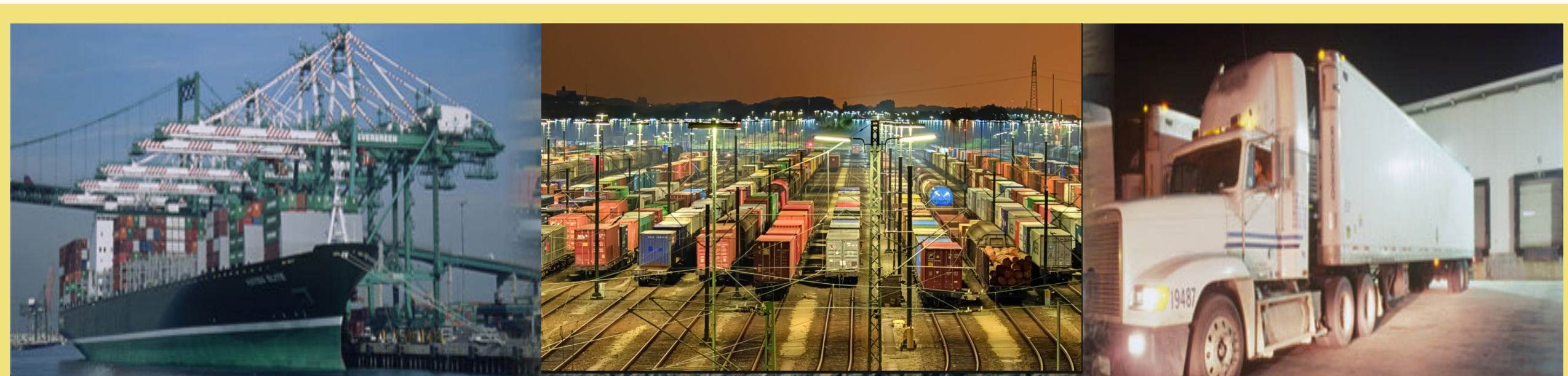


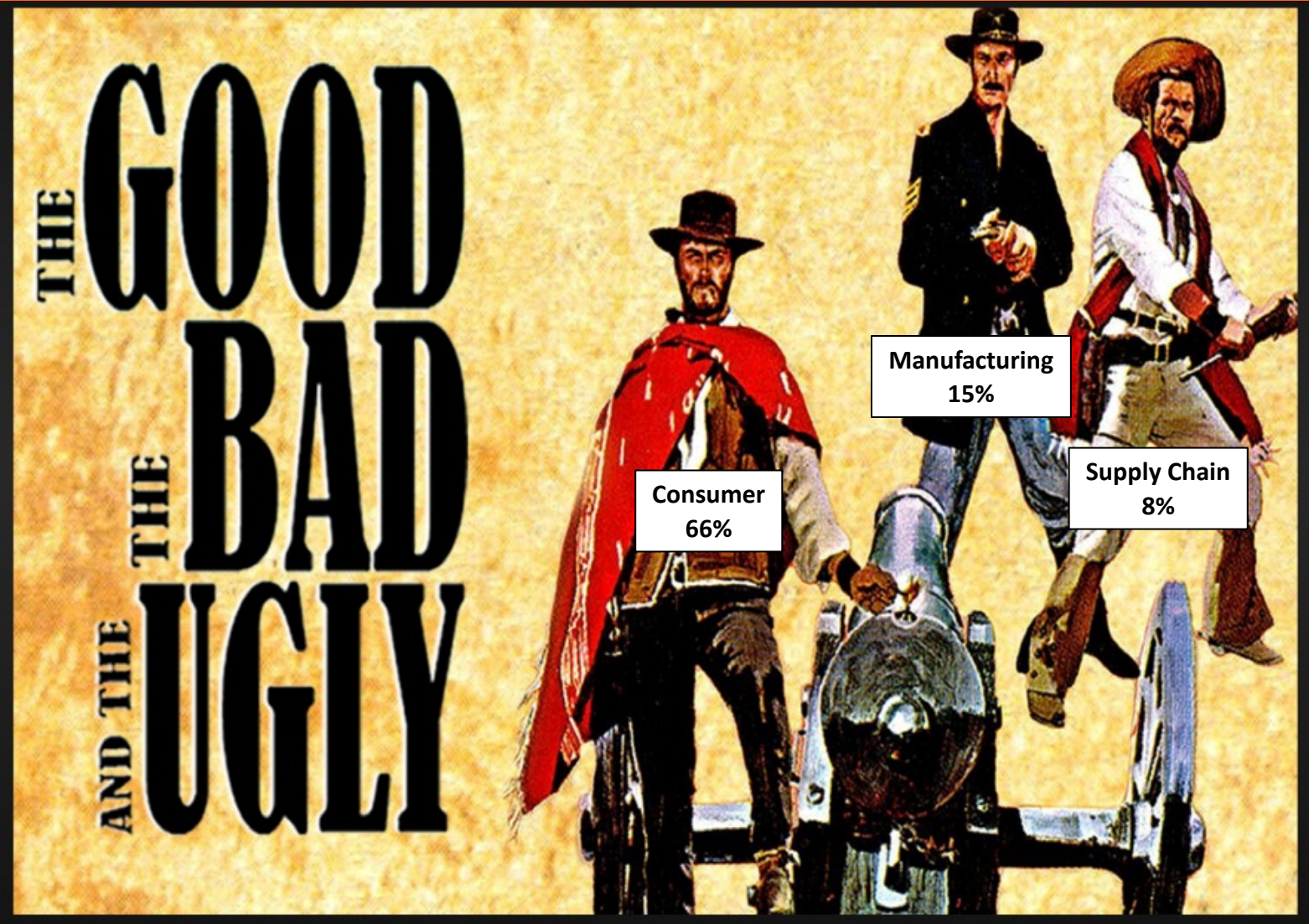
ECONOMIC UPDATE: *“Recession or Reframing the Economy?”*

SAM KYEI, CHIEF ECONOMIST

**Southwest Association of Rail Shippers (SWARS) Conference
San Diego, CA
September 28, 2023**



Agenda

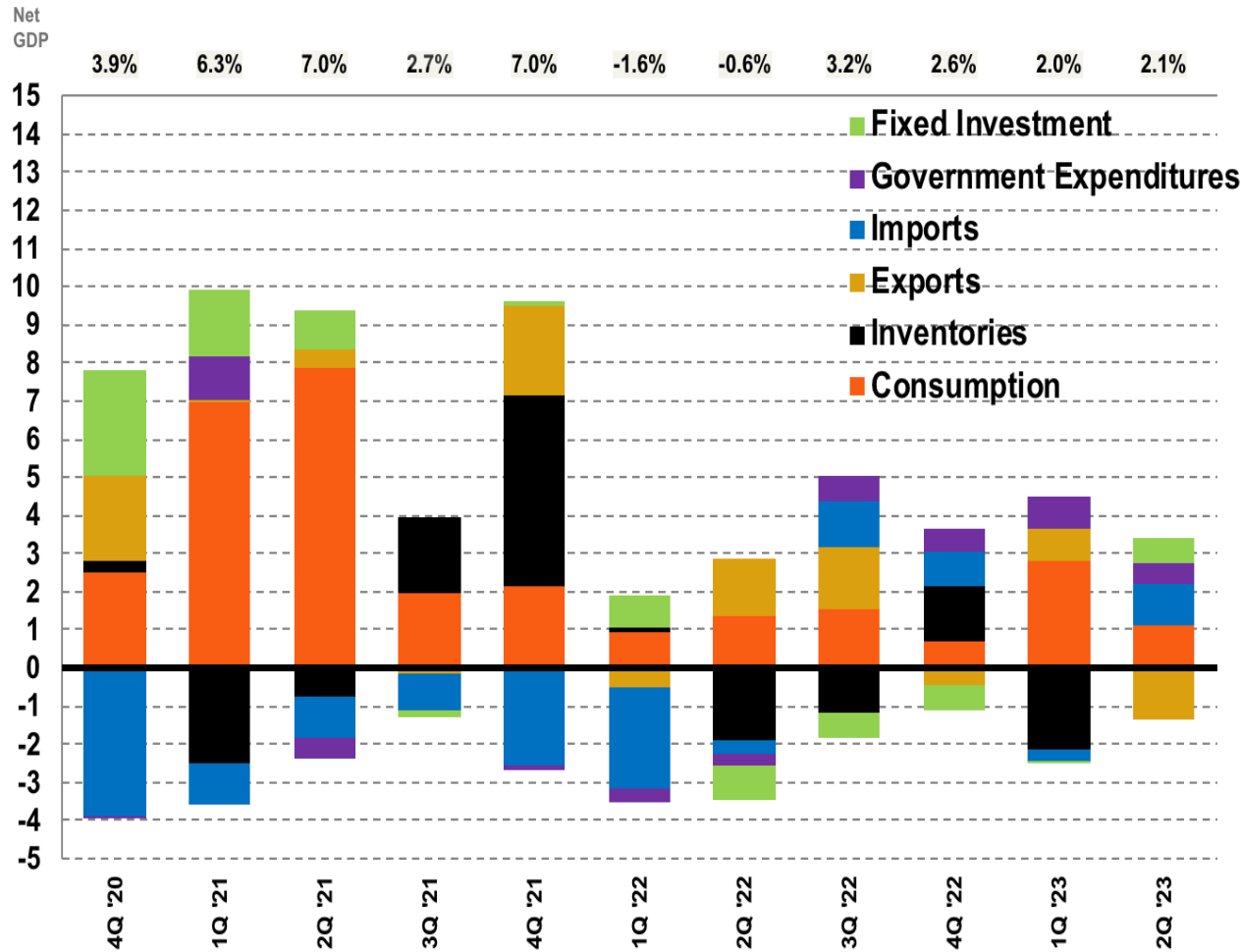


U.S. ECONOMIC GROWTH



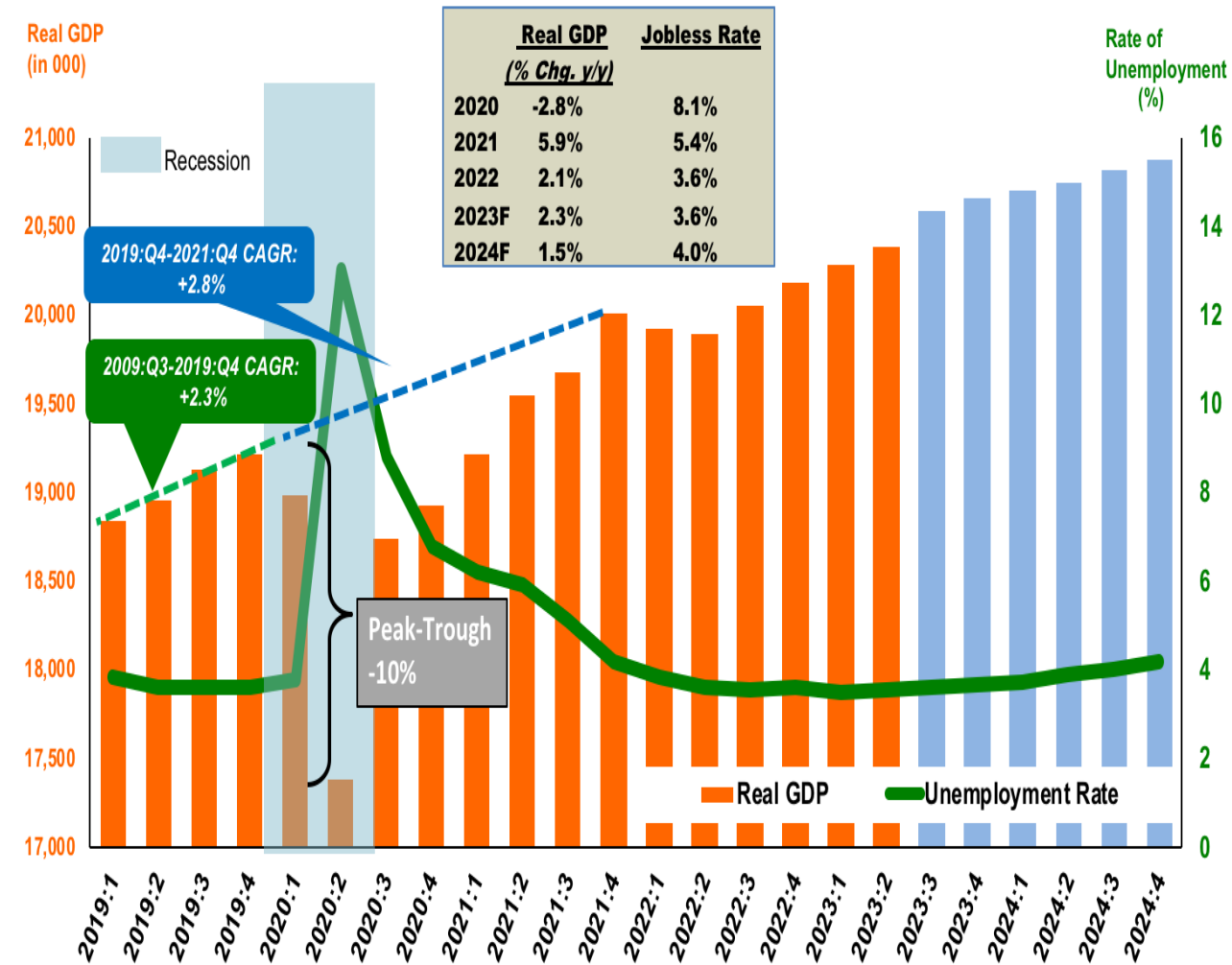
Q2 '23 real GDP was +2.1% q/q (or +2.5% y/y), driven by steady consumer and business spending. Expect +1.5% y/y growth in '24

Real GDP Growth and its Contributions



Source: U.S. Dept. of Commerce, Bureau of Economic Analysis, August 30, 2023

Real GDP vs. Rate of Unemployment

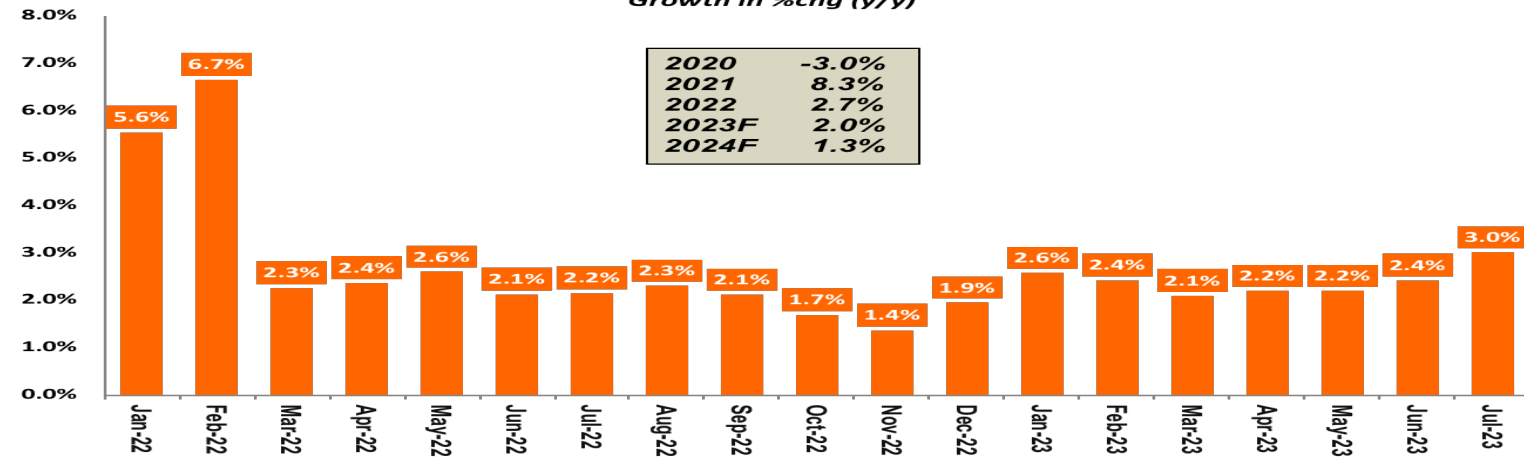


Source: BEA, August 30, 2023, IHS Markit Sep. 2023

THE CONSUMER SECTOR

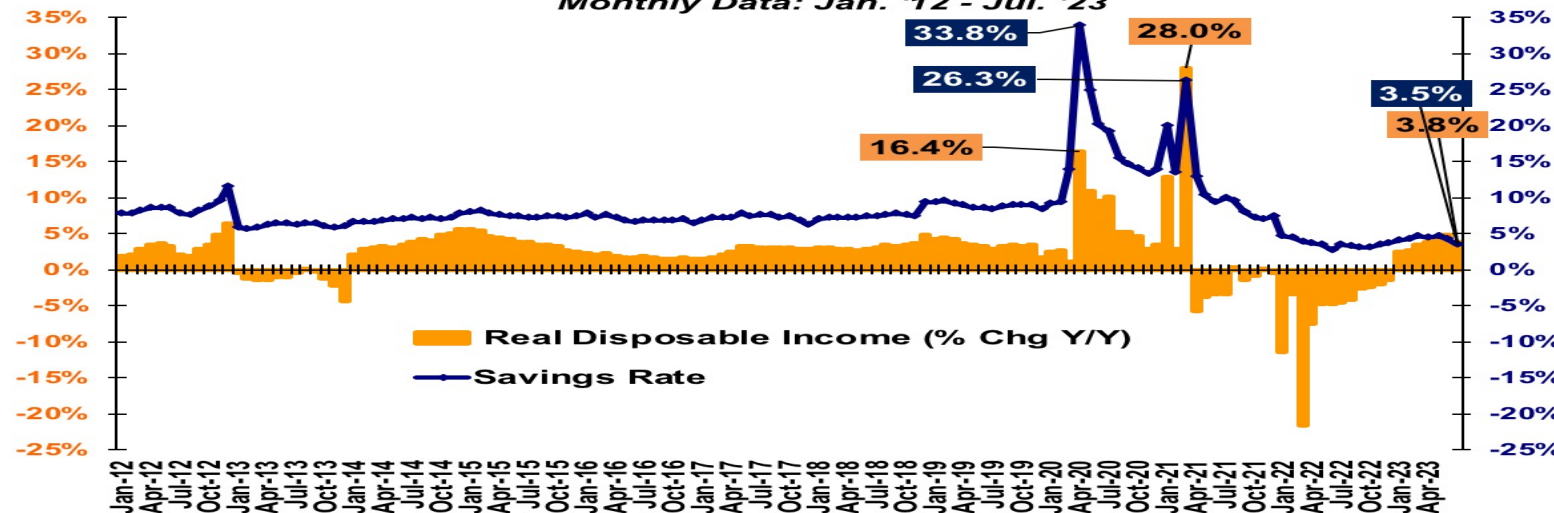
US consumer is still strong: Spending rose 3% y/y in Jul. '23, backed by jobs, rising real disposable incomes, and cheaper durable goods

