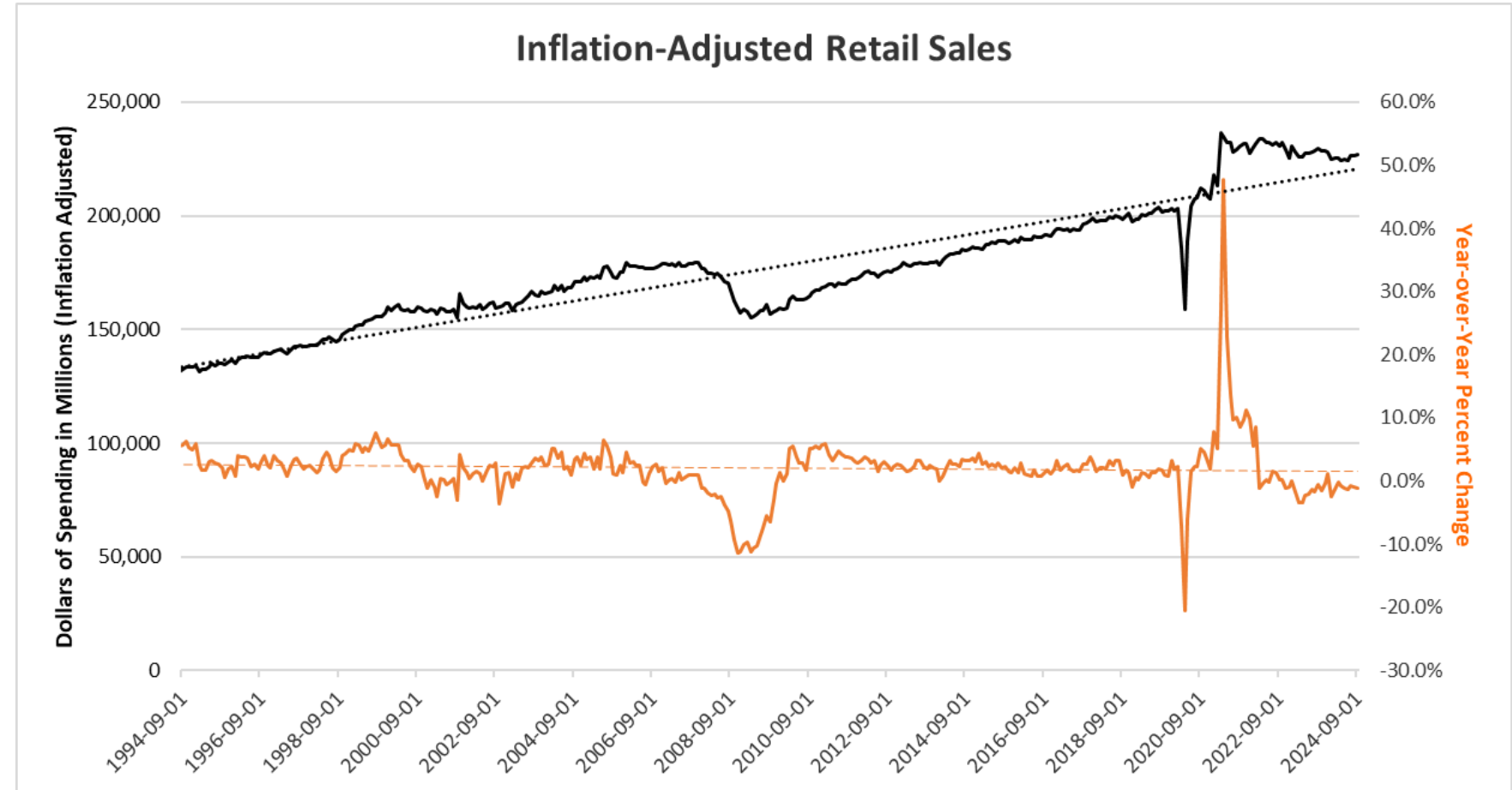
- Year-over-year comparisons strip some seasonality out of the mix.
- Top line growth was 1.7% Y/Y, stripping out food, fuel and auto, sales were still up 1.4%.
- September sales overall were stable –some discretionary categories were weaker (autos, electronics, furniture, sporting goods, and department stores)
- E-commerce popped back up at a 7.1% annual growth rate.



Kind of Business	Percent Change	
	Sep. 2024 Advance from --	
	Aug. 2024	Sep. 2023
Retail & food services, total	0.4	1.7
Retail	0.3	1.4
Motor vehicle & parts dealers	0.0	-0.3
Furniture & home furn. stores	-1.4	-2.3
Electronics & appliance stores	-3.3	-4.6
Building material & garden eq. & supplies dealers.....	0.2	0.5
Food & beverage stores.....	1.0	2.5
Grocery stores	1.0	2.5
Health & personal care stores	1.1	4.6
Gasoline stations	-1.6	-10.7
Clothing & clothing accessories stores	1.5	3.5
Sporting goods, hobby, musical instrument, & book stores	0.3	-3.5
General merchandise stores.....	0.5	2.6
Department stores	0.4	-1.2
Nonstore retailers	0.4	7.1
Food services & drinking places	1.0	3.7

Inflation-Adjusted Retail Spending

- Inflation-adjusted retail sales continued to outpace the 30-year trend through June (latest available).
- When adjusted for inflation, retail sales are slightly weaker year-over-year, falling by 0.7%.
- But the National Retail Federation is still predicting holiday sales between 2.5% and 3.5% this year, which would be a good showing.



Source: Federal Reserve

NRF inbound container forecast for 2024

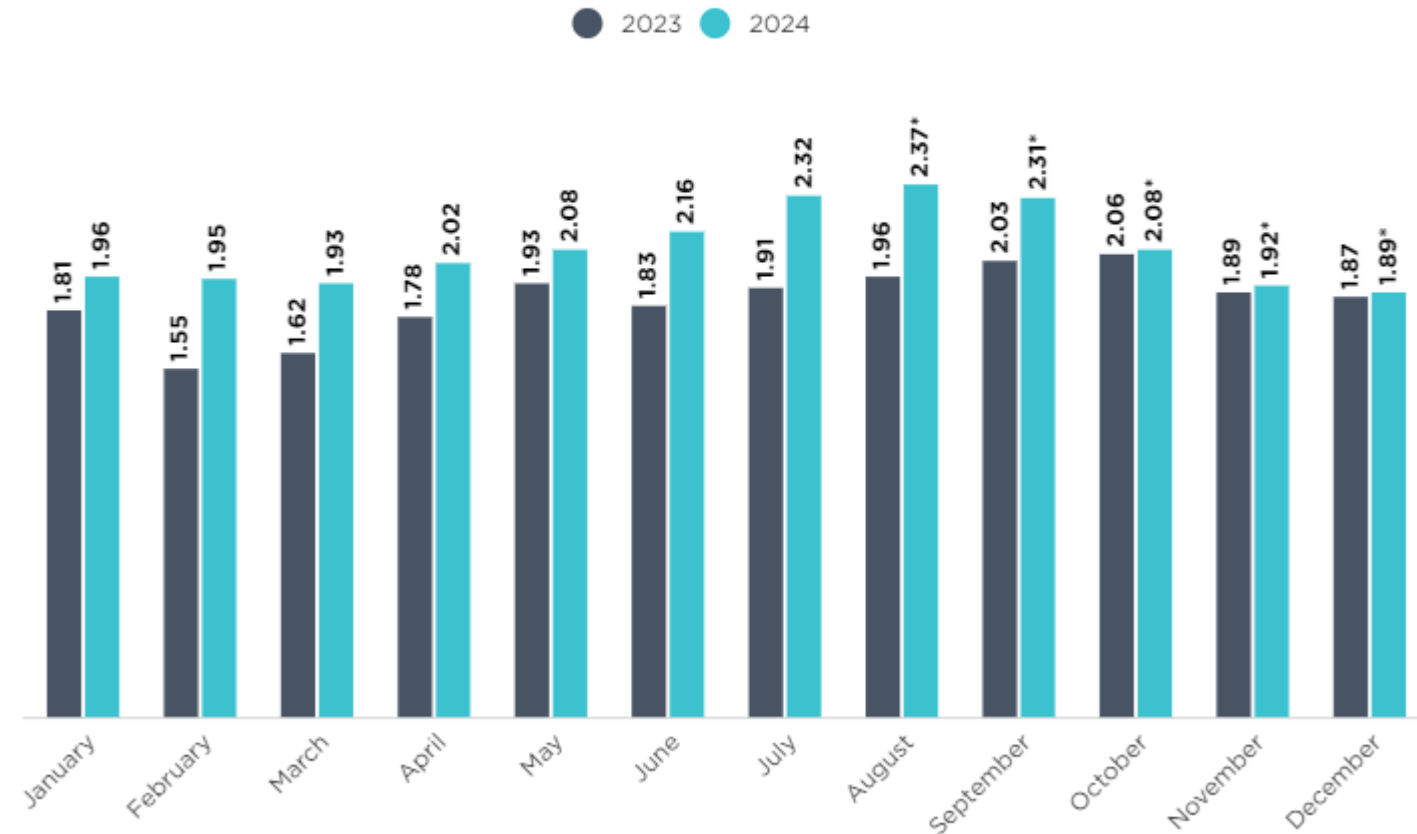
• **Current:** 2.32 million 40-ft equivalents handled through July (latest available).

- Up 8.1% M/M from June
- 21% higher Y/Y (highest July on record)
- August could have broken more records

– **Outlook:**

- Sep 2.31 million TEUs; +14% Y/Y
- Oct 2.08 million TEUs; +1.3% Y/Y
- Nov 1.92 million TEUs; +1.6% Y/Y
- Dec 1.89 million TEUs; +0.9% Y/Y

Monthly imports 2023-2024 (TEU-Millions)

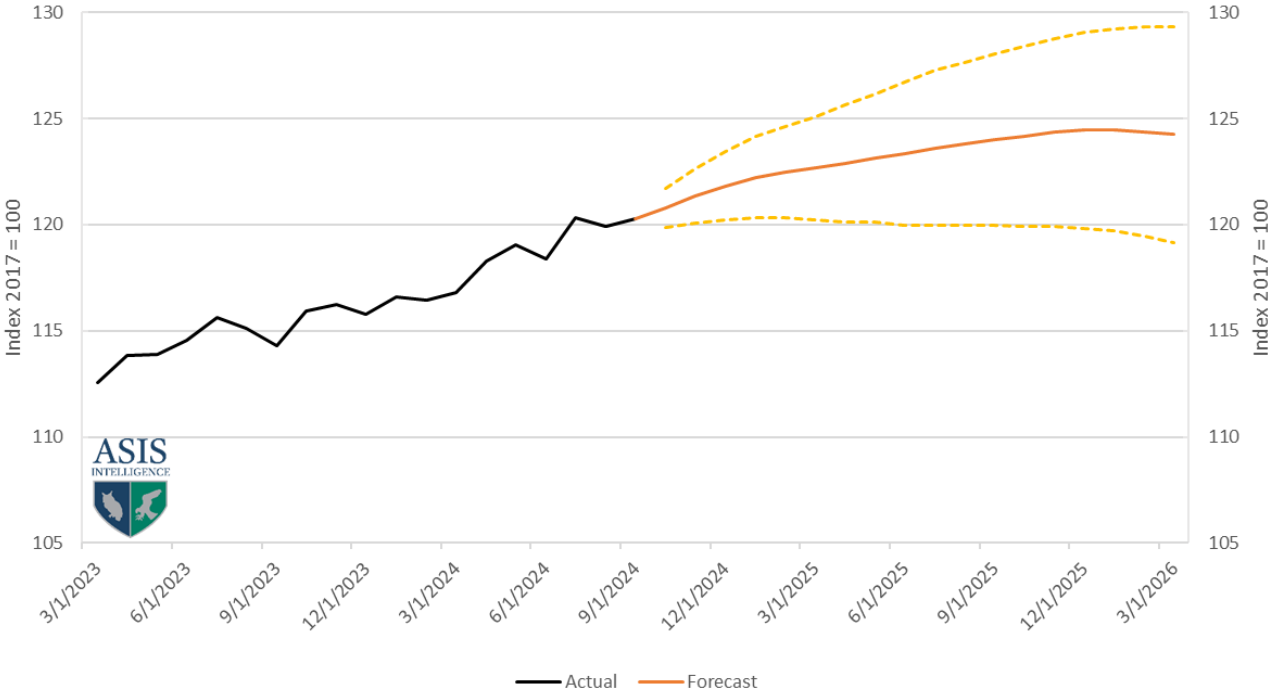


Source: NRF/Hackett Associates Global Port Tracker *Forecast

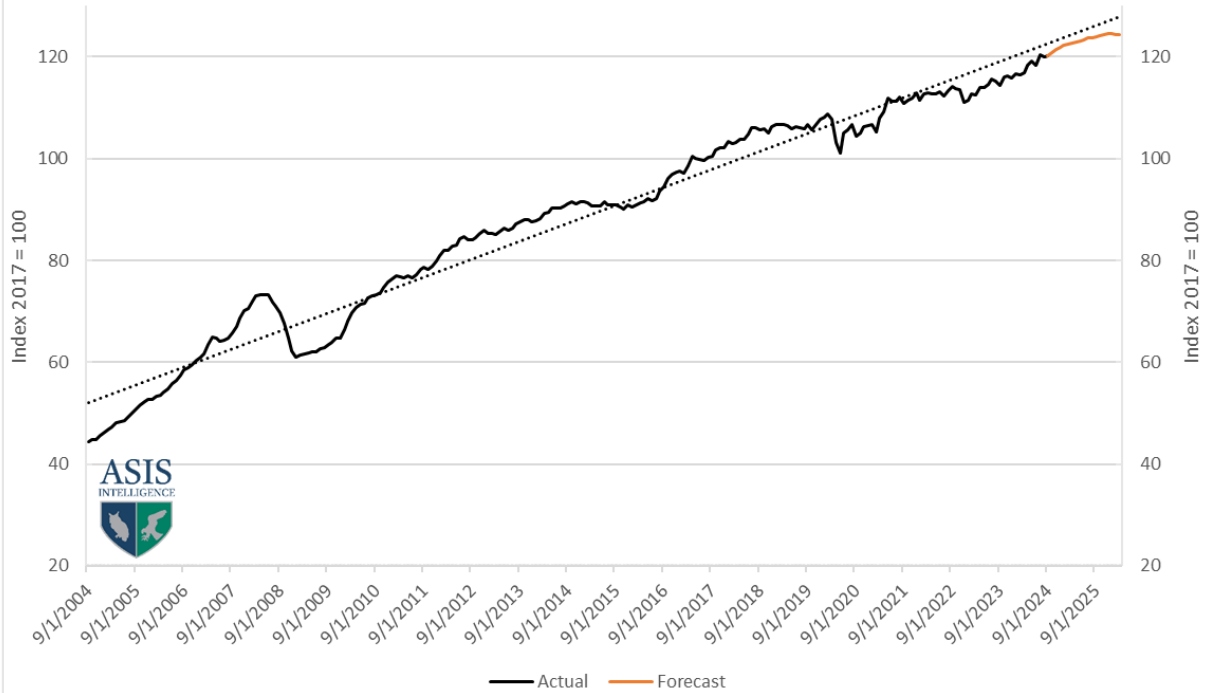
Computer and Electronic Forecast



Industrial Production: Computer and Electronic Product (IPG334S)
Forecast as of 10/22/2024



