A Review of Rail Traffic Trends & Key Economic Indicators Shaping Demand for Rail Transportation

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ASSOCIATION OF AMERICAN RAILROADS

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SUMMARY OF MOST RECENT DATA

(Note: All railroad carload figures are originations.)

Total U.S. rail carloads fell 7.0% in June 2016 from June 2015, which is bad but less bad than it's been: 7.0% is the smallest percentage decline for total carloads in eight months. Total carloads averaged 249,005 per week in June 2016, the lowest weekly average for June since 1988, when our records begin. In the first six months of 2016, total U.S. carloads were down 12.3% (886,579 carloads) from the same period in 2015 and were the lowest January-June total since sometime prior to 1988. U.S. coal carloads were down 16.4% in June 2016 from June 2015 (their smallest monthly decline in eight months) and were down 30.4% for the year to date. Excluding coal, U.S. carloads were down 2.3% in June 2016 and 2.0% for the year to date. U.S. intermodal originations were down 5.6% in June 2016 from June 2015 (their fourth straight monthly decline) and were down 2.1% (147,056 containers and trailers) in the first half of 2016. Carloads on Canadian railroads (including their U.S. operations) were down 10.4% in June; intermodal originations were down 6.4%.

	Jan. '16	Feb. '16	March '16	April '16	May '16	June '16
Total U.S. carloads*						
Average per week	242,011	244,761	239,233	236,092	240,643	249,005
% chg same month prior year	-16.6%	-10.1%	-14.2%	-16.1%	-10.3%	-7.0%
U.S. carloads excluding coal*						
Average per week	166,520	169,843	171,997	175,033	175,709	174,253
% chg same month prior year	-5.9%	0.4%	-1.2%	-2.8%	-0.2%	-2.3%
U.S. coal carloads*						
Average per week	75,491	74,918	67,236	61,060	64,934	74,752
% chg same month prior year	-33.3%	-27.3%	-35.9%	-39.7%	-29.6%	-16.4%
U.S. intermodal						
Average per week	259,905	262,282	250,185	257,115	262,408	259,048
% chg same month prior year	3.4%	12.9%	-7.7%	-7.5%	-3.3%	-5.6%
U.S. carloads + intermodal						
Average per week	501,916	507,042	489,418	493,207	503,051	508,053
% chg same month prior year	-7.3%	0.5%	-11.0%	-11.8%	-6.8%	-6.3%
Total Canadian carloads*						
Average per week	68,885	70,153	71,580	70,314	65,849	68,141
% chg same month prior year	-12.2%	-6.3%	-9.2%	-13.6%	-15.4%	-10.4%
Canadian intermodal						
Average per week	59,544	60,250	55,155	59,401	59,016	57,862
% chg same month prior year	0.9%	7.9%	-8.2%	-5.0%	-6.0%	-6.4%

YTD Through June	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Total U.S. carloads*	7,540,373	7,325,537	7,217,933	7,472,953	7,181,795	6,295,216
U.S. carloads excluding coal*	4,197,801	4,340,562	4,369,281	4,592,341	4,571,624	4,479,667
U.S. coal carloads*	3,342,572	2,984,975	2,848,652	2,880,612	2,610,171	1,815,549
U.S. intermodal	5,856,189	6,049,809	6,270,447	6,682,660	6,860,059	6,713,003
U.S. carloads + intermodal	13,396,562	13,375,346	13,488,380	14,155,613	14,041,854	13,008,219
Total Canadian carloads*	1,928,794	1,996,099	2,036,384	2,048,676	2,024,093	1,799,404
Canadian intermodal	1,218,736	1,307,909	1,363,829	1,462,788	1,570,130	1,517,929
Canadian carloads + intermodal	3,147,530	3,304,008	3,400,213	3,511,464	3,594,223	3,317,333

**excludes intermodal*

It would be nice if, when an economic indicator comes out that seems too good to be true, it was just accepted because other indicators were really good too. But we're not there yet. On July 8, the BLS reported that 287,000 jobs were created in June 2016, up from a revised 11,000 in May 2016. Doesn't make sense. Other recent indicators are a mix of good and not as good. The Purchasing Manager's Index (PMI) rose to 53.2 in June, its fourth straight month over 50 (indicating manufacturing is expanding). On the other hand, the most recent data from the Federal Reserve continue to show flat or even falling manufacturing output. The Non-Manufacturing Index (NMI) and one of the major measures of consumer confidence rose sharply in June over May, but another measure of consumer confidence and auto sales fell in June from May. Consumer spending and retail sales both showed solid gains in April and May. How they do going forward will largely determine how well the economy does.