U.S. Consumer Spending
July 2023
Growth in %chg (y/y)



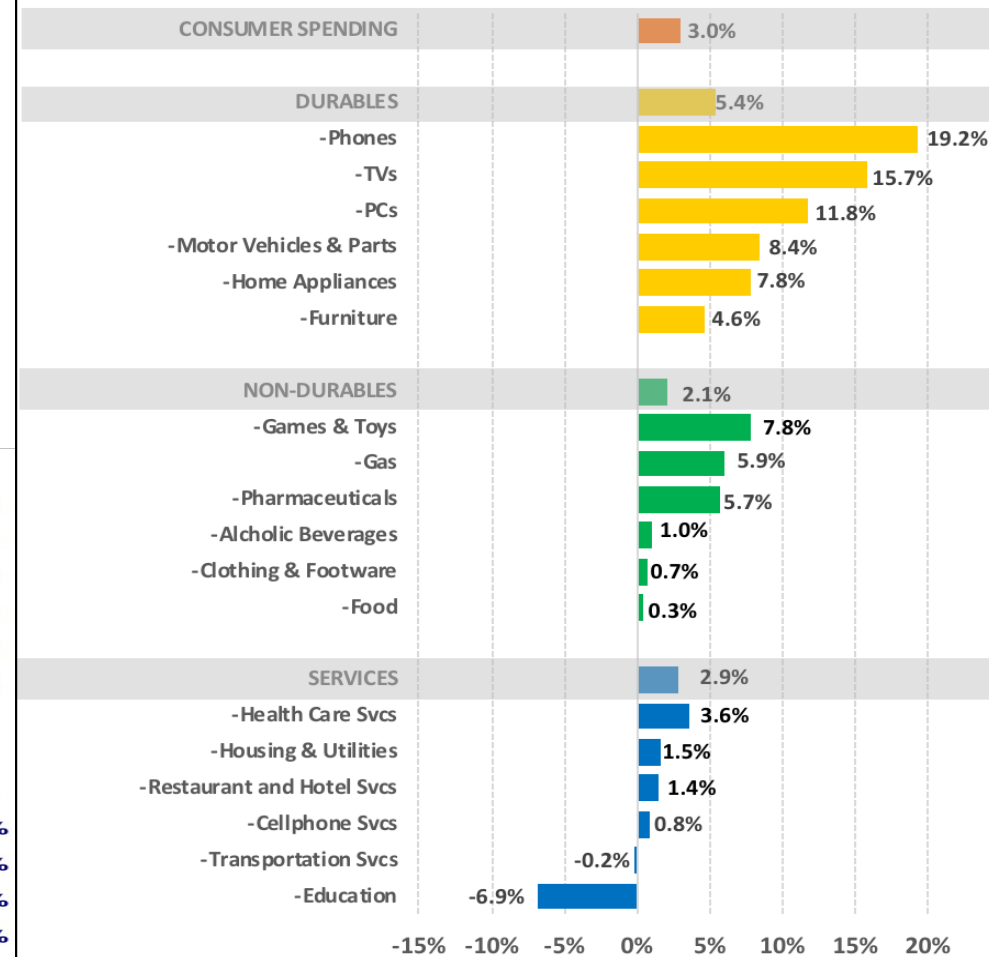
Source: Bureau of Economic Analysis, August 31, 2023, IHS Markit, August 2023

Real Disposable Personal Income and The Savings Rate
Monthly Data: Jan. '12 - Jul. '23



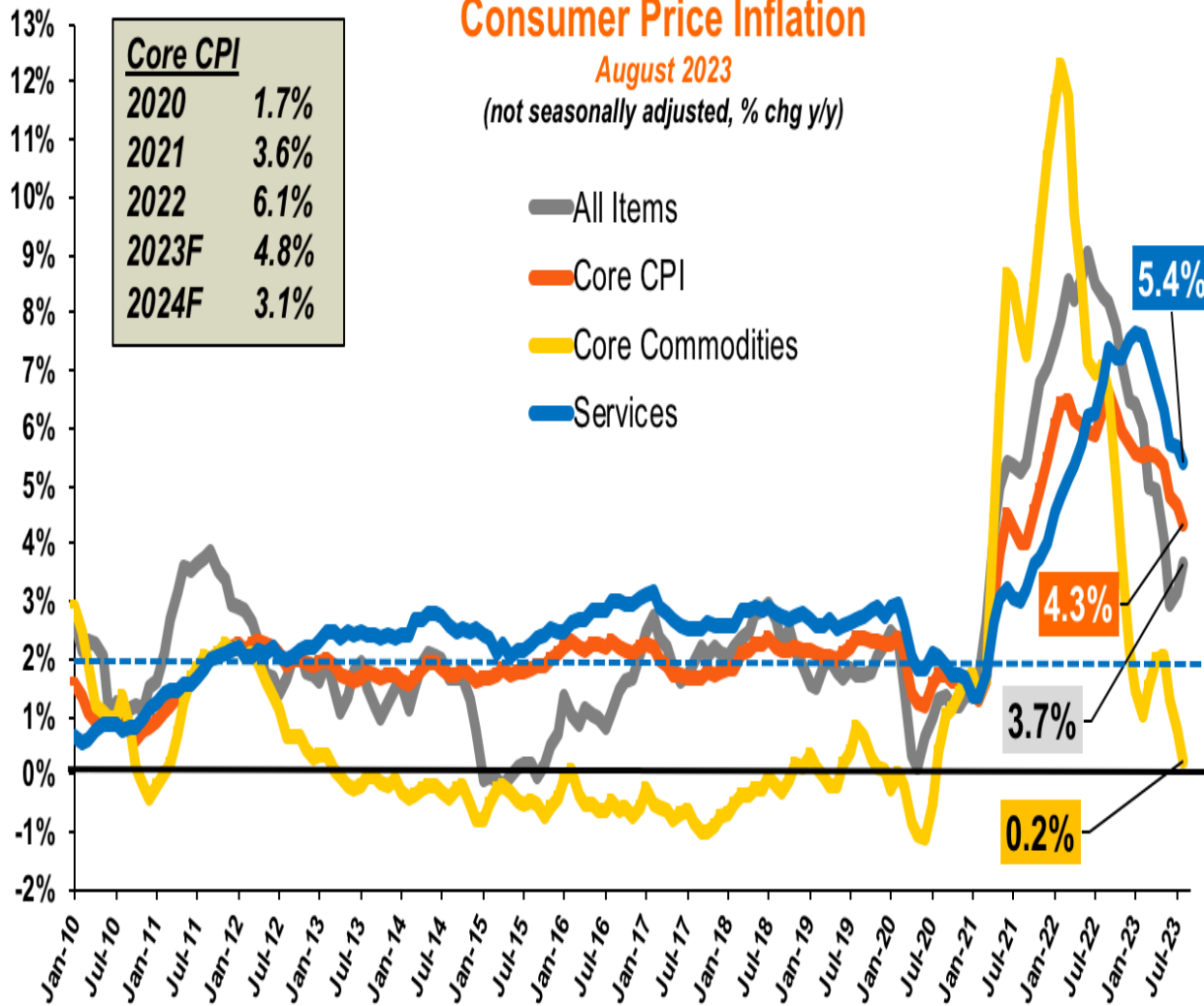
Source: BEA, August 30, 2023

SELECTED CONSUMER ITEMS
July 2023
(% Chg. Y/Y)

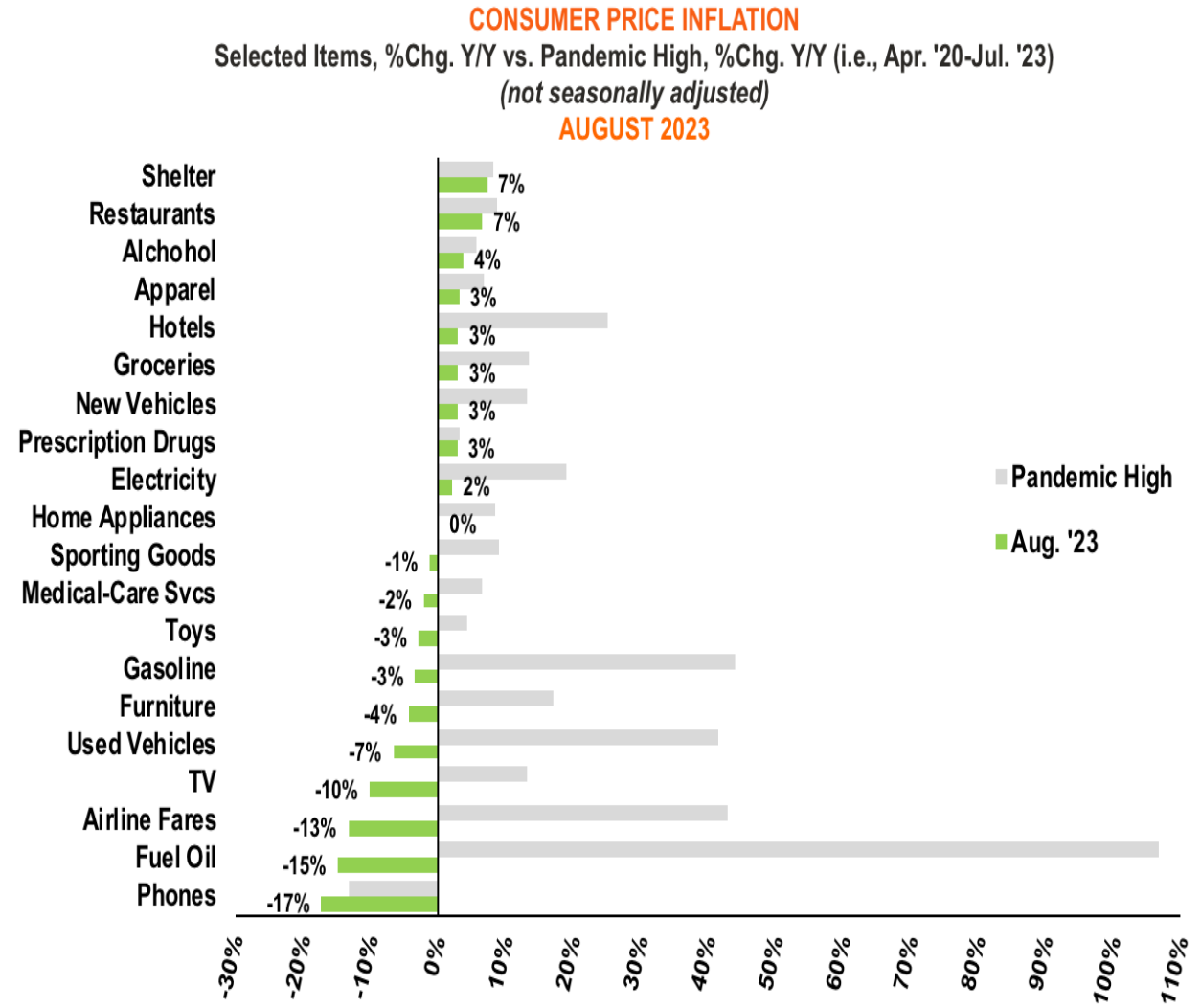


THE CONSUMER SECTOR

Core inflation is falling like a feather: It fell to 4.3% y/y in Aug. '23, down from a peak of 6.6% y/y in Jun. '22, reflecting goods disinflation