Industrial Production: Computer and Electronic Product (IPG334S)
Forecast as of 10/22/2024

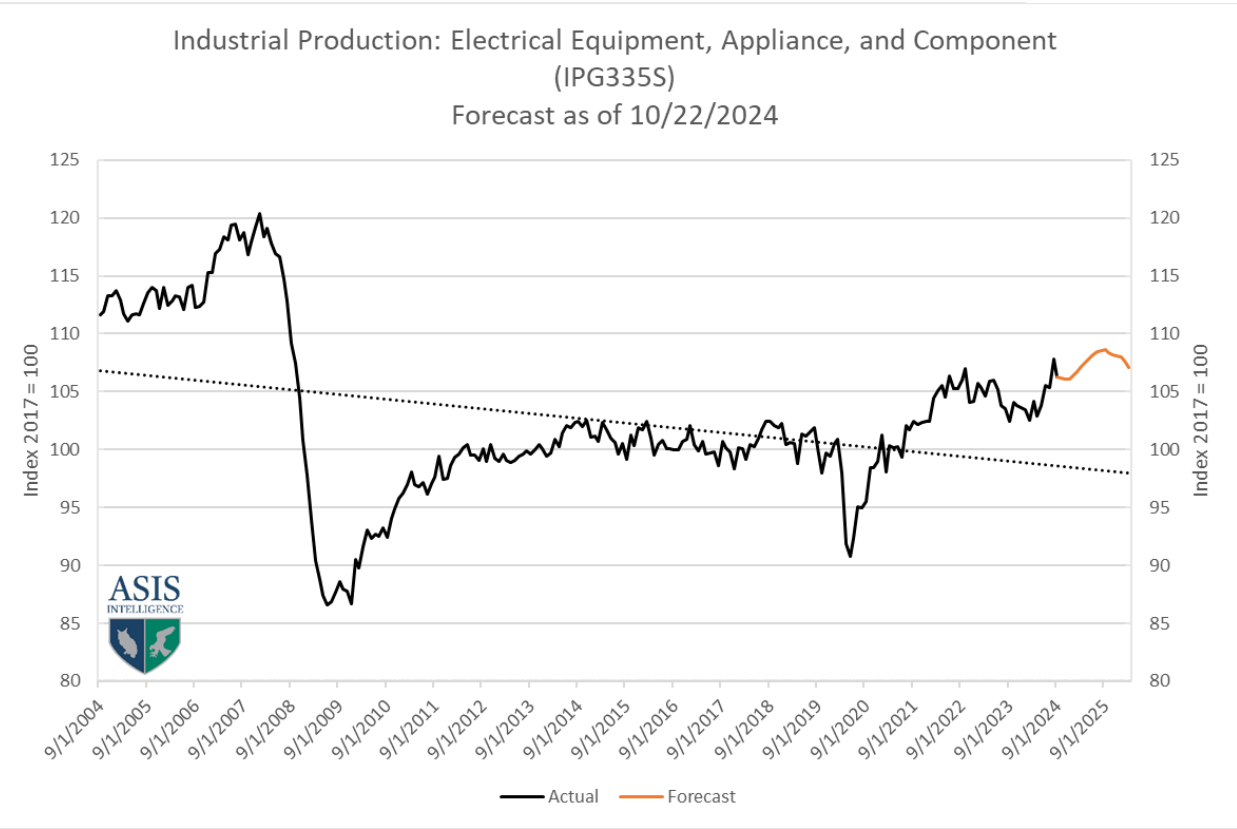
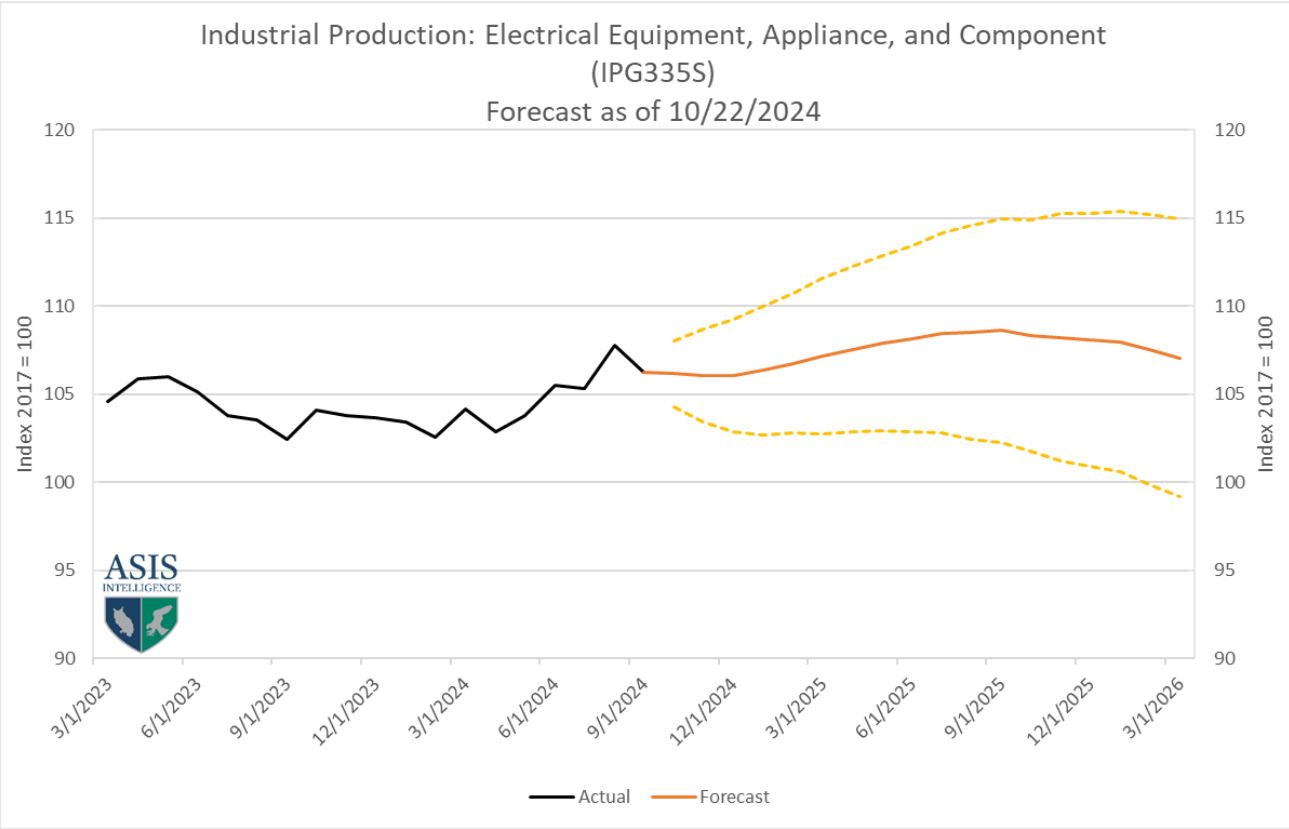


	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Computer and electronic product IPG334S	1.29%	1.79%	-0.23%	1.31%	0.88%	1.34%	1.60%	1.30%	0.69%	0.57%	0.53%		-1.29%	6.06%	-1.55%	4.21%	5.22%

Source: Armada Forecasts

Industrial Production: Computer and electronic product IPG334S	3-month	6-month
	99.1%	99.6%

Electrical Equipment and Appliance Forecast



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Electrical equipment, appliance, and component IPG335S	0.42%	0.52%	-2.56%	1.19%	0.48%	1.31%	0.69%	-0.15%	1.03%	0.91%	0.43%		-0.48%	3.55%	1.64%	-0.47%	2.34%

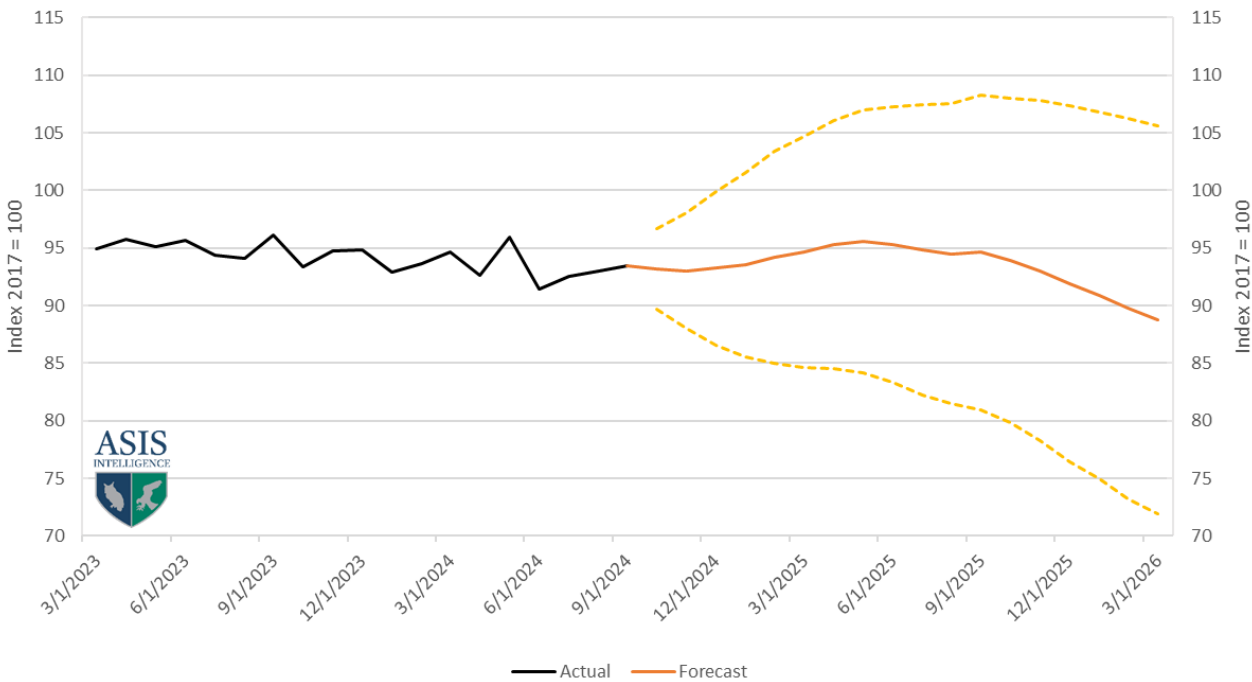
Source: Armada Forecasts

	3-month	6-month
Electrical equipment, appliance, and component IPG335S	98.9%	97.5%

Primary Metal Production Forecast



Industrial Production: Primary Metal (IPG331S)
Forecast as of 10/22/2024



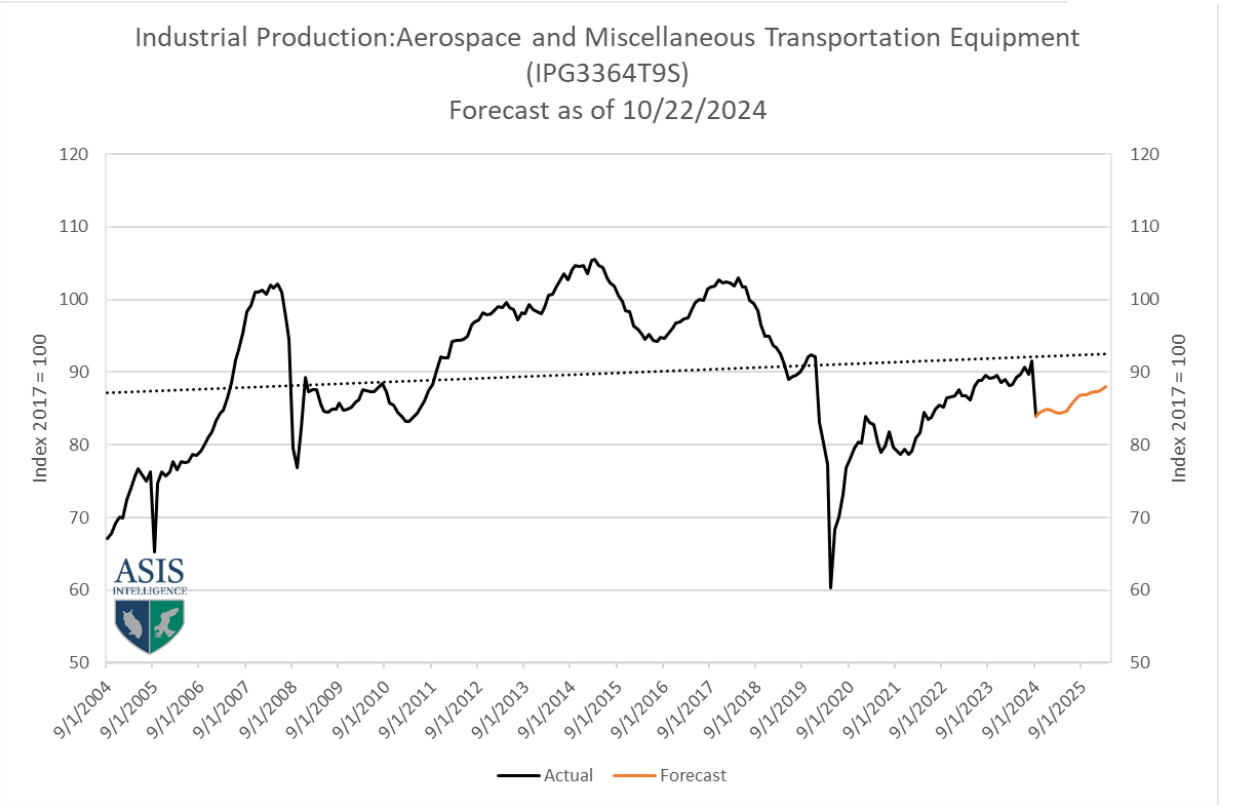
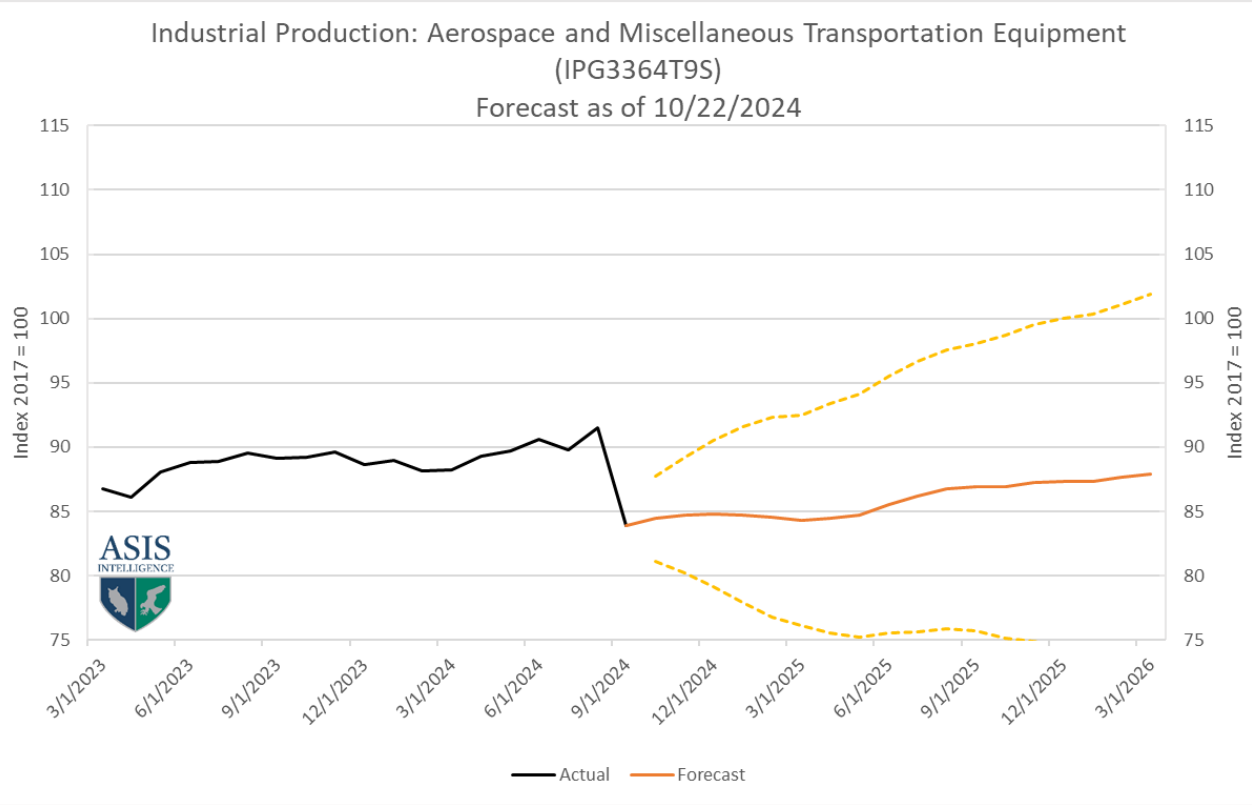
Industrial Production: Primary Metal (IPG331S)
Forecast as of 10/22/2024



