



ASSOCIATION OF
AMERICAN RAILROADS

POLICY &
ECONOMICS

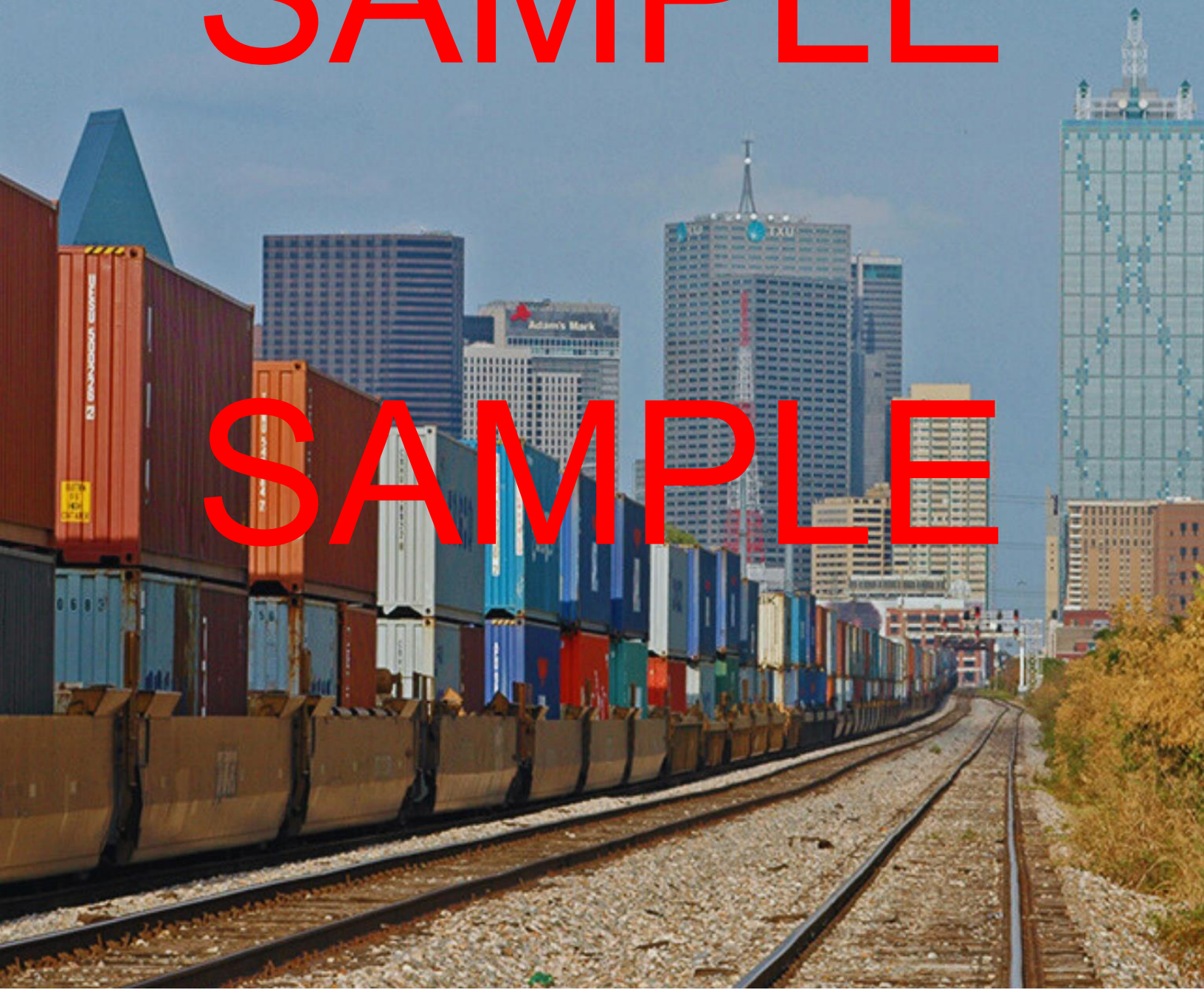
Rail Time Indicators

JULY 9, 2024

A REVIEW OF TRAFFIC TRENDS
& KEY ECONOMIC INDICATORS
SHAPING FREIGHT RAIL DEMAND

SAMPLE

SAMPLE



Copyright © 2024 by the Association of American Railroads. All Rights Reserved.

Rail Time Indicators, produced by AAR's Policy and Economics team examines, in a non-technical and accessible way, the state of the economy and rail traffic, how they're interconnected and where they might be going.

We obtain information for RTI from sources we believe to be reliable. However, we can't guarantee the accuracy or completeness of this sourced information and we assume no liability for errors or omissions. The AAR reserves the right to change anything associated with RTI at any time. Opinions expressed in RTI are not necessarily those of the AAR or its members. RTI is free to employees of [AAR members](#) and to employees of regional and short line railroads and is available through a [paid subscription](#) for everyone else.

Copyright Use Restrictions

Employees of AAR members and AAR associates, as well as employees of short line railroads, can forward RTI to other people at their firms but should not forward RTI to anyone outside their firms. Subscribers who are not employees of AAR members, AAR associates, or short line railroads are not permitted to forward RTI to anyone else, either inside or outside their firm without their approval. Discounted group rates for subscriptions to RTI for non-AAR members are available.

AAR is the copyright owner of this publication and reserves all rights. Reproduction of this publication, including the charts and tables therein, is prohibited except for short excerpts and quotes. Transmitting this publication in whole or in part; uploading it to a public website; and otherwise disseminating the charts and tables therein is prohibited. Neither you nor the organization you represent may recreate, distribute, reproduce, or sell any portion of the purchased content unless you or your organization receive prior written authorization from the AAR.

A Note on Rail Traffic Data in RTI

The AAR's raw traffic data cover one week, with the week beginning on Sunday and ending on Saturday. We create monthly figures by assigning each week to a particular month. Weeks completely within a particular month are assigned to that month. Weeks that bridge two months are assigned to the month with more of their days in it. This means some months have 4 weeks and some have 5. Because of this, we use weekly averages to compare traffic from one month to another.

June 2024 is the 4 weeks from Sunday, June 2, 2024, to Saturday, June 28, 2024. When comparing a current period to the previous year, we use the period of the same length 52 weeks earlier. So, when comparing June 2024 to June 2023, June 2023 is the 4 weeks falling 52 weeks earlier — that is, from Sunday, June 4, 2023 to Saturday, July 1, 2023. The same principle applies to quarters.

Unless otherwise specified, rail traffic figures in RTI are originations and percentages are year-over-year. Carloads are categorized into 20 commodity groups. A unit of rail intermodal traffic is either a shipping container (94.9% of U.S. intermodal traffic in 2023) or a truck trailer (5.1%) carried on a rail flat car. A container counts as one unit regardless of its size. Intermodal is not included in carloads. Commodity detail for what's inside containers and trailers is not available. The U.S. operations of Canadian and Mexican railroads are in North American totals, not U.S. totals.

Get In Touch

For all questions, comments, or requests, please email publications@aar.org.

Table of Contents

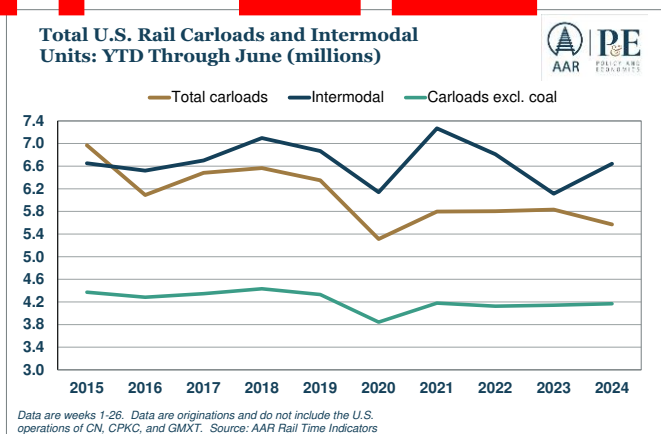
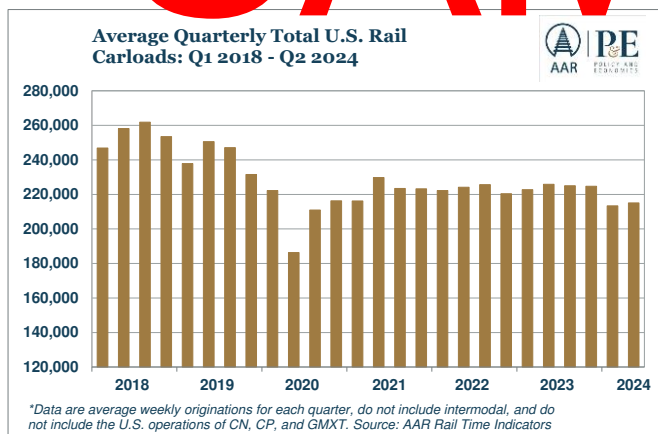
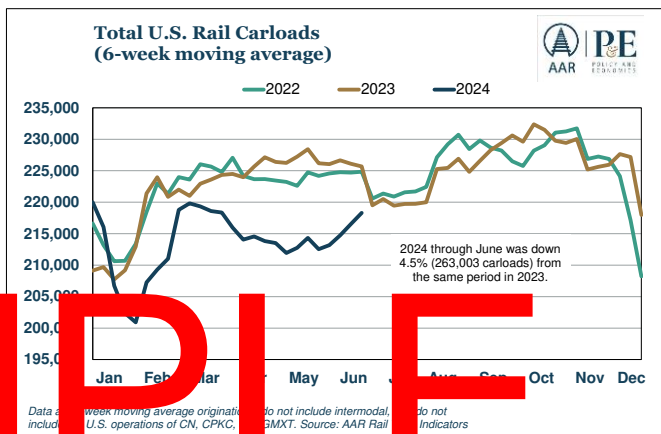
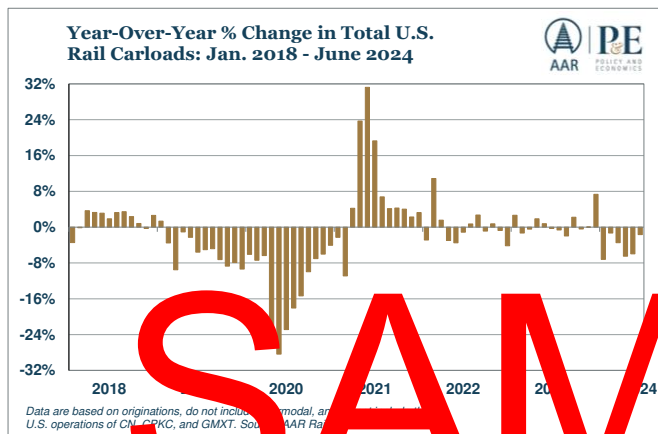
Rail Traffic Summary for Q2 2024	2
Summary of Key Economic Indicators	7
The Big Picture: Railroads and the Economy	8
The U.S. Economy Today Refuses to Make Its Intentions Clear	10
The Broad Economy Today	11
Inflation Is Still a Work in Progress	11
A Slowdown in the Labor Market?	13
The Consumer Spending	16
Rail Intermodal	16
Consumer Spending	18
Manufacturing Continue to Struggle	19
Broader Supply Chain Issues	22
What About Near-Term Economic Growth?	24
Recent Rail Traffic Trends for Major Commodities	25
Chemicals.....	25
Coal.....	27
Grain.....	30
Grain Mill Products	32
Food Products.....	33
Petroleum Products.....	33
Lumber & Wood Products	34
Pulp & Paper Products	36
Motor Vehicles	36
Steel and Iron-Related Products	38
Crushed Stone, Sand, and Gravel.....	39
Rail Cars in Storage	40

Rail Traffic Summary for Q2 2024

Sometime around 500 B.C., the Greek philosopher Heraclitus supposedly said, “No man ever steps in the same river twice.” He suggests the world and everything in it are always changing. Railroads weren’t around back then, but Heraclitus wouldn’t be surprised that rail markets and the economic conditions railroads face are always changing too. (The nearby chart shows some key changes in conditions railroads have faced just in the past few years.) Sometimes those changes in conditions are positive, sometimes not, but rail traffic patterns always reflect them.

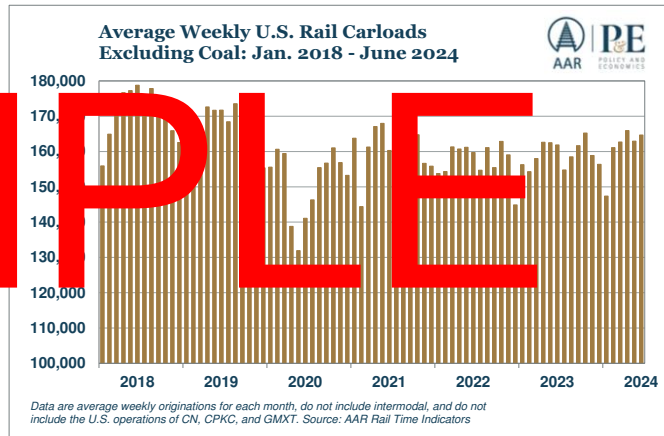
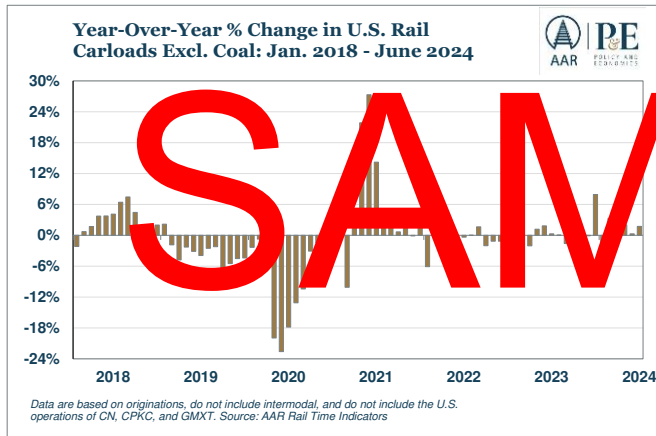


In terms of total carloads, we're in a period where the changes are mostly positive. Total original carloads of U.S. railroads in the second quarter of 2024 were down 4.8%, or 40,045 carloads, from the second quarter of 2023. That was the biggest year-over-year quarterly percentage decline for total carloads since Q4 2022. Total carloads averaged 215,042 per week in Q2 2024, up slightly from Q1 2024 but otherwise the fewest since Q3 2020. Year-to-date total carloads in 2024 through June were down 4.5% (263,003 carloads) from last year and down 4.0% from the first six months of 2022. In the first six months of 2024, total carloads have fallen each month compared to last year.



Total carloads are down due to a decrease in coal carloads. We discuss coal beginning on page 27. In summary, in Q2 2024, coal carloads were down 20.3% from last year. They averaged 50,663 carloads per week, the second fewest for coal for any quarter in our records (that go back to 1988). Year-to-date coal carloads in 2024 through June were down 17.1%, or 289,401 carloads, from last year to 1.40 million – by far the lowest January-to-June total for coal in our records. Coal carloads today are far lower than they used to be, but coal remains by far the single highest volume carload commodity for U.S. railroads.

Excluding coal, carloads were much better: up 1.7% (11,254 carloads) in Q2 2024 over Q2 2023 and up 0.6% (26,398 carloads) in the first six months of this year over last year.



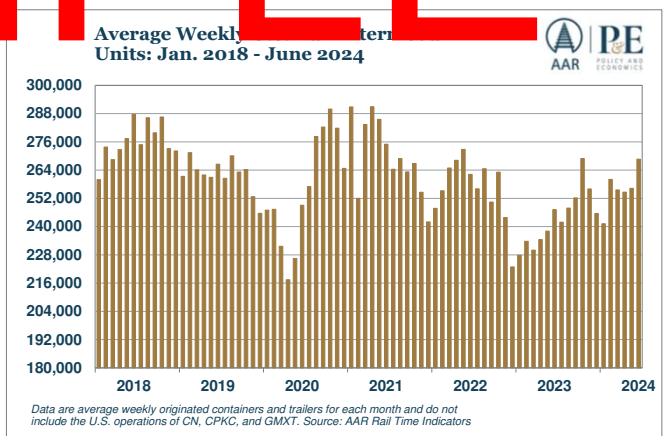
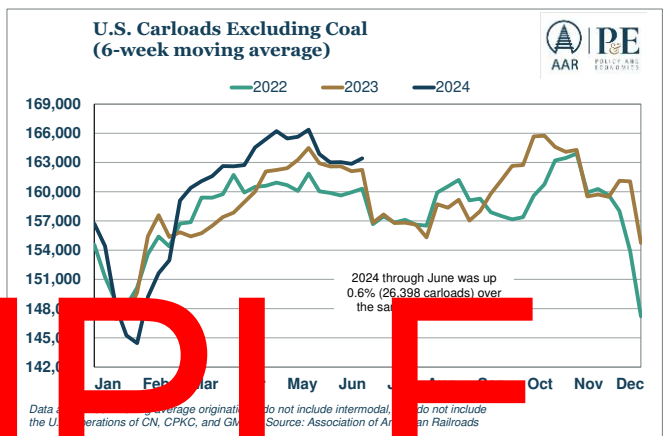
In June, 11 of the 20 carload categories we track saw gains for U.S. railroads. For the second quarter, 11 of the 20 were up. For the year-to-date through June, 10 of the 20 were up. Carload commodity details for the second quarter and the year to date are on page 5.

Chemicals and petroleum products were the top carload categories in the first half of 2024. We talk more about chemicals on page 25 and petroleum products on page 33.

Besides coal, commodities with significant carload declines in the first half of 2024 include crushed stone and sand (see page 39), nonmetallic minerals, and primary metal products (see page 38).

U.S. intermodal volume had another good month in June – volume was up 8.7% over last year, the 10th straight year-over-year gain for intermodal.

For the second quarter, intermodal was up 8.2%, with volume the highest since Q2 2022. Year-to-date intermodal through June was up 8.7% over last year but down 2.5% from 2022 through June.

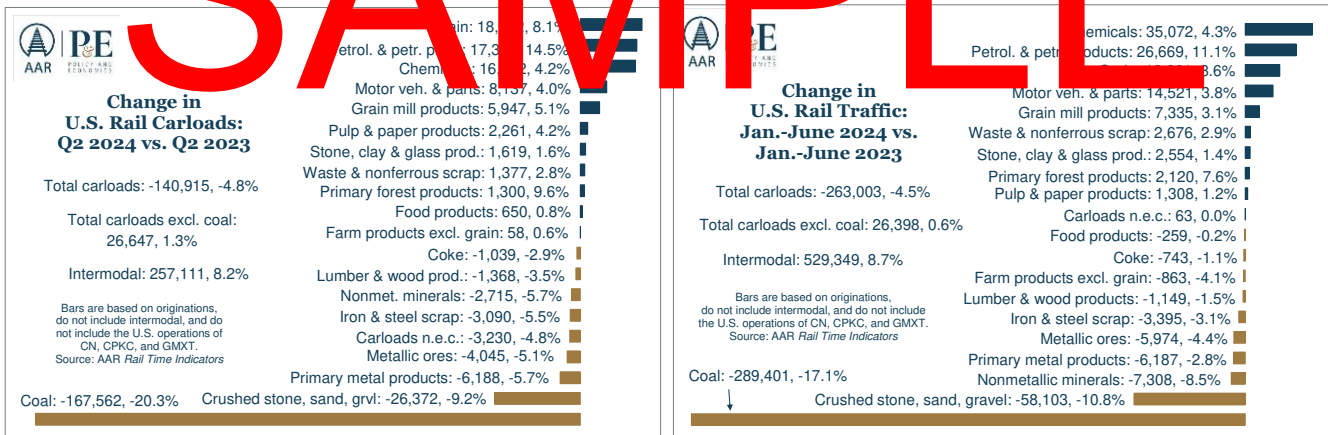


		Feb. '24	Mar. '24	April '24	May '24	June '24
U.S.*	Total carloads					
	Avg. per week	220,802	216,716	212,221	212,160	221,466
	% change from prior year	-1.3%	-3.5%	-6.5%	-6.0%	-1.7%
	Total carloads excl. coal					
	Avg. per week	161,105	162,694	165,918	162,921	164,663
	% change from prior year	3.3%	2.9%	2.0%	0.3%	1.7%
	Total intermodal					
	Avg. per week	260,078	255,580	254,642	256,250	268,662
	% change from prior year	10.9%	11.7%	8.6%	7.6%	8.7%
Economically sensitive***						
	Avg. per week	400,281	397,575	399,701	399,641	414,943
	% change from prior year	7.9%	7.9%	6.0%	4.6%	5.5%
North America**	Total carloads					
	Avg. per week	337,009	327,055	333,624	337,125	328,454
	% change from prior year	0.9%	-2.9%	4.4%	0.2%	-0.8%
	Total intermodal					
	Avg. per week	345,002	342,963	341,402	347,897	351,688
	% change from prior year	10.5%	11.6%	9.4%	6.3%	6.2%
		Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024
U.S.*	Total carloads					
	Avg. per week	225,882	225,005	224,721	213,371	215,042
	% change from prior year	0.8%	-0.3%	2.0%	-4.2%	-4.8%
	Total carloads excl. coal					
	Avg. per week	162,329	158,327	160,062	156,313	164,379
	% change from prior year	1.2%	0.6%	2.7%	0.0%	1.3%
	Total intermodal					
	Avg. per week	239,796	247,365	256,771	251,434	259,574
	% change from prior year	-10.3%	-4.0%	5.5%	9.1%	8.2%
Economically sensitive***						
	Avg. per week	384,000	390,276	395,092	387,394	404,368
	% change from prior year	-5.1%	1.7%	4.8%	-2.0%	5.3%
North America**	Total carloads					
	Avg. per week	357,100	351,251	354,245	357,125	322,611
	% change from prior year	-1.2%	0.3%	2.0%	3.8%	-2.9%
	Total intermodal					
	Avg. per week	322,349	325,217	336,304	333,231	345,680
	% change from prior year	-10.0%	-6.7%	3.9%	8.4%	7.2%
		YTD Through June (in millions)				% change
		2021	2022	2023	2024	'23-'24
U.S.*	Total carloads	5.798	5.803	5.832	5.569	-4.5%
	Total carloads excl. coal	4.181	4.125	4.143	4.169	0.6%
	Total intermodal	7.269	6.812	6.114	6.643	8.7%
North America**	Total carloads	8.522	8.447	8.630	8.342	-3.3%
	Total intermodal	9.628	9.067	8.189	8.826	7.8%