Source: Bureau of Labor Statistics, September 13, 2023

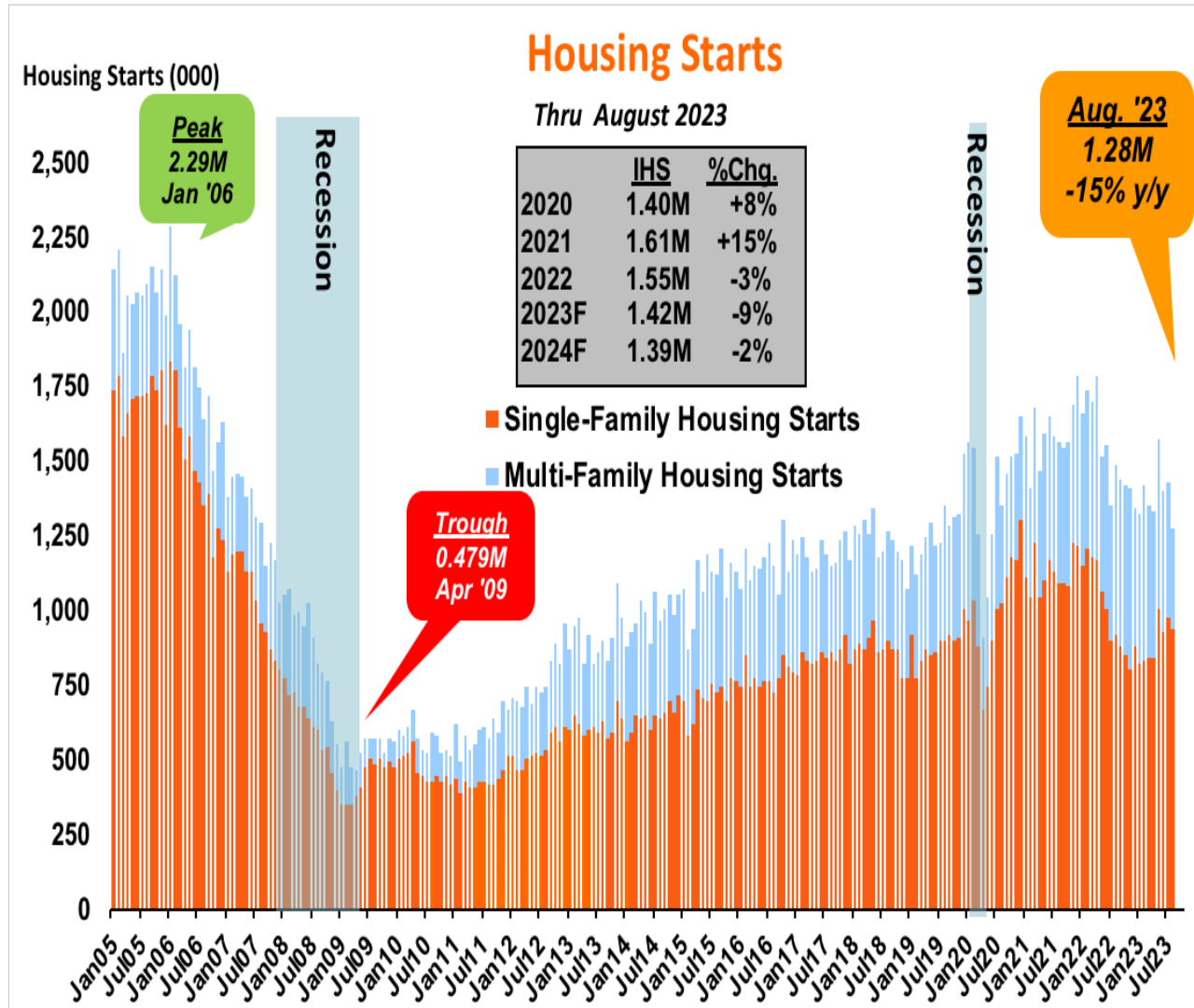


Source: Bureau of Labor Statistics, September 13, 2023

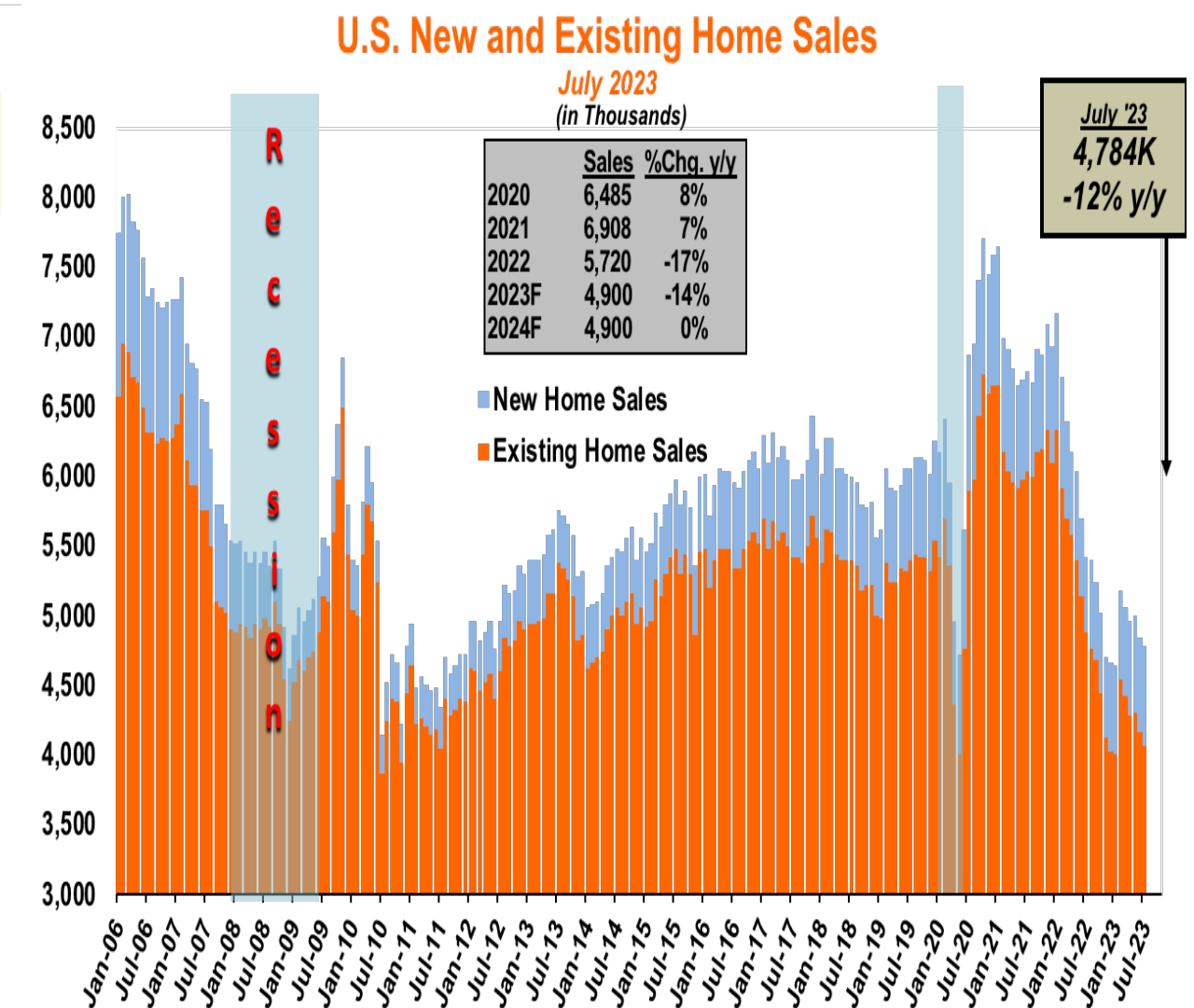
THE HOUSING MARKET



The chaotic housing market not bottoming: Housing starts fell 15% y/y in Aug. '23, on peaking interest and mortgage rates and tight stocks



Source: Census Bureau, September 19, 2023, IHS Markit, September 2023



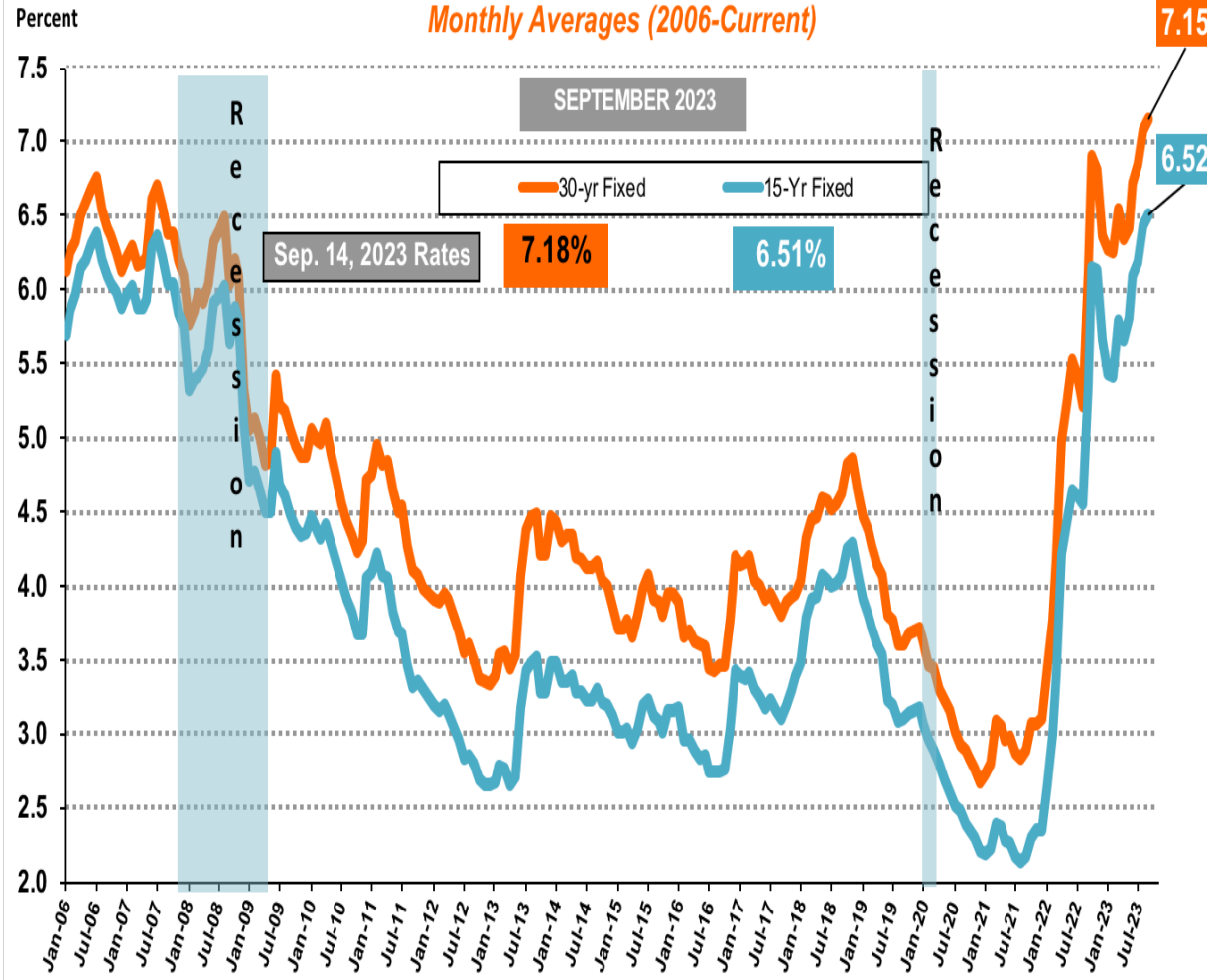
Source: U.S. Department of Census, Aug. 23, 2023; NAR, Aug. 22, 2023, IHS Markit, SAK Economics LLC, Sep. 2023

THE HOUSING MARKET

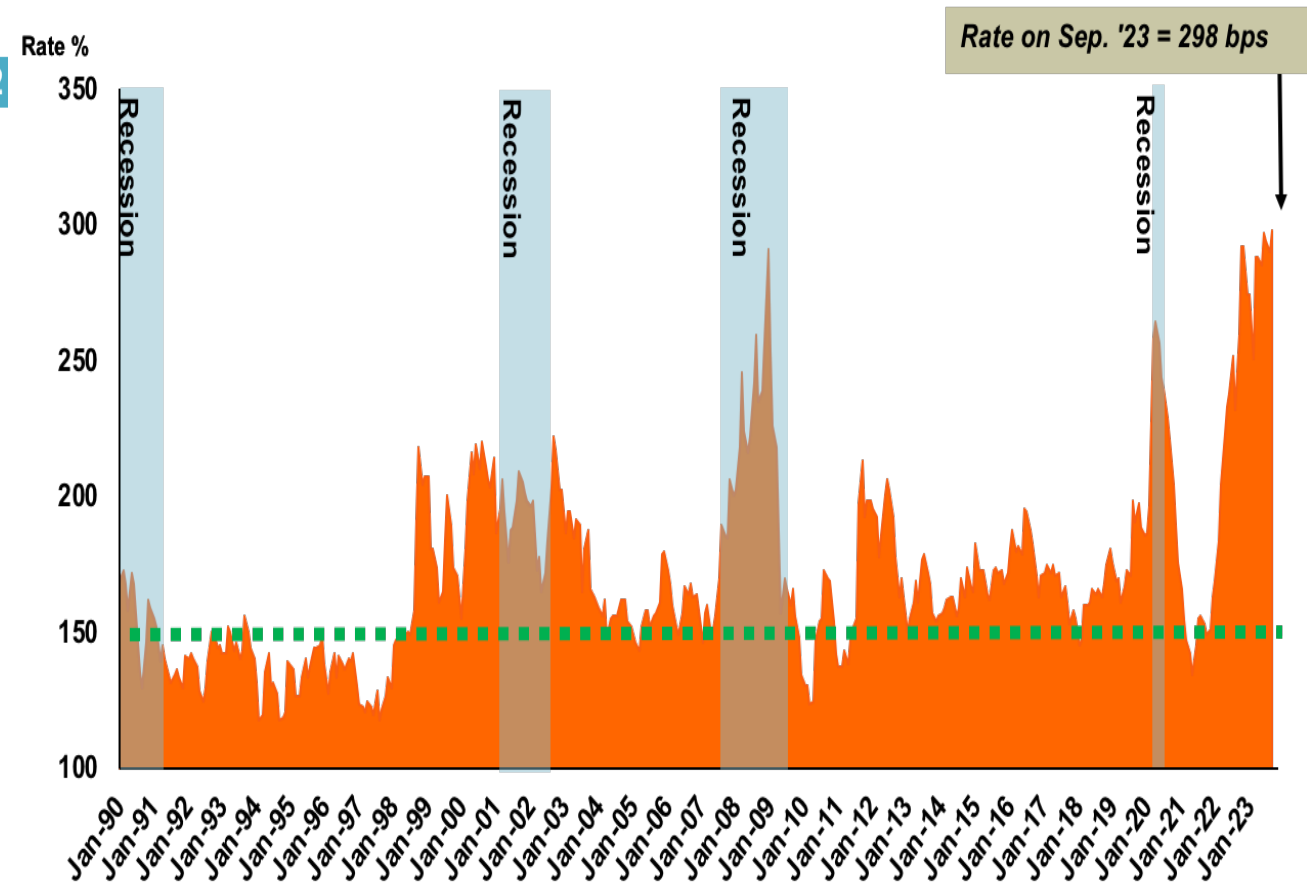


Due to the Fed's tightening cycle, mortgage rates have risen over to 7%, up almost 400 basis points since the start of the pandemic lockdown

Mortgage Rates Monthly Averages (2006-Current)



Mortgage Risk Spread (30yr Mortgage v. 10yr Yield Spread)



Source: Freddie Mac, Primary Mortgage Market Survey, September 14, 2023

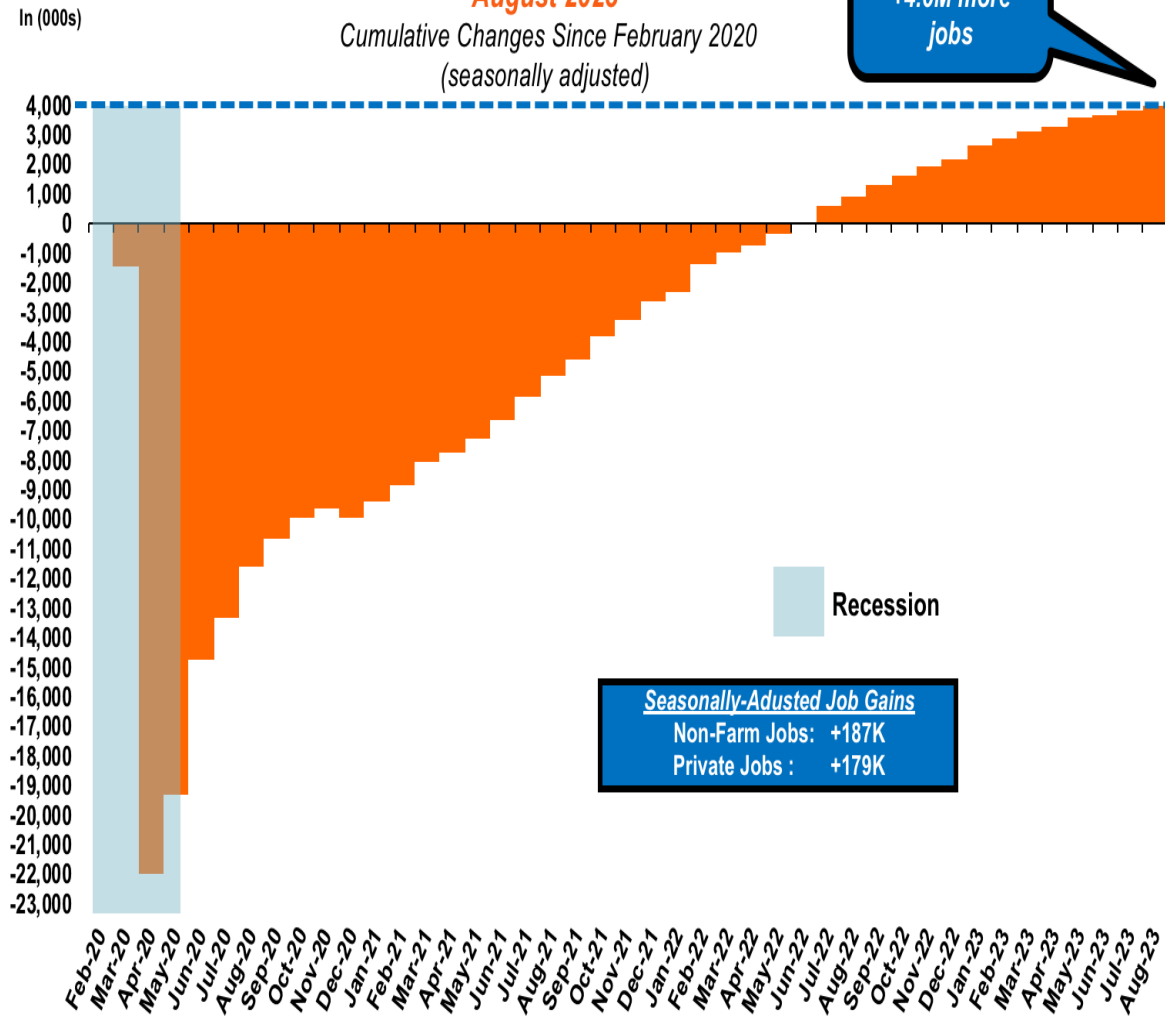
Source: Federal Reserve, September 1, 2023