	Jan '16	Feb '16	Mar '16	Apr '16	May '16	Jun '16
Purch. Mgr. Index (<50=bad) (p. 22)	48.2	49.5	51.8	50.8	51.3	53.2
Non-Manuf. Index (<50=bad) (p. 22)	53.5	53.4	54.5	55.7	52.9	56.5
Industrial output (2012=100) (p. 23)						
Total	104.6	104.4	103.4	104.0	103.6	n/a
Manufacturing	103.5	103.4	103.0	103.2	102.8	n/a
Utilities	101.5	100.5	96.6	102.5	101.4	n/a
Mining, natural gas, oil	108.2	107.5	104.9	102.2	102.4	n/a
Capacity utilization (%) (p. 25)						
Overall	75.8%	75.6%	74.8%	75.3%	74.9%	n/a
Manufacturing	75.5%	75.4%	75.1%	75.2%	74.8%	n/a
Employment situation (p. 26)						
Total net new jobs created	168,000	233,000	186,000	144,000	11,000	287,000
Unemployment rate	4.9%	4.9%	5.0%	5.0%	4.7%	4.9%
Class I railroad employment (p. 28)						
Total employed	156,602	154,212	153,723	153,143	152,726	n/a
Change from previous month	-4,193	-2,390	-489	-580	-417	n/a
Change year-over-year	-14,874	-17,983	-19,247	-20,979	-20,217	n/a
Consumer confidence (p. 29)						
Conference Board (1985=100)	98.1	92.2	96.1	94.2	92.4	98.0
Univ. of Michigan	92.0	91.7	91.0	89.0	94.7	93.5
Retail sales (p. 30)						
% change from previous month	-0.5%	0.3%	-0.3%	1.3%	0.5%	n/a
% change year-over-year	2.8%	3.6%	1.7%	3.0%	2.5%	n/a
Personal consumption (p. 30)						
% change from previous month	0.1%	0.2%	0.0%	1.1%	0.4%	n/a
% change year-over-year	3.9%	3.8%	3.3%	4.1%	3.7%	n/a
New auto sales (SAAR, mil.) (p. 32)	17.4	17.4	16.5	17.3	17.4	16.6
Housing (p. 32)						
Total starts (SAAR, 000s)	1,128	1,213	1,113	1,167	1,164	n/a
Single-family starts (SAAR, 000s)	775	845	751	762	764	n/a
Multi-family starts (SAAR, 000s)	335	356	353	391	396	n/a
Inflation (%) (p. 34)						
Year-over-year overall CPI	1.4%	1.0%	0.9%	1.1%	1.0%	n/a
Year-over-year "core" CPI	2.2%	2.3%	2.2%	2.1%	2.2%	n/a
Empty rail cars in storage (p. 34)	346,505	358,603	363,784	378,227	391,560	388,294

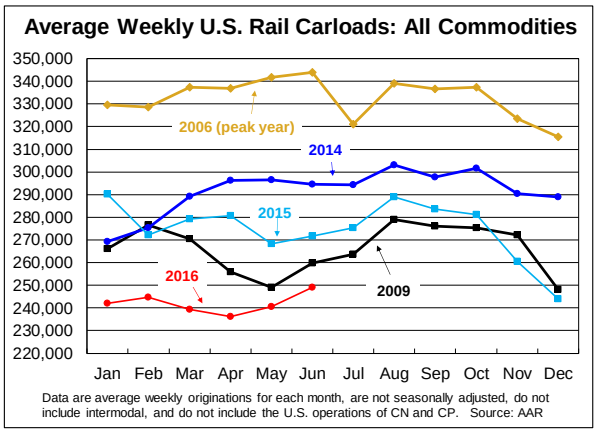
U.S. AND CANADIAN FREIGHT RAILROAD TRAFFIC