All figures are originations. Carloads do not include intermodal. *U.S. is the sum of BNSF, CSX, Lake Superior and Ishpeming, NS, Paducah & Louisville, and UP. **North America is the U.S. total plus CN, CPKC, and GMXT. ***Intermodal + carloads excluding coal and grain

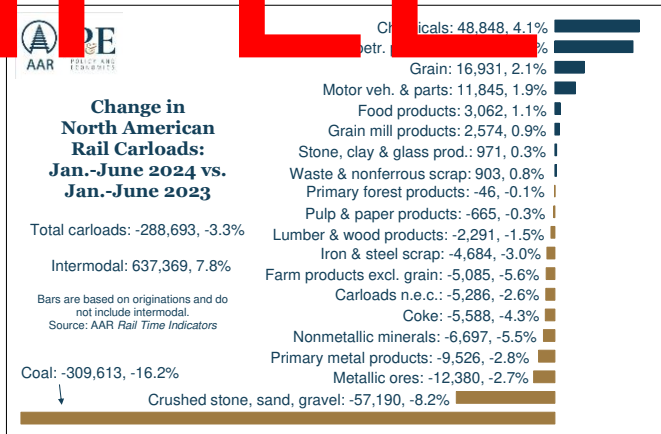
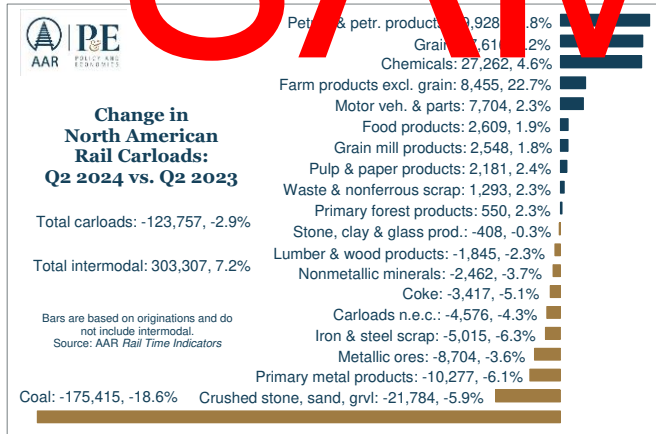
U.S. RAIL TRAFFIC: SECOND QUARTER 2024*									
(13 weeks ending June 29, 2024 and year-to-date)									
Commodity	SECOND QUARTER				YEAR-TO-DATE				% of Total YTD 2024
	2024	2023	Chng	%	2024	2023	Chng	%	
Carloads									
Agricultural & food prod.	466,764	441,127	25,637	5.8%	947,965	923,691	24,274	2.6%	17.0%
Grain	254,610	235,628	18,982	8.1%	519,205	501,144	18,061	3.6%	9.3%
Farm products excl. grain	10,146	10,088	58	0.6%	20,368	21,231	-863	-4.1%	0.4%
Grain mill products	122,490	116,543	5,947	5.1%	246,127	238,792	7,335	3.1%	4.4%
Food products	79,518	78,868	650	0.8%	162,265	162,524	-259	-0.2%	2.9%
Chemicals & petroleum	562,610	528,247	34,363	6.5%	1,112,985	1,051,244	61,741	5.9%	20.0%
Chemicals	425,175	408,193	16,982	4.2%	845,061	809,989	35,072	4.3%	15.2%
Petroleum & petr. prod.	137,435	120,054	17,381	14.5%	267,924	241,255	26,669	11.1%	4.8%
Coal	658,618	826,180	-167,562	-20.3%	1,400,375	1,689,776	-289,401	-17.1%	25.1%
Forest products	109,413	107,220	2,193	2.0%	216,697	214,418	2,279	1.1%	3.9%
Primary forest products	14,880	13,580	1,300	9.6%	29,881	27,761	2,120	7.6%	0.5%
Lumber & wood products	36,711	39,431	-1,368	-3.7%	71,800	71,113	-1,149	-1.6%	1.3%
Pulp & paper products	5,446	54,200	-2,261	-4.1%	11,444	11,444	1,308	1.2%	2.0%
Metallic ores & metals	21,749	281,111	-1,362	-0.6%	517,855	531,554	-16,299	-3.1%	9.3%
Metallic ores	6,052	80,091	-4,045	-5.1%	13,078	13,078	-5,974	-4.4%	2.3%
Coke	1,039	36,121	-1,039	-2.9%	68,467	69,506	-743	-1.1%	1.2%
Primary metal products	102,255	18,444	-6,187	-5.5%	212,461	214,948	-6,187	-2.8%	3.8%
Iron & steel scrap	53,357	3,000	-3,000	-5.0%	107,723	11,395	-3,395	-3.0%	1.9%
Motor vehicles & parts	210,351	202,214	8,137	4.0%	398,495	383,974	14,521	3.8%	7.2%
Nonmetallic minerals	407,053	434,521	-27,468	-6.3%	750,467	813,324	-62,857	-7.7%	13.5%
Crushed stone, sand & gravel	260,485	286,857	-26,372	-9.2%	482,034	540,137	-58,103	-10.8%	8.7%
Nonmetallic minerals	44,526	47,241	-2,715	-5.7%	78,554	85,862	-7,308	-8.5%	1.4%
Stone, clay & glass prod.	102,042	100,423	1,619	1.6%	189,879	187,325	2,554	1.4%	3.4%
Other	113,989	115,842	-1,853	-1.6%	224,535	221,796	2,739	1.2%	4.0%
Waste & nonferrous scrap	49,774	48,397	1,377	2.8%	95,488	92,812	2,676	2.9%	1.7%
All other carloads	64,215	67,445	-3,230	-4.8%	129,047	128,984	63	0.0%	2.3%
TOTAL CARLOADS	2,795,547	2,936,462	-140,915	-4.8%	5,569,374	5,832,377	-263,003	-4.5%	100.0%
TOTAL EXCLUDING COAL	2,136,929	2,110,282	26,647	1.3%	4,168,999	4,142,601	26,398	0.6%	74.9%
TOTAL EXCL. COAL & GRAIN	1,882,319	1,874,654	7,665	0.4%	3,649,794	3,641,457	8,337	0.2%	65.5%
Intermodal									
Containers	3,241,188	2,949,695	291,493	9.9%	6,380,089	5,770,299	609,790	10.6%	96.0%
Trailers	133,275	167,657	-34,382	-20.5%	263,021	343,462	-80,441	-23.4%	4.0%
TOTAL INTERMODAL	3,374,463	3,117,352	257,111	8.2%	6,643,110	6,113,761	529,349	8.7%	100.0%
TOTAL CARS & MOD.	6,170,010	6,053,814	116,196	1.9%	11,942,484	11,946,138	-266,346	-0.2%	100.0%

*Data are originations not seasonally adjusted and do not include the U.S. operations of CN, CPKC or GMXT.



NORTH AMERICAN RAIL TRAFFIC: SECOND QUARTER 2024*										
(4 weeks ending June 29, 2024, and Year-To-Date)										
Commodity	SECOND QUARTER				YEAR-TO-DATE				% of Total YTD 2023	
	2024	2023	Chng	%	2024	2023	Chng	%		
Carloads										
Agricultural & food products	740,949	699,721	41,228	5.9%	1,496,486	1,479,004	17,482	1.2%	17.9%	
Grain	409,192	381,576	27,616	7.2%	832,139	815,208	16,931	2.1%	10.0%	
Farm products excl. grain	45,778	37,323	8,455	22.7%	86,369	91,454	-5,085	-5.6%	1.0%	
Grain mill products	145,352	142,804	2,548	1.8%	293,386	290,812	2,574	0.9%	3.5%	
Food products	140,627	138,018	2,609	1.9%	284,592	281,530	3,062	1.1%	3.4%	
Chemicals and petroleum	903,367	846,177	57,190	6.8%	1,796,929	1,702,857	94,072	5.5%	21.5%	
Chemicals	619,174	591,912	27,262	4.6%	1,226,390	1,177,542	48,848	4.1%	14.7%	
Petroleum & petr. prod.	284,193	254,265	29,928	11.8%	570,539	525,315	45,224	8.6%	6.8%	
Coal	766,138	941,858	-175,720	-18.7%	1,496,486	1,911,993	-415,507	-21.7%	19.2%	
Forest products	192,201	195,400	-3,199	-1.6%	391,938	394,440	-2,502	-0.8%	4.7%	
Primary forest products	55,500	23,950	31,550	131.7%	48,593	44,339	4,254	9.6%	0.6%	
Lumber & wood products	136,701	79,910	56,791	71.1%	153,510	151,110	2,400	1.6%	1.8%	
Pulp & paper products	20,000	91,540	-71,540	-78.1%	109,826	191,991	-82,165	-42.8%	2.3%	
Metallic ores and metal	529,224	566,633	-37,409	-6.6%	1,060,799	1,097,777	-36,978	-3.4%	12.7%	
Metallic ores n.e.c.	232,507	11,210	221,297	1972.3%	451,564	461,444	-9,880	-2.1%	5.4%	
Coke	63,602	67,019	-3,417	-5.1%	124,370	129,958	-5,588	-4.3%	1.5%	
Primary metal products	158,183	168,460	-10,277	-6.1%	332,250	341,776	-9,526	-2.8%	4.0%	
Iron & steel scrap	74,932	79,947	-5,015	-6.3%	152,615	157,299	-4,684	-3.0%	1.8%	
Motor vehicles & parts	335,962	328,258	7,704	2.3%	641,744	629,899	11,845	1.9%	7.7%	
Nonmetallic minerals	561,788	586,442	-24,654	-4.2%	1,041,086	1,104,002	-62,916	-5.7%	12.5%	
Crushed stone, sand & grvl	346,297	368,081	-21,784	-5.9%	641,546	698,736	-57,190	-8.2%	7.7%	
Nonmetallic minerals	63,520	65,982	-2,462	-3.7%	115,748	122,445	-6,697	-5.5%	1.4%	
Stone, clay & glass prod.	151,971	152,379	-408	-0.3%	283,792	282,821	971	0.3%	3.4%	
Other	159,914	163,197	-3,283	-2.0%	309,325	313,708	-4,383	-1.4%	3.7%	
Waste & nonferrous scrap	57,178	55,885	1,293	2.3%	108,364	107,461	903	0.8%	1.3%	
All other carloads	102,736	107,312	-4,576	-4.3%	200,961	206,247	-5,286	-2.6%	2.4%	
TOTAL CARLOADS	4,193,937	4,317,694	-123,757	-2.9%	8,341,587	8,630,280	-288,693	-3.3%	100.0%	
Intermodal										
Containers	4,347,875	4,007,318	340,557	8.5%	8,535,250	7,812,826	722,424	9.2%	96.7%	
Trailers	145,969	183,219	-37,250	-20.3%	290,856	375,911	-85,055	-22.6%	3.3%	
TOTAL INTERMODAL	4,493,844	4,190,537	303,307	7.2%	8,826,106	8,188,737	637,369	7.8%	100.0%	
TOTAL CARLOADS INTERMOD.	8,687,781	8,508,231	179,550	2.1%	17,167,693	16,819,017	348,676	2.1%	100.0%	

*Data are originations not seasonally adjusted.



Summary of Key Economic Indicators

Key Economic Indicators



	Jan '24	Feb '24	Mar '24	Apr '24	May '24	Jun '24
Dallas Fed Weekly Econ. Index	1.68%	1.59%	1.69%	1.62%	1.81%	2.13%
Manufacturing PMI® (<50%=bad)	49.1%	47.8%	50.3%	49.2%	48.7%	48.5%
Services PMI® (<50%=bad)	53.4%	52.6%	51.4%	49.4%	53.8%	48.8%
Industrial Output						
Total (12=100)	101.7	101.6	102.4	102.5	103.3	n/a
% change from prev. month	-0.8%	0.1%	-0.8%	0.0%	0.9%	n/a
Manufact. (% of total, 2012=100)	98.1	97.7	99.4	99.0	99.8	n/a
% change from prev. month	-1.5%	1.1%	-0.1%	-0.4%	0.9%	n/a
Capacity Utilization						
Overall	77.9%	78.4%	78.3%	78.2%	78.7%	n/a
Manufacturing	76.2%	77.2%	77.0%	76.6%	77.1%	n/a
Employment Situation						
Total net new jobs created	256,000	236,000	310,000	108,000	218,000	206,000
Unemployment rate	3.7%	3.9%	3.8%	3.9%	4.0%	4.1%
Class I Railroad Employment						
Total employed	122,677	123,377	122,941	122,967	122,518	n/a
Change in total from prior month	334	700	-436	26	-449	n/a
Consumer Confidence						
Conference Board (1985=100)	110.9	104.8	103.1	97.5	101.3	100.4
University of Michigan	79.0	76.9	79.4	77.2	69.1	68.2
Consumer Spending Adj. for Inflation						
% change total from prior month	-0.3%	0.2%	-0.3%	-0.1%	0.2%	n/a
% change goods from prior month	-1.3%	-0.1%	0.0%	-0.7%	0.6%	n/a
% change services from prior month	0.1%	0.3%	0.2%	0.1%	0.1%	n/a
% change total from prior year	1.9%	2.1%	2.6%	2.3%	2.4%	n/a
% change goods from prior year	1.6%	0.1%	2.5%	1.3%	1.7%	n/a
% change services from prior year	2.2%	2.6%	2.6%	2.6%	2.6%	n/a
New Auto Sales (SAAR, mil.)						
Total	14.9	15.6	15.5	15.8	15.9	15.3
% change total from prior year	-1.4%	4.9%	3.7%	1.0%	2.6%	-4.8%
Housing						
Total housing starts (SAAR, mil.)	1.376	1.546	1.299	1.352	1.277	n/a
Single-family starts (SAAR, mil.)	1.011	1.134	1.041	1.036	0.982	n/a
Multi-family starts (SAAR, mil.)	0.365	0.412	0.258	0.316	0.295	n/a

The Big Picture: Railroads and the Economy

The U.S. economy is the biggest in the world and incorporates pretty much every kind of economic activity imaginable. To be sure, railroads care about overall economic growth, but they especially care about growth in sectors connected to the production and consumption of tangible goods. To quote a CEO at a major railroad, “If consumers are consuming more services like travel, data plans or health care, that doesn’t really impact our top line. We need consumers to buy a house and fill it with goods.”

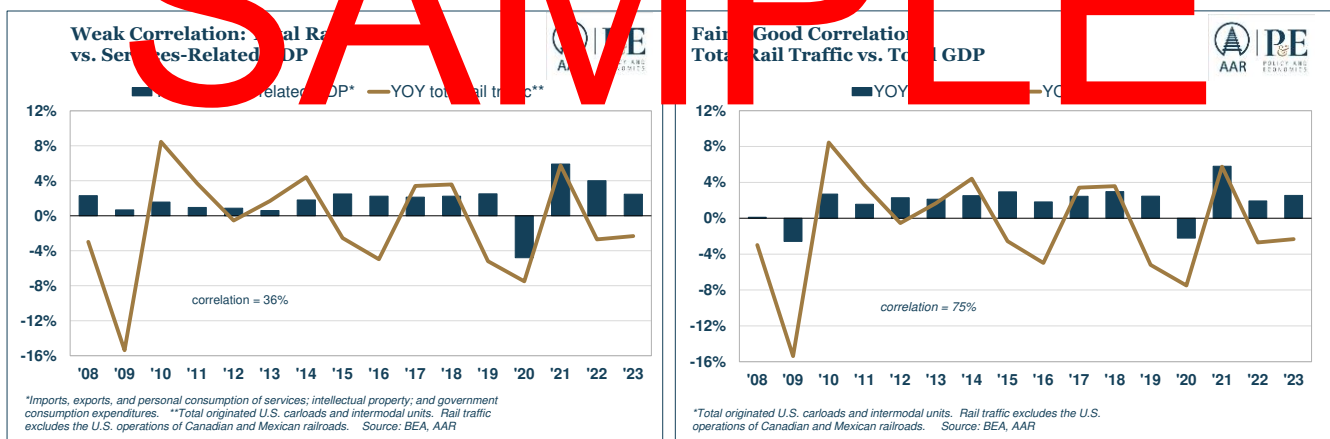
For example, consumer spending accounts for approximately 70 percent of U.S. GDP, but only about a third of consumer spending is for goods; the rest is for services. Only the goods component has the potential to directly generate significant freight movement. A railroad could easily be deeply involved in the production and delivery of, say, a washing machine, but probably not a haircut.¹

Likewise, the import and export of goods generate significant amounts of rail freight, but not the import and export of services. Similarly, new homes and business investment in equipment and structures could involve railroads, but purchases of software and other intellectual property will not.

The “good” or “tangible” sectors of the economy typically grow at different rates than the “services” or “non-tangible” sectors of the economy, with the goods sectors as a whole typically more volatile than non-goods sectors. At times, the goods sectors will outperform the overall economy; other times, they’ll lag. A further complication is that, for some key railroad “goods” — especially coal and grain — volumes tend to rise or fall for reasons that have little to do with the state of the overall economy.

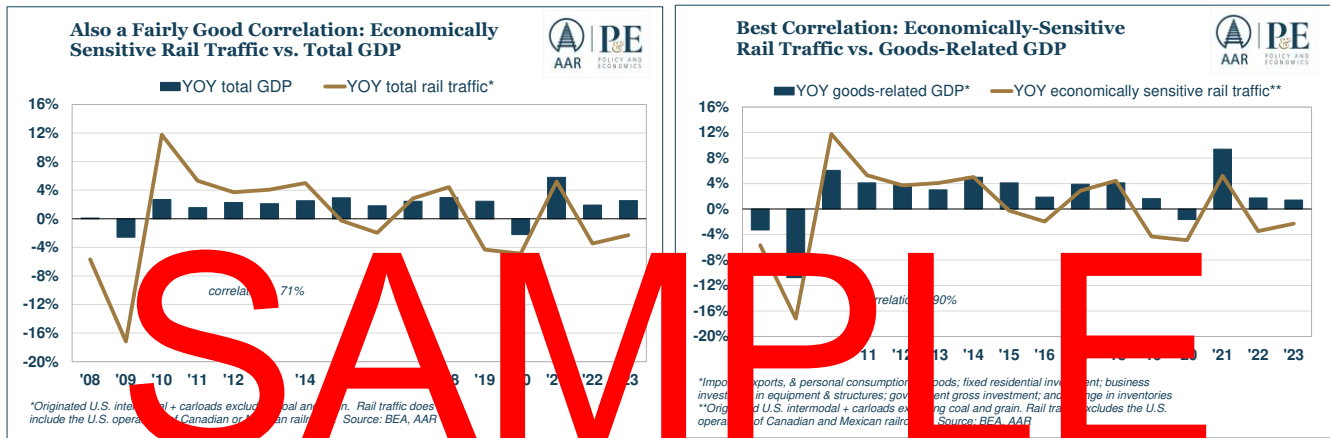
For most other goods carried by rail, the amount carried at a given time is a function of the health of the overall economy. When the economy is flourishing and businesses need freight moved — either to obtain supplies and raw materials or to deliver intermediate goods and final products to customers — demand for rail service typically surges. When people aren’t buying these goods and manufacturers aren’t building them, rail traffic typically declines. Put another way, rail volumes are a useful economic indicator overall, and especially for the goods side of the economy.

These points are made by the charts below. The top left chart compares the year-over-year change in an estimate of services-related GDP with the year-over-year change in total U.S. rail traffic (defined as total carloads plus total intermodal) from 2008 to 2023. The correlation is 36%, which is not terribly high. The top right chart compares total GDP (not just services) and total rail traffic. This time the correlation is a much stronger 75%.



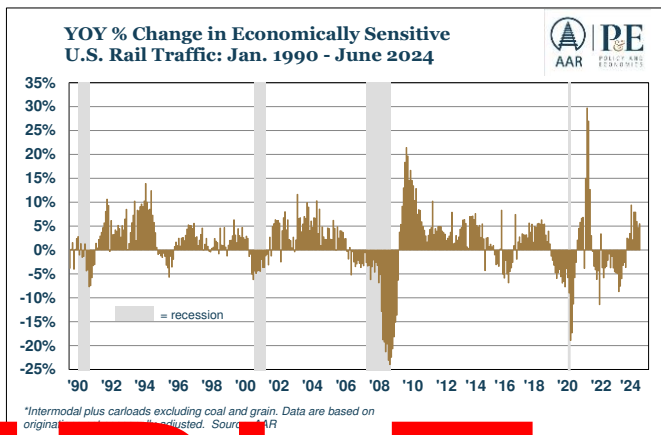
¹ Railroads do likely have an indirect involvement in many services. For example, the steel in a hairstylist’s scissors and her bottle of shampoo could easily have involved railroads somewhere along the line.

The chart below left compares total GDP with economically sensitive rail carloads, defined as intermodal plus carloads excluding coal and grain. The correlation in this case is also respectable at 71%. Finally, the bottom right chart compares an estimate of goods-related GDP with economically sensitive rail carloads (again, intermodal plus carloads excluding coal and grain, which when indexed we call the AAR’s “Freight Rail Index”). The correlation in this case is an even better 90%.



The charts above show that if you are interested in how well the economy is doing, rail traffic is a valuable metric to follow, even if most of the U.S. economy is services-based. (Look in this space in later editions of RTI for further examinations of the relationship between GDP and rail traffic.)

Looking at the rail-GDP nexus from a different angle, the chart at right shows economically sensitive rail traffic since 1990, with recessions shaded. There have been some times when rail volumes were negative without there being a recession in the overall economy, but if there’s been an overall recession, there’s always a recession in rail volumes too.



There is no perfect economic indicator, but it makes good sense to follow railroads to get a firm handle of what’s going on with the economy.

The U.S. Economy Today Refuses to Make Its Intentions Clear

In these pages in the past, we’ve said the U.S. economy is often like a game of tug-of-war, with economists, policymakers, and analysts on each side expressing conflicting views on the state of the economy. Sometimes one side has overwhelming support for its view and the game doesn’t last long. Other times, though, the sides are more closely matched and the game can last a long time. Today, we’re in one of those long-lasting games and it’s still unclear which side is winning.²

On one side are those who claim the economy is, by and large, in good shape. Players on this side point to huge recent job gains and an unemployment rate that, while higher than it was a year ago, is still extremely low by historical standards. They say inflation rates are far lower than they were a couple of years ago; household balance sheets are relatively healthy, which should keep consumer spending at a respectable level; recent corporate earnings have been very good overall; and the stock market has been setting records. These players admit there’s some economic uncertainty out there and bumps in the road can be expected, but they say the same reasons to think moderate economic growth won’t continue for the foreseeable future.