THE LABOR MARKET

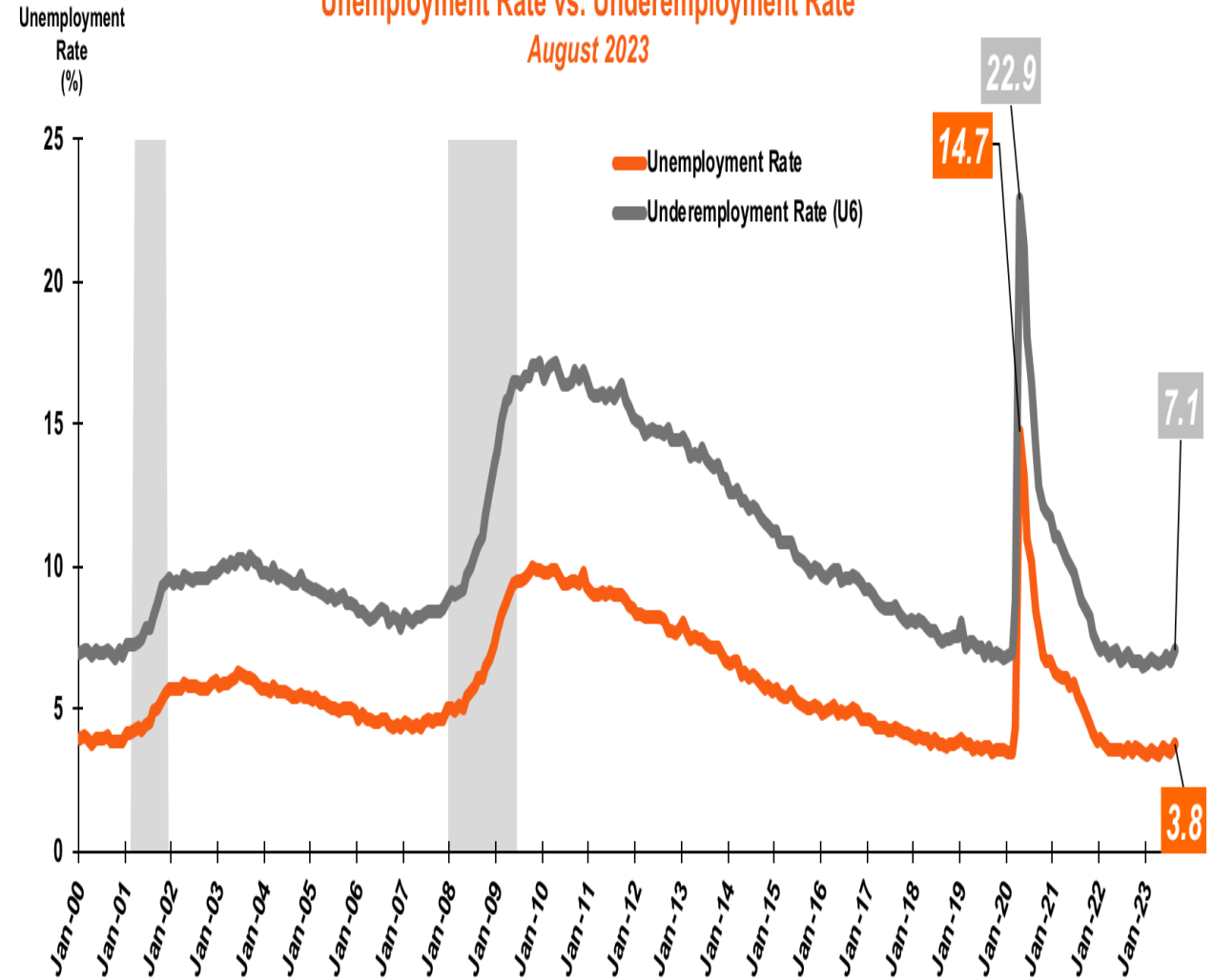
The labor market added 187K more jobs in Aug. '23. Jobs are 4M more than pre-pandemic levels. The jobless rate is 3.8%

Total Non-Farm Payroll Employment August 2023

Cumulative Changes Since February 2020
(seasonally adjusted)



Unemployment Rate vs. Underemployment Rate August 2023



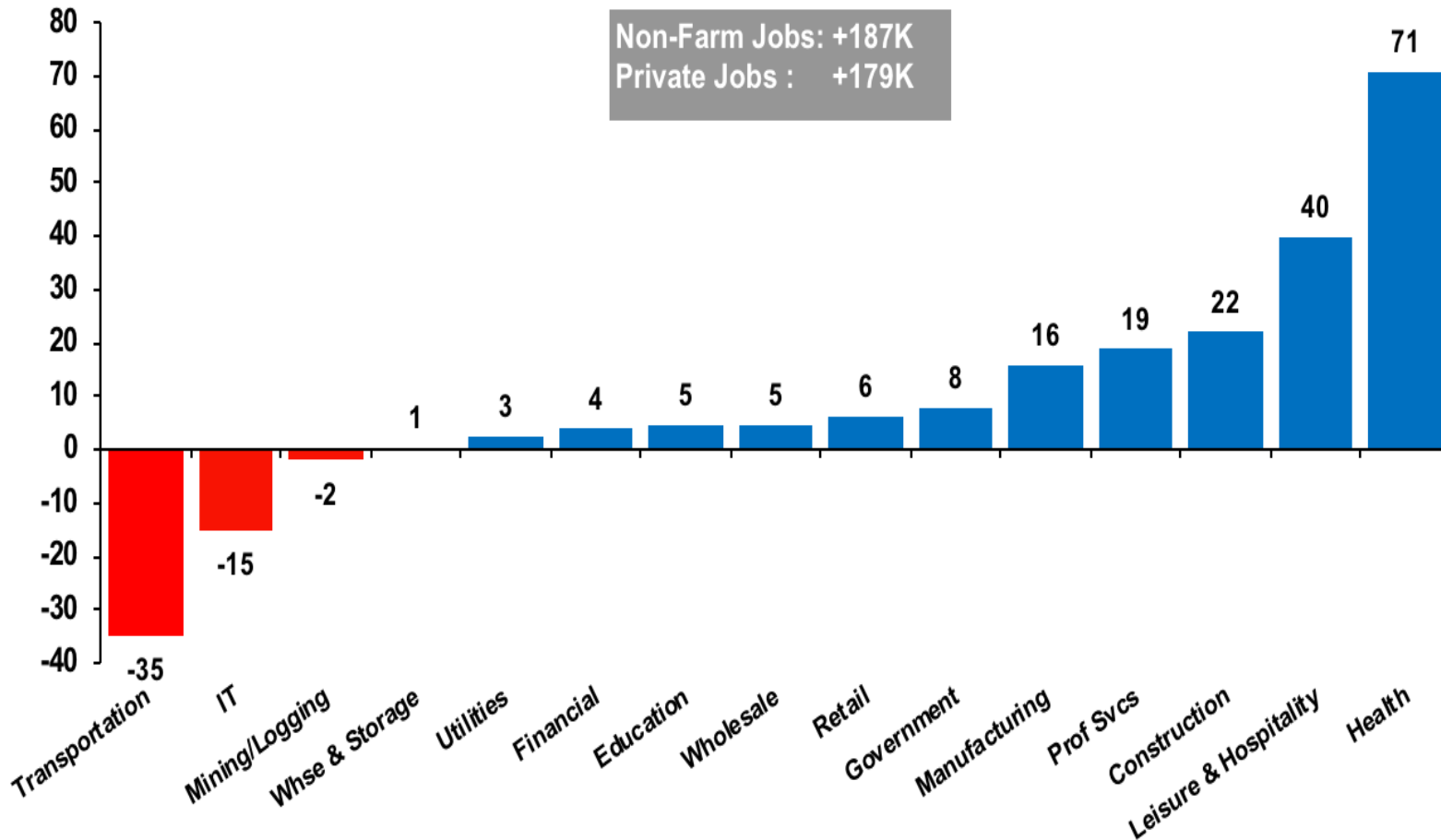
THE LABOR MARKET

The labor market is 118% recovered. The sectors that lost the most jobs due to Covid-19, including leisure and health, are showing the biggest job gains

Payroll Employment Growth- By Sector

August 2023

Job Growth (in 000)



Non-Farm Jobs: +187K
Private Jobs : +179K

* Temp Workers are not classified by sector

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, September 1, 2023

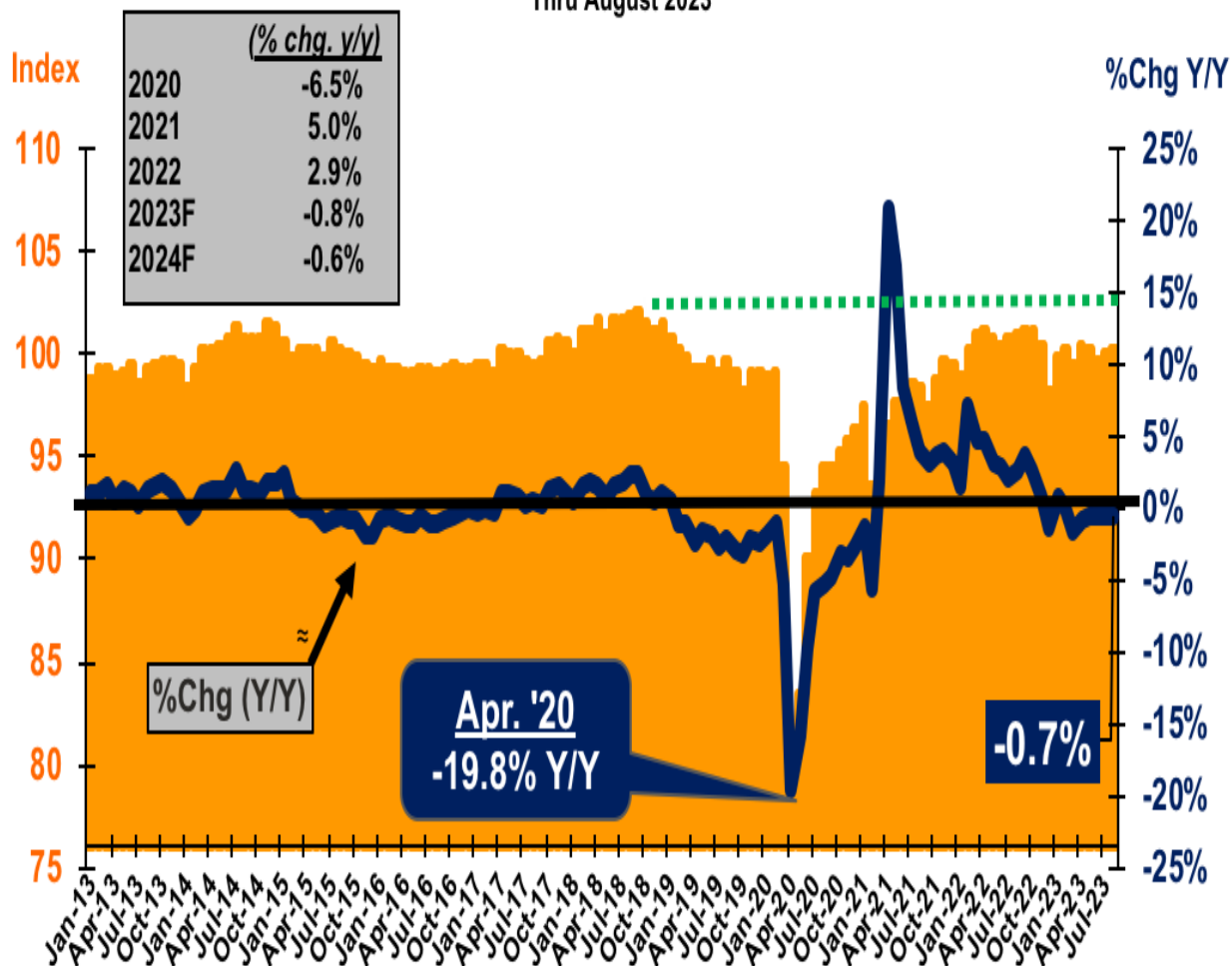
Sector	Loss (3/20-4/20)	Gain (5/20-8/23)	Recovery%
Leisure & Hospitality	8,235	7,945	96%
Prof Svcs	2,267	3,845	170%
Retail	2,266	2,291	101%
Health	1,604	2,137	133%
Manufacturing	1,371	1,583	115%
Construction	1,081	1,466	136%
Education	523	664	127%
Wholesale	406	583	144%
IT	268	411	153%
Financial	280	569	203%
State & Local Govt.	200	670	335%
Transit & Passenger	186	134	72%
Warehouse & Storage	77	634	823%
Trucks	89	137	154%
Airlines	75	106	140%
Mining/Logging	67	23	34%
Barges	6	7	127%
Utilities	5	15	292%
Railroads	4	(5)	-107%
Pipelines	0	(4)	0%
Federal Govt.	(25)	61	-244%
NON-FARM TOTAL	21,941	25,989	118%

MANUFACTURING

The US manufacturing sector is in recession: Factory output fell 0.7% y/y in Aug. '23, the fifth consecutive month of negative y/y growth