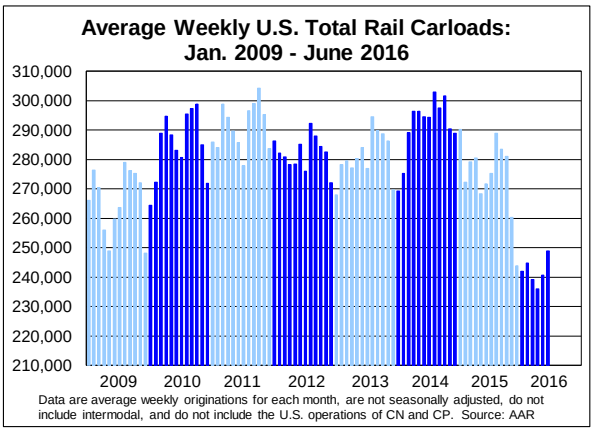
In terms of rail traffic, June 2016 is the five weeks beginning Sunday, May 29, 2016, and ending Saturday, July 2, 2016. In terms of holidays, June 2016 includes Memorial Day (May 30) but does not include July 4th. For comparison purposes, June 2015 is the period 52 weeks earlier from June 2016 — that is, the five weeks beginning Sunday, May 31, 2015, and ending Saturday, July 4, 2015. In terms of holidays, June 2015 does not include Memorial Day (which was May 25, 2015) but does include July 4 (which was celebrated on Friday, July 3, 2015). In other words, both June 2016 and June 2015 include one holiday.

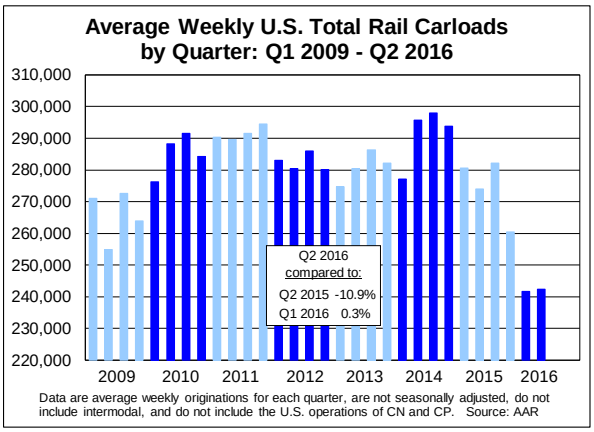
Rail traffic data below are reported as carloads or intermodal units. Carload traffic is broken down into 20 commodity categories (coal, grain, metallic ores, etc.). A unit of rail intermodal traffic is either a shipping container (89% of intermodal traffic in 2015) or a truck trailer (11%) carried on a railroad flat car; a container is counted as one unit regardless of its size. Intermodal is not included in carloads. Commodity detail for what's inside containers and trailers isn't available.

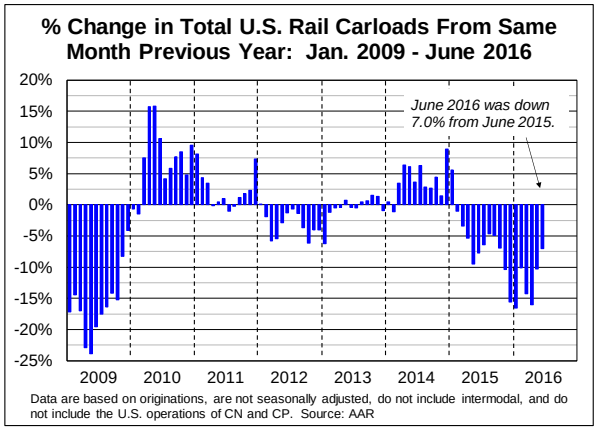
U.S. Rail Carload Traffic

- It's not often that a 7.0% decline in the volume of something can, in a way, be considered good news, but that's where we are with U.S. rail carloads. **They totaled 1,245,025 in June 2016, down 7.0% (93,687 carloads) from June 2015**. It's the 17th straight year-over-year monthly decline, but it's the smallest percentage decline in eight months (see the bottom right chart below).
- Weekly average carloads in June 2016 were 249,005, the lowest weekly average for June since our records begin in 1988, tied for the eighth-worst weekly average for any month since 1988, but the highest for any month since November 2015. Put another way, June's carloads were still bad, but they were not as bad than they have been.



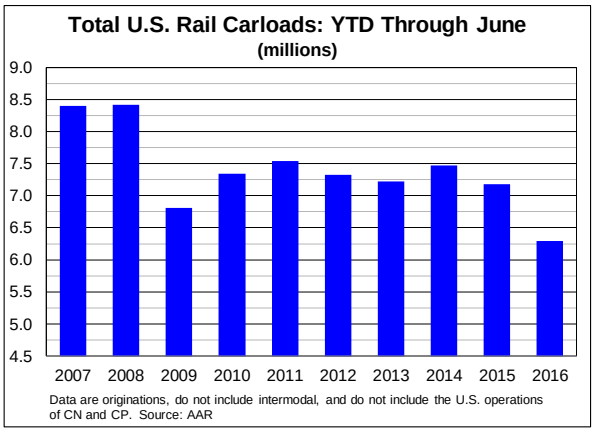






- In the **second quarter of 2016**, **total U.S. carloads were down 10.9%** from the second quarter of 2015 but up 0.3% over the first quarter of 2016 (see the chart above left).