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Primary Metal IPG331S	4.81%	0.79%	0.45%	-1.32%	-0.25%	-3.36%	2.18%	-0.22%	1.50%	0.69%	-0.69%		-5.20%	4.08%	-6.23%	4.72%	-1.71%

Source: Armada Forecasts

Aerospace Production Forecast

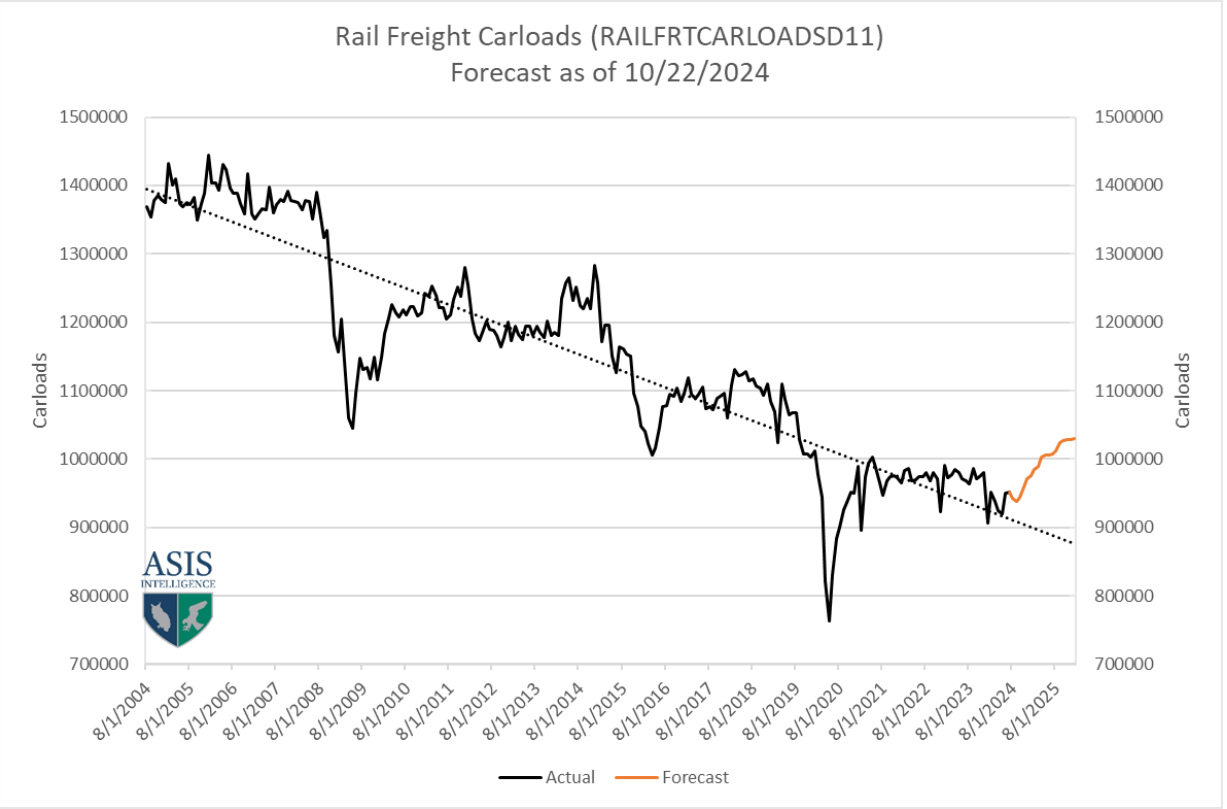
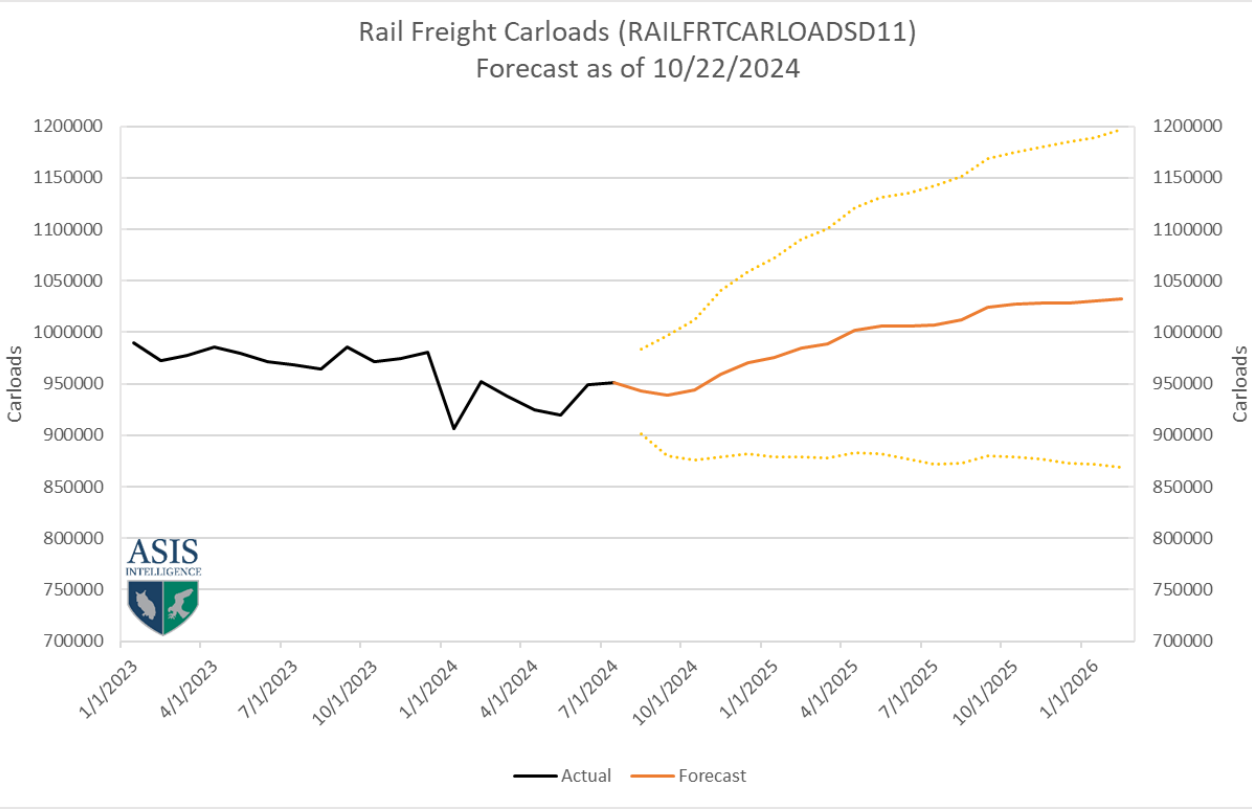


	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4*	Q1*	Q2*	Q3*	Q4*					
Aerospace and miscellaneous transportation equipment IPG3364T9S	0.01%	2.39%	0.31%	-0.53%	-0.41%	2.70%	-7.44%	1.11%	-0.63%	1.44%	1.60%		-13.00%	-1.78%	10.15%	2.18%	-4.27%

Source: Armada Forecasts

	3-month	6-month
Aerospace and miscellaneous transportation equipment IPG3364T9S	90.6%	90.0%

Rail Carload Forecast



	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1*	Q2*	Q3*	Q4*					
Rail Freight Carloads RAILFRTCARLOADSD11	5.82%	-0.64%	1.50%	-0.55%	-4.28%	1.21%	-1.16%	3.40%	1.92%	1.71%	1.80%		-5.27%	2.35%	-5.07%	6.13%	-0.99%

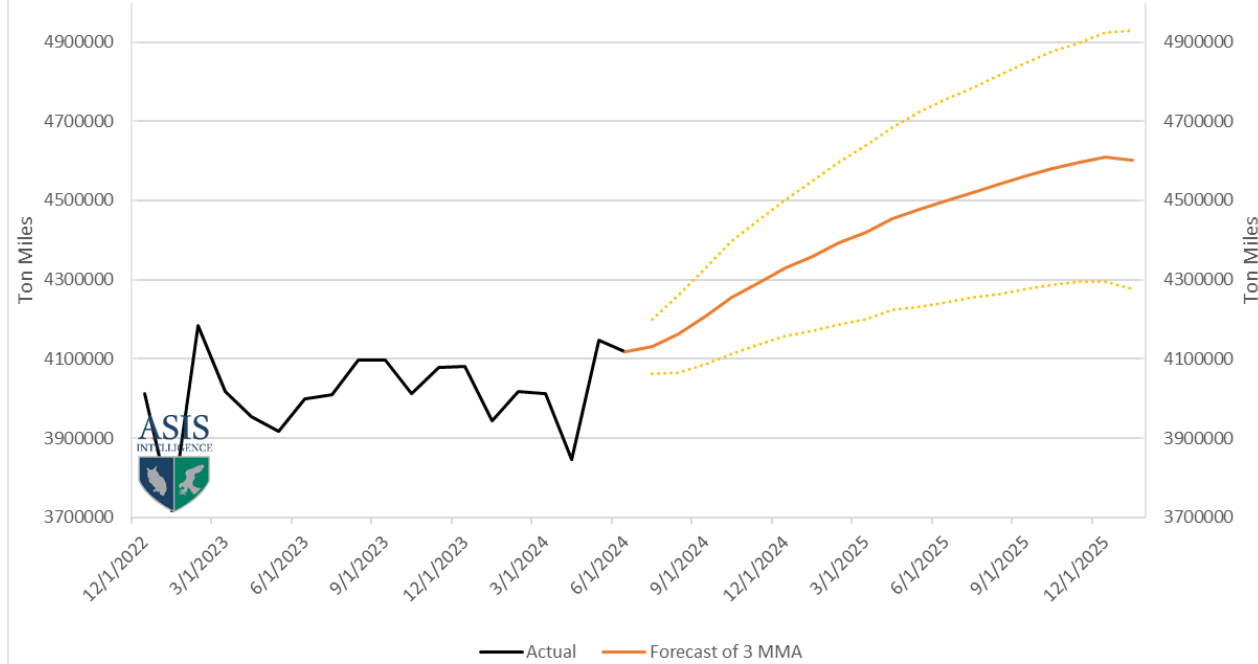
Source: Armada Forecasts

Rail Freight Carloads RAILFRTCARLOADSD11	3-month	6-month
	98.5%	98.4%

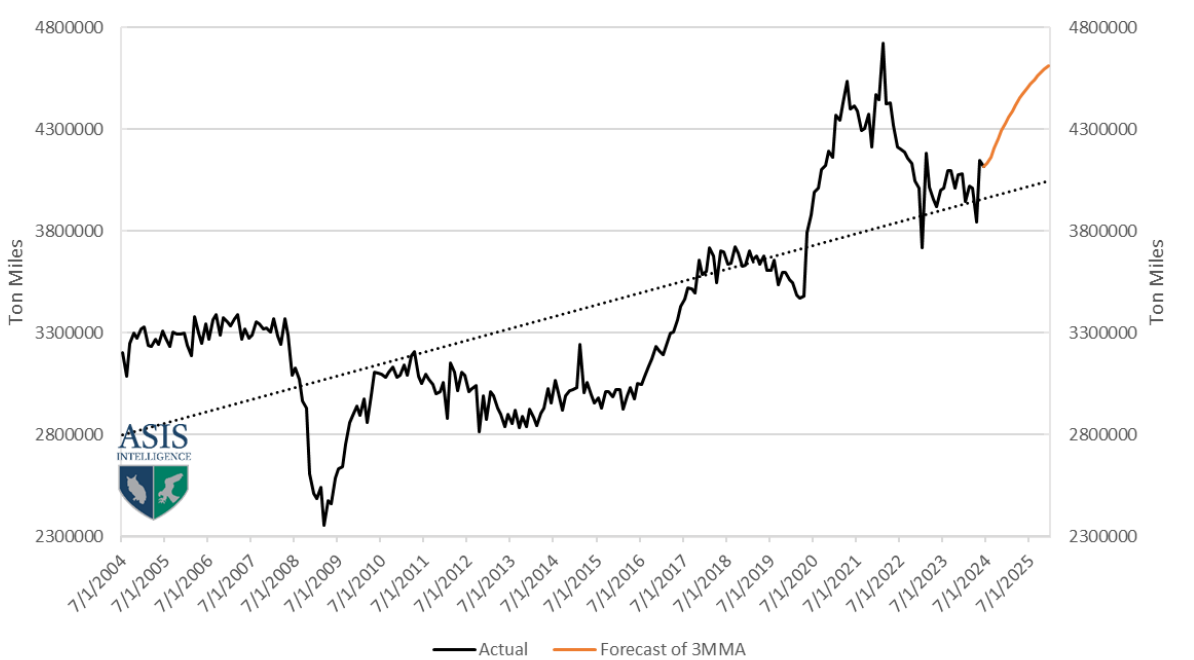
Air Cargo Forecast



Air Revenue Ton Miles of Freight and Mail (AIRRTMFMD11)
3 Month Moving Average Forecast
Forecast as of 10/22/2024