Manufacturing Output

Thru August 2023

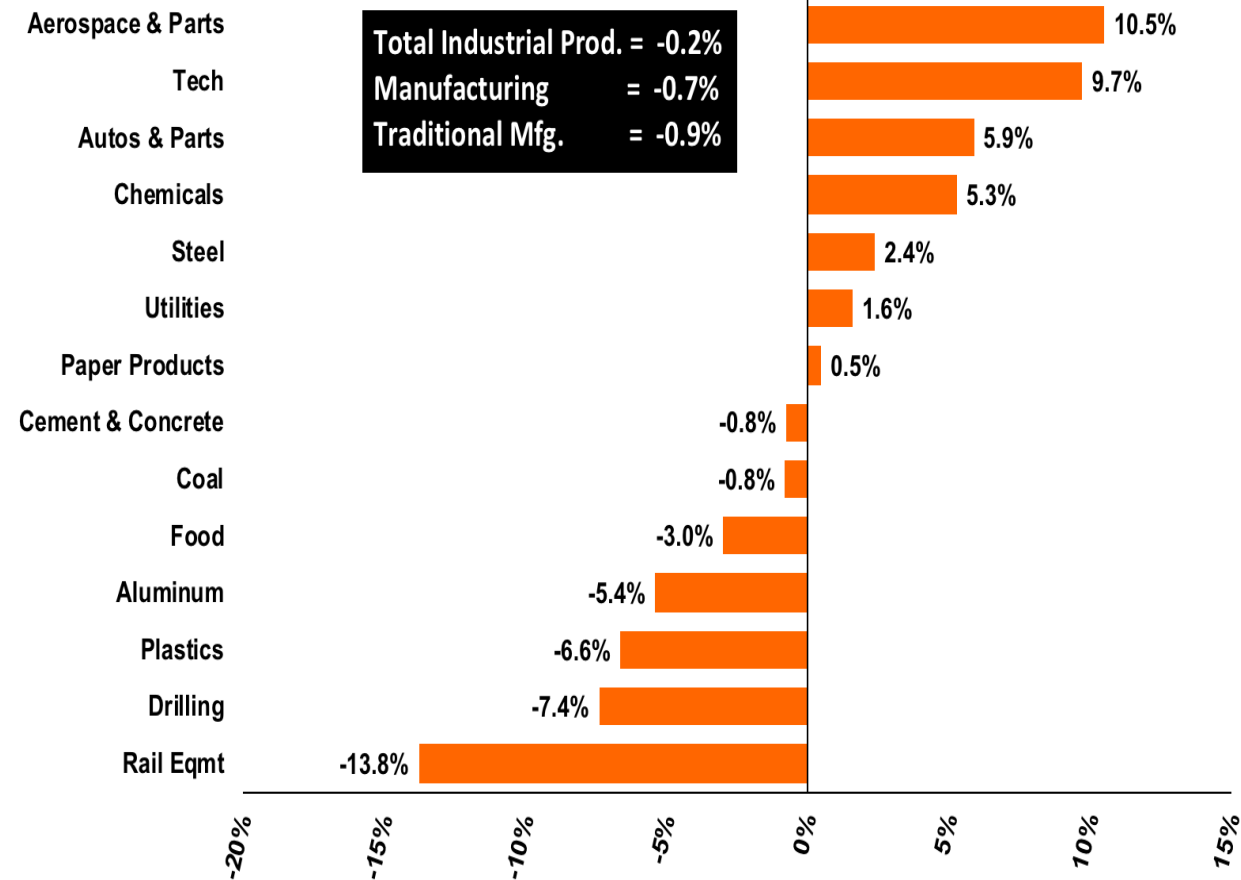


INDUSTRIAL PRODUCTION SECTORS

August 2023

Selected Industries

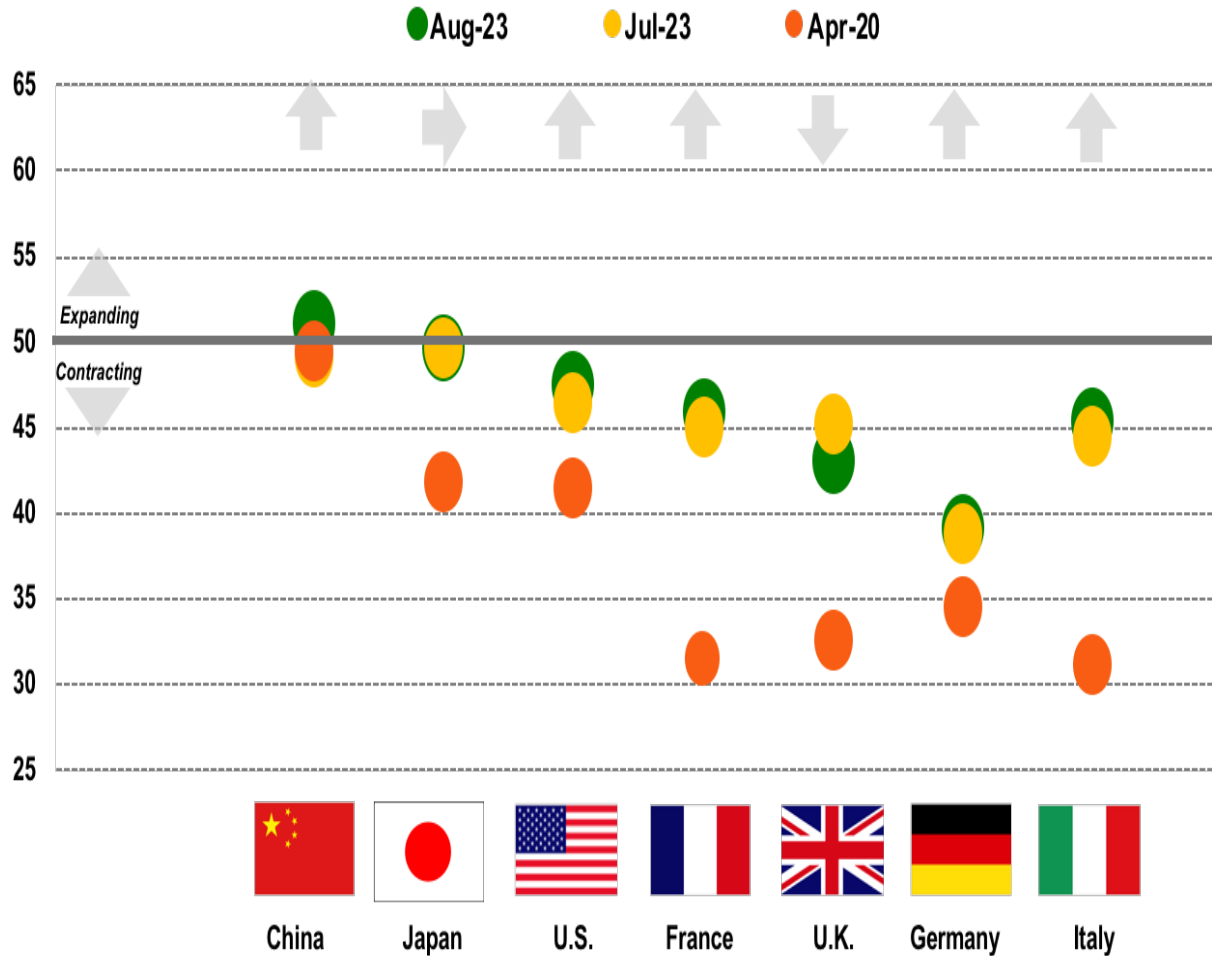
(% Chg Y/Y)



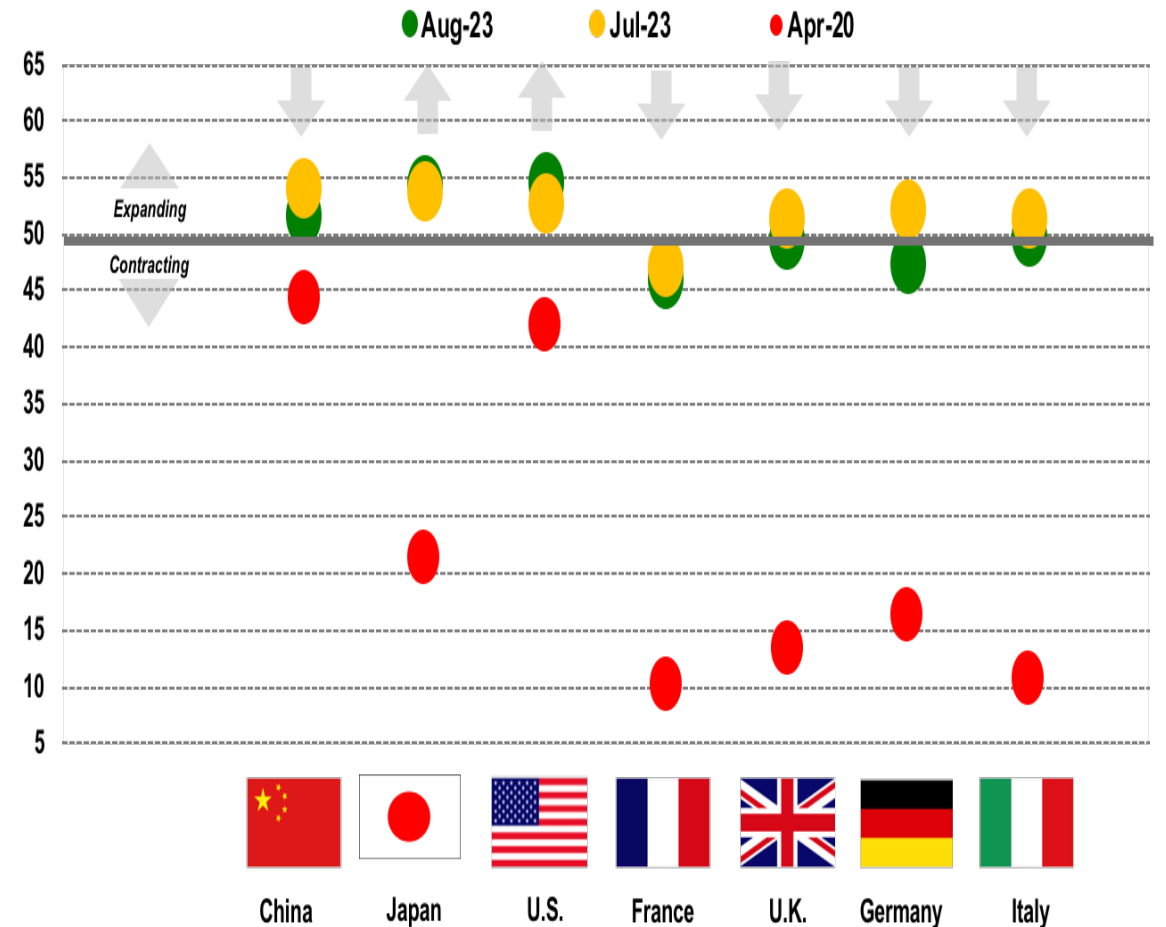
MANUFACTURING

Manufacturing sectors in key countries in global economy have contracted, but service sectors are expanding, due to pandemic reopening

Manufacturing Purchasing Managers' Index - By Country



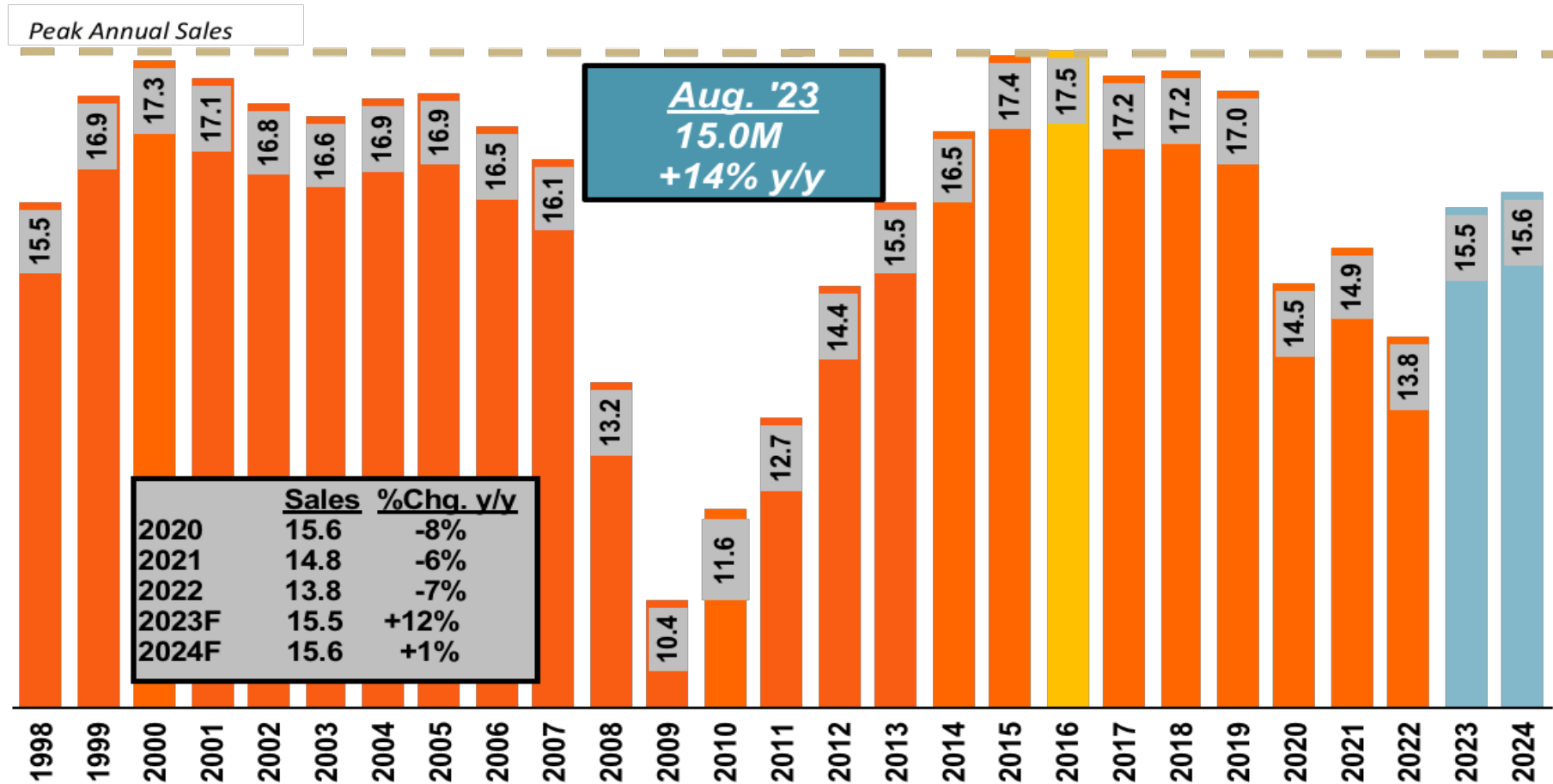
Service (or Non-Manufacturing) Purchasing Managers' Index - By Country



AUTO SECTOR

Auto plants shut down during the pandemic. In addition to structural issues, the sector faced a severe chip shortage, lean stocks and higher prices

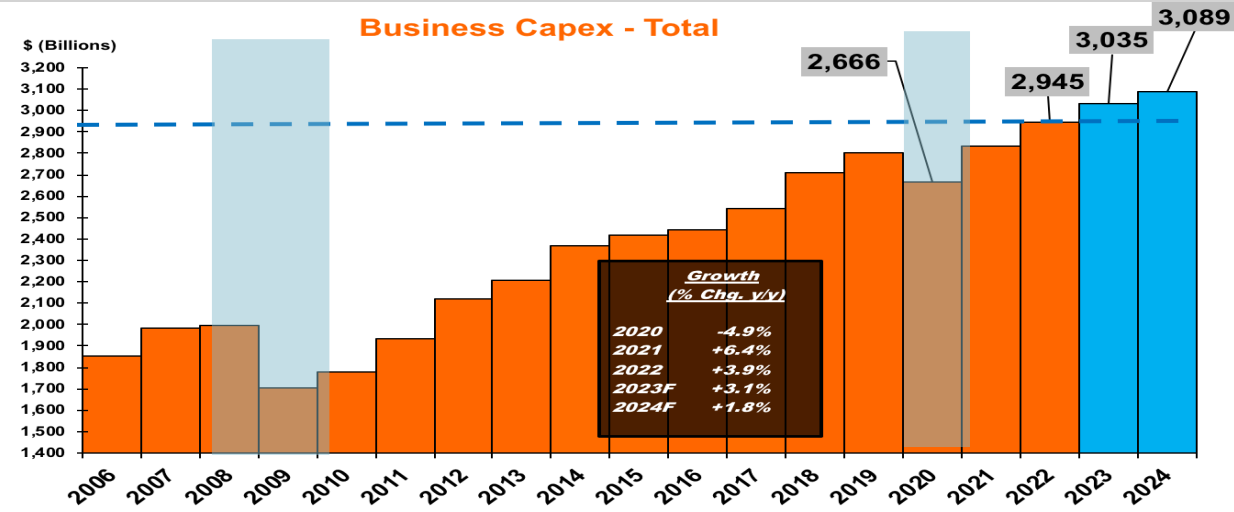
Annual Light Vehicle Sales Actuals Thru August 2023 (in 000,000)



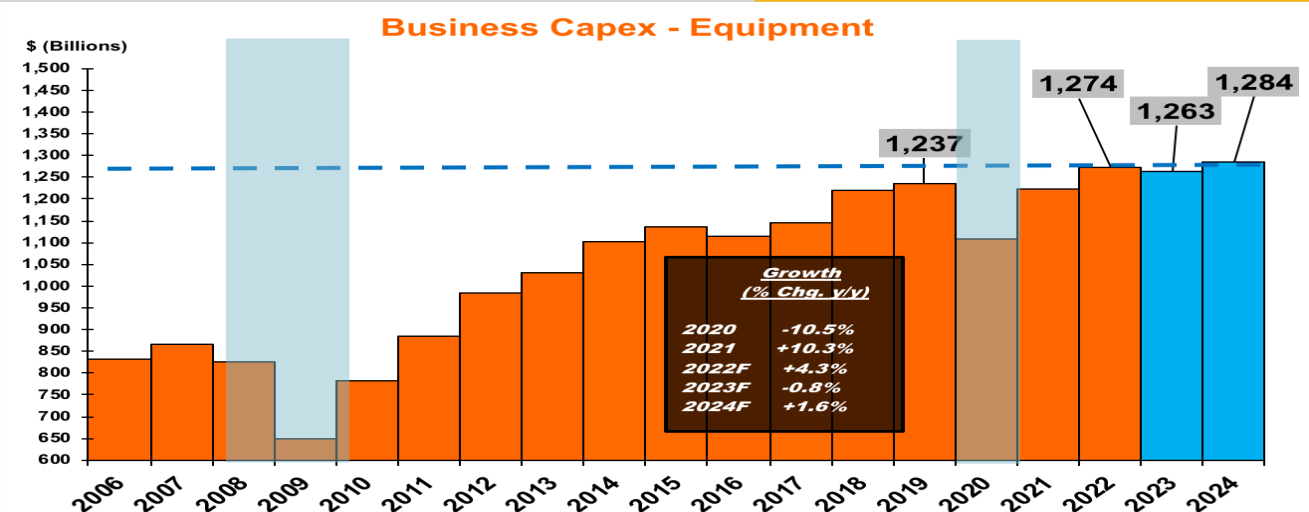
Source: BEA, September 6, 2023; IHS Markit, September 2023