Players on the other side say that’s wishful thinking. They point to other indicators that, they say, are flashing yellow, if not red: for example, a manufacturing sector that’s been flat at best for two years; tepid consumer confidence; and a weak housing sector. They point to the Services PMI®. This measure of the health of the giant U.S. services sector came in well below expectations in June and was in “contraction” territory for the second time in three months (see the chart on page 24). This side admits inflation has slowed, but they say past inflation has lifted prices so high that more and more consumers will be forced to cut back on spending. They say key labor market indicators have already started to worsen (e.g., the unemployment rate) and are likely to continue along that path. And they say the Federal Reserve’s balancing act — keeping interest rates higher for longer to kill inflation without tipping the economy into recession — can’t work forever.

Who’s right? Right now, most economists are probably on the first team, agreeing that moderate economic growth is likely to continue. But a game of tug-of-war can change quickly if just a couple strong players join one side, or if a player or two changes sides, or if some exogenous event comes along. And as the past couple of years have shown, what matters to railroads and freight transporters is the goods side of the economy. A growing or shrinking overall economy does not translate into exactly equivalent movements for freight transportation volumes.

In the sections that follow, we discuss what’s going on with the U.S. economy, including what many key economic indicators are saying and the many ways rail traffic adds to the discussion.

² *Tug-of-war has been around forever: ancient Chinese texts suggest it was used as a training aid for soldiers more than 7,000 years ago. Tug-of-war was an actual Olympic sport from 1900 to 1920.*

The Broad Economy Today

How big is the U.S. economy? In today’s dollars, it’s about \$28.3 trillion, too big for us to really imagine.³ Kudos to the statisticians and economists in the government and elsewhere for helping us make sense of it.

The Bureau of Economic Analysis (BEA) reports that U.S. GDP rose an annualized and seasonally adjusted 1.4% in the first quarter of 2024 over the first quarter of 2023. That’s the slowest rate of growth since the first half of 2022 and well below growth of 4.9% in Q3 2023 and 3.4% in Q4 2023. The average for 2018 through 2019, before the pandemic, was 2.5%, so Q1 2024 was clearly below average.

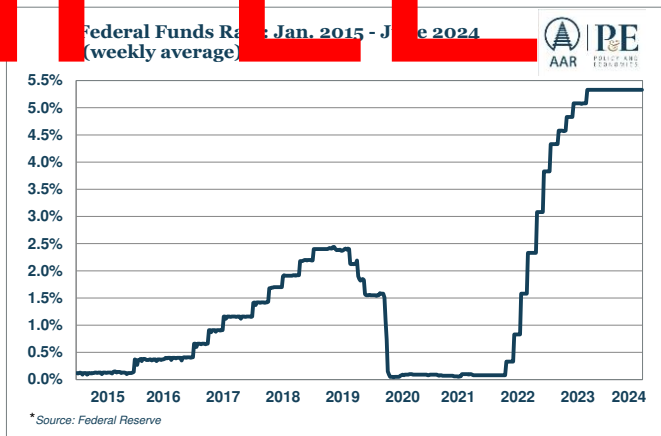
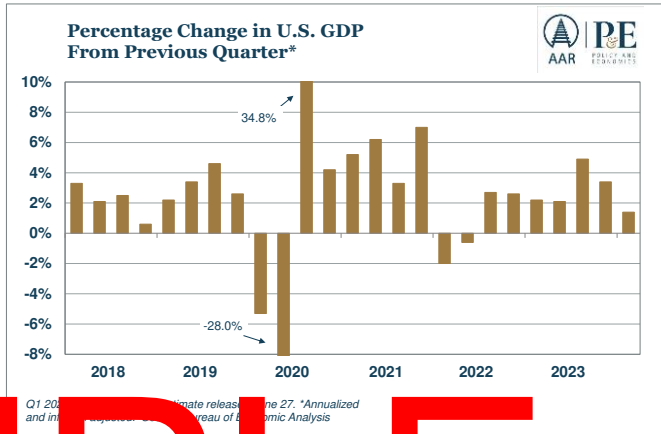
It’s also what was supposed to happen. For many economists, the question is, what took so long? The Federal Reserve started raising interest rates in March 2022 in response to inflation that, by then, was already surging. The Fed raised rates repeatedly until July 2023 in the fastest round of rate increases in 40 years. Rates have been flat since then, but every time the Fed has met, there’s been intense speculation on if the Fed would raise or lower them.

The idea behind raising interest rates is that borrowing costs go up, which tends to reduce spending (e.g., financing a new car becomes more expensive, so you expect fewer car sales) and investment (e.g., borrowing money to fund a plant expansion becomes more costly, so fewer plants are expanded). In theory, this should slow economic growth (hopefully not so much as to tip the economy into recession) and lower inflation at the same time.

If high interest rates are mainly making themselves felt in the broader economy, as evidenced by the lower Q1 2024 GDP number and a slowing labor market (see page 13) and some other metrics, it’s taken far longer than most economists expected. Some sectors have clearly suffered from high rates (housing, for example, as mortgage rates rose — see page 35), but by and large the broader economy has proven resilient.

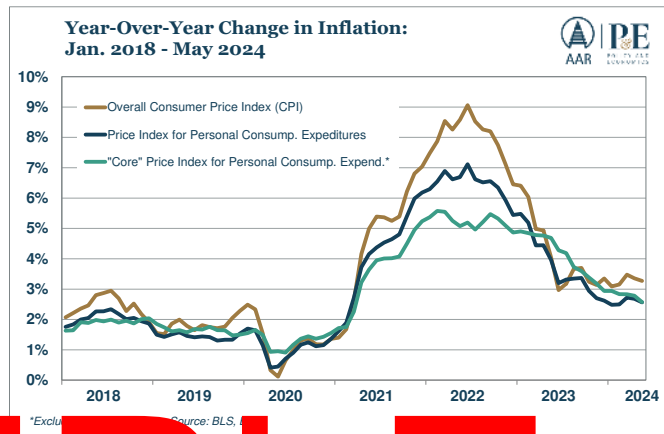
Inflation Is Still a Work in Progress

Low inflation is often considered desirable, but high inflation is not. High inflation imposes a hidden tax on people and firms; reduces their wealth and savings; erodes confidence in the economy; disrupts economic planning by creating uncertainty; and harms a country’s global competitiveness. Avoiding these problems is exactly why the Federal Reserve has a goal of 2% inflation.



³ You’d need approximately 188,000 60-foot boxcars to hold 28.3 trillion dollar bills. A train that long would stretch roughly 2,350 miles, roughly the distance from New York City to Los Angeles.

We're not there yet, but we're close. The year-over-year price index for personal consumption expenditures (PCE), the inflation index preferred by the Federal Reserve, peaked in June 2022 at 7.1%. **In May 2024, it was down to 2.6%.** Excluding food and energy, the year-over-year PCE was also at 2.6% in May, down from a peak of 5.6% in February 2022 and down from 2.8% in April 2024. Meanwhile, the overall consumer price index was up 3.3% in May 2024 over May 2023, down from a peak of 9.1% in June 2022.



Unfortunately, over the past six months, inflation has essentially plateaued. No one knows if, and how quickly, it will get down to the Fed's 2% target.

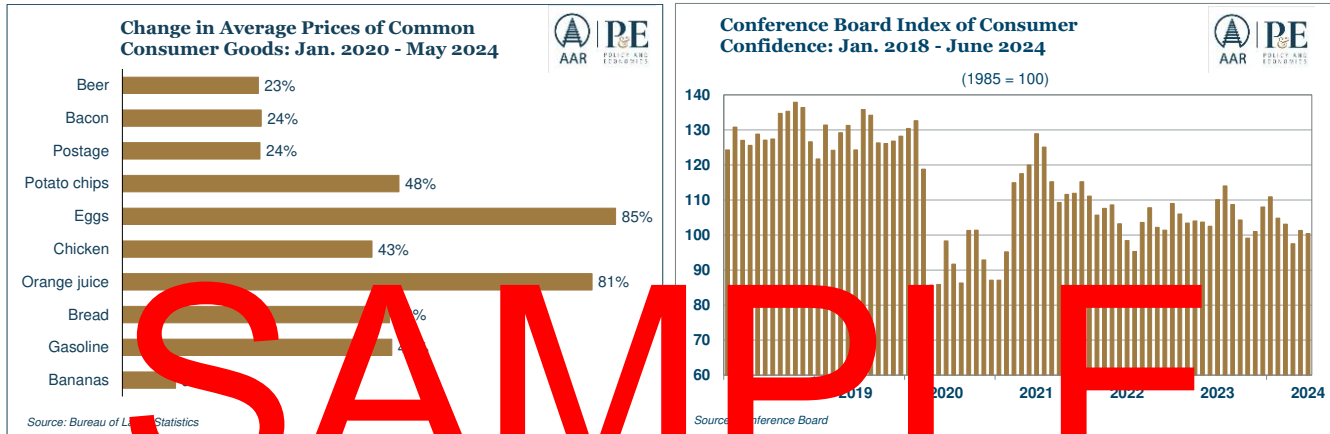
At a press conference following the Fed's June 12 meeting, Chairman Jerome Powell said, "We've made pretty good progress" on inflation but "we'll need to see more good data." At that meeting, Fed officials responsible for setting interest rates signaled that one cut later this year has been penciled in. Of the 19 officials on the Fed panel, 15 said rates would fall in the second half of this year. Roughly half the Fed officials anticipated cutting rates twice and half thought just once. Early this year, many economists were predicting three or even four rate cuts in 2024. That didn't happen mainly because the labor market has remained more resilient than expected and because inflation has remained too high. Fed officials meet four more times in 2024, including July and September.

For railroads, lower overall inflation could mean higher consumer confidence, increased demand for goods, and increased demand for shipping goods. It potentially could also mean more predictable and manageable input costs. And for railroads, like for other firms, low inflation generally provides a more stable environment for long-term planning. All else equal, it could mean more railroad capacity expansion and technology implementation.

It's worth mentioning one more point about inflation: even if inflation is "baked in" in the short run. Put another way, the rate at which prices are growing today is much slower than it was 18-24 months ago, but actual prices we pay are often significantly higher, reflecting the higher past rates. The chart below left shows the change in average prices for a variety of common consumer goods from January 2020 (right before the pandemic) to May 2024. In some cases, the increases are staggering: chicken is 43% higher; potato chips are 48% higher; orange juice is 31% higher.⁴

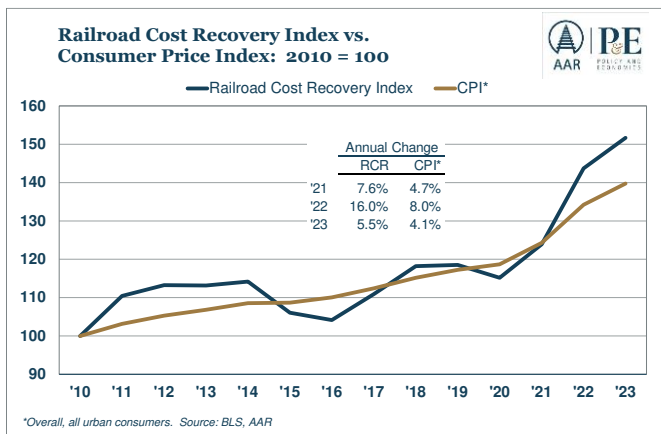
⁴ Orange juice here refers to frozen concentrate. During World War II, the military needed Vitamin C to help prevent scurvy. At that time, the Florida Citrus Commission and the USDA jointly developed frozen concentrate as a way to preserve orange juice. An [obituary for C.D. Atkins](#), a key player in this effort, appeared in the *New York Times* on June 8, 2000. Frozen concentrate facilitated a mass market for orange juice after the war.

The consumer products in the chart were chosen at random, and no doubt other items haven't seen these kinds of price increases. Still, consumers notice higher prices every time they go to the grocery store, and it's a major reason why consumer confidence today is well below where it was before the pandemic.



SAMPLE

Railroads have their own inflationary pressures. The [Railroad Cost Recovery Index \(RCR\)](#) measures changes in the cost of railroad inputs, similar to how the CPI measures changes in the costs of a basket of consumer goods. Since 2010, the RCR has been well correlated with the CPI, though there's been a divergence over the past few years. In 2021, 2022, and 2023, the RCR rose 7.6%, 16.0%, and 5.5%, respectively, much higher than the CPI's comparable increases of 4.7%, 8.0%, and 4.1%. In 2022 and 2023, the RCR rose primarily because of higher wages associated with collective bargaining agreements reached in late 2022, and also because of higher fuel and material prices.



SAMPLE

A Slowdown in the Labor Market?

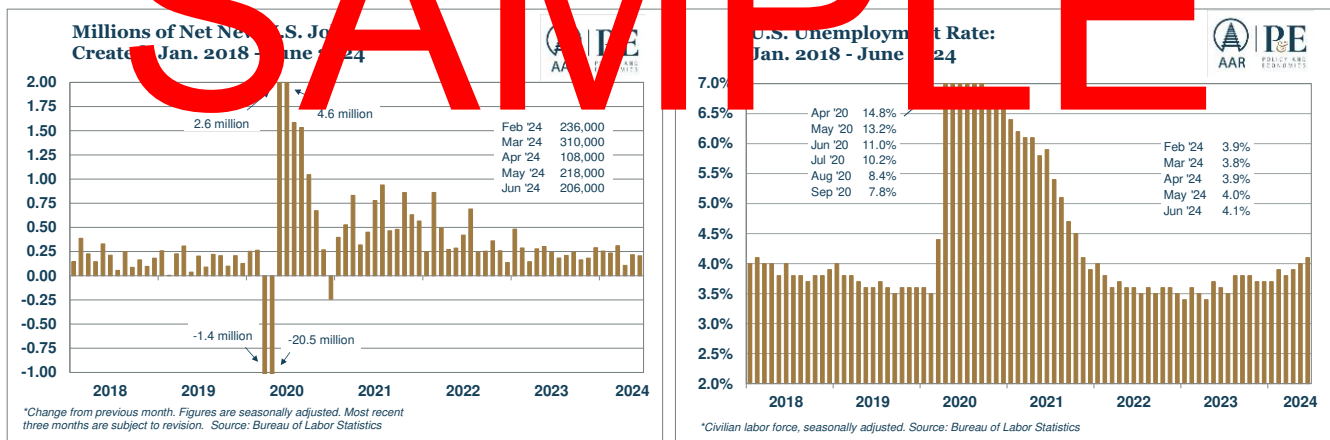
Lawrence Summers, the former U.S. Treasury Secretary, has said, "Employment data is the most important economic data you can get. It tells you where the economy is and where it is likely to go." No surprise, then, that the monthly U.S. jobs report from the Bureau of Labor Statistics (BLS) is probably the most-anticipated and most-evaluated set of economic indicators in the world.

For the past couple years, job gains have greatly exceeded expectations. As discussed earlier, when the Fed started raising interest rates in March 2022, it was expected that the economy and job growth would slow. Yet job gains remained huge: 1.7 million in the first half of 2023; 1.3 million in the second half of 2023; and 1.3 million in the first half of 2024. Gains of that magnitude would be considered excellent at any time, but especially in a high-interest rate environment. Average monthly net U.S. job gains from 2015-2019 were 191,000. Average job gains from April 2022 to June 2024 were 269,000.

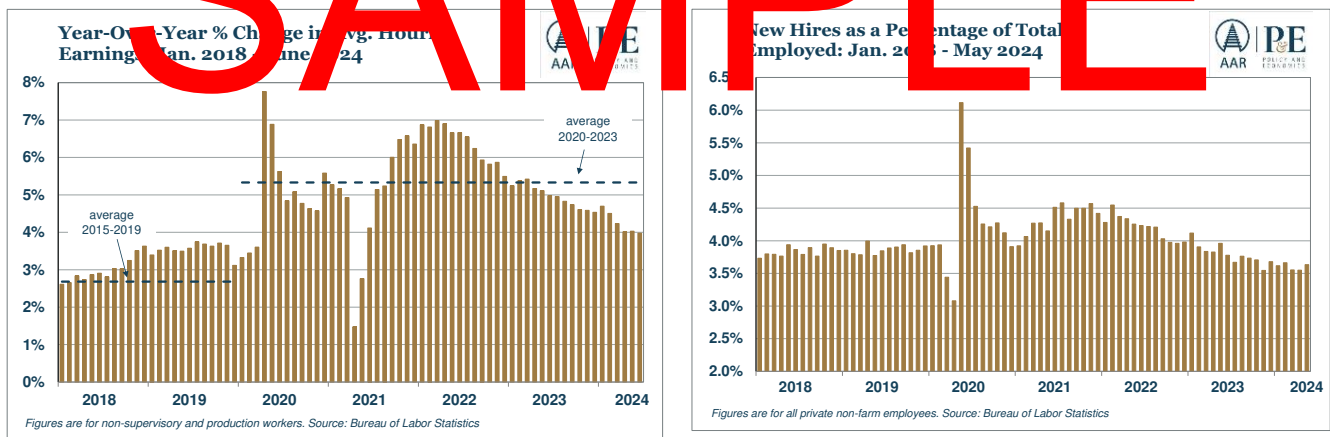
That said, a labor market slowdown *might* finally be here. On July 5, the BLS reported that a **preliminary 206,000 net new jobs were created in June 2024**, and figures for April and May 2024 were revised substantially downward. Average job gains from April to June 2024 were 177,000 — still entirely respectable but the smallest 3-month average since January 2021.

Meanwhile, the official unemployment rate rose to 4.1% in June 2024. That’s extremely low by historical standards (the median from 1950 to today was 5.5%) but it’s the highest since November 2021. It’s been trending higher since bottoming out at 3.4% in early 2023. A key question is if it will settle around 4% — more or less what many labor economists consider to be “full employment” — or if it will keep rising. Past norms don’t necessarily apply to today’s economy, but in the past, when the three-month average unemployment rate has risen to 0.5 percentage points above the low point of the prior 12 months, a recession followed. (This is the “Sahm rule,” named after the economist who discovered it.) In June, the pertinent figure was 0.43 percentage points, not far from 0.5.

Fed officials have said they would cut interest rates more than later if job growth plunged and unemployment surged. It’s not clear if the most recent numbers will be enough to spur the Fed to act.



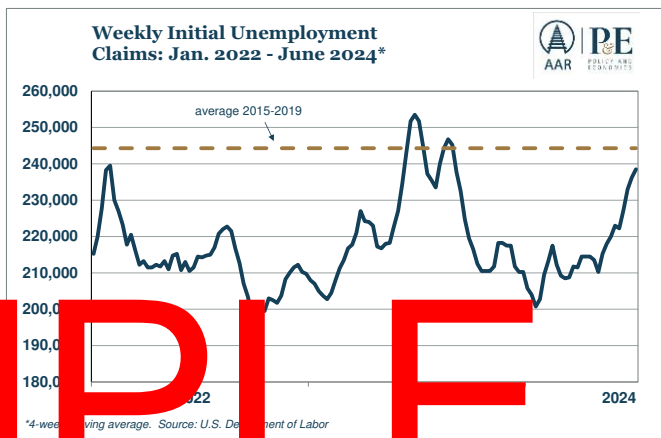
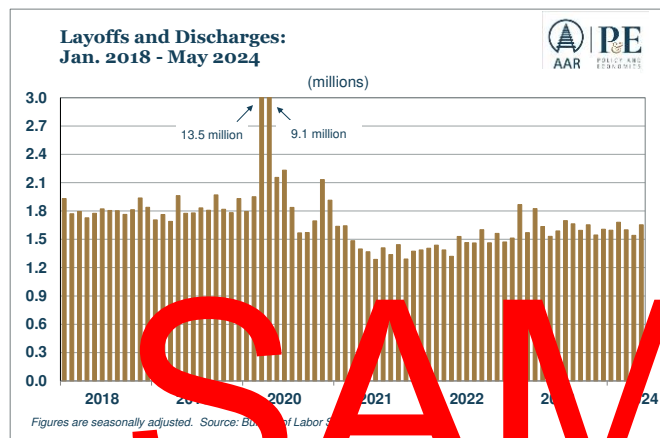
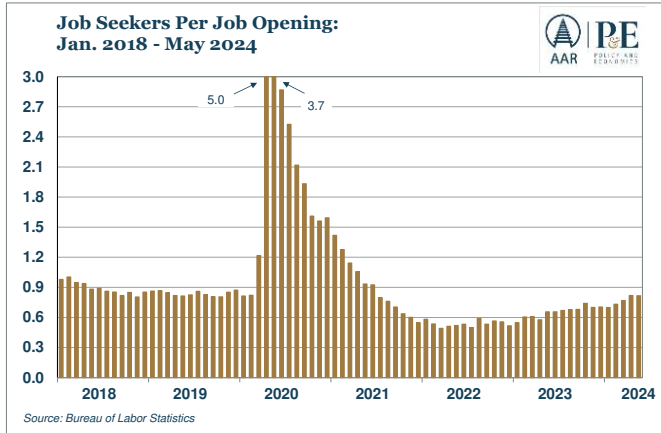
In the first six months of 2024, 60% of new jobs were health care, social services, or government, but these three categories account for just 29% of total jobs. Growth in health care and social services is consistent with an aging population, but these categories are not big freight creators. Industries that do create freight were not big job creators in the first half: manufacturing and mining employment actually fell. Jobs in wholesale trade grew only marginally.



In addition to job gains, the Fed pays attention to worker pay. Faster wage increases are generally associated with higher inflation, and lower wage increases will be critical to getting overall inflation under control and keeping it there. In June 2024, average hourly earnings were 4.0% higher than in June 2023, their third straight month at that level. That’s well below the 2020-2023 average of 5.3% but well above the 2015-2019 average of 2.7%.

There are other signs of a labor market slowdown. First, there were 0.8 job seekers per job opening at the end of May 2024, up from a low of 0.5 in the spring of 2021 and not far from where it was before the pandemic. This metric has been trending higher for 18 months and is now not at pre-pandemic levels.

Second, layoffs are below pre-pandemic averages today. After having a hard time finding workers when the economy was recovering from the pandemic, many firms are now loathe to let them go lest they get caught flat-footed again.⁵ However, the hiring rate — the number of new hires as a share of overall employment — is now below its pre-pandemic level. As [this excellent article](#) in the New York Times on June’s employment report points out, this suggests people who do lose their jobs are having a harder time finding something else.



Finally, weekly initial claims for unemployment benefits reflect people who recently lost their jobs and are seeking unemployment benefits. A sustained increase in claims might suggest a weakening economy, while a decrease could indicate economic recovery or stability.

In June 2024, initial claims averaged 231,000 per week, the most for a month since August 2023 and not far from the 2015-2019 average and much higher than the recent low point of 204,000 in January 2024.