Air Revenue Ton Miles of Freight and Mail (AIRRTMFMD11)
3 Month Moving Average Forecast
Forecast as of 10/22/2024



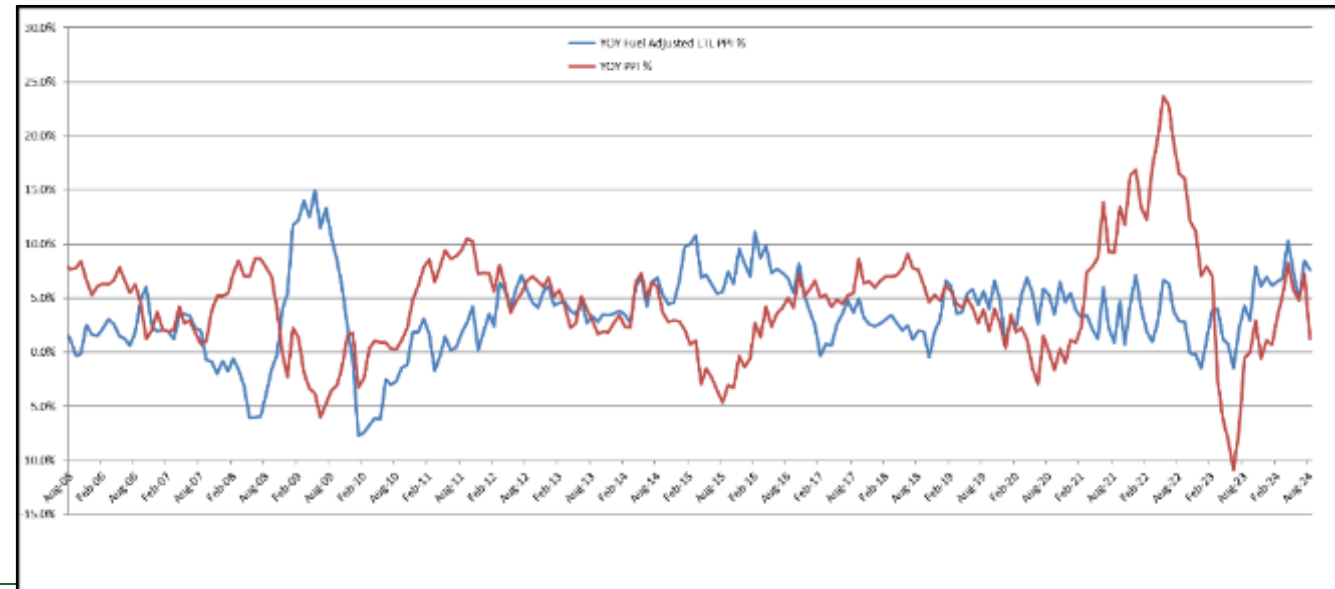
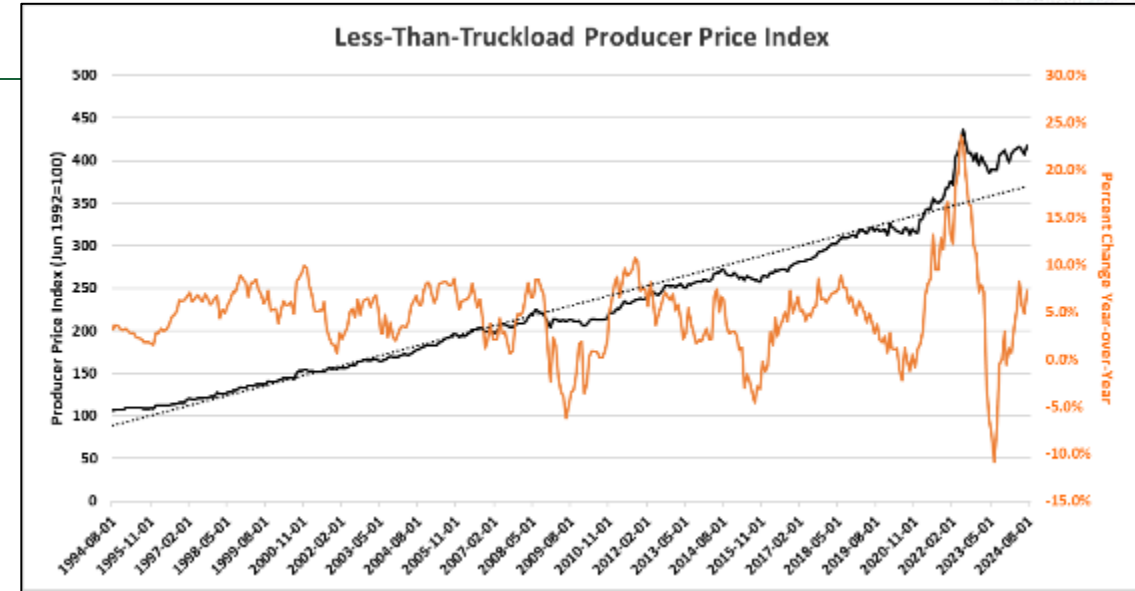
	2023				2024				2025				2020	2021	2022	2023	2024*
	Q1	Q2	Q3	Q4	Q1	Q2	Q3*	Q4*	Q1*	Q2*	Q3*	Q4*					
Air Revenue Ton Miles of Freight and Mail AIRRTMFMD11	0.11%	-0.43%	2.44%	-0.37%	-1.70%	2.63%	2.19%	2.87%	2.09%	1.80%	1.38%		16.85%	7.47%	-10.28%	1.73%	6.07%

Source: Armada Forecasts

	3-month	6-month
Air Revenue Ton Miles of Freight and Mail AIRRTMFMD11	95.0%	N/A

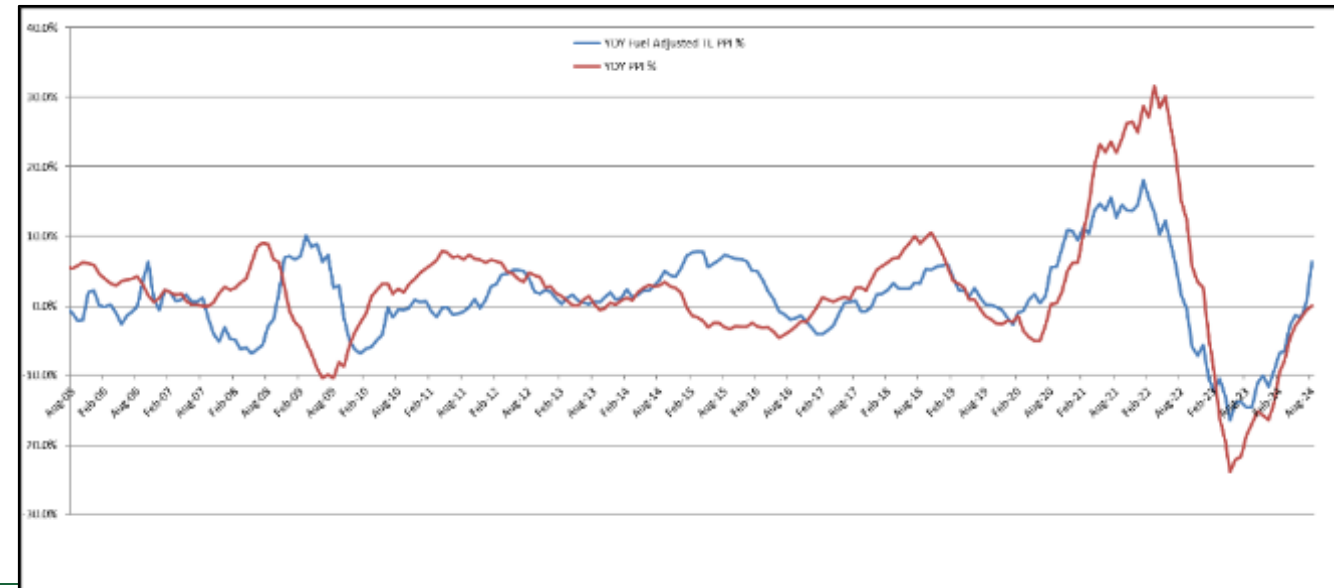
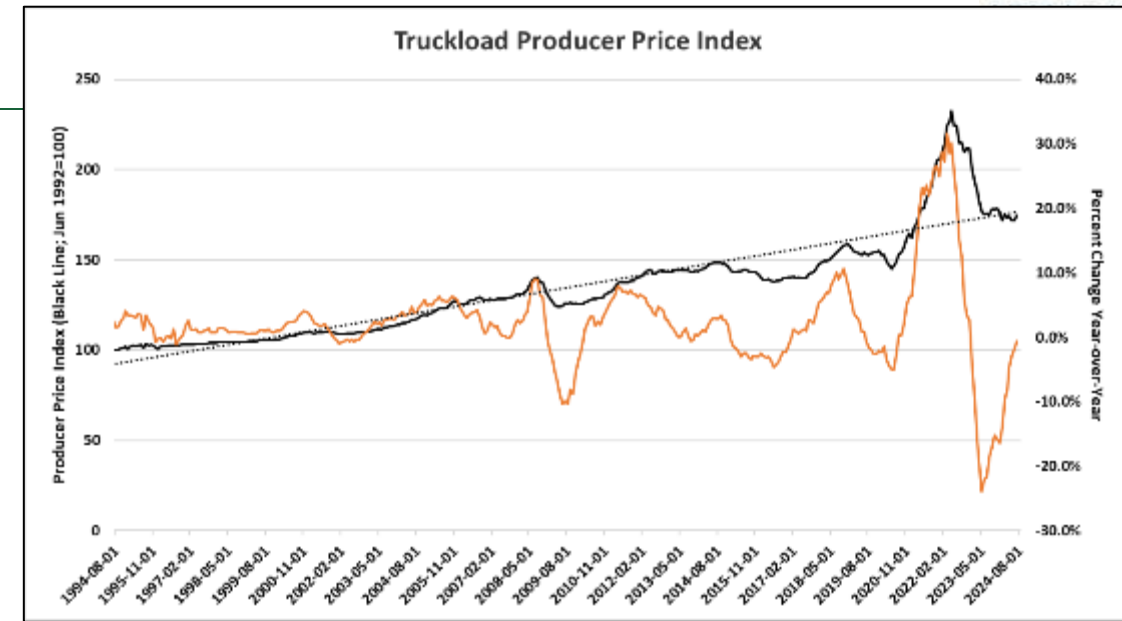
LTL Producer Price Index

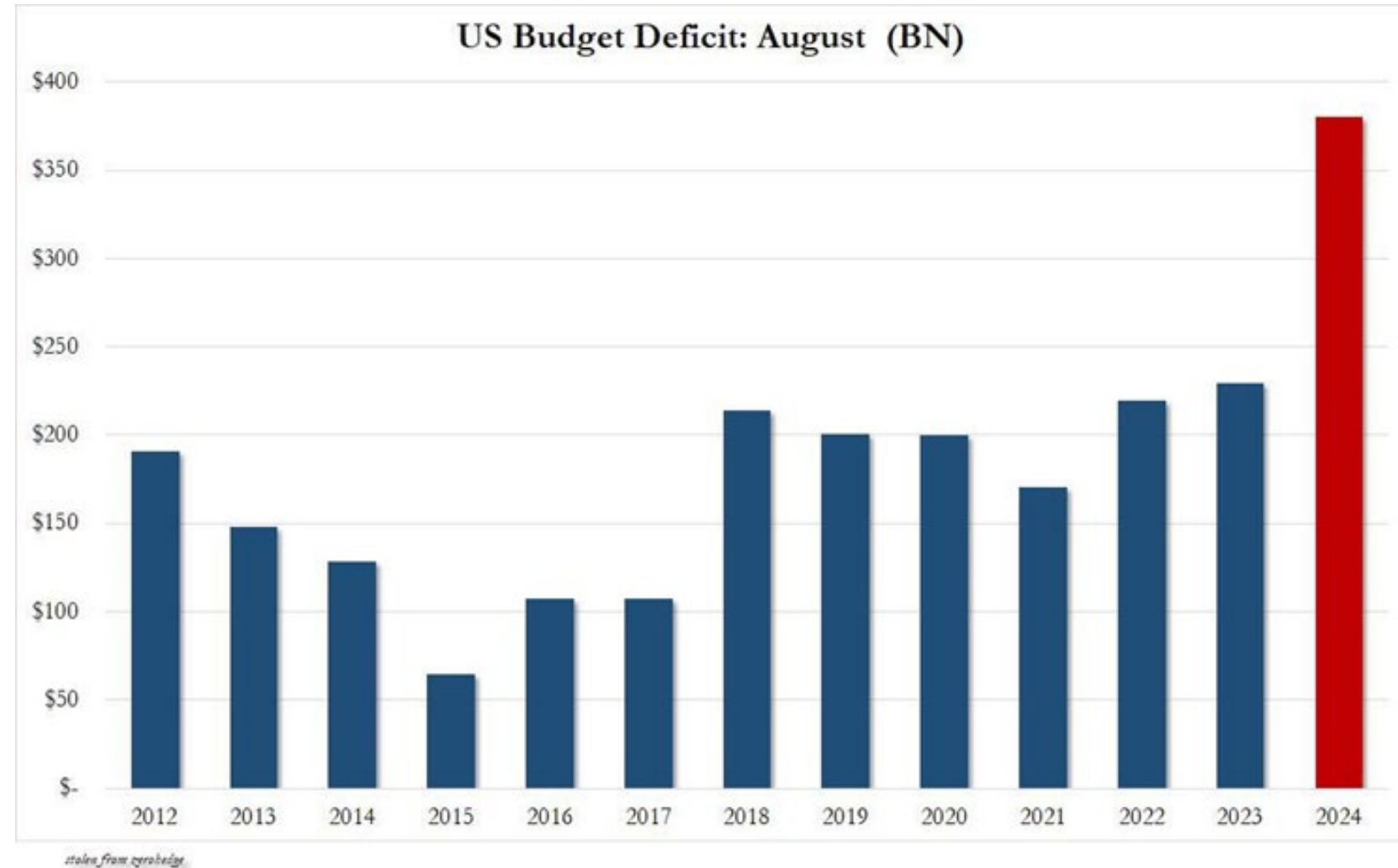
- The LTL Producer Price Index includes spot and contract rates (and fuel)
 - Down 1.5% M/M through August (latest available)
 - Up 1.2% Y/Y
 - Q2 6.2% Y/Y
 - Q2 0.2% Q/Q
 - Remains well above the long-term trend (dotted black line)
 - Again, likely more a function of shifting capacity and less about demand
- The fuel-adjusted LTL PPI was 7.7% higher year-over-year despite being 0.3% lower M/M through August
 - Estimated to be unchanged quarter over quarter in Q3
 - Q2 2024 was 6.3% higher Y/Y
 - Q3 2024 was 3.6% higher Y/Y through two months of the quarter
- Note: Armada did a study for Yellow in 2023 and found that in previous bankruptcies of a major LTL firm, prices remained 4-6% above economic trend for 12-18 months after the bankruptcy
 - This would help explain how TL can currently be flat while LTL prices are averaging 6% when adjusted for fuel