BUSINESS CAPEX

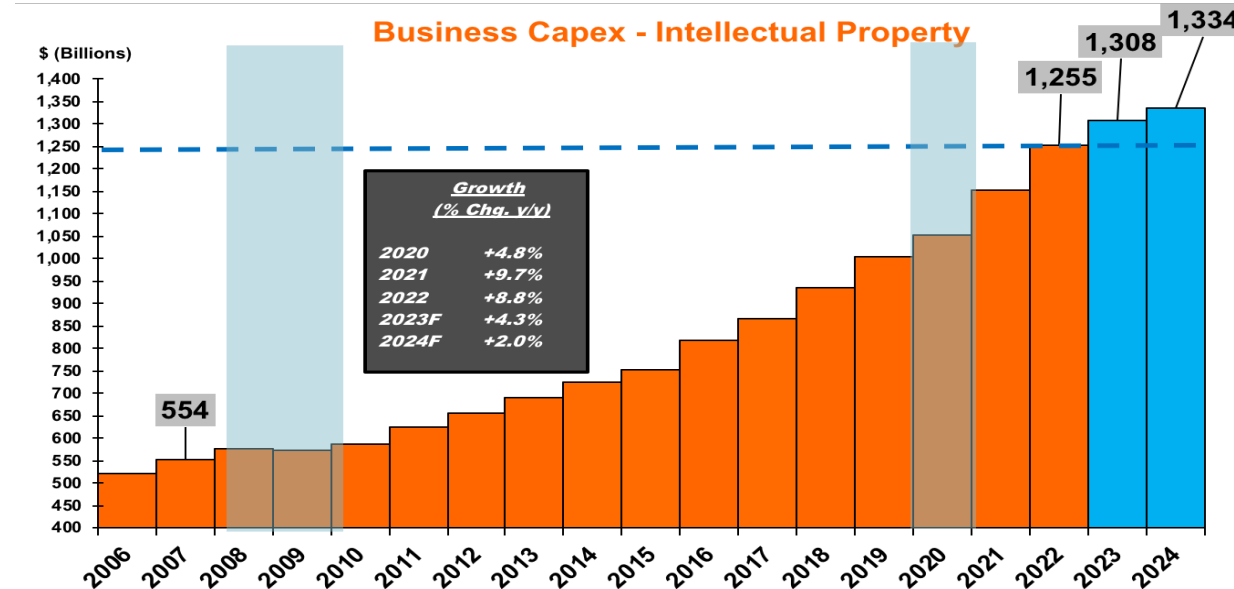
Business capex growth is expected to slow to 3% in '23 and 1.6% in '24: Software: Faster Growth; Replacement and Expansion Capex: Flattish



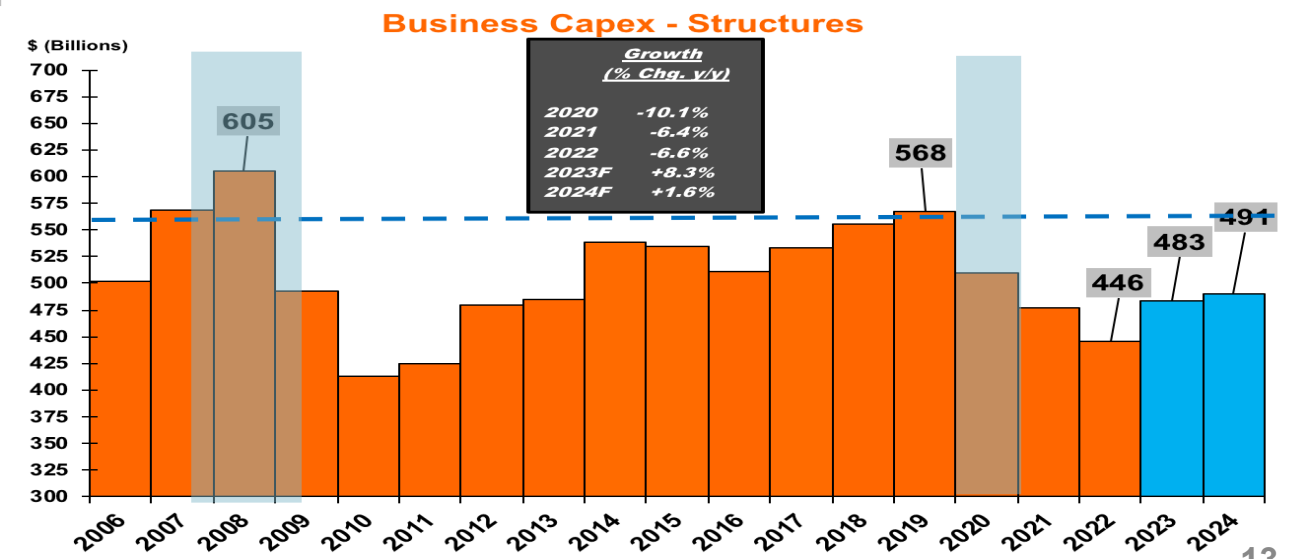
Source: IHS Markit, September 2023



Source: IHS Markit, September 2023



Source: IHS Markit, September 2023



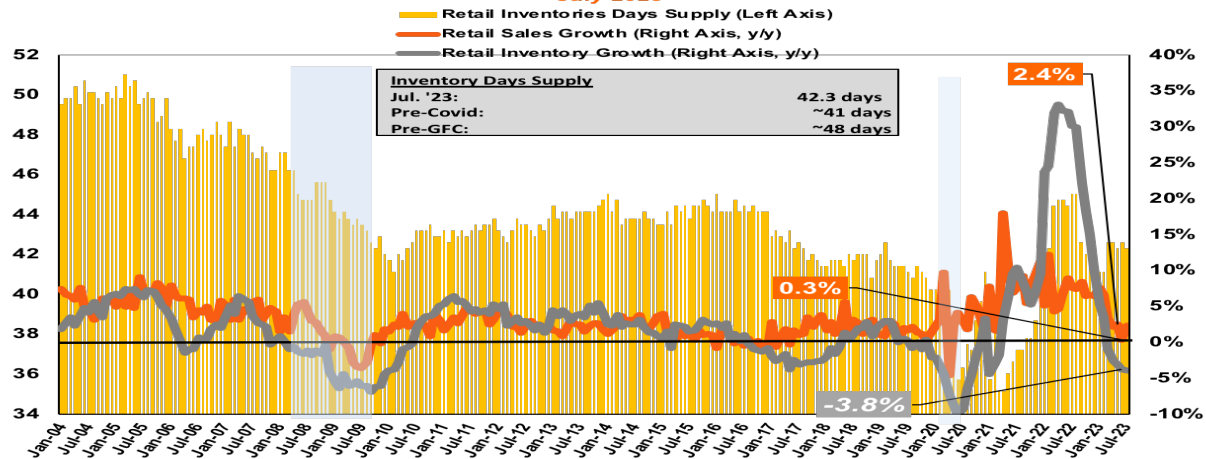
Source: IHS Markit, September 2023

BUSINESS INVENTORIES

Not all retail inventories are the same: Core retail and pandemic sectors are destocking; autos is stocking. Supply chain bottlenecks are key factors

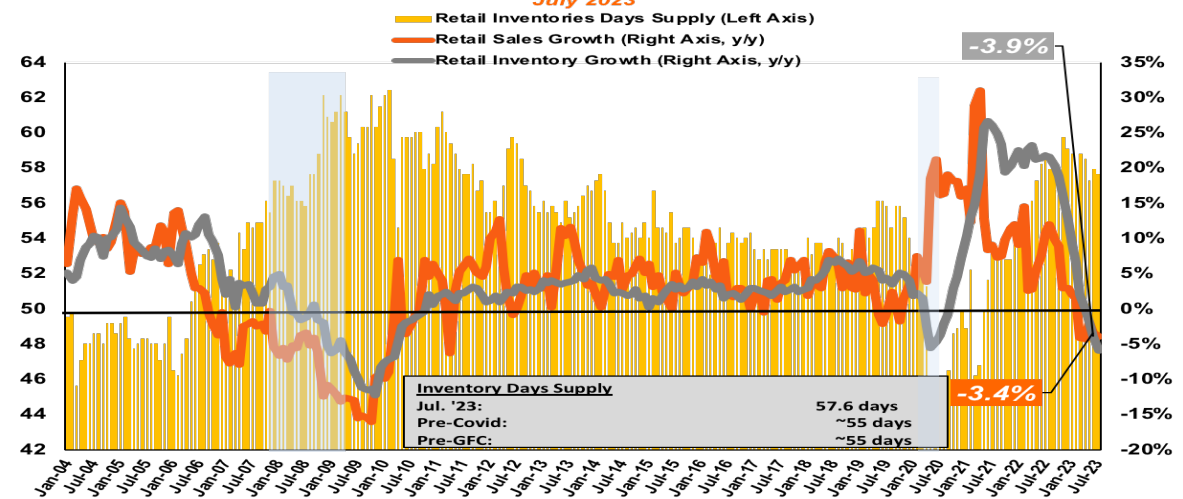


Retailers (Gen. Merchandise) Inventories vs. Sales
July 2023



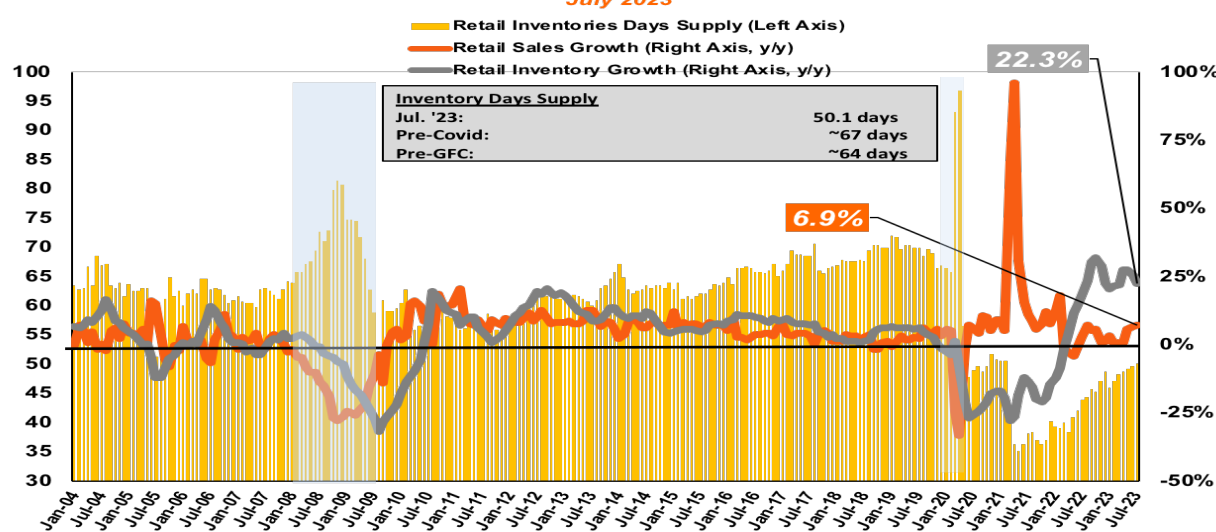
Source: U.S. Census Bureau, September 14, 2023

Retailers (Building & Garden Materials) Inventories vs. Sales
July 2023



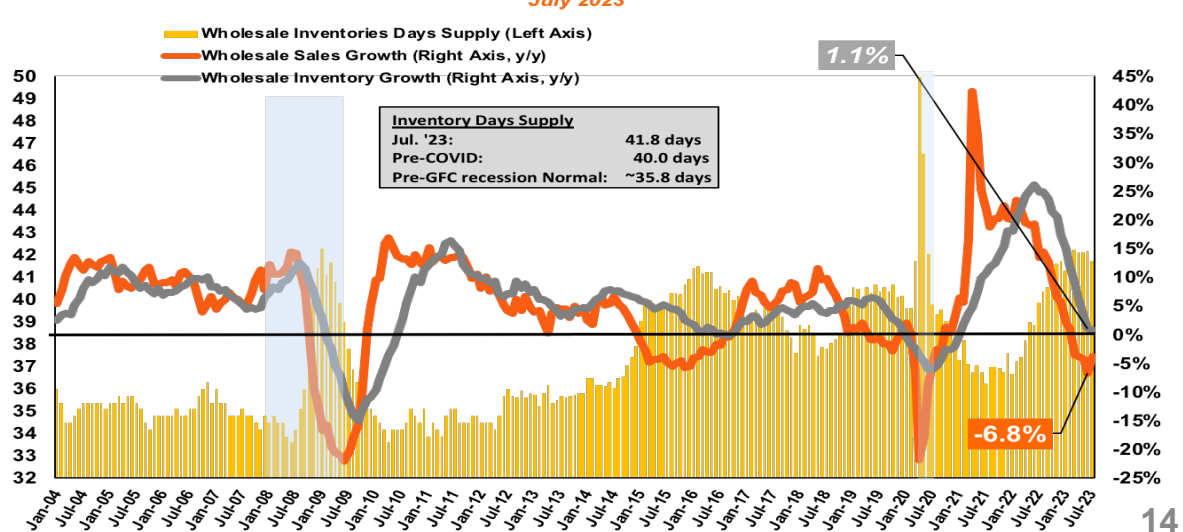
Source: U.S. Census Bureau, September 14, 2023

Retailers (Autos & Parts Dealers) Inventories vs. Sales
July 2023



Source: U.S. Census Bureau, September 14, 2023

Wholesalers Inventories vs. Sales
July 2023



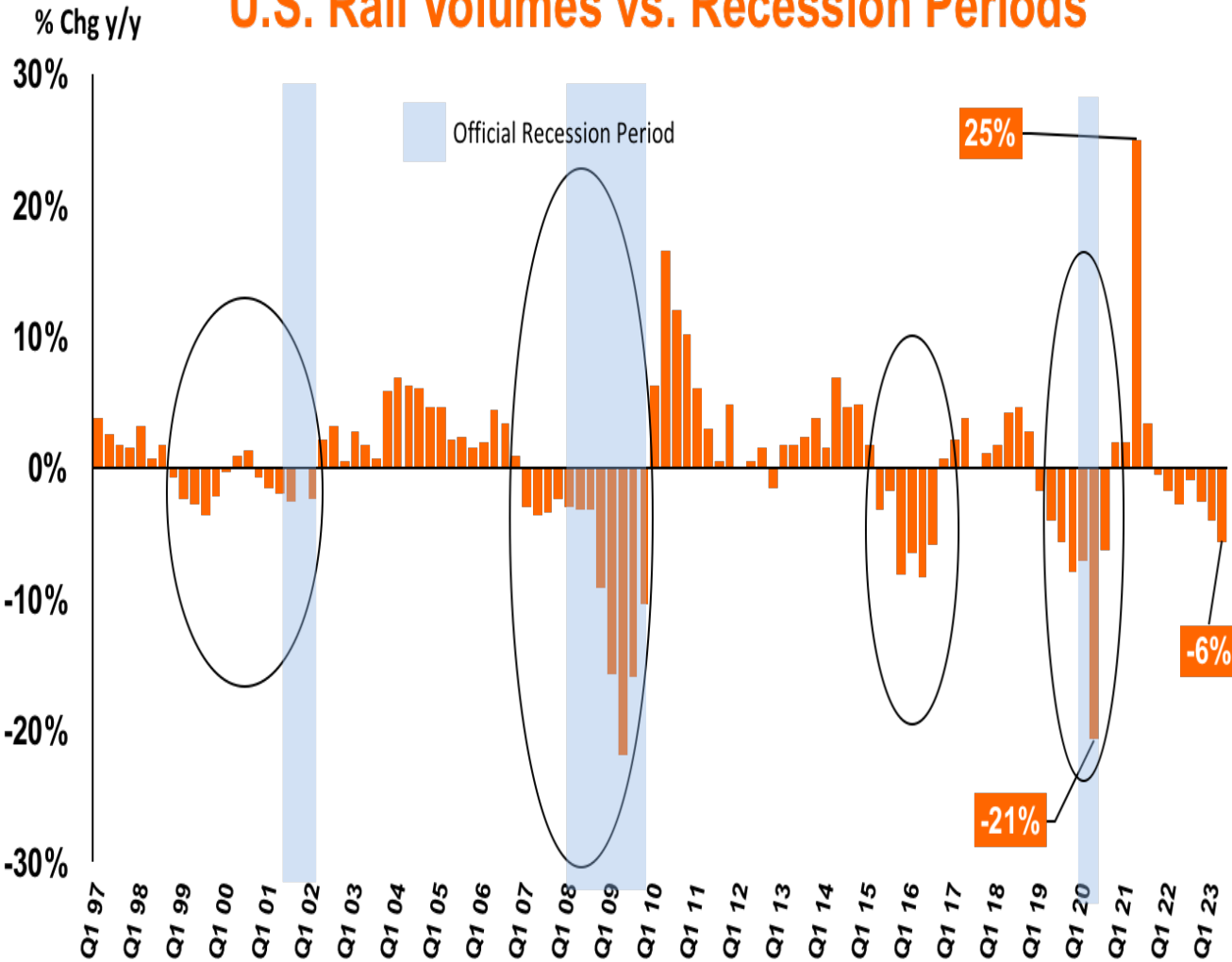
Source: U.S. Census Bureau, September 14, 2023