⁵ The phrase "caught flat-footed" originates from early 20th-century American slang, particularly in the context of baseball. It describes a fielder being unprepared or off-guard, literally standing flat on his feet without being ready to move quickly to get to the ball. Over time, the phrase has come to mean anyone caught unprepared or surprised about something.

The Consumer is King

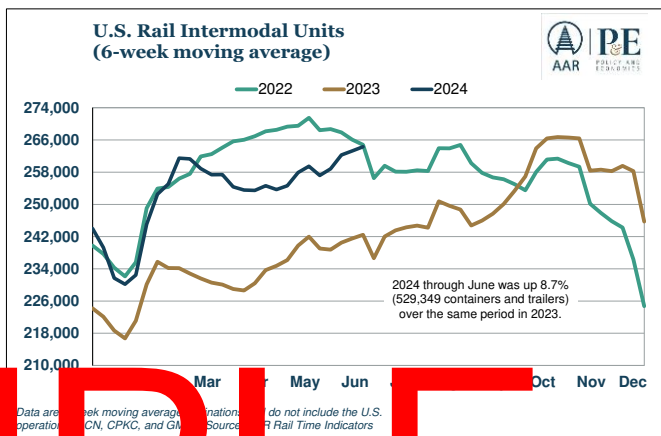
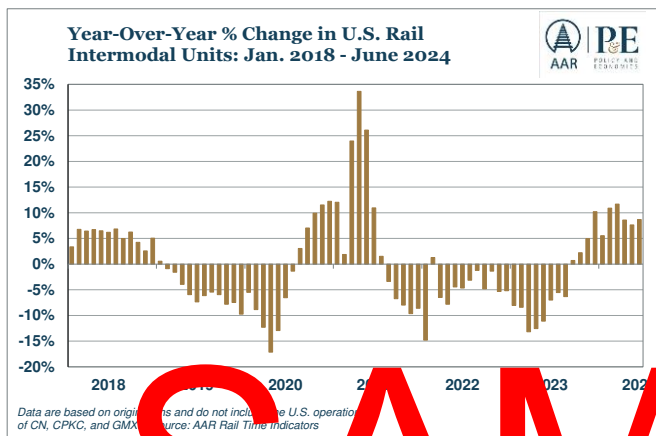
The phrase "the consumer is king" is often attributed to Ludwig von Mises, a prominent Austrian economist and economic historian. He popularized the idea in his writings on free-market economics, emphasizing the importance of consumer preferences in driving production and market outcomes.⁶ Today, "the consumer is king" can be applied to the overall U.S. economy. Consumer spending accounts for some 70% of U.S. GDP, which means when the consumer comes down with something, the whole economy is likely to get sick.

Rail Intermodal

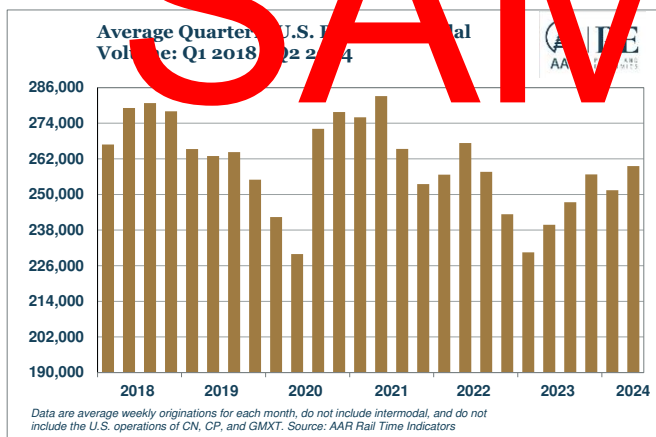
Intermodal is the rail traffic segment most closely associated with consumer spending. Intermodal doesn't consist solely of consumers goods – industrial products such as chemicals, auto parts heading to auto factories, and grain moving to ports for export also travel by intermodal. Generally speaking, though, a rail intermodal shipment is likely to have furniture or electronics or any of thousands of other products you might find on retail shelves or in their warehouses.

U.S. intermodal originations in June 2024 were up 8.7% (85,896 containers and trailers) over June 2023, its tenth straight year-over-year month-to-month gain. In Q2 2024, intermodal was up 8.2% over Q2 2023 following a 9.1% year-over-year gain in Q1 2024 over Q1 2023. Q1 and Q2 2024 were the best two year-over-year percentage gains for intermodal since Q1 and Q2 2021.

SAMPLE



SAMPLE

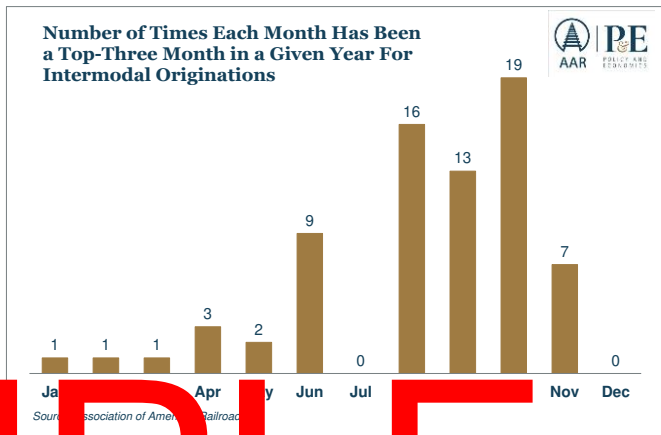
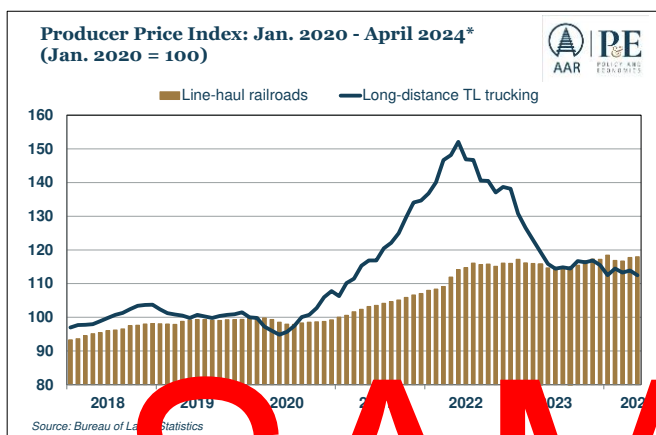


⁶ In his works, von Mises argued that government intervention distorts market signals and leads to inefficiencies and malinvestment. He claimed that during the 1860s, as the first transcontinental railroad took shape, there was no economic justification for it. Other economists strongly disagree with his take.

Year-to-date intermodal through June was 6.64 million units, up 8.7% (529,349 units) over last year. Average January-June U.S. intermodal originations from 2015 to 2023 were 6.69 million, so the increase in 2024 over 2023 brings intermodal volumes back to normal. Year-to-date container volumes in 2024 through June were up 10.6%; trailers were down 23.4%. Containers accounted for a record 96.0% of intermodal in the first half of 2024, up from 84% 15 years ago.

Rail intermodal has two components: international and domestic. **So far this year, international is the main force behind intermodal’s gains.** There is a very close correlation between port activity (as measured by combined loaded and empty container imports and exports) and rail container movements. In 2024 through April, port activity at eight major U.S. port complexes combined was up 13% over the same period last year.

On the domestic side, truckload carriers are intense competitors to rail intermodal. When the economy was recovering from the pandemic in the second half of 2020 and into 2021, an enormous amount of freight had to be moved as consumers switched from going to restaurants and taking vacations to renovating their kitchens and buying new televisions. In response to higher demand, truck rates soared and new entrants flocked to the trucking industry to take advantage of rapidly increasing industry capacity. Freight demand slowed over the past couple of years, truck rates plunged. Most analysts and trucking executives say there’s still a lot of excess capacity in the truckload industry, keeping rates lower than they otherwise would be and presenting tough price competition to railroads.



That said, there is an enormous amount of freight that currently moves by truck that could move by rail. Capturing this freight is a key reason for the intense efforts currently underway at railroads to improve service reliability and efficiency.

Seasonality is evident in a number of rail traffic categories. For example, carloads of lumber and wood products tend to peak in the spring when construction season gets fully underway.⁸ Intermodal is another example. Thanks to the need for wholesalers and retailers to stock up for back-to-school and holiday shopping, August, September, and October tend to be “peak season” for intermodal months, as the chart on the bottom right of the previous page shows.

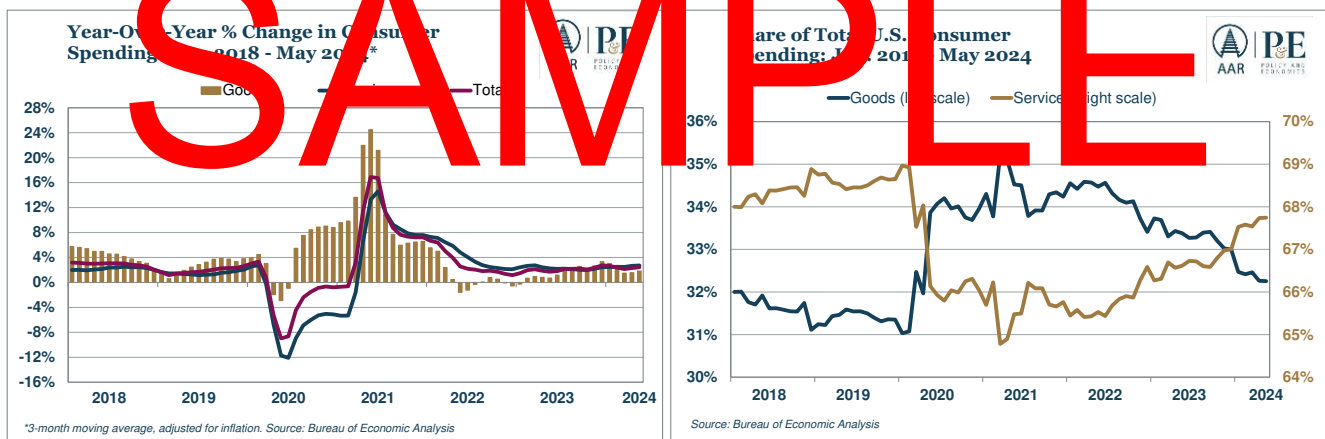
⁷ This is why April 2021 and January 2021 are the two highest volume U.S. rail intermodal months in history, even though January and April are not typically among the highest volume months of the year for intermodal.
⁸ See the “Coming Down the Tracks” section in the February 2024 Rail Time Indicators.

Consumer Spending

As noted above, consumer spending is a key driver both for the overall economy and for rail traffic. The more people are spending, the better the economy is likely to be doing. And the more stuff people and firms are buying, the better railroads and other transportation providers are likely to be doing.

Over the past couple of years, consumer spending has held up better than most economists (at the Federal Reserve and elsewhere) thought it would, largely because the labor market has held up better than expected (see discussion of the labor market on page 13).

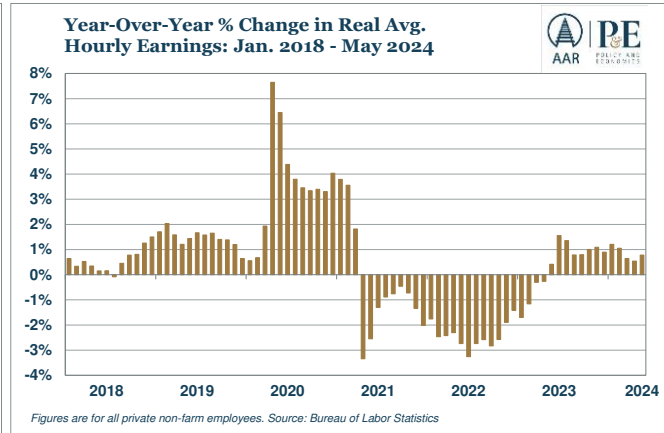
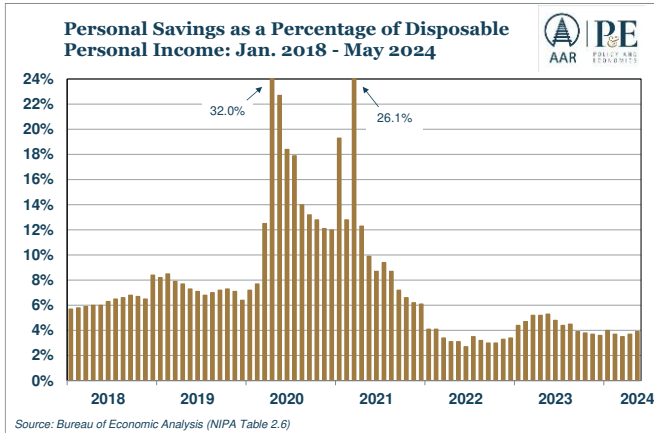
In May 2024, total consumer spending adjusted for inflation rose a preliminary 0.3% over April 2024. That's better than the average month-to-month gain from January 2022 to May 2024 of 0.2%. Year-over-year inflation-adjusted total spending in May 2024 was up 2.4% in May 2024, equal to the average since January 2022.



For railroads, consumer spending on goods is most important. Inflation-adjusted spending on goods rose a preliminary 0.6% in May, after a 0.7% decline in April 2024. Inflation-adjusted spending on services rose 0.1% in May, the same gain as in April and the ninth straight month-to-month increase. The chart below left shows 3-month average year-over-year percentage changes in consumer spending to account for month to month volatility. Spending gains over the past couple of years have not been extraordinary like they were in the second half of 2020 and in 2023, but spending has remained respectably robust.

The share of consumer spending devoted to goods surged at the start of the pandemic, but it's trended down the past two years and is still above the pre-pandemic norm. To the extent goods' share continues trending back to pre-pandemic levels, it will be a headwind for rail intermodal volumes. Going forward, the trajectory of consumer spending will heavily impact rail volumes. Consumer spending, in turn, will depend on other factors such as the strength of the labor market and the health of household balance sheets. Personal savings as a percentage of disposable income rose to 3.9% in May 2024 compared to 3.7% in April 2024, indicating potential for further spending down the road.

Adjusted for inflation, average hourly earnings have been positive for a year, following a couple of years when they were sharply negative. The current trend obviously is a tailwind for consumer spending and, therefore, rail volumes.

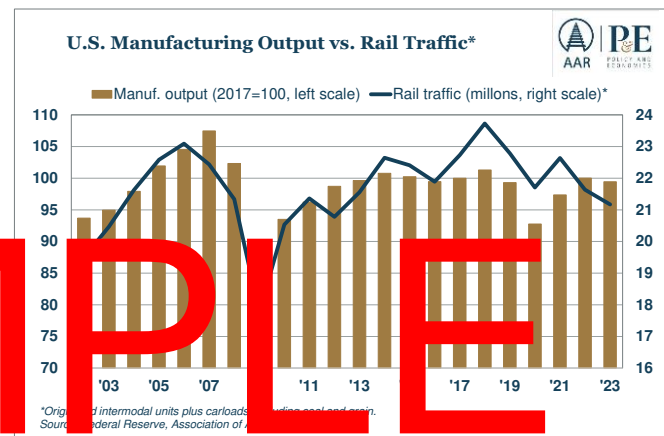


Manufacturing Continues to Struggle

As noted earlier, economists are always evolving. Fifty years ago, services — education, health care, transportation, retail trade, food services, telecommunications, information technology, and so on — accounted for roughly half of U.S. economic activity. Today, they’re around 80%. That increase has come at the expense of industrial activity, especially manufacturing.

That’s not the same thing as saying manufacturing in the United States no longer matters. As we’ve said in RTI before, the U.S. manufacturing sector alone would be the world’s eighth-largest economy, and the U.S. share of global manufacturing output — around 16% — is more than Japan, Germany, and South Korea combined. Only China’s share is bigger.

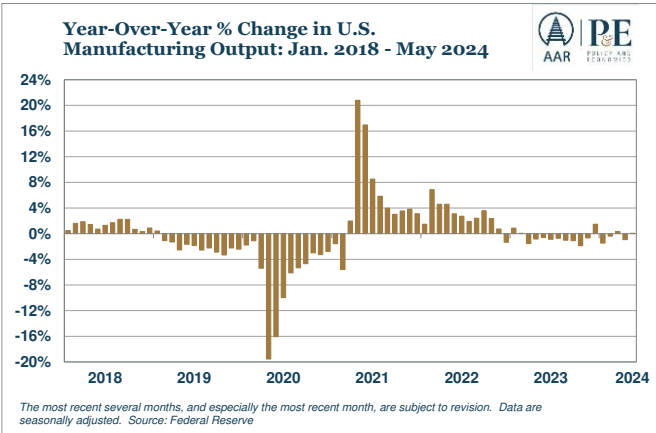
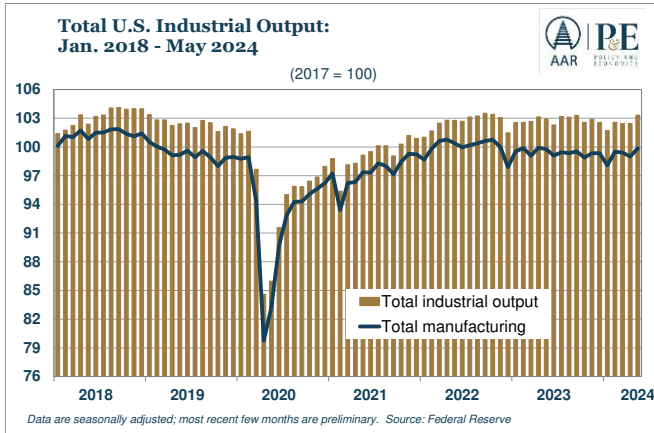
U.S. industrial production figures are compiled by the Federal Reserve from various government and industry sources and are based on the monthly raw volume of goods produced by U.S. industrial firms. Even though services are a much larger share of the economy, big changes in industrial output can mean a business cycle has reached an inflection point. Manufacturing accounts for about 75% of industrial production; utility and mining output (including oil and gas) account for the rest.



Manufacturing is a key driver of rail traffic. The chart at right compares “economically sensitive” rail traffic — intermodal plus carloads excluding coal and grain, a metric that when indexed is our “Freight Rail Index” (FRI) — and manufacturing output. The correlation is positive and strong.

For the past two years, total output and total manufacturing output have trended flat to slightly down, but the most recent figures are encouraging. **Total output in May 2024 was up a preliminary and seasonally adjusted 0.9% over April 2024.** If it holds after revisions, it would be the biggest month-to-month gain in 10 months. May’s reading follows a flat reading in April and a 0.1% decline in March.

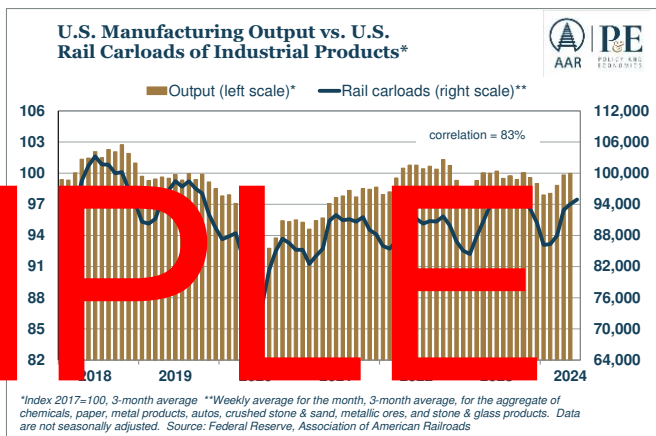
Meanwhile, manufacturing output in May was also up a preliminary 0.9% from April 2024, much better than the 0.4% decline in April and 0.1% decline in March.

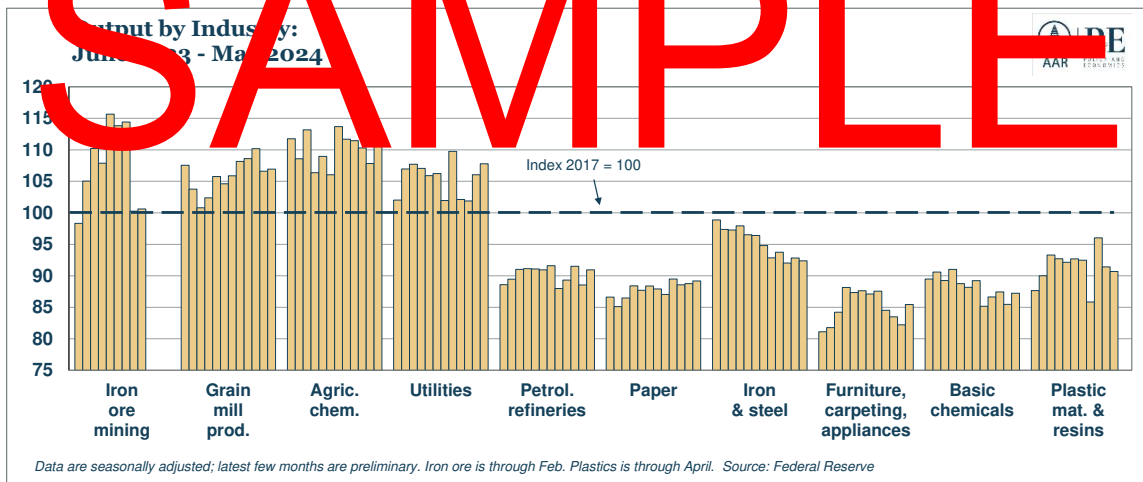
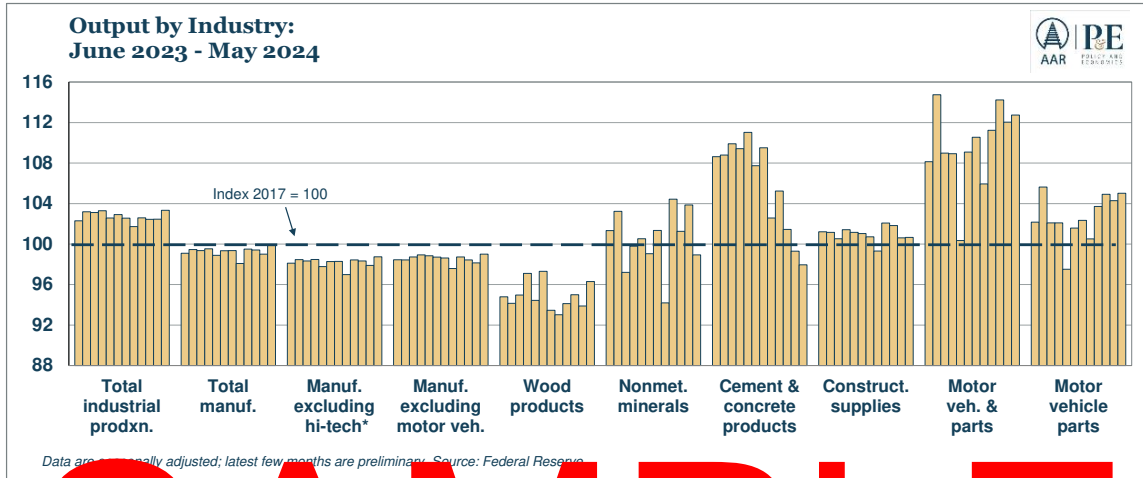


The chart below shows the year-over-year change in manufacturing output since 2018. There was a big decline in output when the pandemic hit, a rapid recovery in the second half of 2020 and in 2021, but since early 2022 there has been very little change. Justification: numerous rail load categories will be constrained.