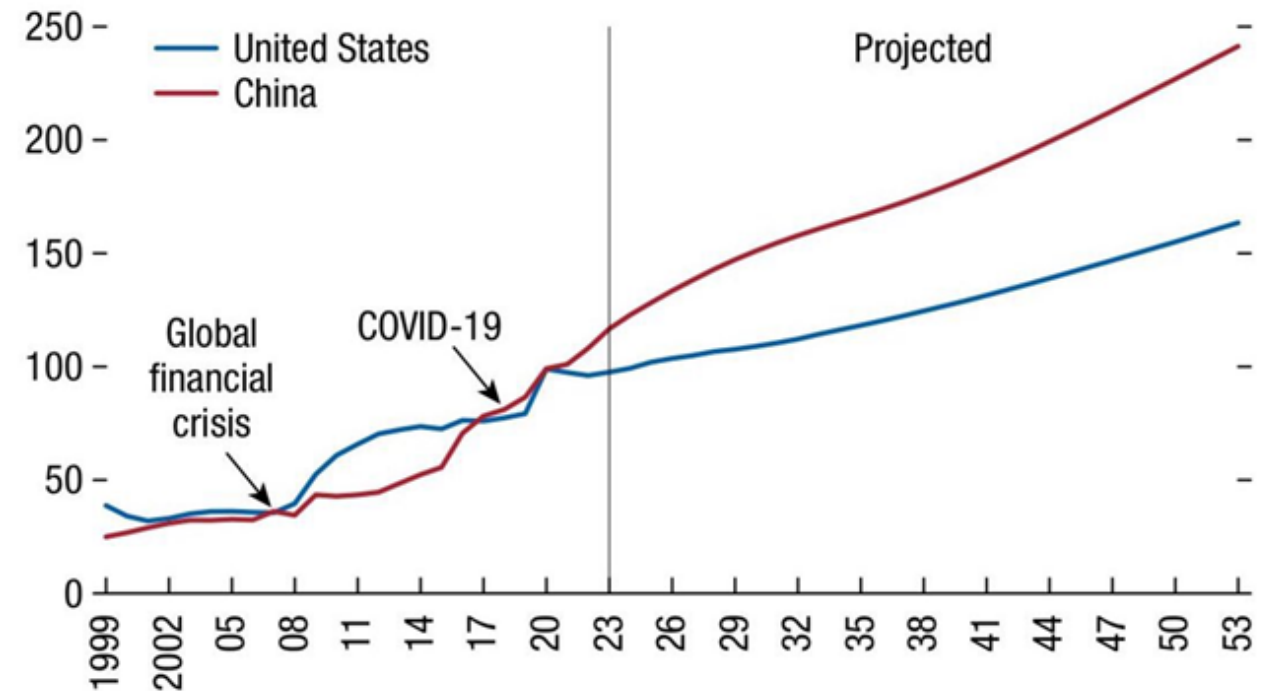
Truckload Producer Price Index

- The truckload Producer Price Index includes spot and contract rates (and fuel)
 - up 0.3% M/M through August (latest available)
 - Flat Y/Y
 - Q2 -3.1% Y/Y
 - Q2 -0.4% Q/Q
 - Has reverted to the long-term trend (dotted black line)
- The fuel-adjusted TL PPI was 6.3% higher year-over-year and was 1.5% higher M/M through August
 - Estimated to be 1.2% higher quarter over quarter in Q3
 - Q2 2024 was -1.9% lower Y/Y
 - Q3 2024 was 1.0% lower Y/Y through two months of the quarter



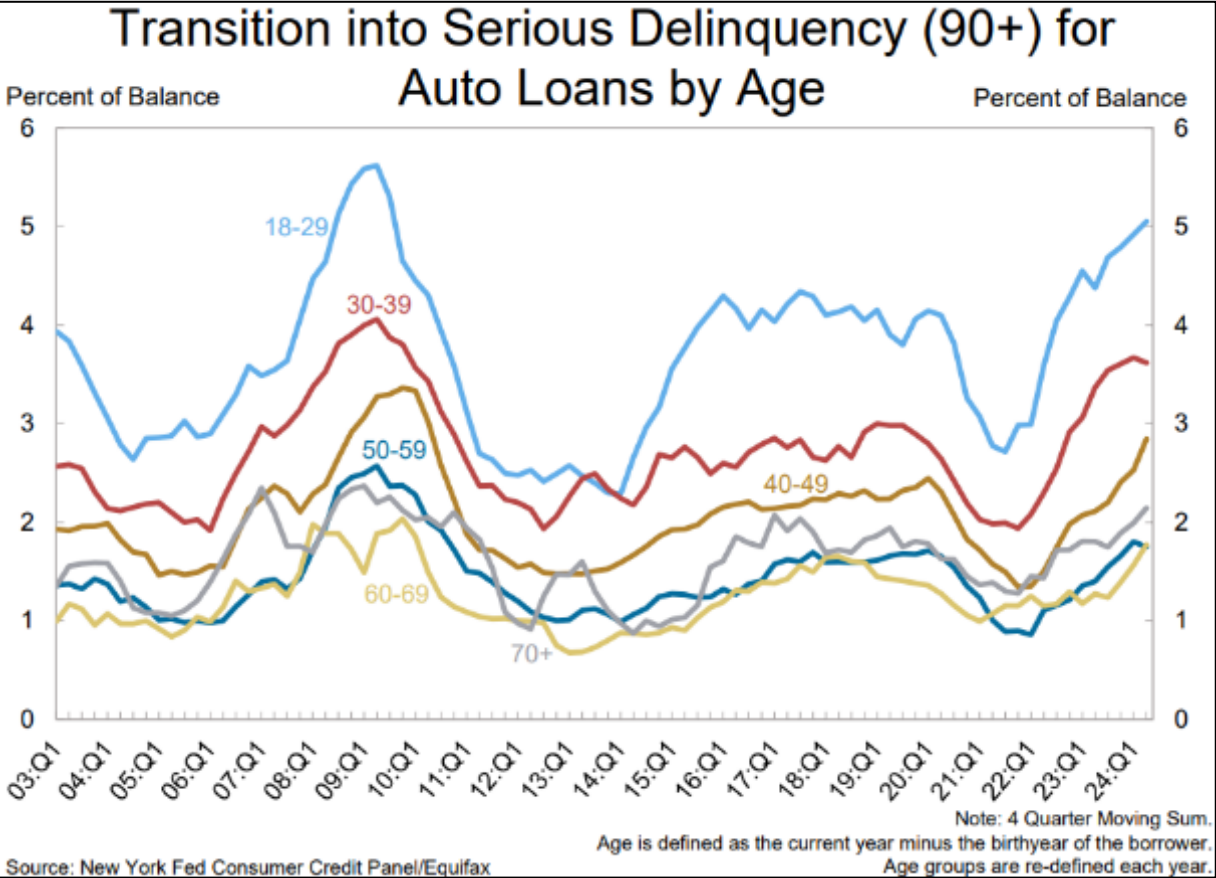


**Figure 1.4. Evolution of Public Debt in the Two Giants:
The United States and China**
(Percent of GDP)

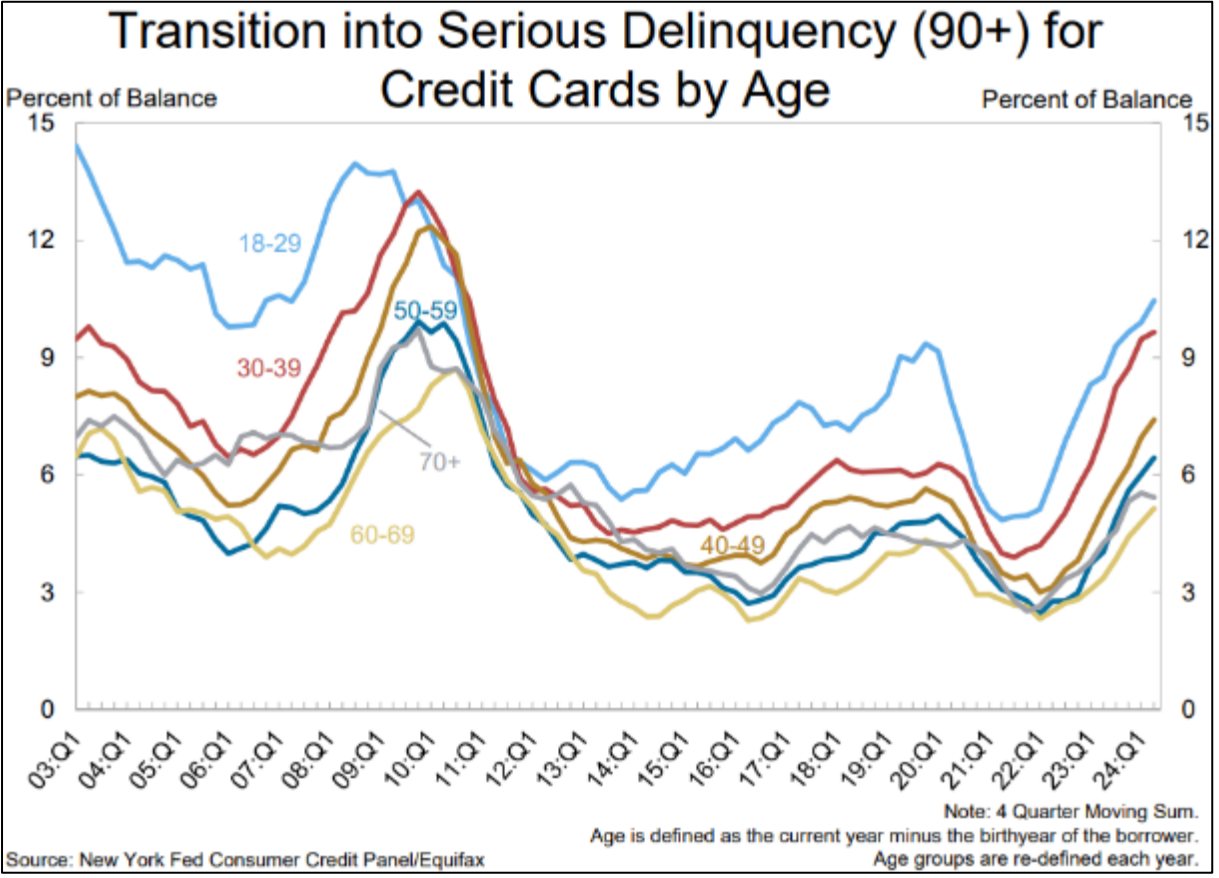


Sources: IMF 2024; US Congressional Budget Office 2024; and IMF staff calculations.

Transition Into Serious Delinquency (90+) by Age for Credit Cards and Automotive Accounts

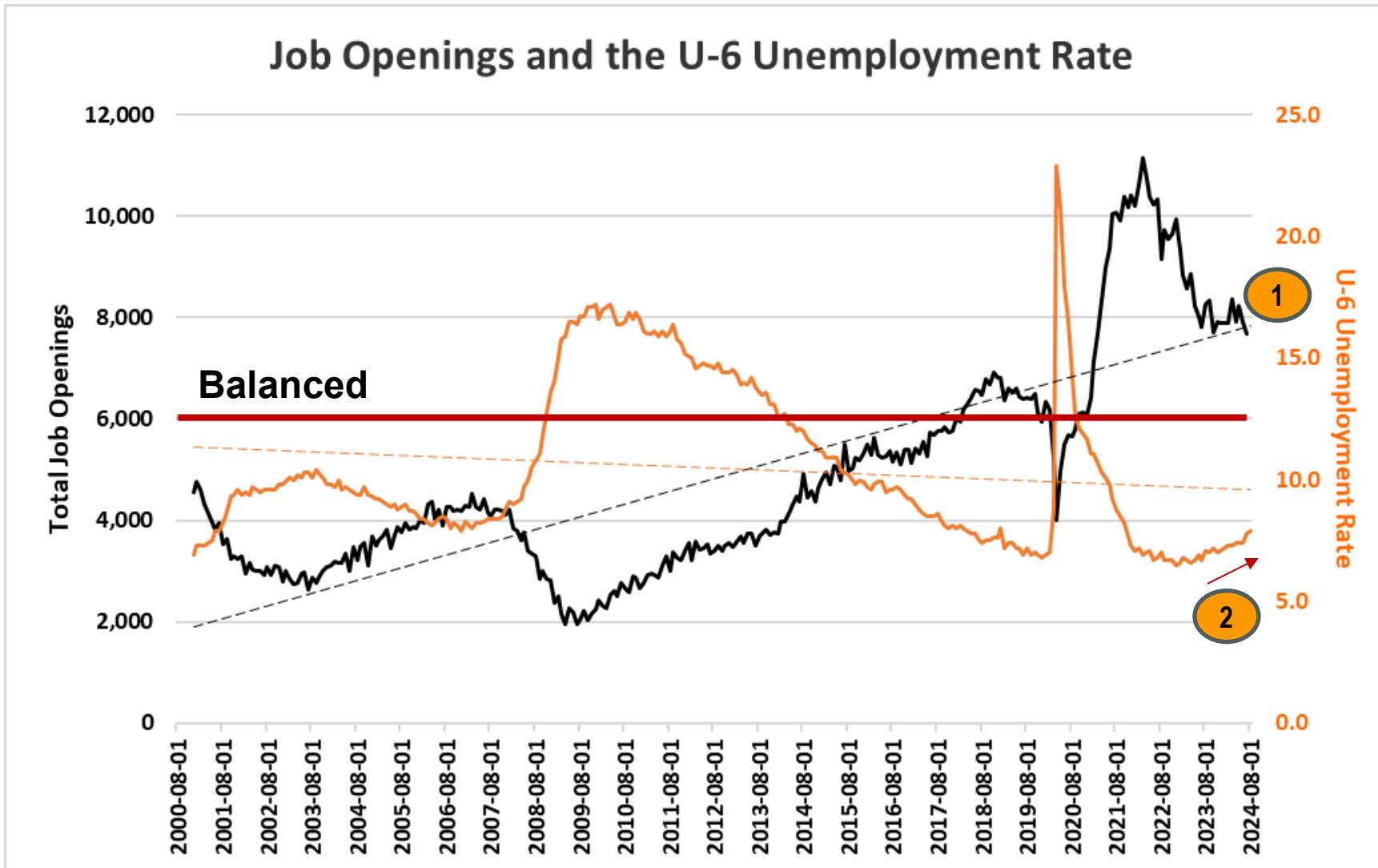


K



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The Fed Still Has a Job Buffer to Work With



Powell still has a 1.4M job opening buffer to work with.