THE FREIGHT RAIL SECTOR



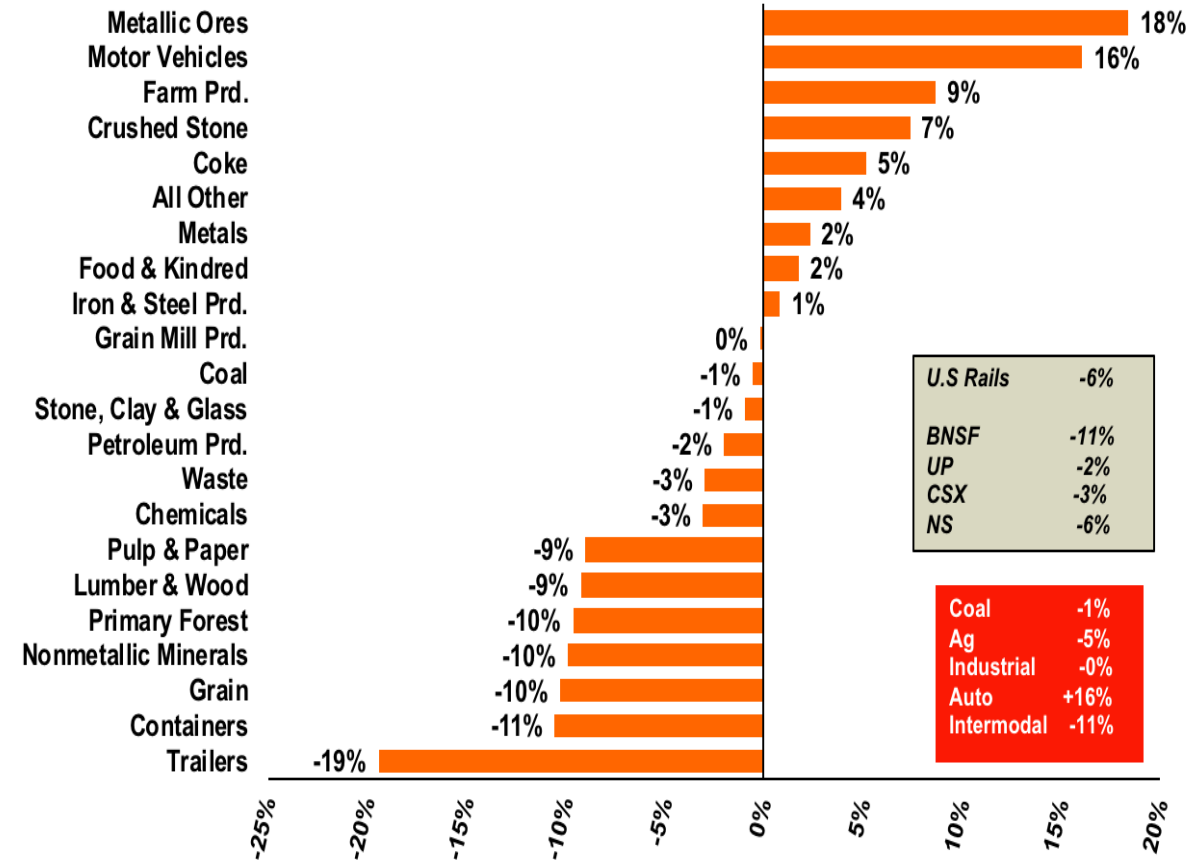
Rail sector volume growth is a leading indicator of recessions. Q2 growth was about -6% y/y. Truck tons fell 0.8% y/y in Jun. '23

U.S. Rail Volumes vs. Recession Periods



Source: Association of American Railroads, July 2, 2023

U.S. RAILROADS
(CS54 Groups, % Change in Units Handled)
2023 Q2
Weeks 14 through 26, 2023 vs. 2022
Apr. 9 through Jul. 2



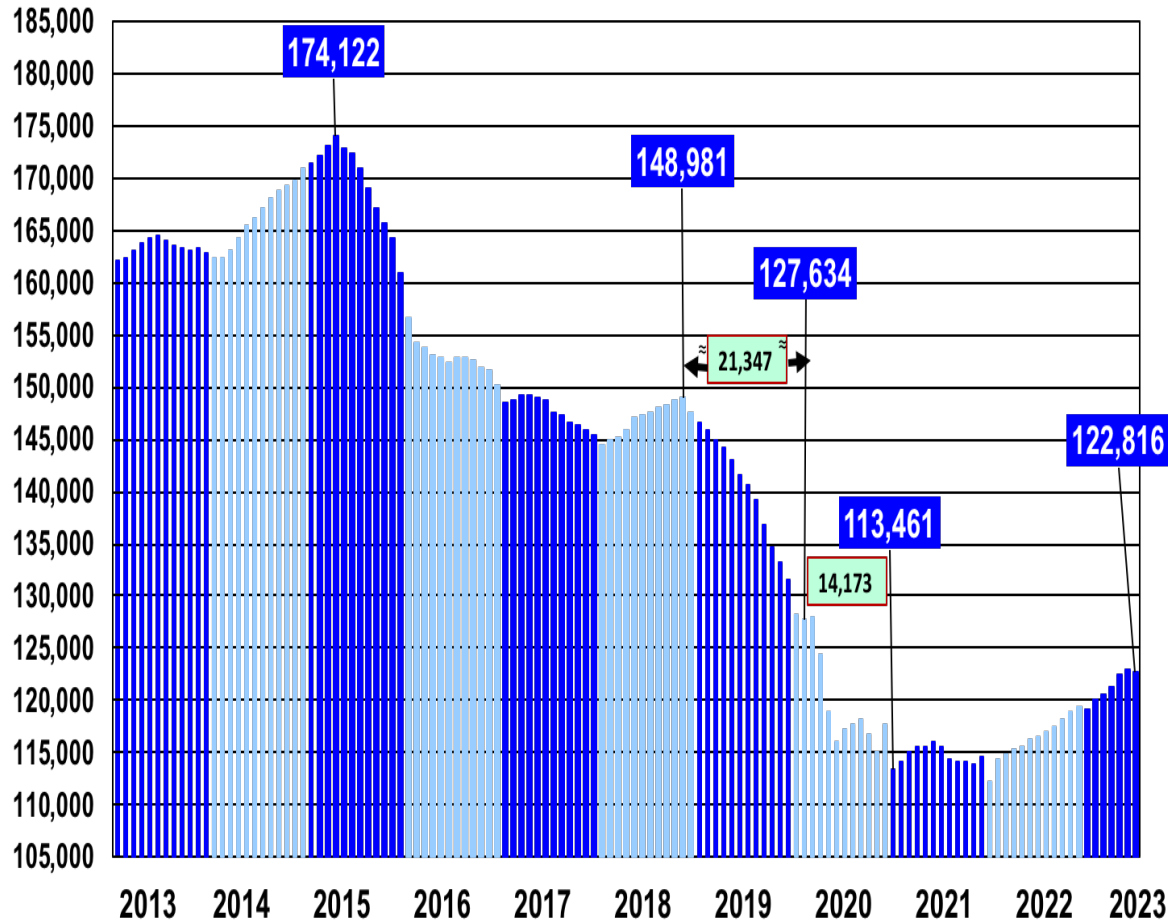
Source: Association of American Railroads, Jul. 2, 2023, SAK Economics Jul. 5, 2023

THE FREIGHT RAIL SECTOR

The rail sector cut about 14K jobs during the pandemic. It is only about 66% recovered vs. 118% in US. Hiring jumped by 6.4K y/y in Jun. '23

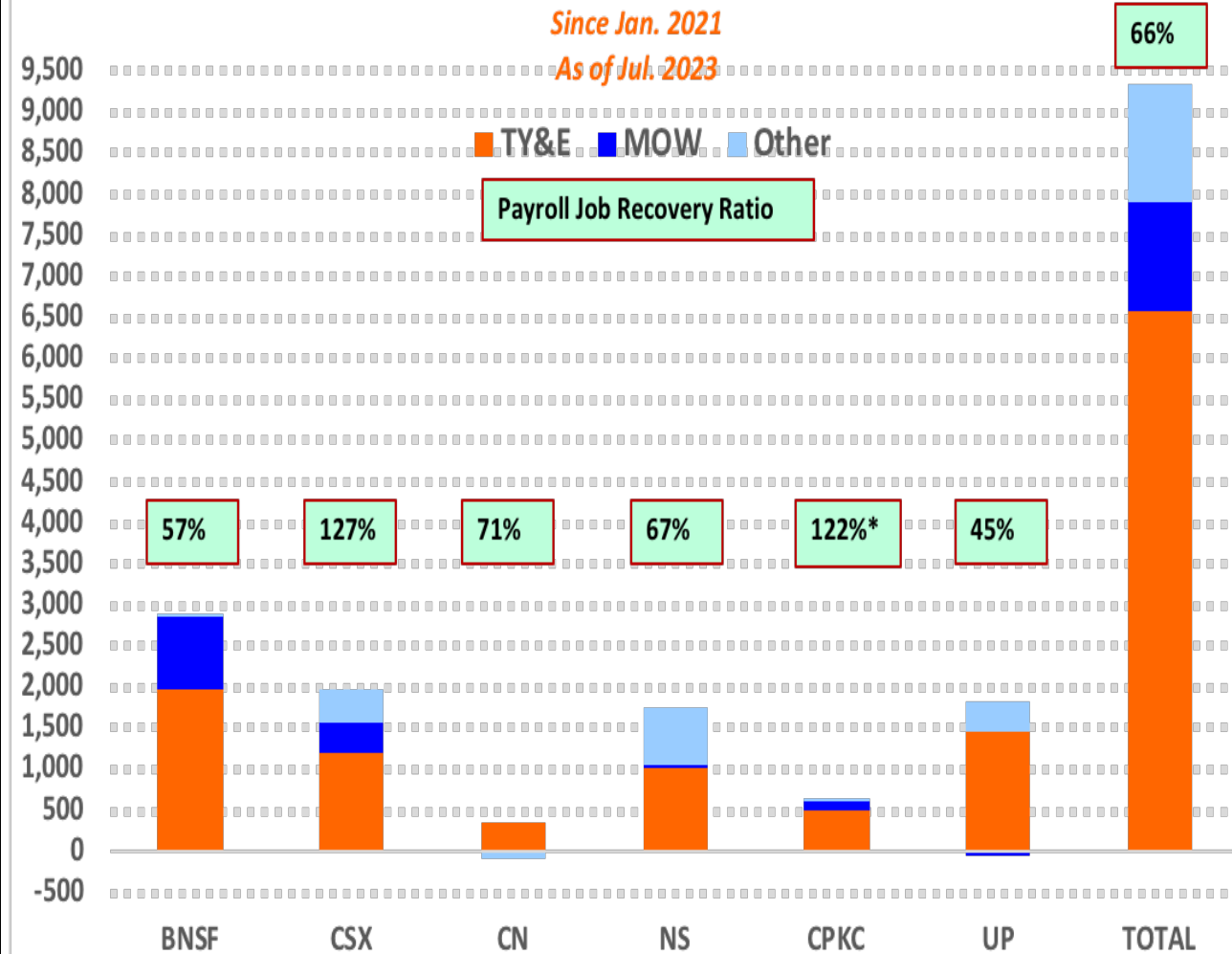


Class I Railroad Employment: Jan. 2013 - Jul. 2023



Source: Surface Transportation Board, September 4, 2023. Data are not seasonally adjusted.

US AND CANADA RAILS: PAYROLL JOB CHANGES



Source: Surface Transportation Board, Employment Data September 4, 2023

THE FREIGHT RAIL SECTOR

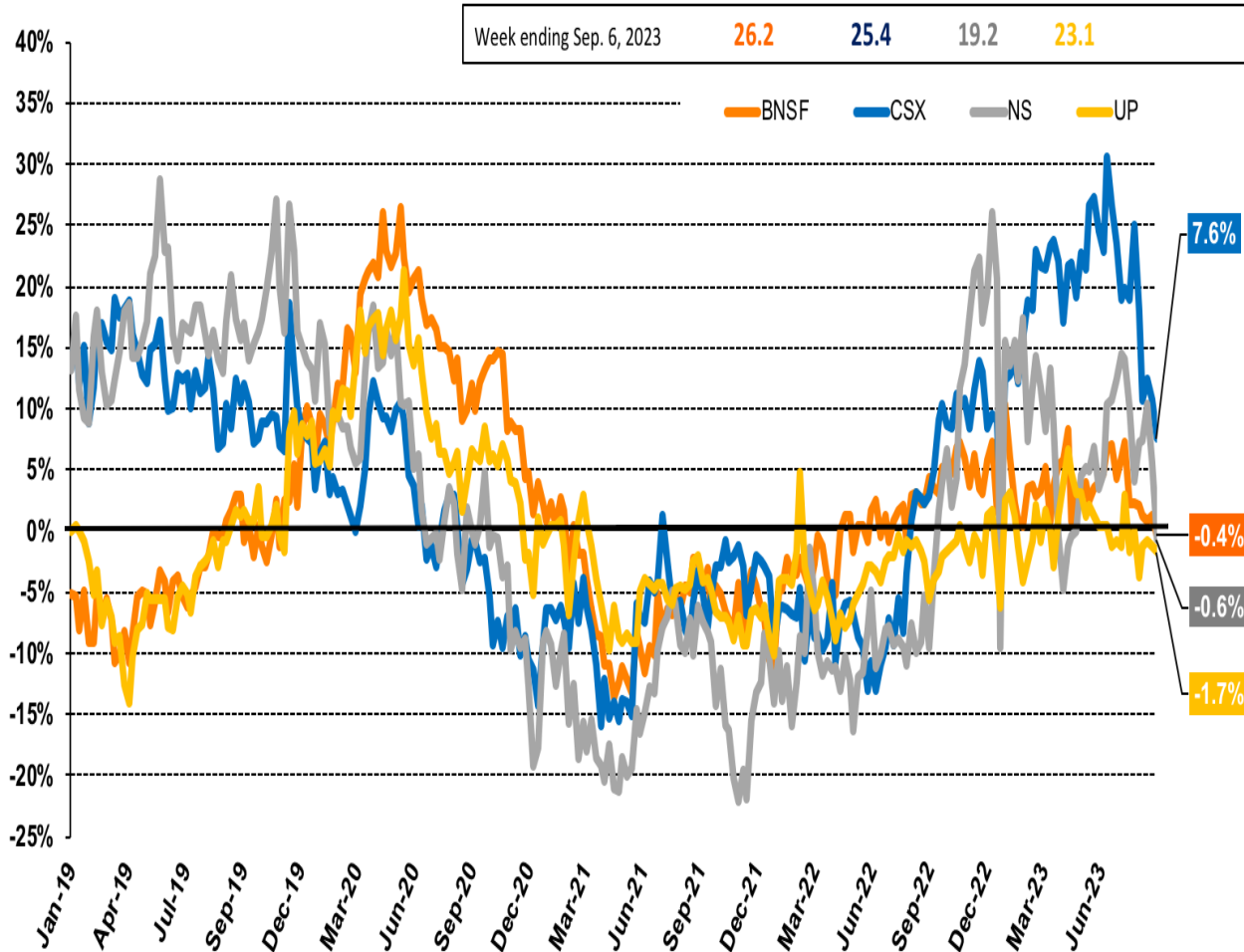
Trains velocity improved on lower volume and easing supply chain congestion, but are slowing toward Peak. Terminal dwells are shorter y/y