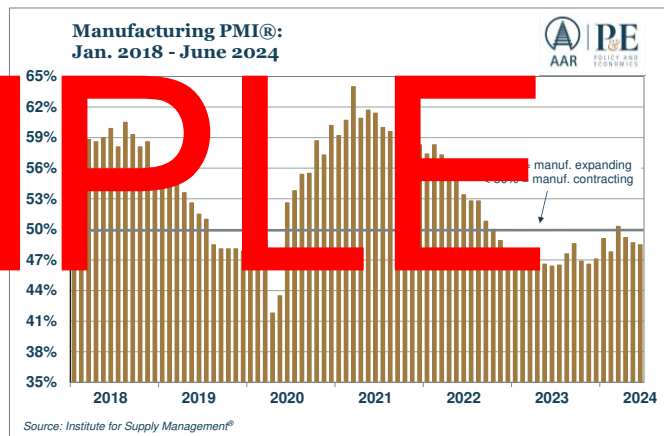
A chart at the beginning of this section compared manufacturing output by year and economically sensitive rail traffic (also known as the AAR’s Freight Rail Index). The chart at right shows another way to compare manufacturing output and rail volumes. The rail measure is what we call “industrial products,” which we define as the sum of seven key rail carload categories: chemicals; motor vehicles; crushed stone, sand, and gravel; metallic ores; paper products; stone, clay, and glass products (this category includes cement and processed minerals); and primary metal products (primarily steel). Again, the correlation isn’t perfect, but it is strong and positive, confirming the importance of manufacturing to railroads.

As is always the case, different industry sectors perform differently at different times. That’s shown in the charts on the next page. Industry sectors that have been trending higher over the past six months include railroad rolling stock, paper products, grain mill products, and motor vehicles and parts. Sectors trending down over the past six months include iron and steel, plastic resins, and agricultural chemicals. For many sectors, a trend up or down isn’t discernible. Petroleum refineries, wood products, and nonmetallic minerals fit this description.





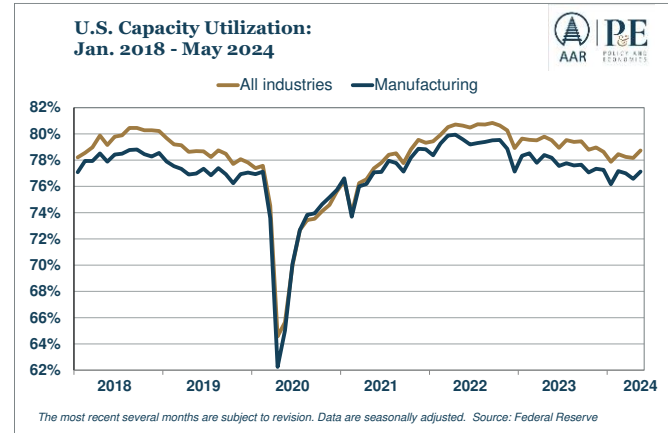
The Manufacturing PMI®, from the Institute for Supply Management®, is a useful measure of the health of the U.S. manufacturing industry. It combines data on new orders, inventories, supplier deliveries, production, and employment. It is based on a survey of several hundred supply managers at manufacturers throughout the country. It's considered an indicator both of actual on-the-ground conditions and near- to medium-term sentiment. A reading above 50% indicates overall manufacturing is expanding; below 50% means manufacturing is contracting.



Unfortunately, the Manufacturing PMI® continues to tell a story no one wants to hear. In June, it was 48.5%, down from 48.7% in May and the 19th month out of the past 20 that it's been below 50%. (It was 50.3% in March 2024, sort of like a whale coming to the surface to take a breath after a long dive and then submerging again.)⁹ A bit of better news: the new orders subindex rose to 49.3% in June from 45.4% in May.

⁹ See [here](#) for a story about how a sculpture of a whale prevented a commuter train in the Netherlands from plummeting 30 feet off a railway platform. Yes, this really happened.

Capacity utilization is a measure of how fully firms are using the machinery and equipment — think of it as the unemployment rate for factory equipment. In May, the overall capacity utilization rate was 78.7%, the highest it's been in six months. For manufacturing, the capacity utilization rate in May was 77.1%, up slightly from March and April. In both cases, the capacity utilization rate is below the long-run average. This suggests there's plenty of room for industrial production to grow given the right conditions (including, potentially, lower interest rates).



To be sure, the future of manufacturing in the United States is fraught with significant challenges including intense competition from manufacturers elsewhere in the world; firms' difficulty finding skilled labor to handle the increasingly high technology associated with manufacturing; and to replace workers who retire, and legal and regulatory burdens that have grown in recent years and will probably continue to grow. For railroads, it will also matter what kind of goods are being produced. A series of new microchip factories, for example, might not require the same quantity of rail service as, say, a large auto or chemical plant.

Broader Supply Chain Issues

Freight supply chains are complex systems driven by a variety of global and domestic stakeholders, including freight railroads. For freight to be delivered safely and efficiently, all participants must take timely, appropriate actions in a precisely coordinated sequence. Most of the time that happens, but there are always potential and actual hiccups here and abroad.

What are supply chain dangers today? Today, the biggest globally are the Houthi rebels in Yemen who are firing on ships entering the Red Sea en route to the Suez Canal, which is a critical artery for ships moving between Europe, Asia, and the U.S. East Coast. To avoid the area, many ships are going around Africa instead, which adds significant costs and up to two weeks of travel time. The New York Times reported on June 26 that the cost of moving a 40-foot ocean-going container from China to Europe rose from around \$3,200 last October to around \$7,000 today. Likewise, trans-Pacific rates have risen sharply: "It now costs over \$6,700 to transport a 40-foot container from Shanghai to Los Angeles, and nearly \$8,000 for Shanghai to New York. As recently as December, those costs were near \$2,000."

Other potential problems as of this writing? Dockworkers on the U.S. West Coast are threatening to strike when their current contract expires on September 30. There's the possibility of a rail strike in Canada sometime after mid-July. Drought earlier this year in Panama led to restrictions on ships traveling through the Panama Canal. Conditions are better now, but it will take time for operations at the canal to return to normal.

In other words, no rest for the weary for those associated with supply chains, including railroads.

A few data sources combine volume data across various modes to provide a big-picture view of freight demand. What follows is an update to information we provided in a previous edition of Rail Time Indicators back in December 2023.

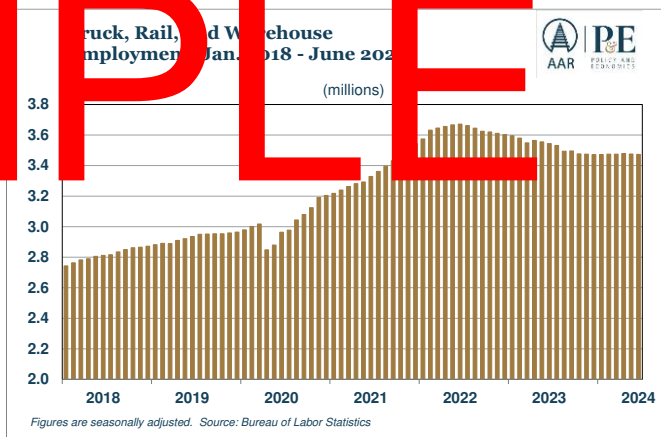
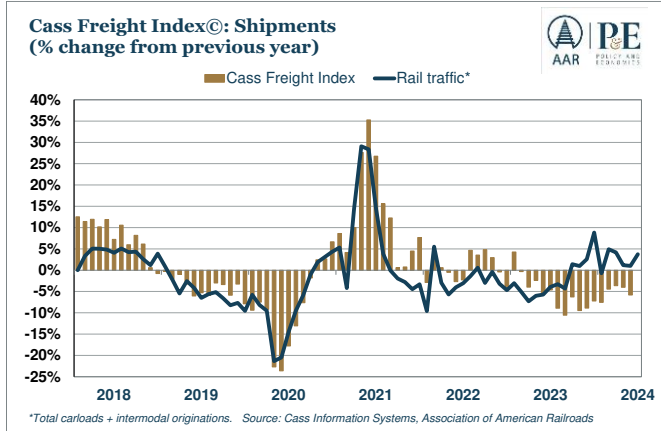
First, Cass Information Systems provides freight payment management services for manufacturers, retailers, and others across the country. On behalf of clients, the company pays out around \$44 billion each year to truck, rail, and other transportation providers. Cass uses the shipment data it collects (trucking has the biggest share in its data) to create its Cass Transportation Indexes.

The bars in the top chart at right show year-over-year changes in the Cass Freight Index. The pattern is familiar: a slowdown in 2019 as U.S. manufacturing weakness and trade disputes led to lower freight demand; the pandemic in spring 2020 and everything gets a lot worse; a rapid recovery through the first half of 2021 as people bought everything they could get, and then a slowdown extending to the present.

For comparison, the line in the Cass chart shows the year-over-year change in total U.S. rail volumes (carloads + intermodal combined) over the same period. The correlation is a solid 81%.

Second, the monthly Transportation Services Index (TSI) from the Bureau of Transportation Statistics (BTS) is another metric covering total freight demand. BTS aggregates data from the AAR, the American Trucking Associations, and others to create an index capturing freight volumes for railroads, for-hire trucking, inland waterways, pipelines, and air freight combined. The middle chart at right presents the BTS's freight-only index as a pattern generally similar to the Cass index (and rail traffic) shown above, including significant weakness in 2023 and into 2024.

Finally, the bottom chart at right shows the change over the past few years in the number of transportation employees, defined here as trucking, railroad, and warehouse combine. As you'd expect, transportation employment plunged when the pandemic first hit, but grew sharply thereafter until mid-2022, when it began to decline. Employment has been essentially flat for many months.

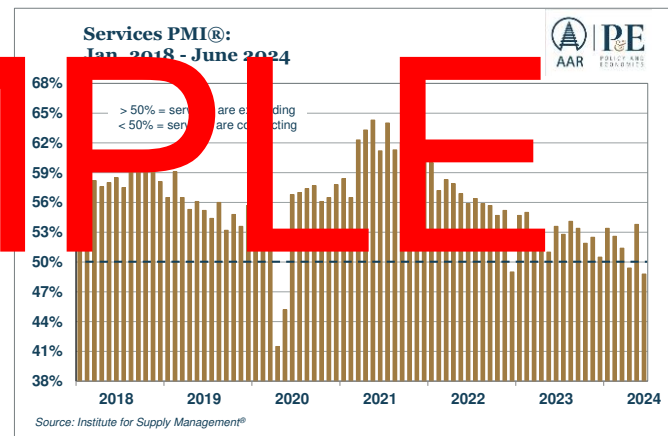


What About Near-Term Economic Growth?

We said earlier that GDP grew 1.4% in Q1 2024 from Q4 2023, but in a sense that’s yesterday’s news. What about Q2 2024 and beyond?

Higher interest rates have clearly had an impact. Credit card rates are much higher now than they used to be, but as explained above, consumer spending remains relatively robust. Mortgage rates are up sharply over the past couple of years and the housing market is in turmoil, but problems in that sector have largely stayed isolated. Auto loans are higher and, along with higher automobile prices and higher insurance costs, are having an impact on new car sales, but problems there have also not spread broadly to the rest of the economy.

The Services PMI® for June was an unwelcome surprise. It measures the direction of the services sector, which accounts for the vast majority of economic activity in the United States. The Services PMI® unexpectedly fell to 48.8% in June, down from 53.8% in May and the second time in three months in which it has been in “contraction” territory (below 50%). The decline in the index in June was due largely to a big drop in new orders. The hope, of course, is that June is an anomaly. If it’s not, well, that could be a big problem.



For now, though, most economists are generally optimistic about the U.S. economy’s near-term outlook, and that slowdowns in certain areas are more likely to be a return to normal than start of further severe deterioration. The table at right shows recent forecasts by several entities. For now, all indicate continued growth in 2024 and 2025.

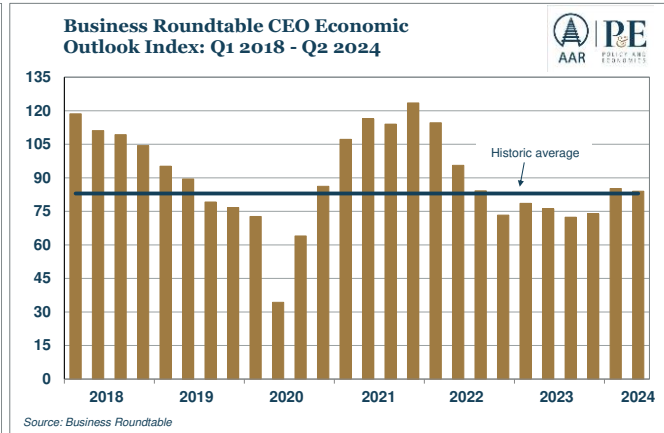
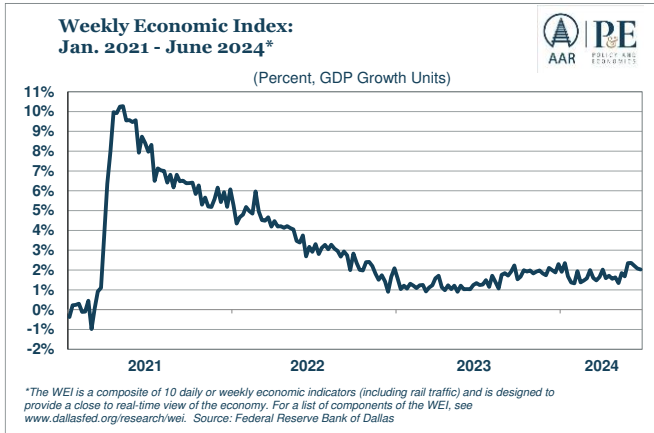
Consumer spending will be key. So far, solid job gains have led to rising spending in a virtuous circle. If consumers cut back on spending too much, though, employers could respond by cutting staff, which could push up unemployment and lead to even more spending cuts and the virtuous circle becomes unvirtuous.

The Weekly Economic Index combines ten different daily and weekly indicators of real economic activity into a single composite index. It was designed by economists at the Federal Reserve Bank of New York and elsewhere to offer a more timely indicator of economic conditions compared to traditional monthly or quarterly reports. Indicators it incorporates include initial unemployment insurance claims, steel production, tax withholding data, and rail traffic. The most recent reading for the WEI is consistent with the past several months — that is, no evidence the economy is falling off a cliff.

Projected GDP Growth				
Forecaster	Q2'24	Q3'24	Q4'24	Released
GDPNow (a)	3.1%	--	--	June 7
WSJ (d)	1.6%	1.4%	1.5%	Apr. 14
Philly (c)	2.0%	1.5%	1.5%	May 20
Philly (c)	2.1%	2.0%	1.5%	May 10
CBO (f)	2.4%	2.1%	1.9%	June 18

Projected GDP Growth				
Forecaster	2024	2025	2026	Released
WSJ (d)*	1.7%	1.9%	2.0%	Apr. 14
NABE (b)	1.7%	2.0%	--	May 20
Philly (c)	2.5%	1.9%	1.9%	May 10
Fed. Reserve (e)	2.1%	2.0%	2.0%	June 12
CBO (f)	2.6%	2.1%	1.8%	June 18

(a) Fed. Rsv. Bank of Atlanta (b) Median from the Feb. 2024 Outlook Survey from the National Assn. for Business Economics; (c) Survey of Professional Forecasters from the Fed. Rsv. Bank of Philadelphia; (d) Median forecast of ~70 economists surveyed quarterly by the WSJ; (e) Most recent median forecast from the Federal Reserve's Federal Open Market Committee. (f) Congressional Budget Office, The Budget and Economic Outlook: 2024 to 2034. *Q4 to Q4



The chart above right shows the most recent sentiment index from CEOs responding to a survey by the Business Roundtable. Its CEO economic outlook index for Q2 2024 is right at its historical average.

Eventually, of course, there will be another recession, the business cycle being what it is. As a recent article in the Wall Street Journal put it: "Just because everyone who predicted a recession has been wrong doesn't mean they won't eventually be right."

SAMPLE

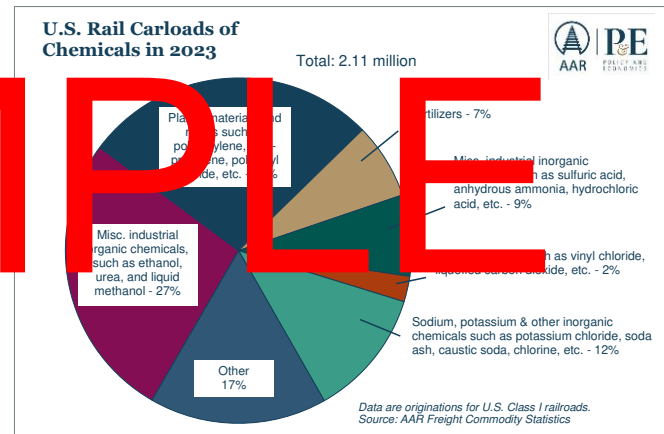
Recent Rail Traffic Trends for Major Commodities

The AAR P&E team offers three annual publications on the rail transportation of chemicals, grain, and coal. The next editions, with data through 2023, will be published by early August 2024. They will be free to AAR members and available for purchase by others. Contact publications@aar.org for more information.

Chemicals

Chemicals make modern life possible and America's freight railroads are essential partners. Railroads transport fertilizers to farmers, plastic resins to auto parts producers, caustic soda to paper manufacturers, and countless other chemical products to intermediaries and end users throughout the United States and the world.

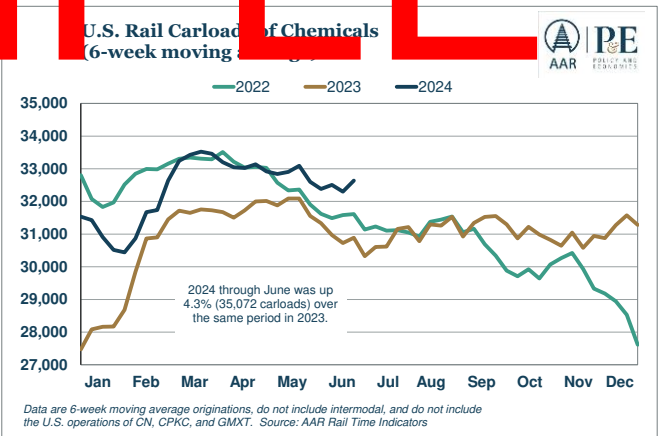
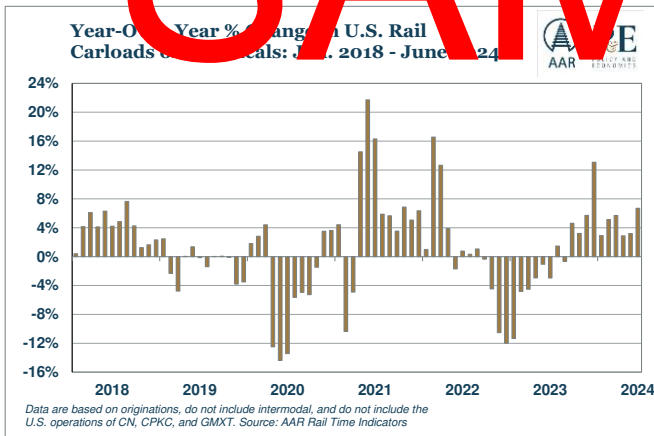
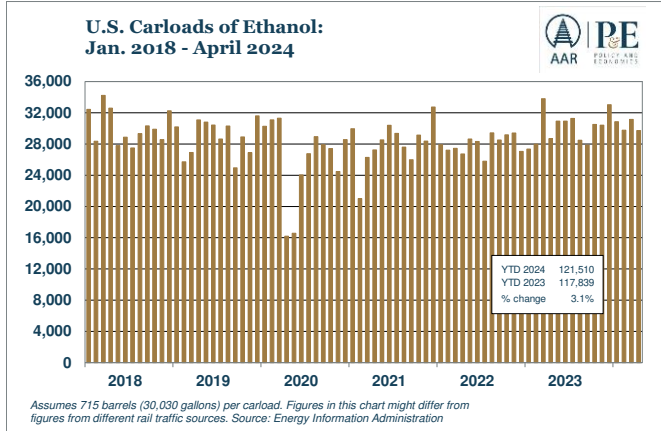
The U.S. chemical industry consists of thousands of firms located throughout the country, but many plants are concentrated in the Gulf States, where petroleum and natural gas raw materials are readily available. Because end users of chemicals are spread throughout the country, huge volumes of chemicals are transported each year. Figures compiled by the American Chemistry Council (ACC) show that some 1.02 billion tons of chemicals were shipped in the United States in 2022 at a cost of \$79.0 billion. ACC data indicate that, in 2022, rail accounted for 16% of total chemical transportation costs (trucks were 74%) and 18% of chemical tonnage (trucks led with 58%). The rail shares in 2022 were one to two percentage points lower than they've typically been in recent years.



SAMPLE

The highest-volume chemicals carried by U.S. railroads are plastics of various types (around 575,000 carloads on Class I railroads in 2023) and ethanol (around 330,000 carloads in 2023). More than half of all rail chemical carloads consist of various industrial chemicals, including soda ash, caustic soda, urea, sulfuric acid and anhydrous ammonia. Plastic materials and synthetic resins account for close to a quarter of rail chemical carloads. Most of the rest is agricultural chemicals.