Only 200,000 higher than peak in 2019.

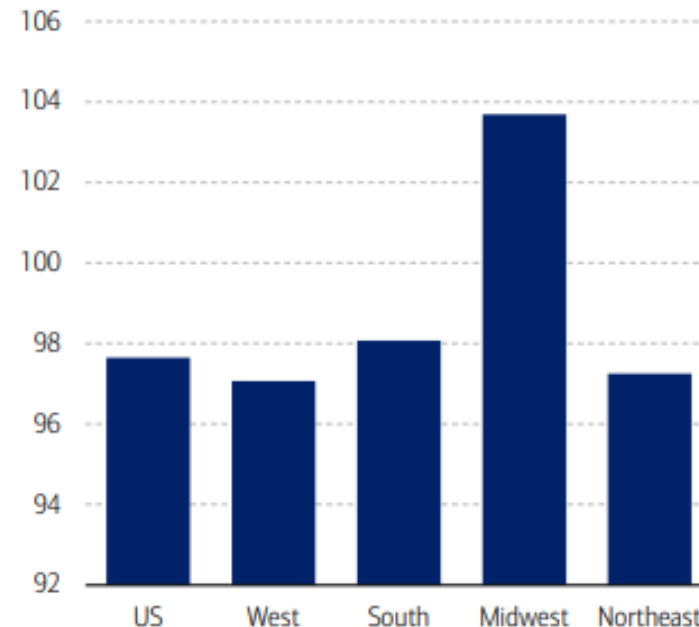
U-6 rate is climbing, but still historically low at 7.8% (but up from the 6.5% rate hit in Dec 2022).

South and Midwest Gaining Majority of Reshoring Activity

- “It appears that small firm manufacturing jobs growth in the Midwest may have fallen back. But this region is still a major beneficiary of reshoring/FDI destinations, with nearly 60% of the jobs going to the South and another 22% in the Midwest. So it could be that this slowdown is temporary.”

Exhibit 8: Average payments for construction small businesses were above the 2022 average only in the Midwest

Average payment amount in construction in August by US Census region (indexed, 2022 average = 100)

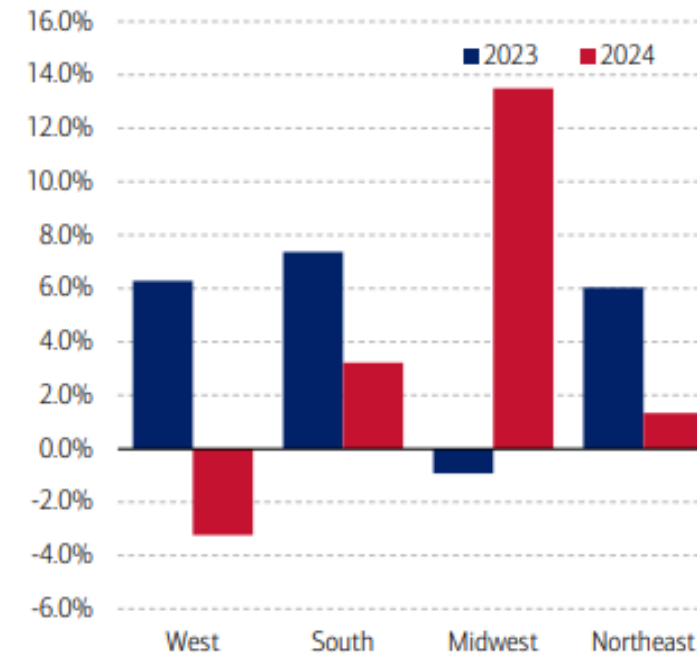


Source: Bank of America internal data

BANK OF AMERICA INSTITUTE

Exhibit 9: Across all regions, the Midwest was also the only region to have stronger payroll payment growth than 2023

Average payroll payment for construction small businesses in August of each year by US Census region (YoY%)



Source: Bank of America internal data

BANK OF AMERICA INSTITUTE

Impact of a 28% Increase in the Corporate Tax Rate

- Affects their ability to raise capital, investments, staffing levels and new hiring, etc.
- It does have a broader macroeconomic impact on the economy.
- Is only beneficial if government spending is kept flat.
- The far chart shows the number of countries with lower tax rates today, the orange line represents after a 28% tax hike.

Exhibit 5: Higher tax rate (28% from 21%) is estimated to be a 5% hit to EPS

Hit to EPS from the corporate statutory tax rate rising to 28% from 21%

	Increased tax amount	2025 net income	Hit to EPS
Cons. Disc.	16,939	213,186	(7.9%)
Comm. Svcs.	16,033	268,899	(6.0%)
Financials	22,153	409,558	(5.4%)
Health Care	15,578	311,913	(5.0%)
Industrials	9,921	200,018	(5.0%)
Staples	6,091	154,426	(3.9%)
Tech	21,051	563,418	(3.7%)
Materials	1,757	54,645	(3.2%)
Energy	2,947	146,189	(2.0%)
Real Estate	172	29,910	(0.6%)
Utilities	60	67,413	(0.1%)
S&P 500	112,703	2,419,576	(4.7%)

Source: BofA US Equity & Quant Strategy

BofA GLOBAL RESEARCH

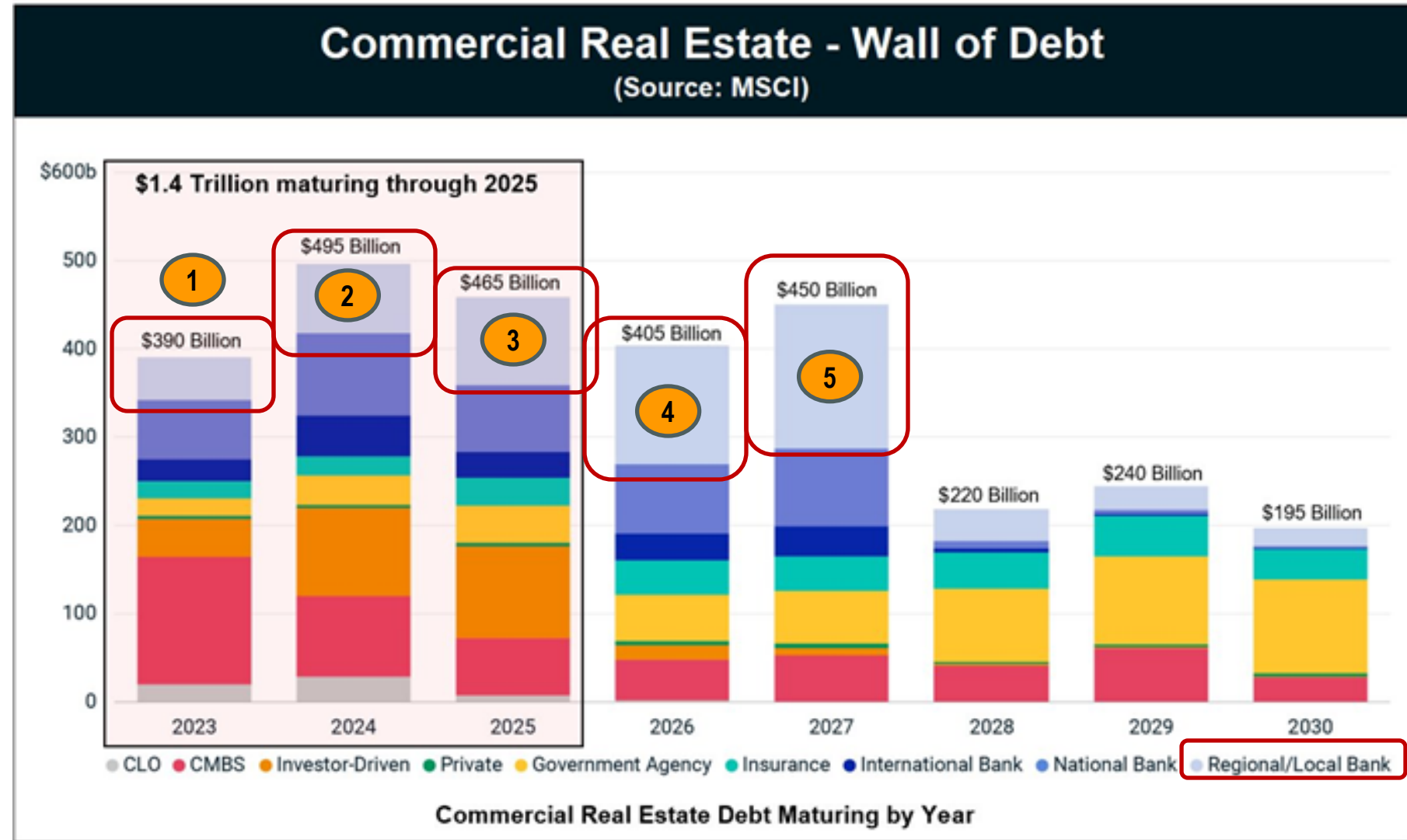
Corporate Tax Rates around the World, 2023

Country		Corporate Tax Rate
HKG	Hong Kong	17%
SGP	Singapore	17%
TWN	Taiwan	20%
THA	Thailand	20%
VNM	Viet Nam	20%
USA	United States of America	21%
CHN	China**	25%
ESP	Spain	25%
GBR	UK	25%
FRA	France	26%
CAN	Canada	26%
KOR	Republic of Korea	27%
JPN	Japan	30%
DEU	Germany	30%
AUS	Australia	30%
IND	India	30%
MEX	Mexico	30%
BRA	Brazil	34%
ARG	Argentina	35%

** (special sectors are as low as 15%)

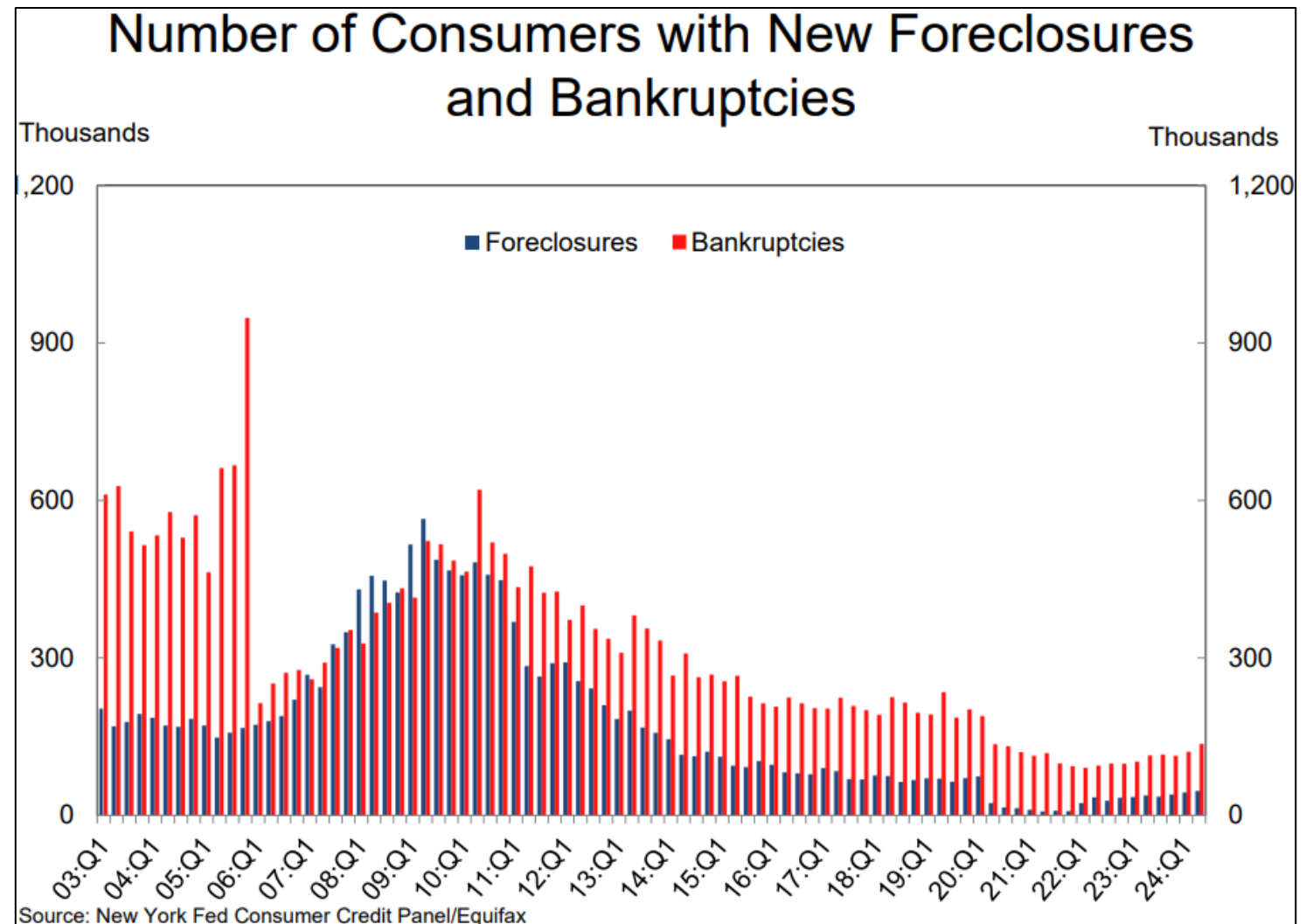
It Apparently Doesn't Matter...Until It Matters.

- So far, we survived the first wave in 2023 without too much trauma. The market absorbed it, and many firms were able to push their refinancing down the road.
- Waves 2-5 may eventually take a toll.
- Delayed repayment cycles are slowing, many firms are not extending or allowing companies to pay for an extension.