US Class 1 Rail - Train Velocity

Thru Sep. 6, 2023

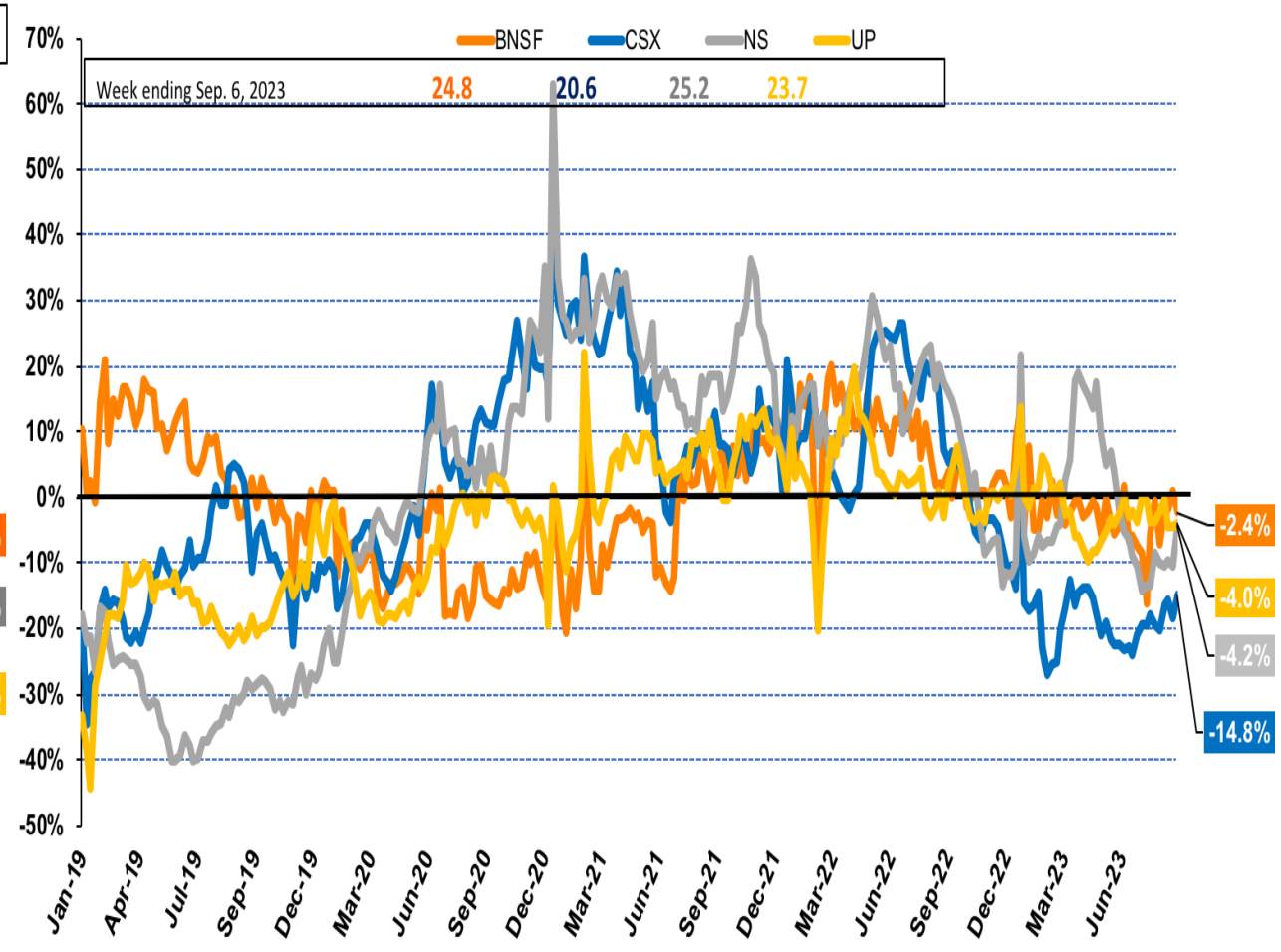
(Weekly Average Train Speed in MPH, % chg y/y)



US Class 1 Rail - Terminal Dwell Time

Thru Sep. 6, 2023

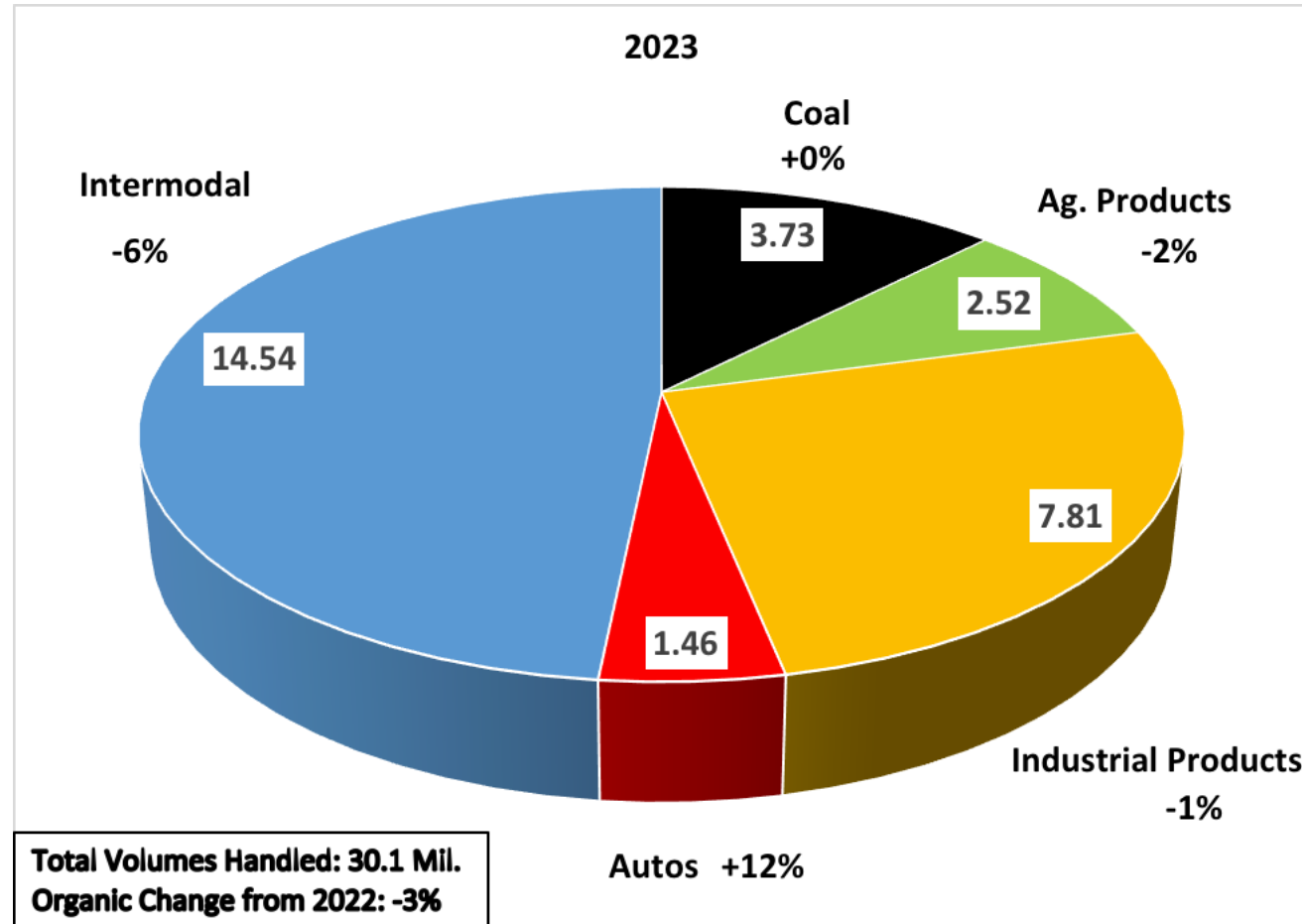
(Weekly Average Terminal Dwell Time - Ex Run-Thru Trains, in Hours, % chg y/y)



Macro Economic BASE CASE Assumptions		
<i>(Sep. 2023 Forecast)</i>		
<i>% Chg Y/Y Unless Stated</i>	2023	2024
Real GDP	2.3%	1.5%
Unemployment Rate	3.6%	4.0%
EIA- Western Coal Production	-4.8%	-19.4%
EIA- App Coal Production	-5.0%	-22.3%
EIA- Interior Coal Production	6.0%	-9.6%
Coal Share of Electricity Generation	15.8%	15.5%
Natural Gas Share of Electricity Generation	41.8%	39.9%
Renewables Share of Electricity Generation	22.5%	24.7%
Natural Gas Price (Henry Hub)	\$2.58	\$3.22
Grains Usage (Bushels, Billions)	20.3	21.0
Industrial Production	-0.2%	-1.1%
Manufacturing	-0.8%	-0.6%
Traditional Manufacturing	-0.7%	0.2%
Food (Ex. Beverages)	-1.5%	0.1%
Housing Starts (Millions)	1.418	1.385
Housing Starts (% Chg.Y/Y)	-8.6%	-2.3%
Furniture	-7.9%	-1.6%
Cement	-1.8%	5.5%
Nonmetallic Minerals	0.1%	1.1%
Iron & Steel	0.2%	1.1%
Chemicals	1.6%	1.4%
Plastics	-5.1%	0.7%
Oil & Gas Drilling	4.6%	1.4%
Aircraft & Parts	6.0%	8.3%
Railroad Equipment	-7.0%	-1.5%
Lt Veh - Sales (Millions)	15.5	15.6
Lt Veh - Sales (% Chg.Y/Y)	12.1%	1.3%
Goods Imports	-1.9%	4.3%
Goods Exports	2.5%	4.2%
Consumer Expenditures	2.5%	1.5%
Retail Sales	3.2%	2.1%
CPI Inflation	4.1%	2.7%
Core CPI Inflation	4.8%	3.1%
WTI Crude Oil (\$/Barrel)	77.8	81.5
Brent Crude Oil (\$/Barrel)	82.6	86.5
Brent-WTI Spread (\$/Barrel)	4.8	5.0

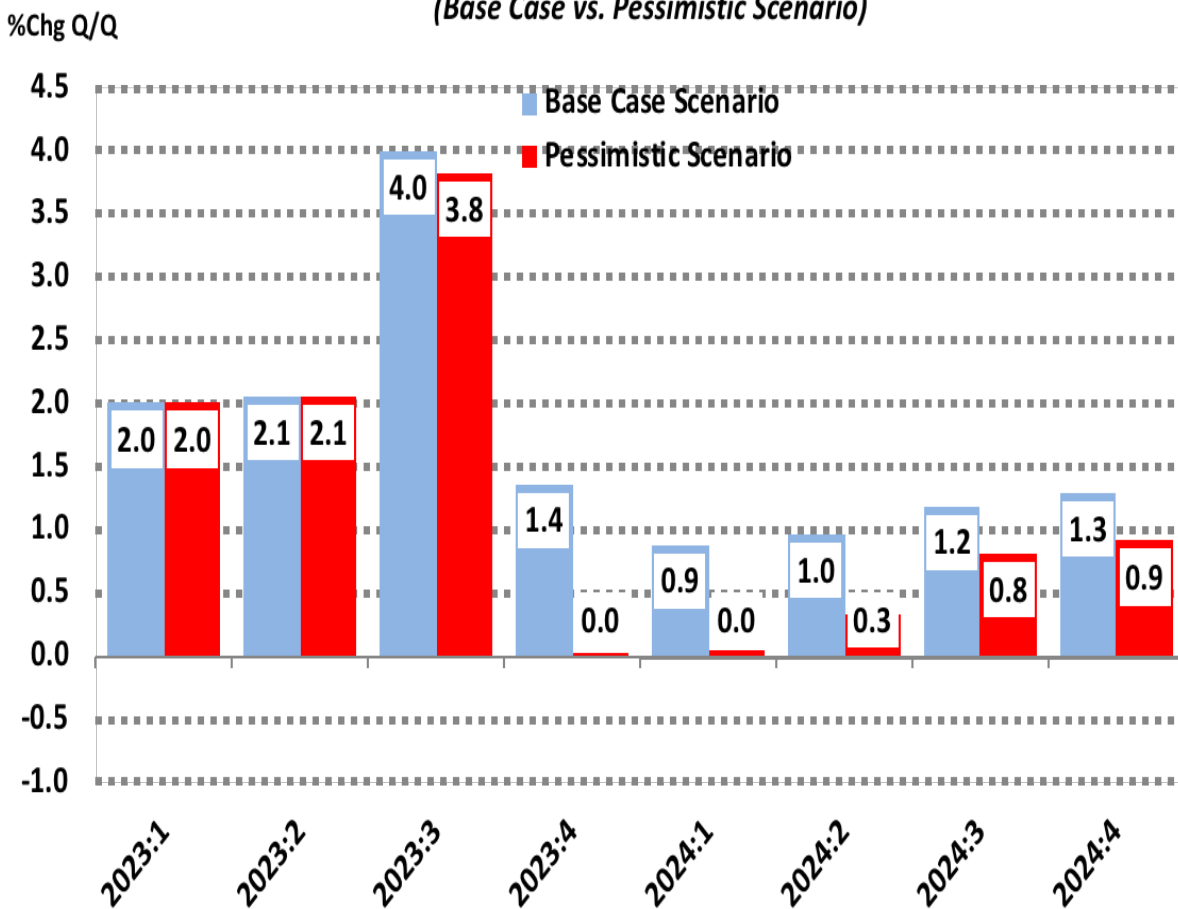
Source: S&P Global (Sep. '23); EIA and USDA WASDE (Sep. '23), SAK Economics LLC

THE U.S. FREIGHT RAIL OUTLOOK



Base Case Probability: 55%

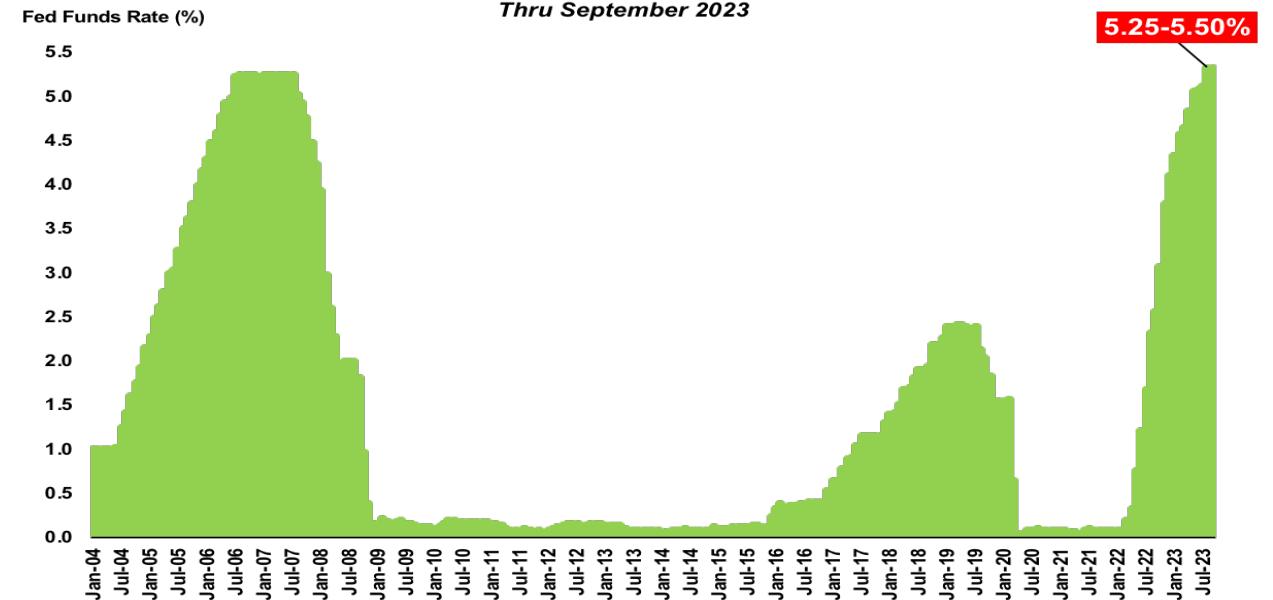
U.S. Real GDP Growth
(Base Case vs. Pessimistic Scenario)



Source: S&P Global, September 2023

Downside Probability: 30%

Fed Funds Rate
Thru September 2023



Source: Federal Reserve, September 12, 2023

Headwinds		Tailwinds	
<i>Recession Scenario Probability (30%)</i>		<i>Optimistic Scenario Probability (15%)</i>	
1	Fed Tightening	1	Jobs
2	Banks: Credit Crunch	2	Supply Chains Easing
3	Debt Ceiling	3	Fiscal Policy
4	Energy Prices (War)	4	Productivity
5	China	5	Incomes, Savings & Wages
6	Student Loans	6	Rising Consumer Confidence

Source: SAK Economics LLC Sep. 2023

YOURS TRULY'S HEY (HAIR) DAYS