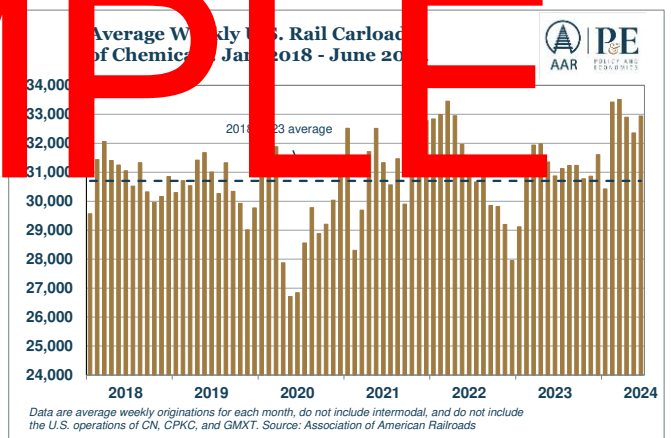
Depending on the year, U.S. railroads transport around two million carloads of hazardous materials, including hundreds of thousands of carloads of chemicals that are considered hazardous. Railroads are the safest mode to transport hazardous materials. More than 99.99% of rail hazmat shipments reach their destination without release caused by a train accident.



Chemicals passed coal a few years ago to take over second place (behind intermodal) as a source of revenue for U.S. Class I railroads. Gross revenue from chemicals was \$12.6 billion in 2023, 15.8% of total Class I gross revenue.

U.S. carloads of chemicals were 4.3% higher in the second quarter of 2024 than in the second quarter of 2023, their fourth straight year-over-year quarterly increase. Carloads of chemicals averaged 32,706 per week in Q2 2024, the second most ever for a quarter. (Q1 2022 was slightly higher.)

Year-to-date carloads through June this year were 845,061, up 4.3% (35,702 carloads) over the same period last year and are the second highest January-to-June total ever (2022 was higher). Carload gains this year are due in part to higher plastics and ethanol movements (see the ethanol chart at right).



Many chemicals are used as inputs in other manufactured products, so looking ahead the fortunes of the chemical industry (and, to a large extent, rail chemical volumes) would improve if the manufacturing sector grew more robustly. The U.S. chemical industry is a major exporter as well, so what's faster economic growth abroad would be a useful tailwind too. Many chemical companies use natural gas as a feedstock and/or as a source of energy. These firms have benefited in recent months by exceptionally low natural gas prices (see the chart on page 29).

The ACC recently released its 2024 mid-year situation and outlook report. In it, the ACC projects U.S. chemical output will grow by 2.2% in 2024 and 1.9% in 2025. The ACC is expecting a moderate rebound in U.S. industrial output in 2025, with chemical volumes following suit.

Coal

The Baltimore and Ohio Railroad (B&O) began operations in 1830 and is generally considered the first U.S. railroad. By 1831, the B&O was carrying coal 100 miles from the Allegheny Mountains to Baltimore, Maryland. As railroads rapidly developed in the ensuing years, coal was transported greater distances and in greater quantities.

Coal was first used to generate electricity in the United States in 1882. The first coal-fired power plant — known as Pearl Street Station, located in Manhattan — was built by Edison and began operations in September 1882.¹⁰

Over time, coal and power plants grew together, aided by development of the Powder River Basin (PRB) in Wyoming and Montana. The PRB contains vast deposits of coal that are easy to mine (the nearby photo is a PRB coal seam). PRB coal is low sulfur, which became particularly important when policies aimed at reducing sulfur dioxide emissions were implemented in the 1970s. The location of the PRB near major rail lines, augmented by massive railroad infrastructure expansions, facilitated the transportation of PRB coal to power plants nationwide. The result was a decades-long bonanza for coal.



SAMPLE

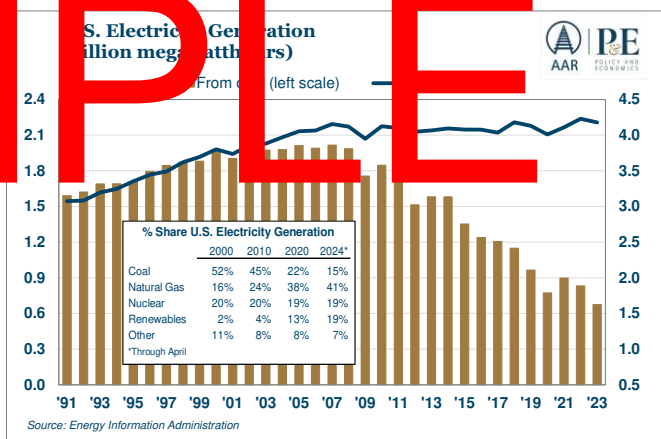
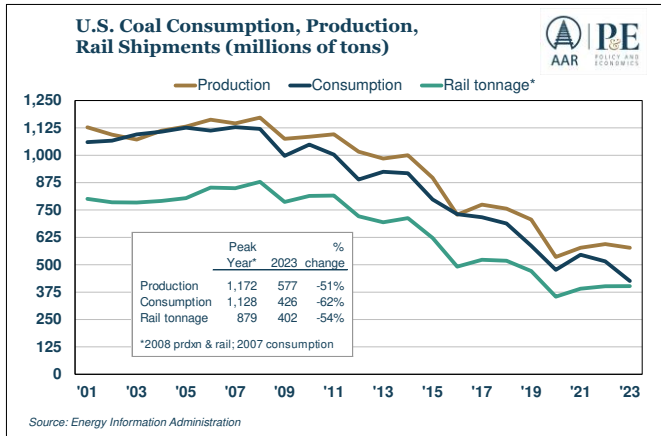
¹⁰ In his youth, Edison sold candy, newspapers, and magazines on the Grand Trunk Western railroad, traveling back and forth from his home in Port Huron, Michigan, to Detroit. In August 1862, when Edison was 15, he was standing outside a station on the route and noticed the toddler son of the station master playing on tracks as a fast train was approaching. Edison pulled the child to safety. As a gesture of thanks, the station master taught Morse Code to Edison. Soon thereafter, Edison became a full time telegraph operator. A few years later, he developed a system that allowed four separate signals (two in each direction) to be sent along one telegraph line. Western Union bought the rights to the invention, and Edison used the funds from the sale of his invention as seed money for his famous laboratory at Menlo Park, New Jersey.

Times have changed, though. Major advancements in hydraulic fracking and horizontal drilling technology led to a U.S. shale gas revolution.¹¹ Natural gas production surged and prices fell, making natural gas an ever-tougher competitor to coal for electricity generation. In addition, environmental laws and regulations related to air quality have become far more stringent, leading Joe Biden to say in 2019, “Coal plants have no future in our new energy economy.”

Well over 90% of U.S. coal consumption is for electricity generation, so the combination of these profound market and demand forces led to huge declines in U.S. electricity generated from coal and the production, consumption, and transportation of coal. According to the Energy Information Administration (EIA), coal's share of U.S. electricity generation, which averaged 52% in the 1990s, fell to 16% in 2023. Meanwhile, the natural gas share rose from 16% in 2000 to 43% in 2023, while the share for renewables (not including hydroelectric) rose from 2% in 2000 to 16% in 2023.

The impact on coal production and consumption has been huge. U.S. coal production in 2023 was 577.5 million tons, not quite the lowest ever (2020 was 535.4 million) but down 51% from 2008, the peak year for coal production at 1.17 billion tons. U.S. coal consumption in 2023 was 425.9 million tons, down from a peak of 1.13 billion tons in 2017.

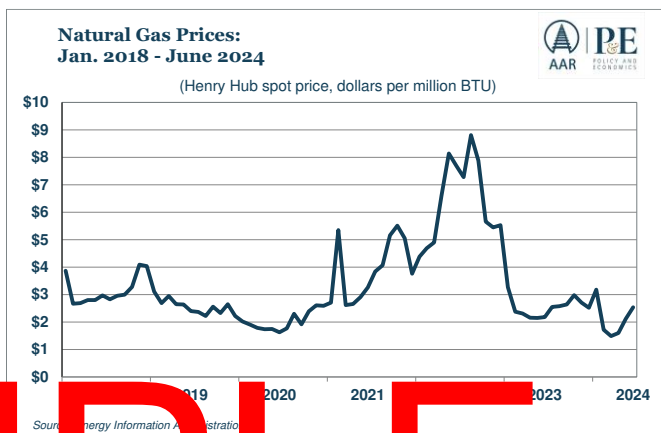
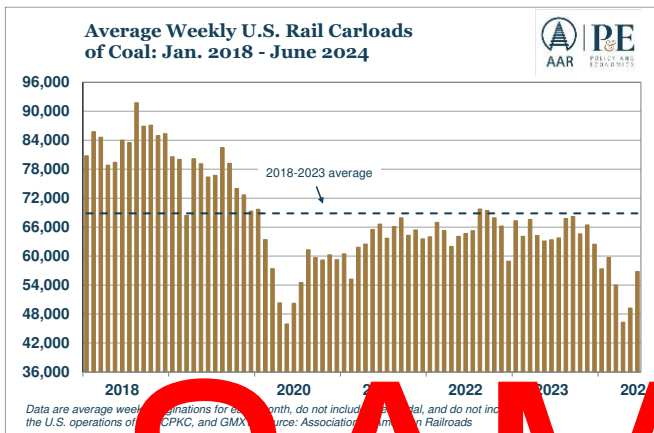
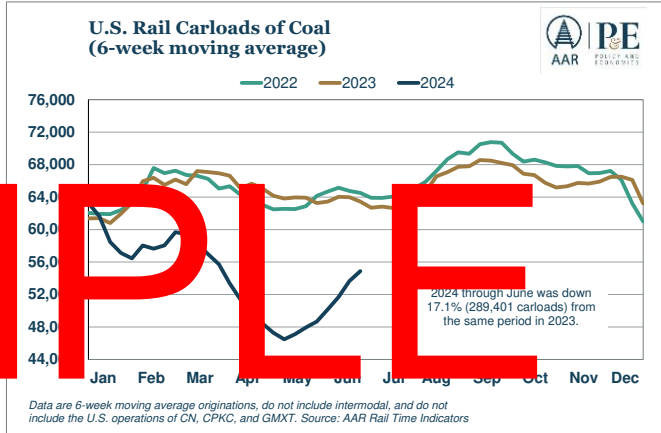
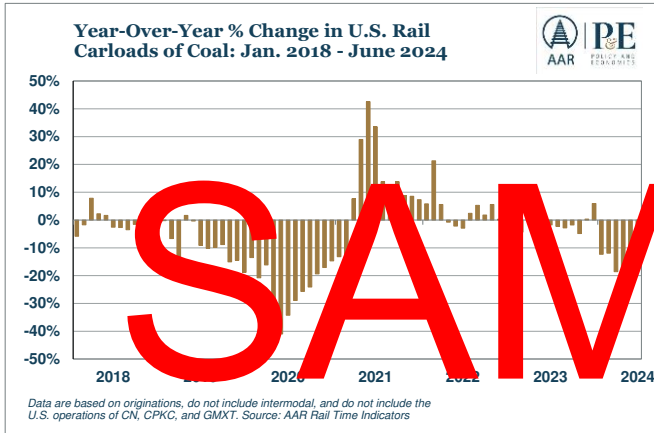
Rail coal volumes have followed suit. Originated coal loads by U.S. Class I railroads peaked at 7.71 million in 2008. In 2023, they were 4.3 million.



SAMPLE

¹¹ The 2013 book *The Frackers: The Outrageous Inside Story of the New Billionaire Wildcatters*, by Gregory Zuckerman, is an excellent history of the fracking revolution.

Rail coal declines have continued to the present. In June 2024, coal carloads averaged 56,803 per week, down 10.4% from June 2023 — their sixth straight double-digit percentage decline. In AAR records that go back to 1988, only 8 months had fewer coal carloads than June 2024. In the second quarter of 2024, coal carloads were down 20.3%. They averaged 50,663 carloads per week in Q2 2024, the second fewest for any quarter in our records (Q2 2020 was lower). Year-to-date coal carloads in 2024 through June were down 17.1% (289,401 carloads) from last year. This year is the lowest January-to-June total in our records.



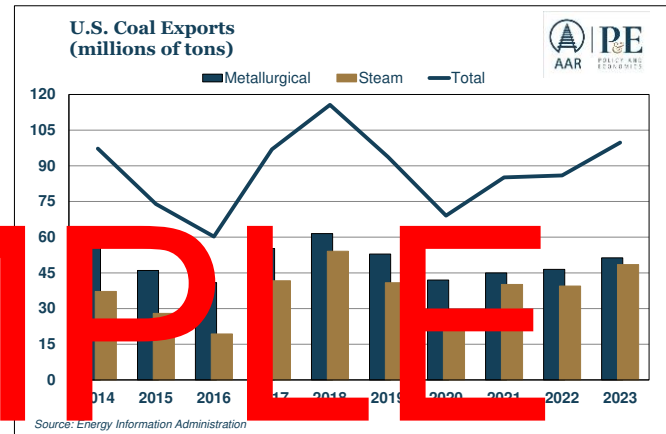
The significant challenges facing coal continue. Natural gas prices are still extremely low by historical standards (see the bottom right chart above) and the cost of electricity generated by wind and solar farms has plunged, thus public and private sources are being invested to further reduce the costs of renewable fuels.

In its [Short Term Energy Outlook](#) released on June 11, the EIA projects U.S. coal production will be 506 million tons in 2024 and 500 million tons in 2025 (down from 577 million tons in 2023) and U.S. coal consumption will be 420 million tons in 2024 and 398 million tons in 2025 (down from 426 million tons in 2023). The EIA thinks coal's share of U.S. electricity generation will continue to decline in 2024 and 2025.

Meanwhile, [new limits](#) on emissions from coal fired power plants were announced by the Environmental Protection Agency in April 2024. If they survive court challenges, they will make it even more difficult (and expensive) to operate coal plants.¹²

In addition to its use to generate electricity, U.S. coal is also exported to countries all over the world for steelmaking and power generation. India and Japan were the top markets in 2023. In past years, coal exports would typically account for around 5% of U.S. coal production.

As domestic coal consumption has waned, however, exports have become relatively more important. In 2023, they were equivalent to 17% of U.S. coal production, a record high. The vast majority of export coal moves by rail, either directly to ports or by rail to piers for loading onto barges that then go to ports. Coal exports in 2023 were 122 million tons higher than in 2022. Those higher exports mean coal carloads were around 90,000 higher in 2023 than they otherwise would have been.



Grain

We all have to eat. Because of railroads, that’s much easier than it otherwise would be. Food and farm products, led by grain, have been a major line of business for railroads since the Baltimore & Ohio Railroad started in 1830.

Most grain is grown to be eaten, either by humans directly or by animals that are eventually eaten by humans (e.g., cows, pigs, chickens). Grain is often processed before final consumption (e.g., wheat into flour, soybeans into soybean oil and meal, barley into beer¹³). Grain is also sometimes processed for industrial use (e.g., corn to ethanol). Railroads participate fully in all these markets.

Corn is by far the highest-volume grain carried by U.S. Class I railroads, accounting for 704,000 carloads (46% of total grain carloads) and \$3.3 billion in revenue (51% of total grain revenue) in 2023, ahead of wheat (234,000 carloads, \$1.4 billion) and soybeans (209,000 carloads, \$1.2 billion). Sorghum, rice, oats, barley and rye are also included in the AAR’s “grain” category.

¹² The EPA’s impact analysis of its April rule says 42 GWs (20% of existing coal generation facilities) will be shut down because of the rule. The EIA says 155 GWs — about 76% of current coal generating capacity — will be nonviable due to the new rule.

¹³ An average rail car of barley contains ~92 tons. Assuming 2 pounds of barley per gallon of beer, that’s enough barley to make ~92,000 gallons of beer. According to [beerinfo.com](#), average U.S. adult per capita beer consumption is 28 gallons, so a railcar of barley is enough to supply beer to 3,300 American adults for a year.

U.S. rail carloads of grain averaged 18,381 per week in June 2024, up 17.5% over June 2023 and their sixth straight year-over-year monthly gain. In Q2 2024, grain carloads were up 8.1% over Q2 last year, making it grain’s first year-over-year quarterly gain since Q3 2022.

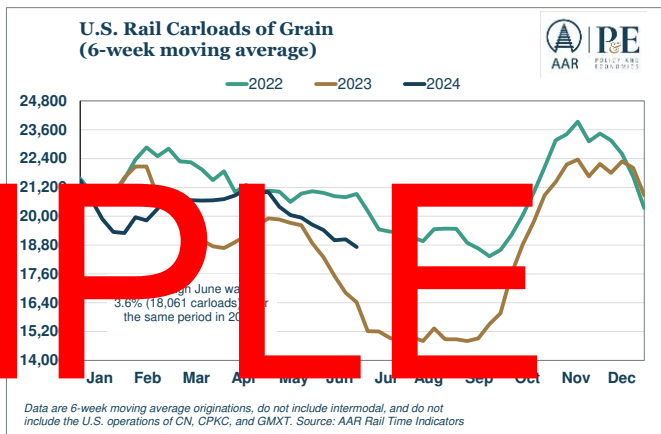
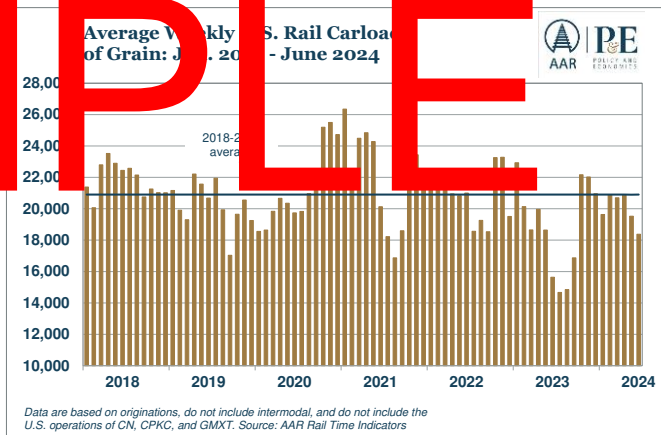
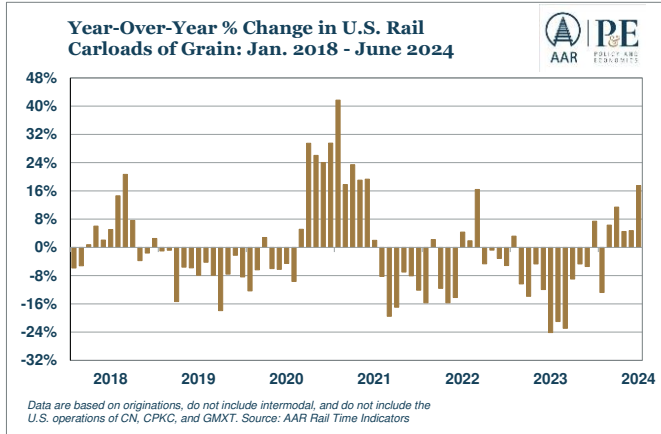
Year-to-date U.S. grain carloads in 2024 through June were 519,205, up 3.6% (18,061 carloads) over the same period last year. From 2015 through 2023, grain carloads for the first six months of the year averaged 546,711, substantially higher than 2024’s January-June total. Put another way, U.S. grain carloads are higher this year than last, but will lag over recent years.

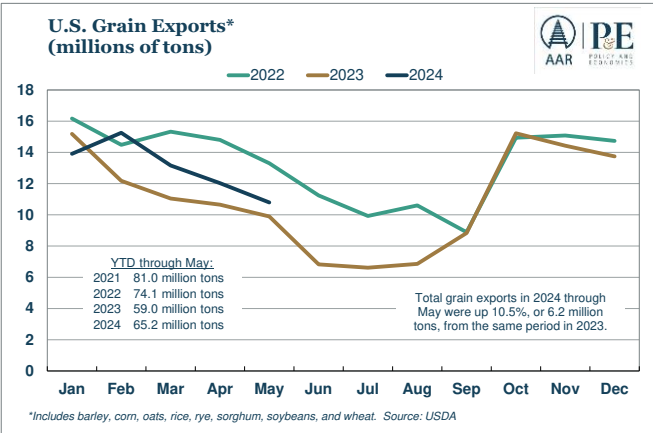
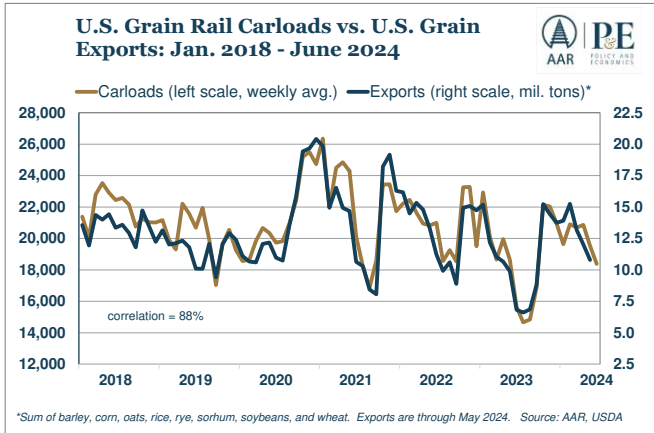
For North American railroads, including Canadian and Mexican railroads, grain carloads were up 12.6% in June, up 7.2% in the second quarter, and up 2.1% for the year to date.

For railroads, the grain market has distinct domestic and international components. Domestic grain demand is usually relatively flat from one year to the next. For example, according to USDA data, over the past 10 years, U.S. domestic corn consumption in the peak year (2023) was just 7% higher than in the lowest fiscal year (2015). For wheat, the comparable figure was 9%. Over the past decade, combined domestic use of corn, soybeans, and wheat was just 9% higher in the highest volume year (2023) than the lowest volume year (2015).

The international side is much different. The U.S. is the world’s top grain exporter, and grain exports vary enormously from year to year. (Double-digit changes from one year to the next are common.) This presents enormous challenges for participants in the grain logistical chain. Railroads account for around 38% of grain exports, an indication of their critical role in connecting agricultural producers with global markets.

The unpredictability of grain exports and rail’s crucial role in it means most of the variability in U.S. rail carloads of grain is related to changes in grain exports. There’s a very close correlation between rail carloads of grain and grain exports.