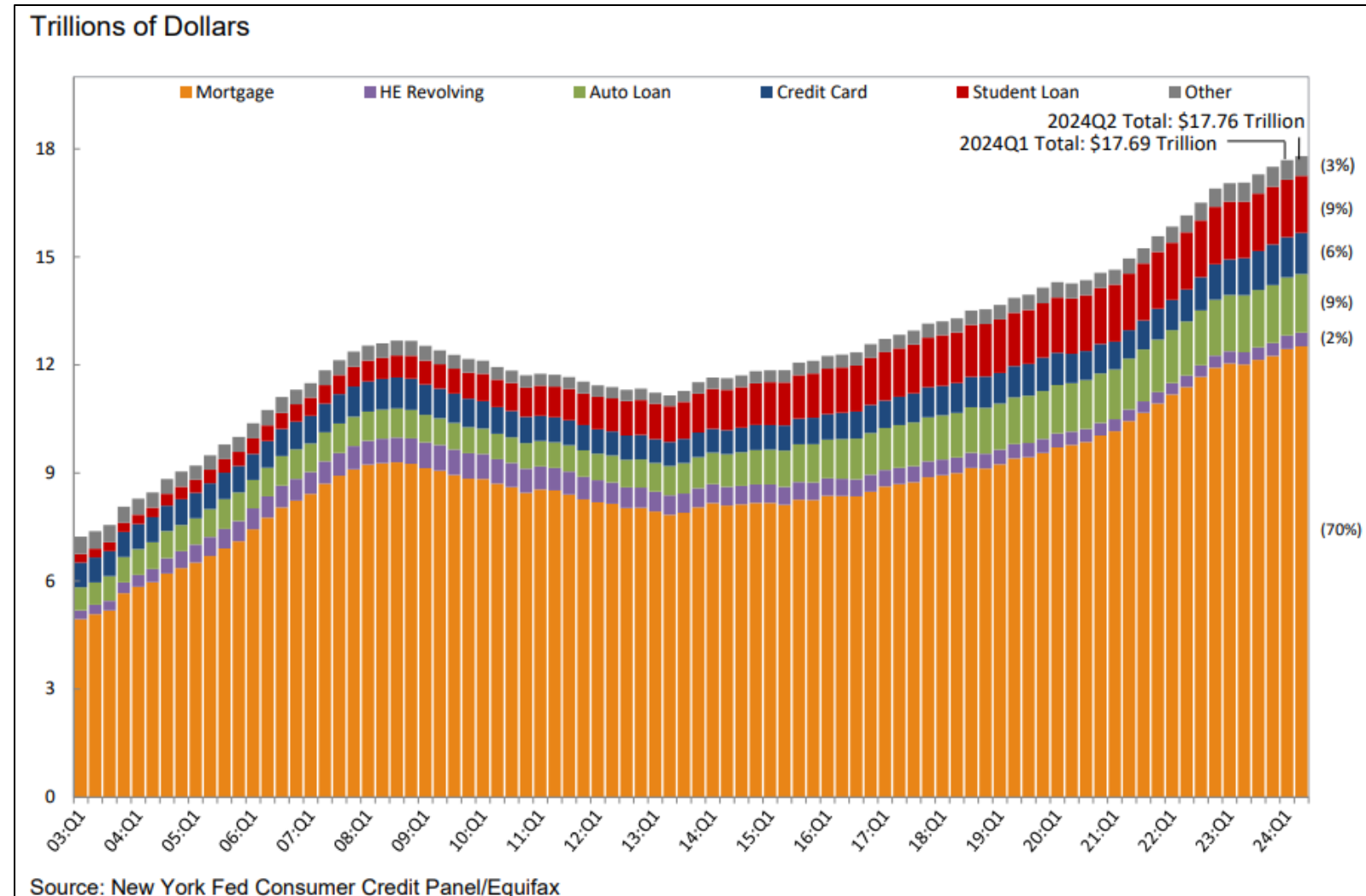
New Foreclosures and Bankruptcies

- Historically not significant at this stage.
- But the trend is showing an uptick in the post CARES Act era.
- From a banking perspective, the foreclosure rate is what is being watched closely.
- An uptick in foreclosures will lead to more credit concerns than anything else.
- Historically, the two measures have moved together as one might expect.



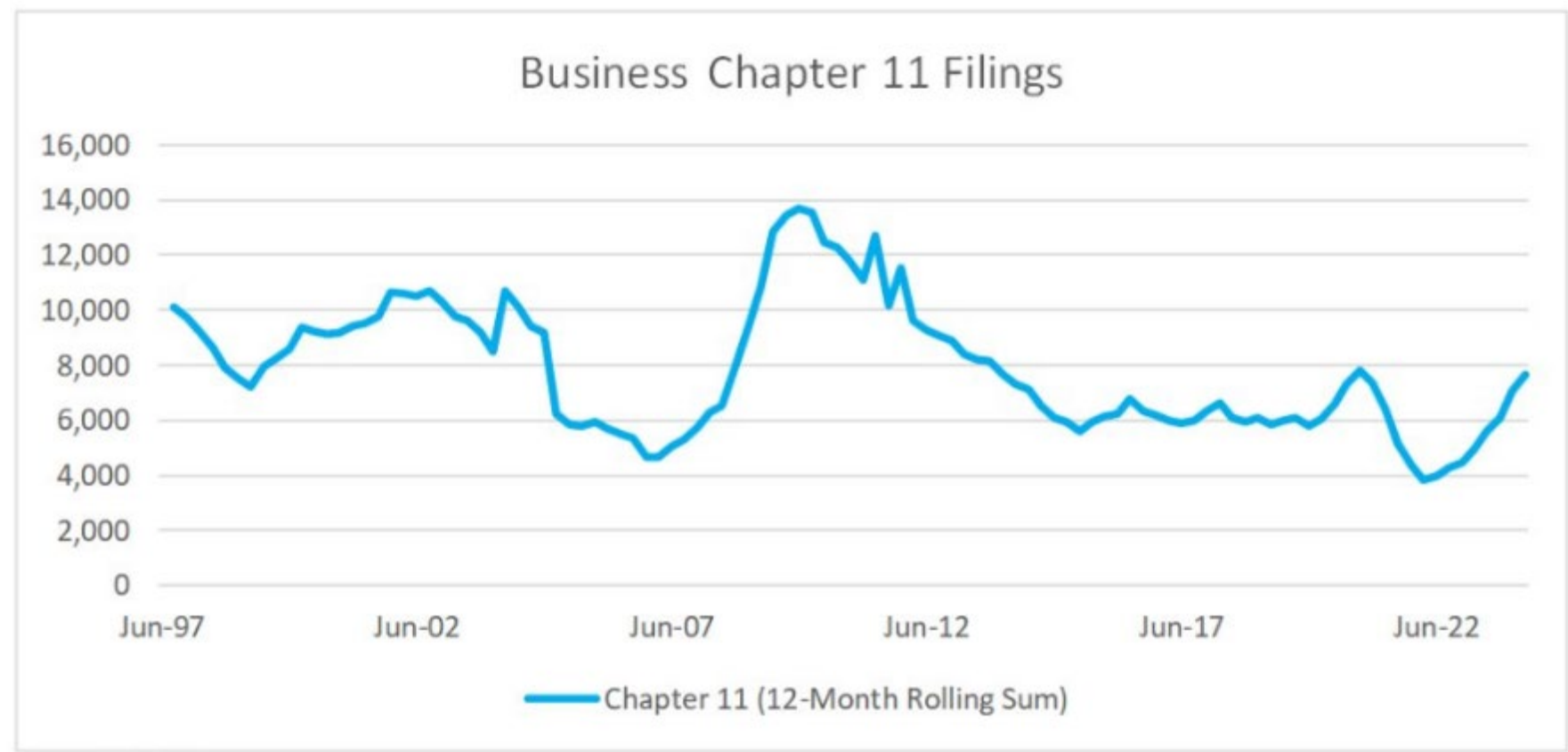
Total Debt Balance and Its Composition

- Mortgages account for 70% of total debt
- Auto loans and student loan debt make up 18% of the remainder.
- Credit card debt makes up just 6% of total debt.



Another Datapoint on Chapter 11 Filings

Figure 14: Chapter 11 bankruptcy filings continue trending up

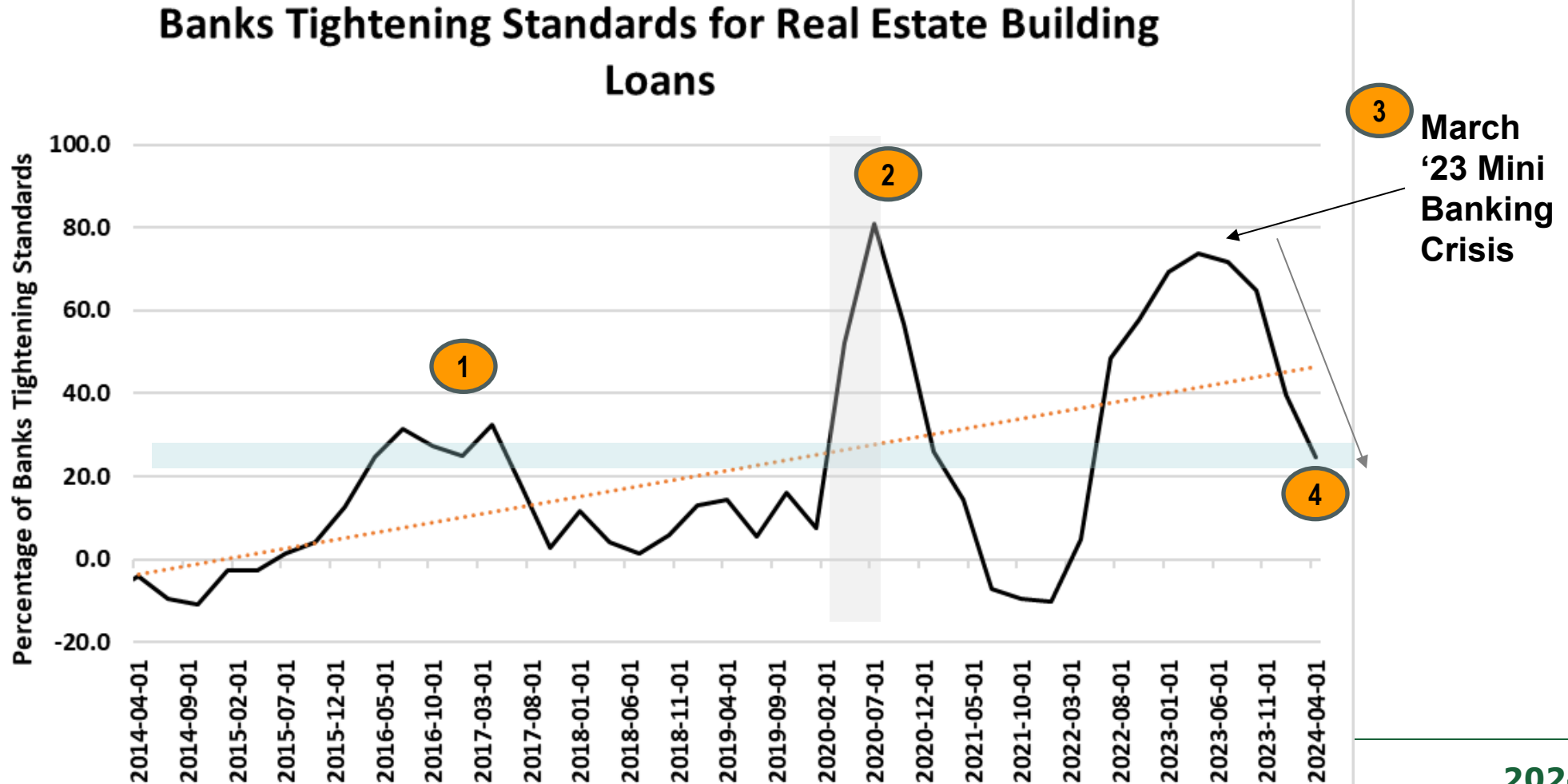
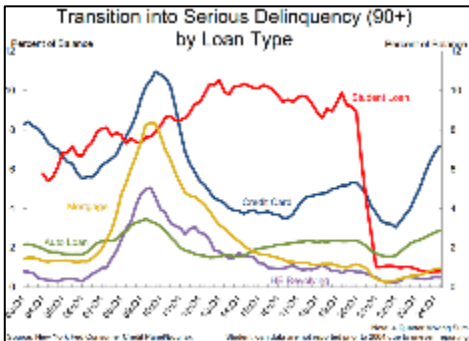


Source: FactSet

And Banks Approach to Lending...Surprisingly Easing?

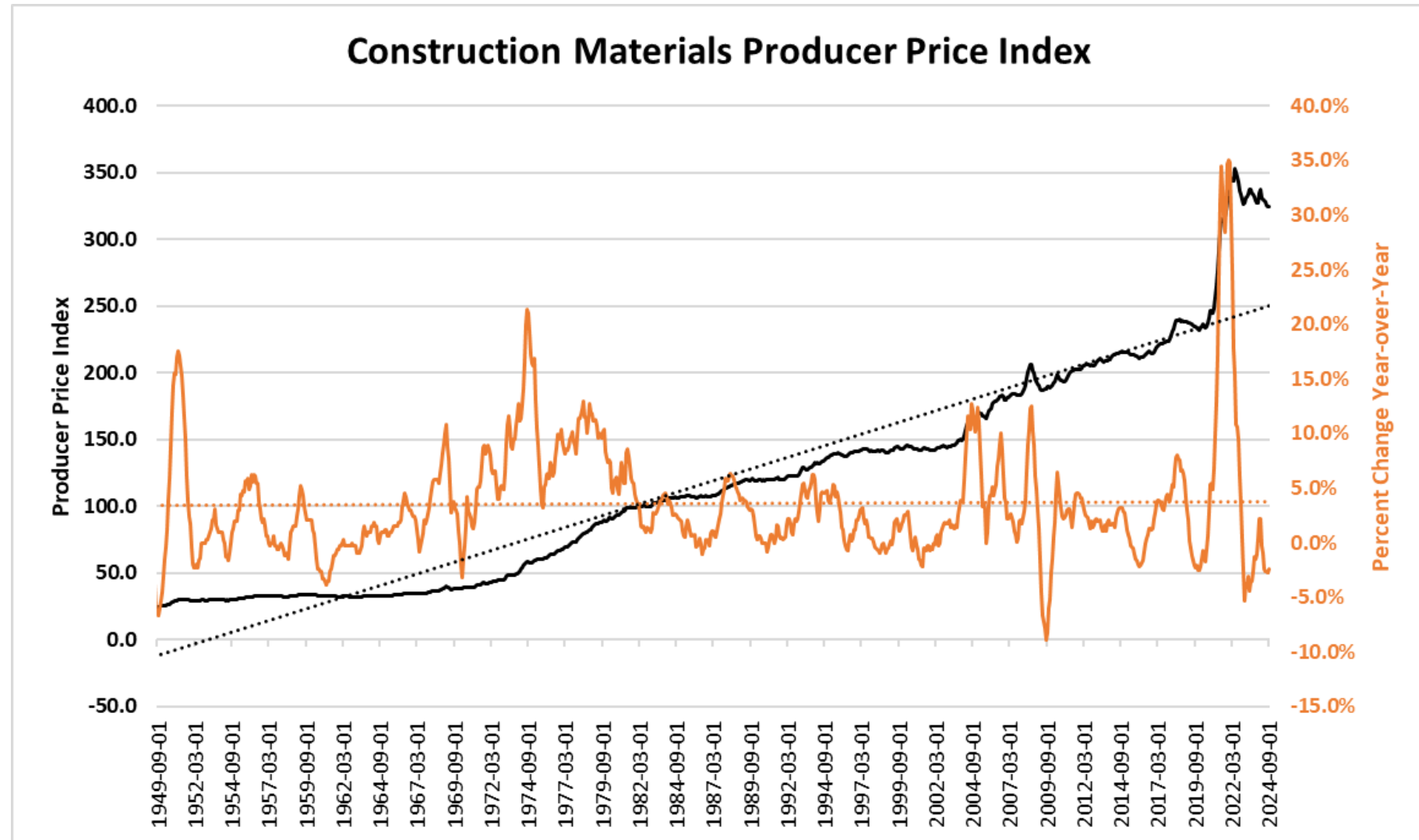
- Banks set aside significant funds for mortgage defaults, which didn't come. As a result, they have significant cash to put to work and despite Commercial Real Estate (CRE) default risks still being high, many are loosening standards for lending into the CRE market.