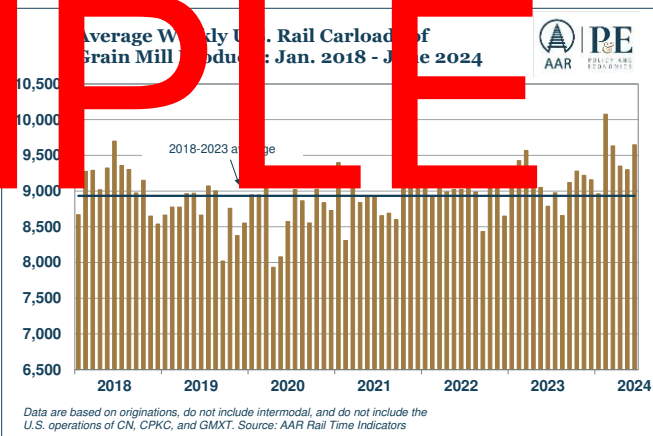
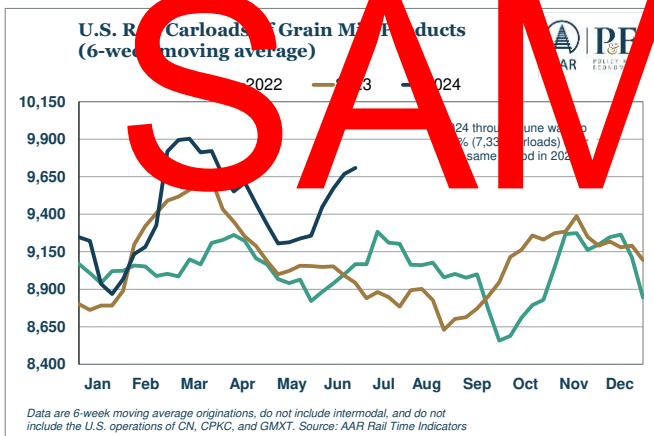


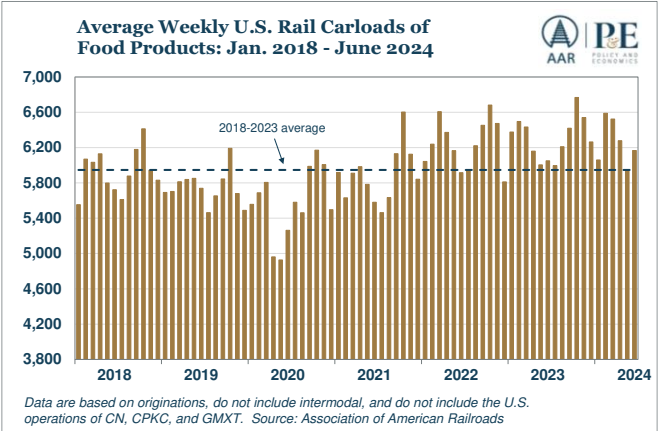
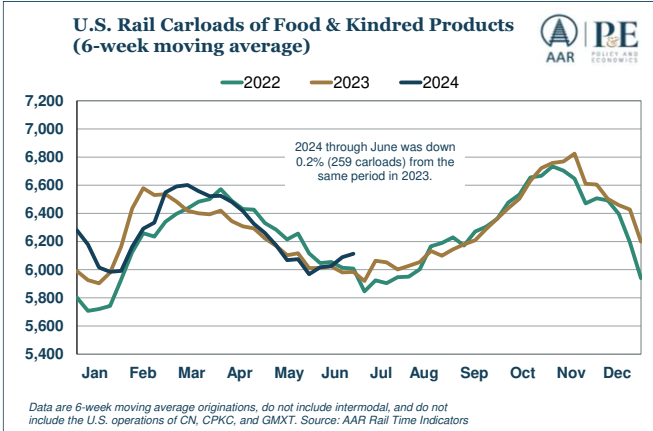
U.S. grain exports in 2023, especially in the third quarter of 2023, were unusually low. That will mean relatively easy year-over-year comparisons for grain exports over the next few months. Unless exports this year are similarly low, rail carloads of grain will be significantly higher than last year. Its most recent forecast, the USDA projects a 20% increase in U.S. corn exports by volume in fiscal year 2024 over fiscal year 2023, a 15% decline in soybean exports; a 10% increase in wheat exports; and a 111% increase in sorghum exports. All else equal, that will mean additional rail carloads of grain.

Grain Mill Products

“Grain mill products” in our weekly traffic report products refer to food items made grains (including soybeans). U.S. Class I railroads (including the U.S. Class I subsidiaries of Canadian railroads) originated 686,497 carloads of these products in 2023. Major subcategories include soybean cake and meal (228,099 carloads, or 33% of the grain mill total); dried distillers grains (103,423, 15%); corn syrup (76,429, 11%); wheat flour and bran (75,681, 11%); and prepared animal feed (68,692, 10%).

In June 2024, U.S. carloads of grain mill products were up 9.8% over June 2023, their fifth straight year-over-increase. In Q2 2024, they were up 5.1% over the same period last year, their biggest year-over-year quarterly gain in three years. For the first six months of 2024, carloads were up 3.1% over last month and were the highest since 2015.





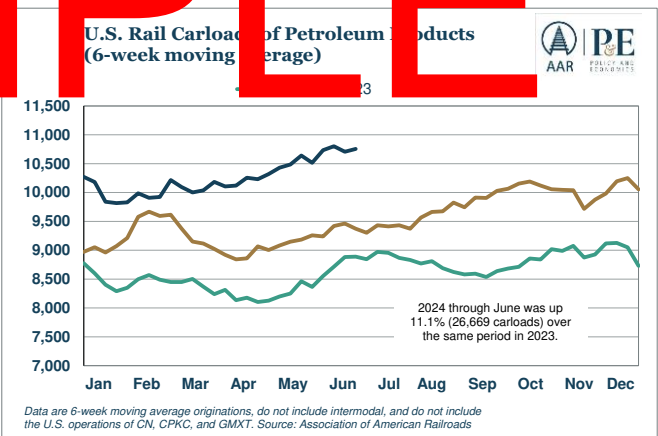
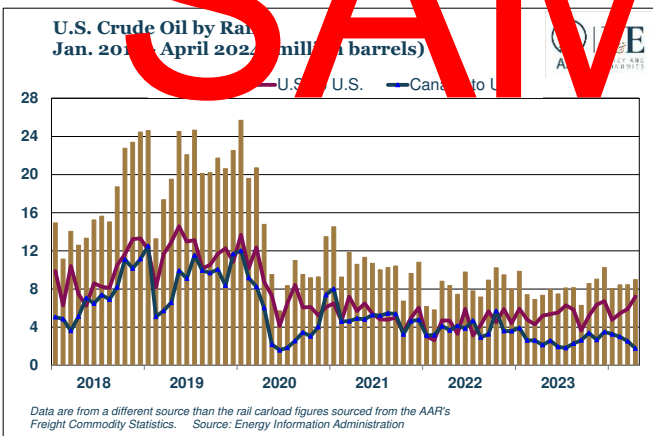
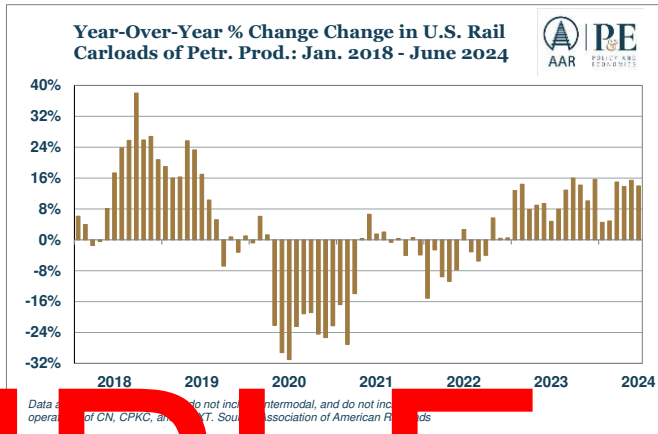
Food Products

Food products in our weekly traffic report encompass a large variety of product categories, including canned goods (about 20% of this category), alcohol beverages (14%), soybean oil (8%), sugar and sugar byproducts (6%), and nut and vegetable oils (other than corn oil 4%). In 2023, Class I railroads originated about 1.7 billion carloads of food and kindred products. Fewer categories see as little year-to-year variability as this carload category.

Petroleum Products

Petroleum products consist of a wide variety of categories accounting for 4% to 5% of non-intermodal originated carloads for U.S. railroads. They consist of products of petroleum refining (LPGs, fuel oil, lubricating oils, aviation and other fuels, etc.) and crude oil.

U.S. carloads of petroleum and petroleum products rose 14.0% in June, their 21st straight year-over-year gain. Year-to-date carloads were up 11.1% (26,669 carloads), second only to chemicals in terms of carload gains.



Crude oil accounts for most of the variability in this category over the years. Crude oil carloads peaked in 2014, fell sharply in 2015 through 2017, then began rising again in 2018 before falling again in mid-2020. So far this year, most of the subcategories appear to be seeing carload growth this year, though crude oil is the primary driver.

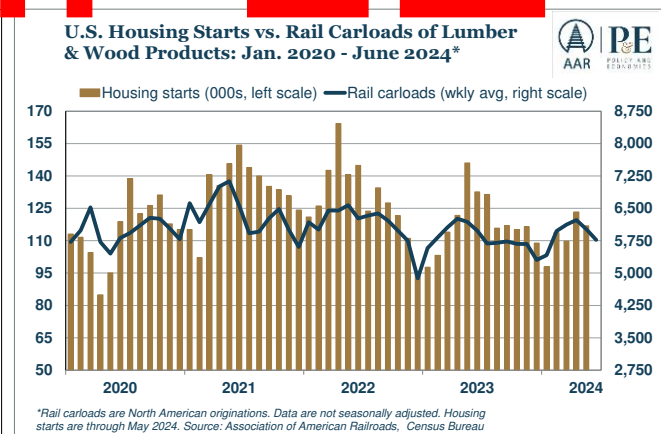
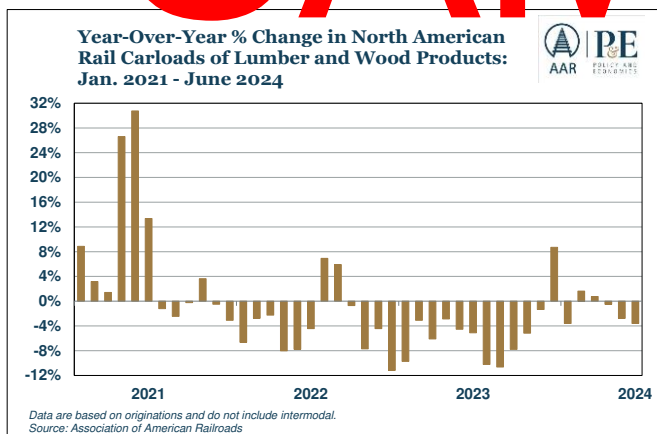
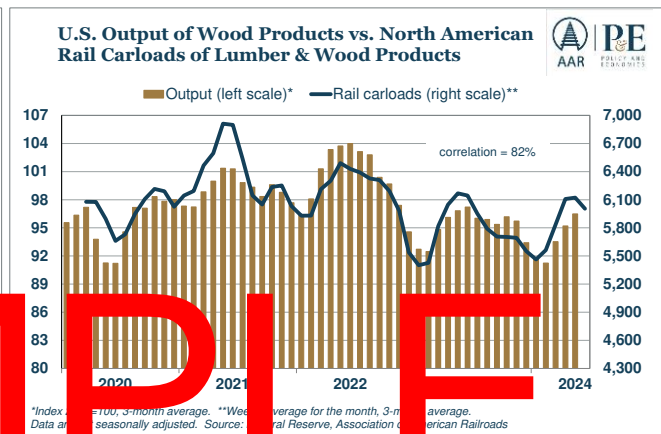
Petroleum products are typically carried in tank cars. The invention of the railroad tank car is generally credited to John D. Rockefeller's Standard Oil Company around 1865. This innovation revolutionized the transportation of liquids by rail, providing a safer and more efficient method compared to earlier makeshift methods of transporting barrels or containers on flatcars.

Lumber & Wood Products

Housing is a key economic sector and rail shipments of lumber and wood products are a useful gauge of housing market activity.

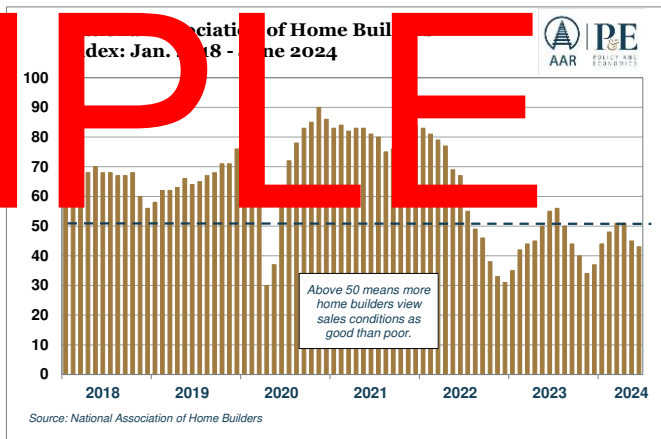
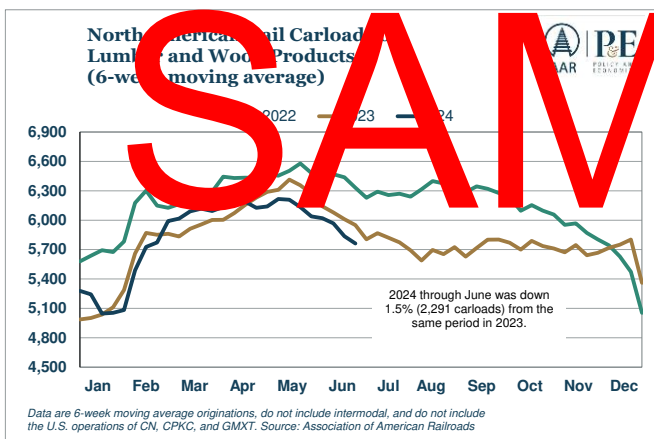
A housing start is the beginning of the foundation of a new home. Total U.S. housing starts were an annualized, seasonally adjusted and preliminary 1.8 million in May 2024, down 5% from April 2024 and down 19.3% from May 2023. Single-family housing starts were an annualized 982,000 million in May 2024 — down 5.2% from April 2024, down 1.7% from May 2023, and the fewest in seven months. Multi-family housing starts were an annualized 295,000 in May 2024, down 1.6% from April 2024.

For the first five months of 2024, total housing starts were down 3.6% from last year, including a gain of 18.8% in single-family homes and a decline of 39.7% for multi-family units.

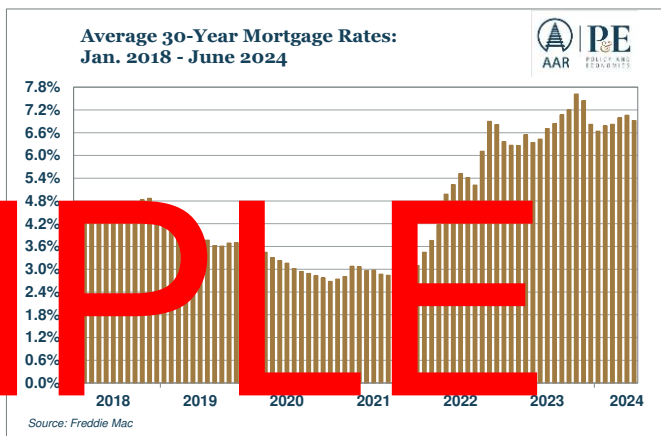


North American carloads of lumber and wood products were down 3.6% in June 2024 from June 2023, their third straight year-over-year decline. (We use North America here because of the importance of Canadian lumber in the U.S. market.) Weekly average carloads in June (5,769 carloads) were the fewest since January 2024. Year-to-date carloads were down 1.5% (2,291 carloads) from January to June last year.

The National Association of Home Builders (NAHB) reports that the NAHB/Wells Fargo Housing Market Index, a measure of homebuilder sentiment, fell to 43 in June from 45 in May, its the second consecutive decline. A reading above 50 means more home builders view sales conditions for single-family homes as good than poor. NAHB Chief Economist Robert Dietz said, “The best way to bring down shelter inflation and push the overall inflation rate down to the 2% range is to increase the nation’s housing supply. A more favorable interest rate environment for construction and development loans would help to achieve this aim.”



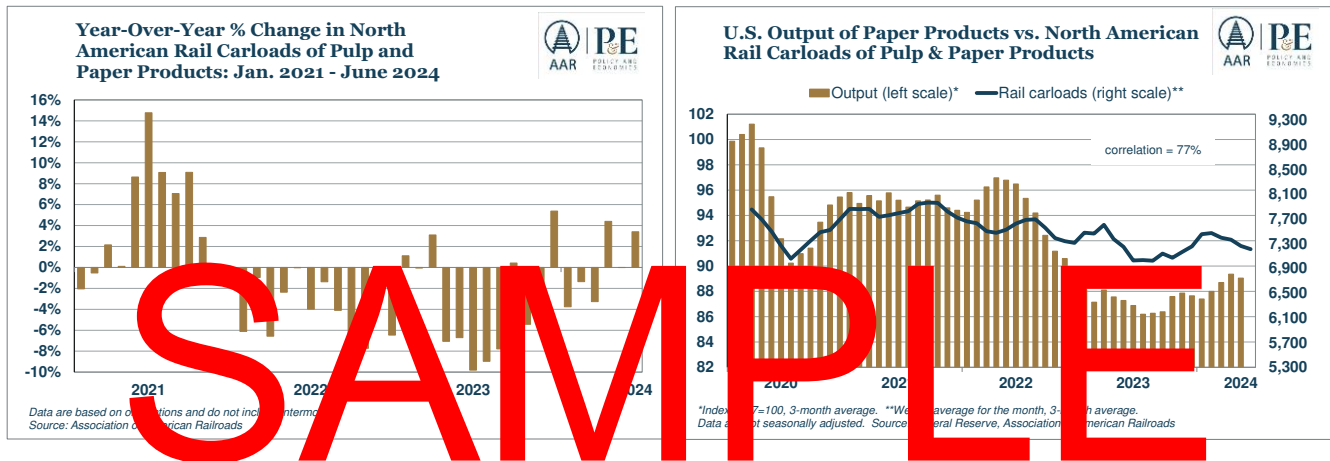
To Dietz’s point, average mortgage rates have hovered around 7% for the past three months. Lower mortgage rates would incentivize prospective buyers and sellers to participate in the housing market while lower construction financing costs would incentivize the construction of more homes. That, in turn, would mean more lumber and wood product movements for railroads.



According to the National Association of Realtors, the national median price of an existing home in May 2024 was \$419,300, a record high. Assuming a 30-year mortgage at 7% and a 20% down payment, the average monthly mortgage payment for a buyer of a median-priced home today is around \$2,200. That’s more than double what a buyer of a median-priced home paid each month just before the pandemic, when the median-price home was \$270,000 and the mortgage rate was half what it is today. Buying a home is now unaffordable for many potential purchasers and has led to many renters having to stay put. That, in turn, is pushing up rents. To the extent higher rents are offsetting lower prices in other areas, this keeps overall inflation higher than it otherwise would be.

Pulp & Paper Products

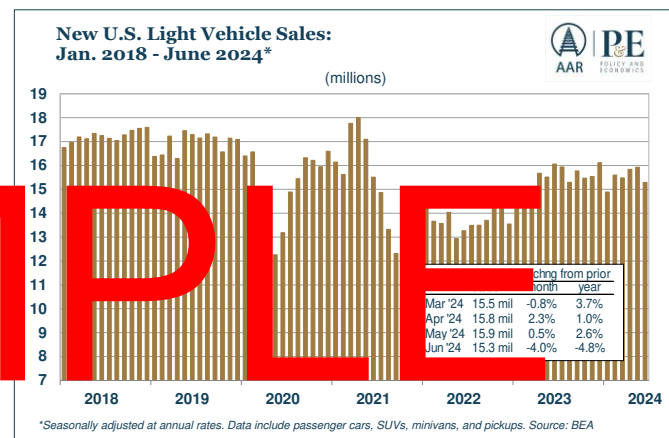
North American carloads of pulp and paper products were up 3.4% in June 2024 over June 2023; for Q2, carloads were up 2.4% (their first year-over-year quarterly increase in five quarters); and year-to-date carloads were down 0.3% (665 carloads).



Motor Vehicles

Over the past 50 years, spending on motor vehicles has accounted, on average, for more than 3.5% of U.S. GDP. Several million people in the United States work at firms associated with automobile production, sales, and repair, making the industry one of the single largest drivers of the industrial economy. This sector's performance is a critical indicator of consumer demand and manufacturing health, both of which are essential for economic growth. In 2023, 6% of U.S. Class I railroad gross revenue came from hauling autos and auto parts.

New light vehicle sales were an annualized and seasonally adjusted 15.3 million in June 2024, down from 15.9 million in May. (May's sales figures were one of the best sales months in the past three years.) Vehicle sales in June were artificially reduced by disruptions at car dealers stemming from a cyberattack targeting a company that supplies critical sales software to some 15,000 auto dealers around the country.

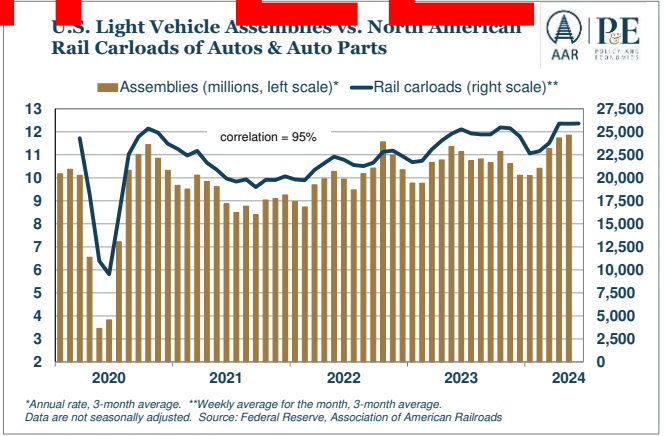
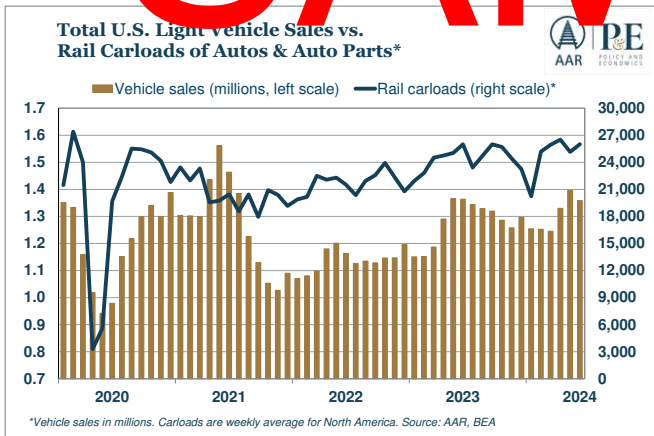
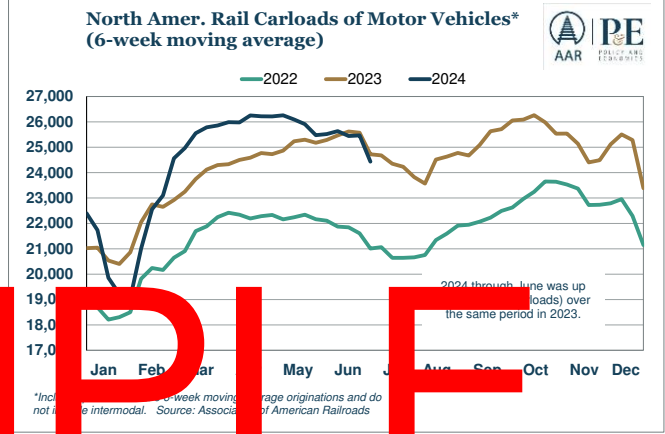
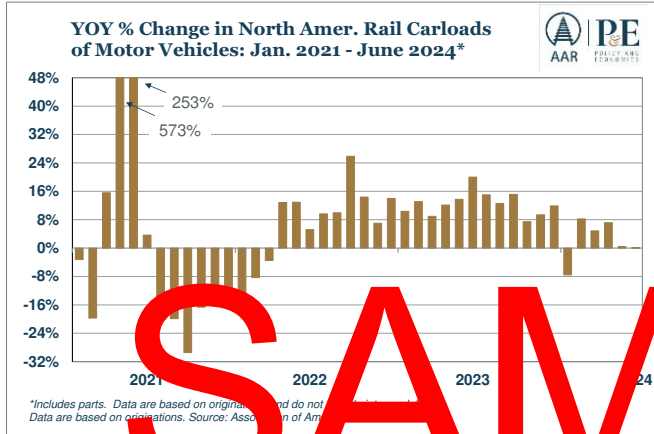


There's some month-to-month volatility, but the trend line for sales over the past year is flat.