Remember This?



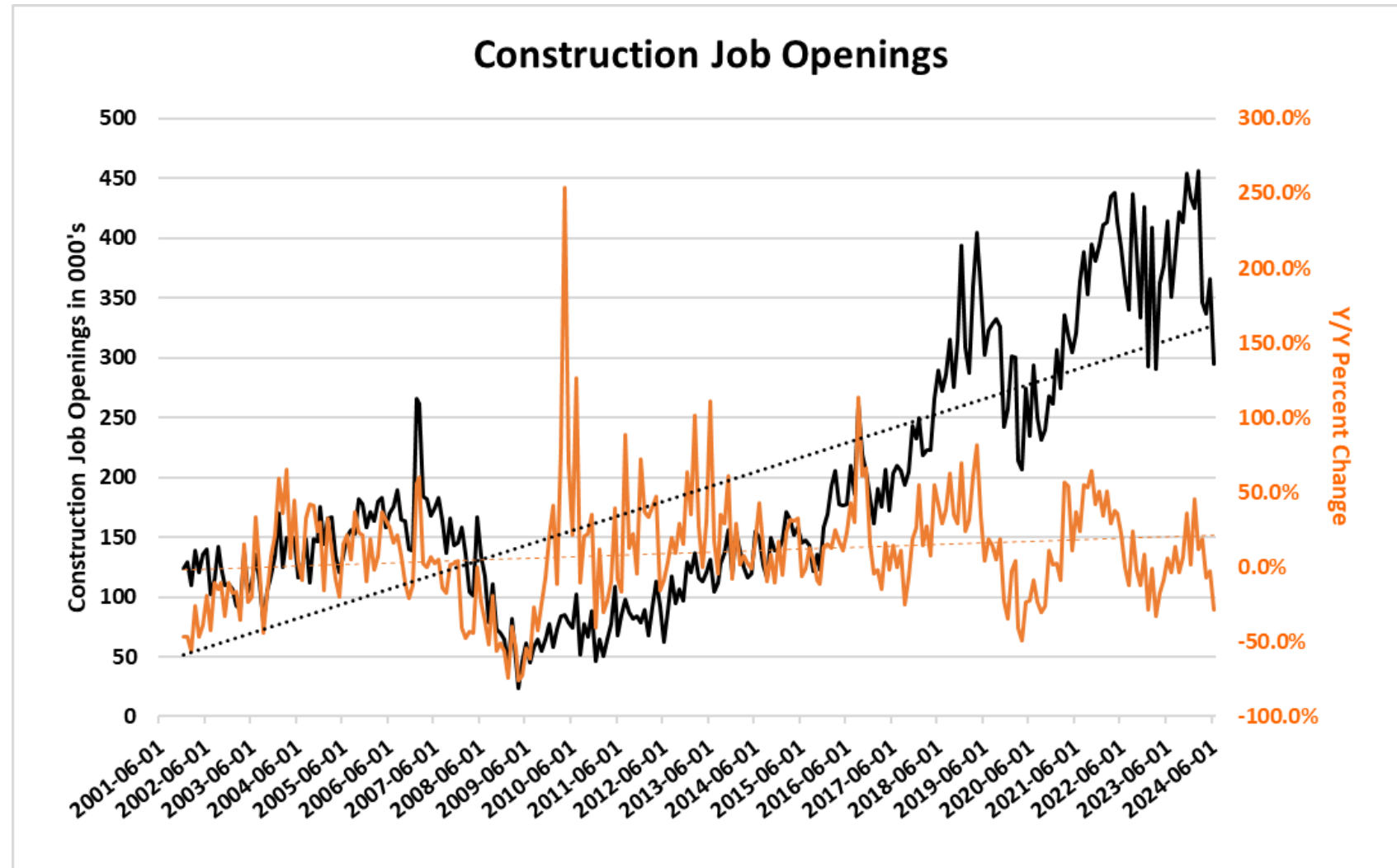
Construction Material Prices Remain Elevated

- Still historically high
- But down 2.4% Y/Y and 0.2% M/M.
- Some softening taking place – but at a slow rate.
- Risk that if interest rates ease, volume could surge, and prices could return to higher levels



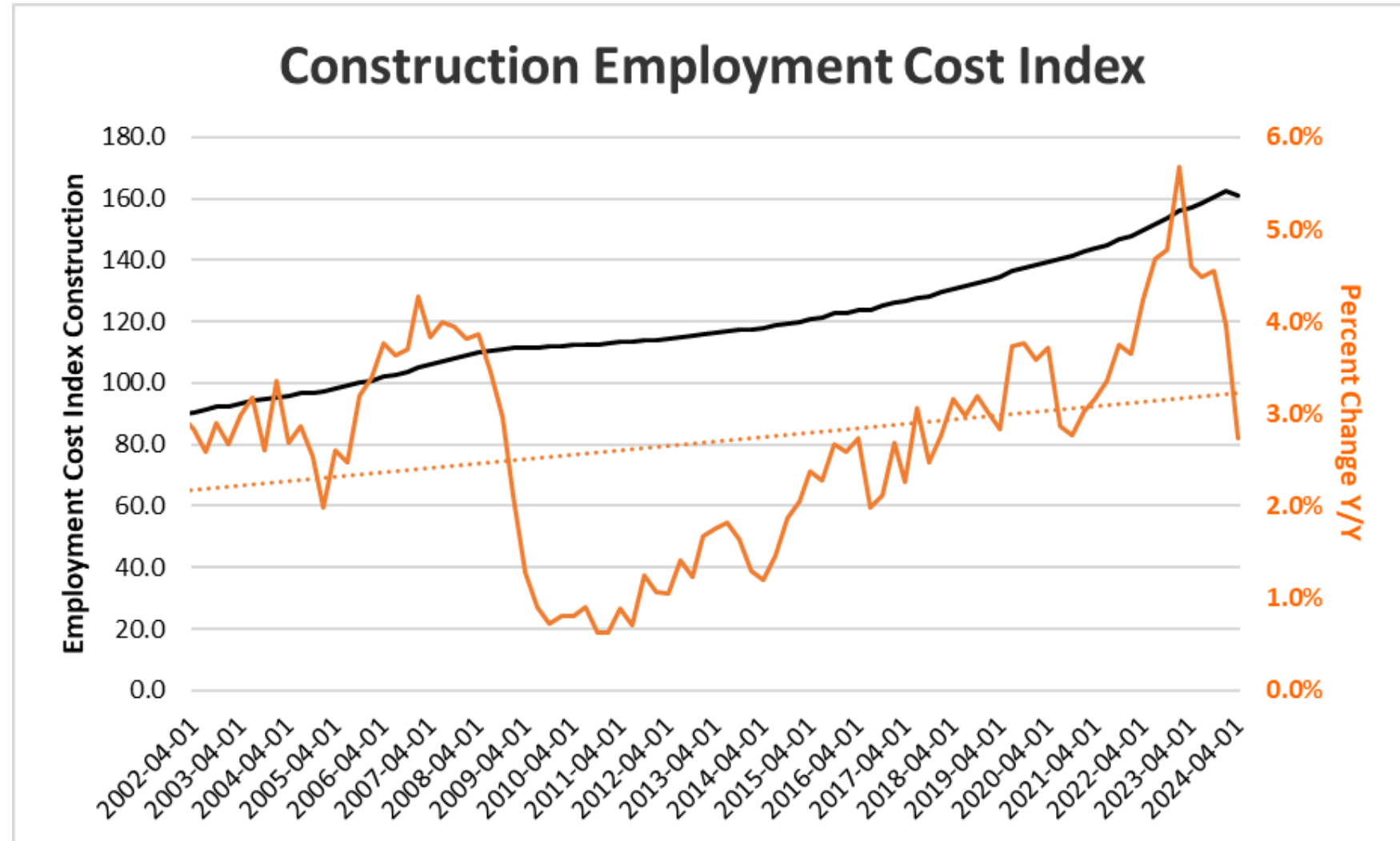
Construction Job Openings Softening

- Construction job openings are down 28.7% Y/Y but remain generally high on a historical basis.
- But they are now back down below 2019 levels.
- Wage adjustments are not yet taking place, but that would be possible if momentum doesn't building the coming months.



Construction Employment Cost Index Falls to 2.7%

- 2.7% annual rate of change is the weakest since Dec of 2017
- It is also weaker than the national ECI of 4.0% across all industries



Problems Facing Consumers with EVs – and Why the Market Will Shift Back to Hybrids and Pick Up the Middle Phase

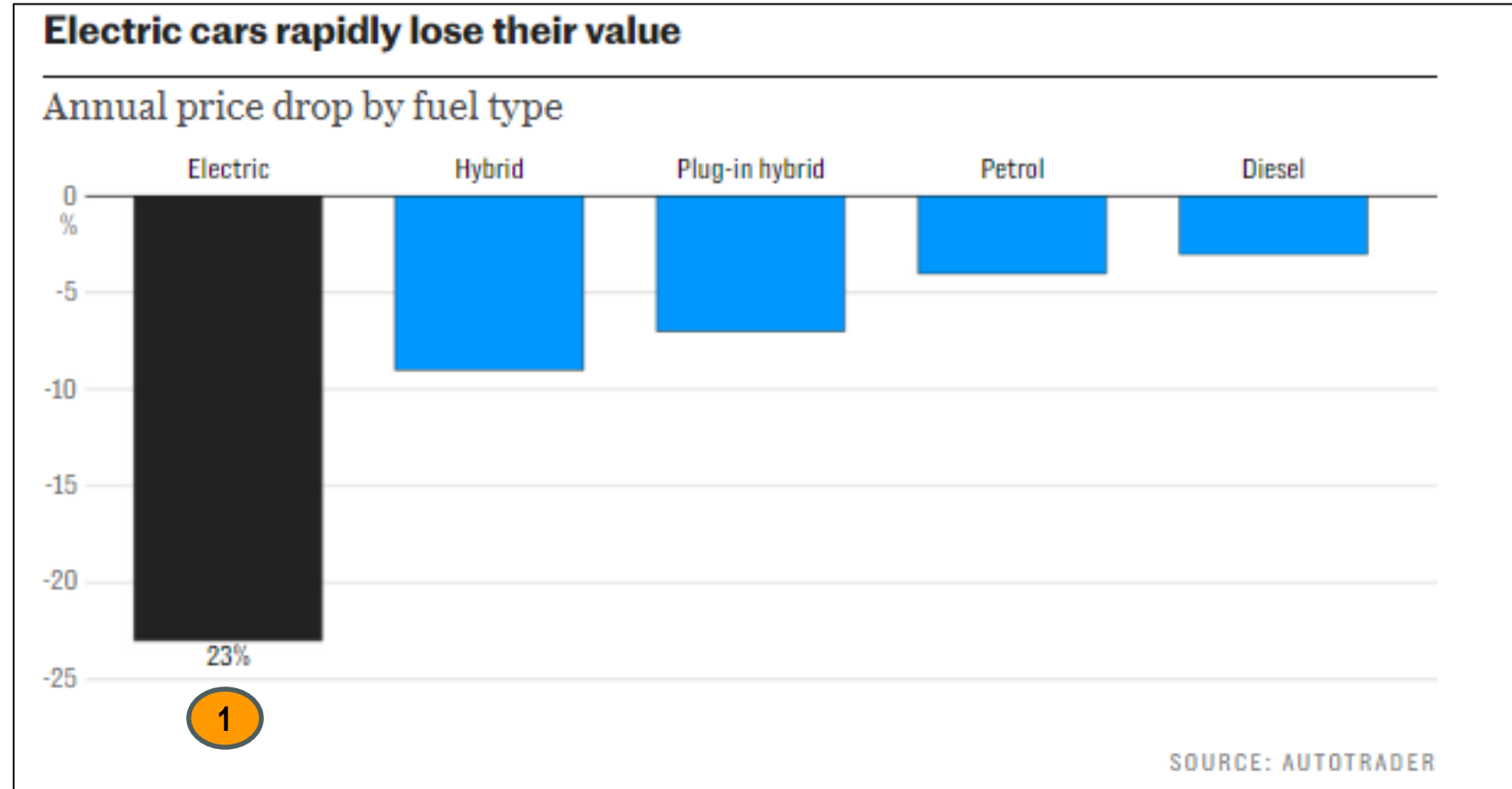
- 3 Generations of automotive buyer...the third generation is in trouble with EVs

2

- Pop culture is starting to turn on it. Influencer on Tik Tok just did a 180-degree pivot on them.
- Inventories currently sitting above 110 days, dealers are pushing back and won't accept new inventory

- But infrastructure spending will continue...that needs to happen before adoption rates increase.

3



NATO Members Debt to GDP Ratio

- Only 2 members were spending 2% of GDP on defense 5 years ago, but now 100% compliance will be achieved in the next two years.
- US accounts for 66% of NATO funds, Germany and UK account for 10%. The remaining 31 countries make up the remaining 24%.
- \$140 billion from European members spent with US defense contractors over the past 2 years.
- The question is how the top 15 on the list at right balance defense spending vs. other needs. That likely leads to austerity measures...which are unpopular.

Rank	Country or Territory	External debt (USD)	
		Total	% of GDP
1	Greece	350 billion	322.9
2	UK	9.65 trillion	283.8
3	Belgium	1.53 trillion	236.8
4	Sweden	1.03 trillion	171.8
5	Portugal	440 billion	164.5
6	Hungary	147 billion	160.0
7	Norway	738 billion	133.1
8	Canada	2.9 trillion	126.9
9	USA	34.4 trillion	122.7
10	Italy	2.6 trillion	120.0
11	Denmark	123 billion	119.0
12	France	3.4 trillion	112.1
13	Slovakia	121 billion	112.0
14	Spain	1.67 trillion	111.8
15	Slovenia	60.7 billion	104.0
16	Estonia	34.2 billion	89.0
17	Iceland	21.8 billion	81.0
18	Croatia	52.9 billion	74.0
19	Lithuania	28.5 billion	74.0
20	Finland	215 billion	71.3
21	Albania	14 billion	66.0
22	Germany	6.1 trillion	65.3
23	Bulgaria	21 billion	63.0
24	Czech Republic	203 billion	61.5
25	Poland	385 billion	49.3
26	Netherlands	532 billion	47.3
27	Turkey	476 billion	46.2
28	Romania	158 billion	45.4
29	Luxembourg	24.2 billion	22.1

What I'm Trying to Figure Out...Or Watching.

- **Where is the global growth driver?**
 - Coming out of pandemic, most of us bought durables. No need to replace anytime soon.
 - How does the lower half of the K recover? Inflation comes down to meet them, their incomes don't likely grow fast enough from here on out. (McDonald's example)
 - Can AI and automation carry it?
 - Will it be wartime spending?
 - Green New Deal?
 - The World will need something to pick up product spending (revolutionary innovation, new personal item tech, etc.).



Allianz, Cambridge, Warton.