Average monthly sales in the first six months of 2024 was 15.5 million, the same as for 2023.

Year-to-date new vehicle sales in the first six months of 2024 (7.8 million) were up 2.1% over last year and the most since 2021.

North American rail carloads of motor vehicles were up 0.1% in June 2024 over June 2023, their 26th increase in the past 27 months. Carloads averaged 26,023 per week in June 2024, very close to where they were the previous five months. Year-to-date carloads were up 1.9% (11,845 carloads) over last year and were the highest in our records for North America beginning in 2020.



Over the past couple of years, there's been a reasonably strong correlation between U.S. light vehicle sales and North American rail carloads of motor vehicles. There's also a very strong positive correlation between rail carloads and U.S. light vehicle assemblies. The AAR estimates that railroads carry approximately 70% of new automobiles.

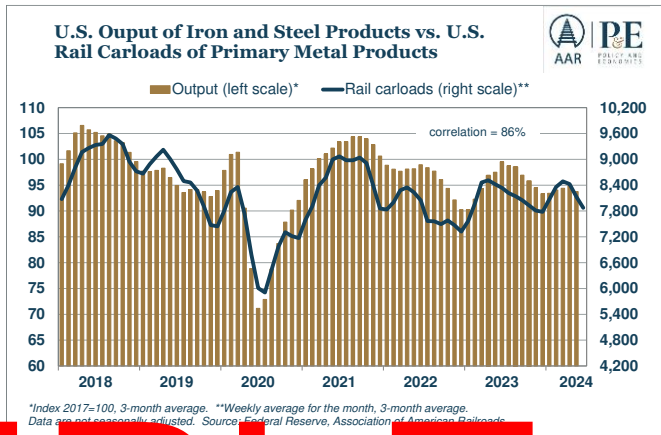
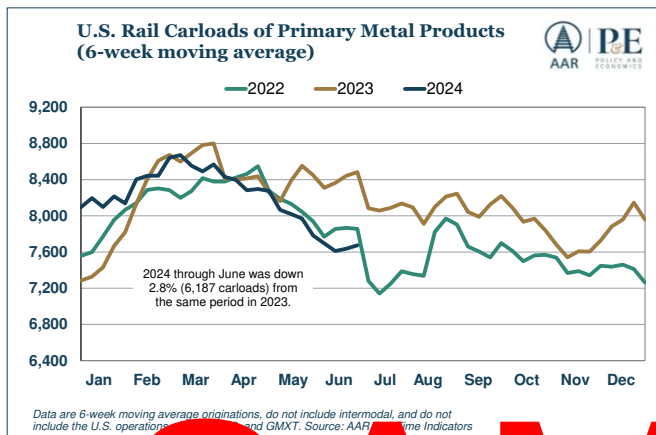
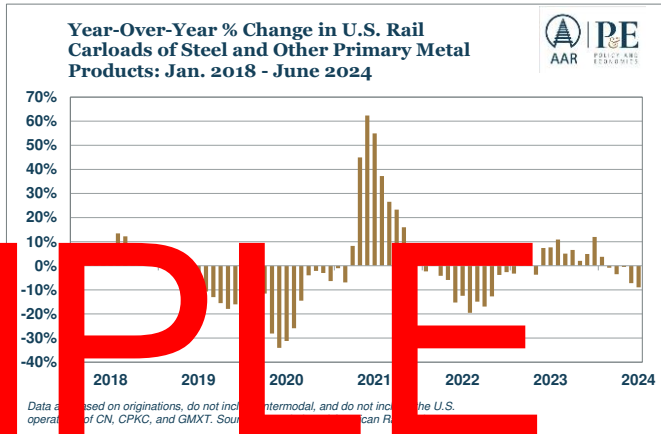
Cox Automotive is a leading marketing and research firm. In its most recent industry forecast released June 25, Cox says sales this year will be 15.7 million. That's well below sales exceeding 17 million in the years prior to the pandemic. Cox's chief economist said, "The [current auto sales] market is rolled by uncertainty...but we aren't expecting a collapse in sales" in the second half of 2024.

One potential problem: cars are really expensive. As a July 5 Wall Street Journal [article](#) points out, J.D. Power says the average out-the-door price for a new vehicle is expected to fall in 2024 for the first time in more than a decade. The average price today is about \$45,000, a couple of percentage points lower than last year. However, higher financing costs and insurance costs more than make up for that small decline. The fear is, at some point, more and more potential buyers will say, "I can't do this."

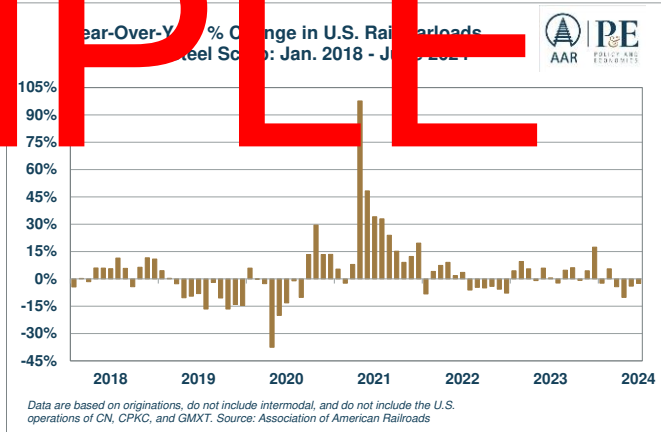
Steel and Steel-Related Products

According to the U.S. Geological Survey, the U.S. iron and steel industry produced raw steel in 2023 with an estimated value of about \$110 billion, down from \$128 billion in 2022. The steel industry touches dozens of other industries, but the biggest consumers are in construction and autos.

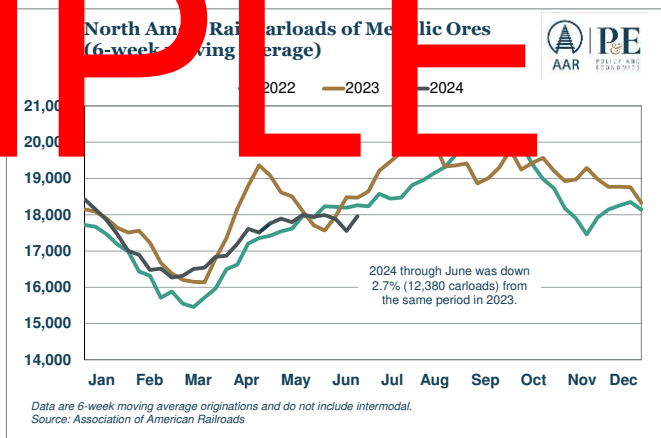
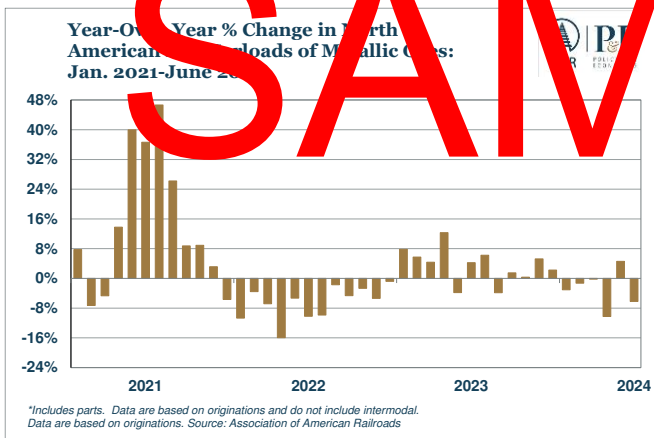
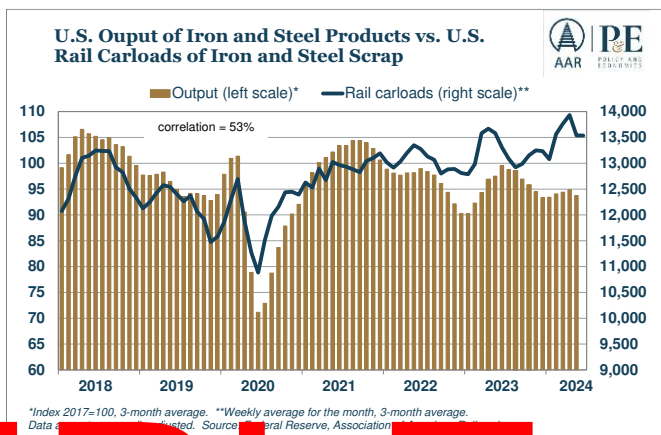
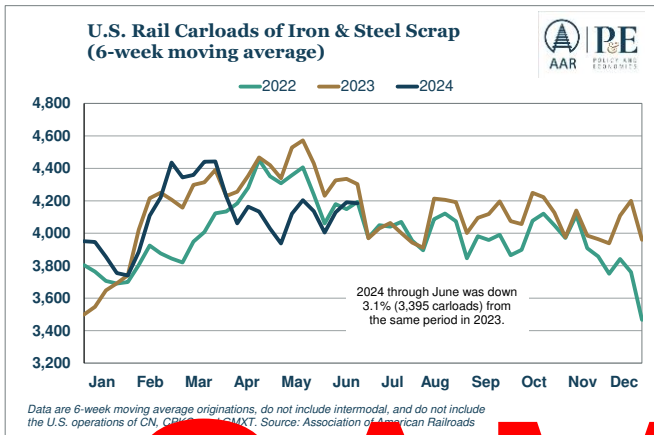
U.S. rail carloads of primary metal products (mainly steel) fell 8.9% in May, their fifth consecutive year-over-year monthly decline following nine straight monthly increases. Carloads averaged 7,657 per week in June, the fewest since October 2023. In the second quarter, carloads were down 5.7%, their first quarterly decline since Q4 2022. Year-to-date carloads through June were down 2.8% (6,187 carloads). The American Iron and Steel Institute says U.S. steel mill shipments in 2024 through June were down 2.6% from last year. There is a strong positive correlation between rail carloads of primary metal products and steel output.



More steel made in the United States today from iron and steel scrap than from the traditional iron ore method, and rail delivers much that scrap. In June 2024, rail carloads of iron and steel scrap were down 2.5% from last year, their fourth straight decline. In the second quarter, carloads were down 5.5%, their first quarterly decline since Q4 2022. Year-to-date carloads were down 3.1% (3,395 carloads) from last year but were otherwise the most since 2014.

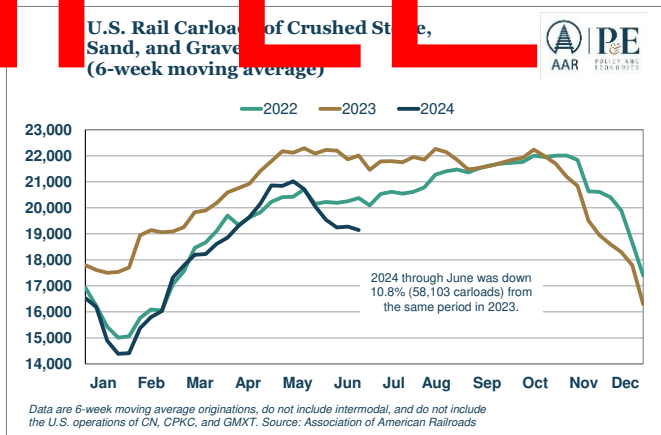
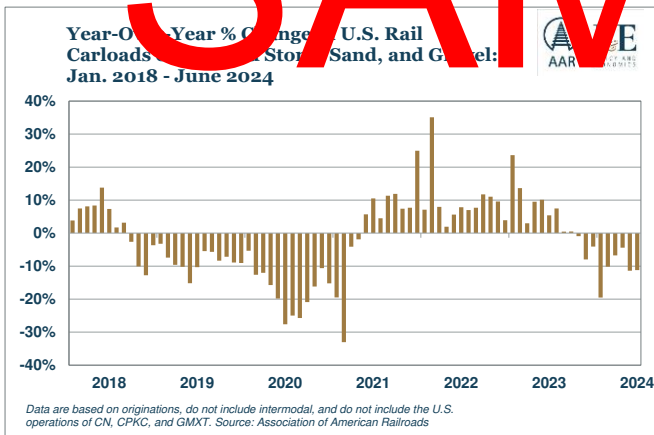


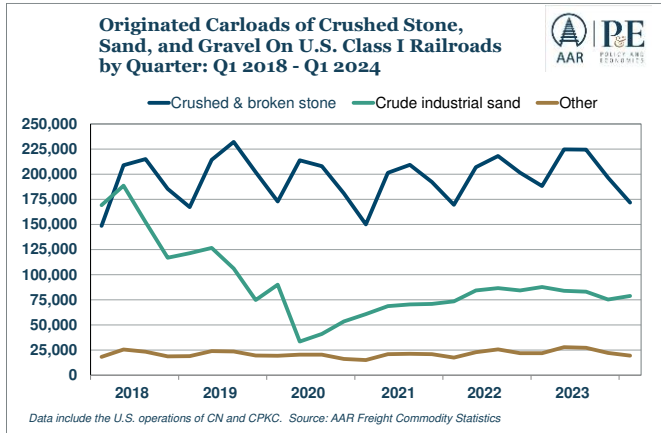
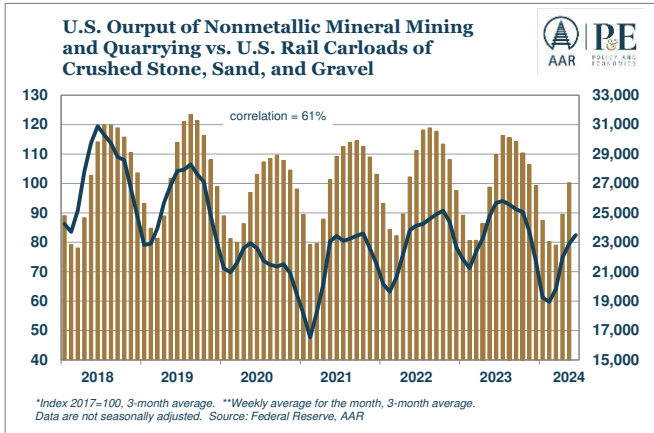
North American carloads of metallic ores (we use North America because of the importance of Canadian railroads for metallic ores) were down 3.6% in the first quarter and were down 2.7% (12,380 carloads) from last year at the same time.



Crushed Stone, Sand, and Gravel

U.S. carloads of crushed stone, sand, and gravel fell 11.2% in June 2024 from June 2023, their ninth straight decline. Carloads in the second quarter were down 9.2%, their third straight year-over-year quarterly decline after 10 consecutive quarterly increases. Year-to-date carloads were down 10.8% (58,103 carloads, second to last among all carload categories in terms of absolute volume declines) and are the lowest since 2021.



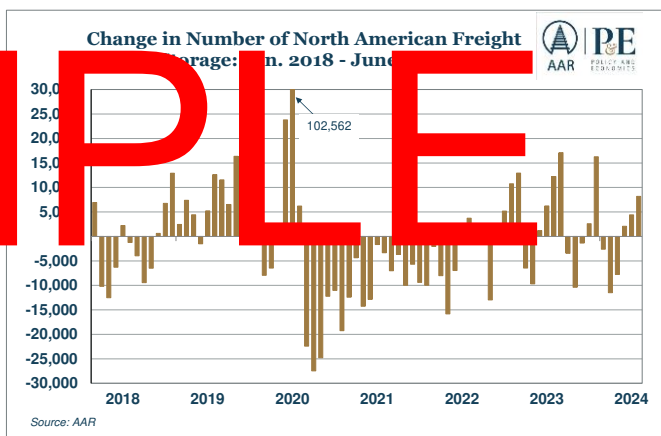
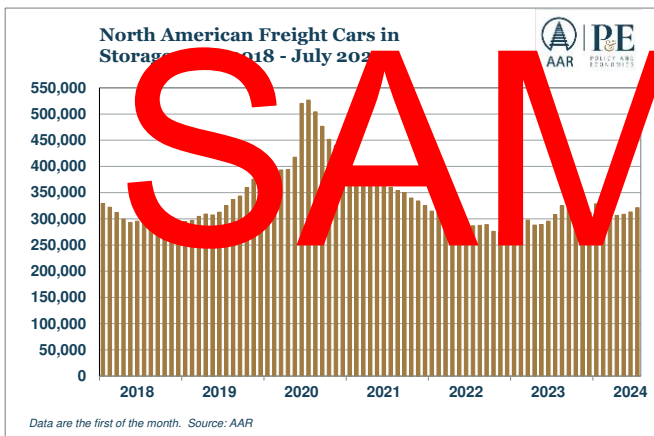


Rail Cars in Storage

Changes in the number of rail cars in storage reflect the short- and near-term outlook of the freight rail transportation demand, and, to a lesser extent, the broader economy. Fewer freight cars in storage suggests an increased demand for rail transportation, indicating that more goods are being moved. This often means that industries are ramping up production, requiring more capacity to transport raw materials and finished goods. AAR defines a railcar is in storage if it had not moved while loaded in the previous 60 days and has moved empty since its last loaded move.

As of July 1, 2024, 19.6% of the 1.64 million North American rail car fleet was in storage, below the historical average. Different rail cars can haul different commodities. The below-average levels for covered hoppers, tank cars and vehicle flat cars indicate robust shipments for commodities such as grain, ethanol, crude oil, and motor vehicles.

Until recently, the monthly AAR cars in storage report has only been accessible to AAR members. A public version is now available for subscription [here](#).



North American Freight Cars in Storage by Major Car Type
(as of July 1, 2024)

Car Type	Primary Commodities	Total Cars		Percent In Storage	Percent of Stored Cars
		In Service	In Storage		
Box	Paper products, wood products, food prod.	102,763	19,147	19%	6%
Covered Hoppers	Grain, chemicals, nonmetallic minerals	570,220	104,179	18%	32%
Flats	Containers, trailers, lumber, steel, autos	71,051	15,896	22%	5%
Gondolas	Coal, nonmetallic minerals, metals, scrap	196,953	38,577	20%	12%
Hoppers	Coal, metallic ores, nonmetallic minerals	111,206	28,253	25%	9%
Intermodal	Containers, trailers	73,457	9,267	13%	3%
Refrigerator	Food products, farm products, chemicals	8,431	3,246	39%	1%
Tanks	Chemicals, petroleum, food products	437,008	99,074	23%	31%
Vehicle Flat	Autos	69,203	3,610	5%	1%
Grand Total		1,640,292	312,249	19%	100%

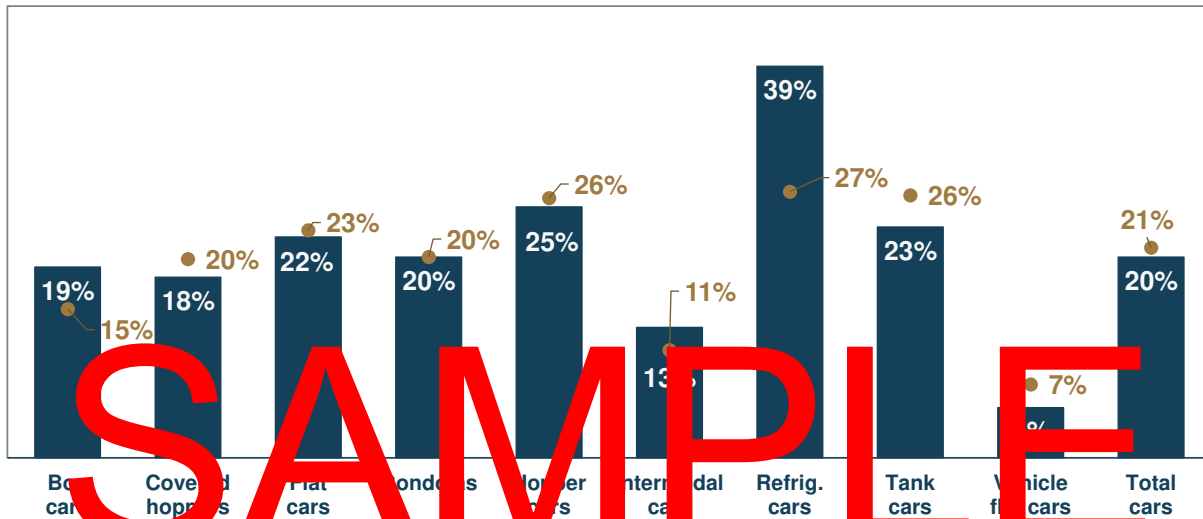
Source: Association of American Railroads

SAMPLE

Freight Cars in Storage* by Car Type as Share of Each Car Type's Total Cars in July 2024



■ July 2024 ● Average 2016-2023



Source: Association of American Railroads.

*A railcar is classified as "in storage" if it has no loaded move for the past 60 days and has moved empty since its last loaded trip.

SAMPLE