- **In the first six months of 2016, U.S. carloads totaled 6,295,216, down 886,579 (12.3%) from the first six months of 2015** and easily the lowest January-June total since sometime prior to 1988, when our data begin (see the chart at right).



- In June 2016, six of the 20 commodity categories the AAR tracks saw higher carloads compared with June 2015. (That's down from 10 categories in May 2016, but May's traffic was a bit overstated because Memorial Day was in May 2015 but not in May 2016.) For the first six months of 2016, five categories had higher carloads than in the first six months of 2015.

- The charts on the top of the next page, the table on page 10, and the commodity sections on pages 13 to 19 have commodity details for U.S. railroads in June 2016 and the first six months of 2016.

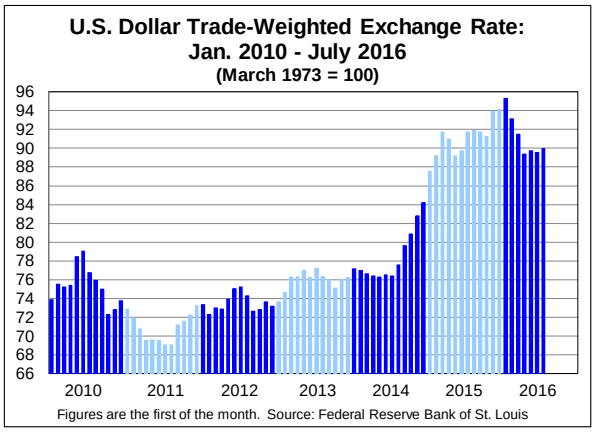
# of AAR Commodity Categories* With Year-Over-Year Gains For U.S. Railroads

Month	2014	2015	2016
Jan	7	18	4
Feb	9	11	9
Mar	11	8	7
Apr	14	5	5
May	17	5	10
Jun	17	6	6
Jul	15	6	
Aug	15	6	
Sep	15	6	
Oct	15	5	
Nov	11	6	
Dec	15	4	

*Out of 20. Source: AAR

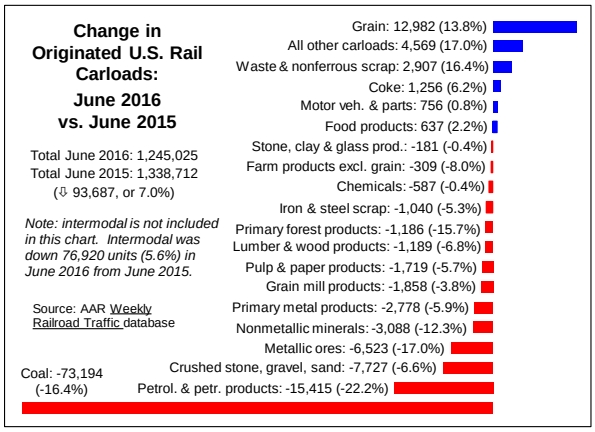
- **Grain** carloads were up 13.8% (12,982 carloads) in June 2016 over June 2015, the biggest percentage gain for grain in nine months. The vast majority of grain carried by U.S. railroads is corn, wheat, or soybeans. For all three, exports are crucial: in a typical year, around 47% of U.S. wheat, 12% of U.S. corn, and 45% of U.S. soybeans are exported. Many of these exports move by rail.

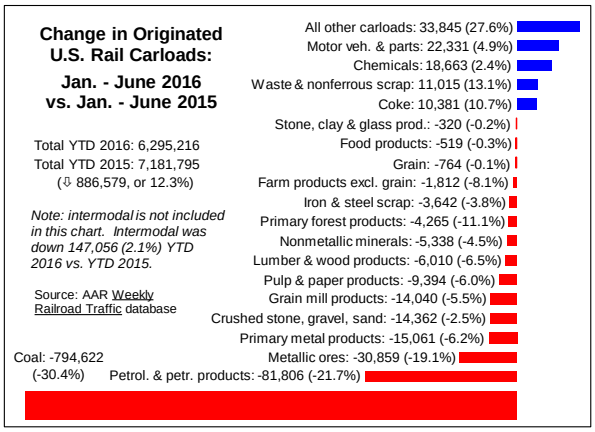
- A June 2016 report (here) from the USDA's Economic Research Service points out that, for corn and soybeans, Argentina, Brazil, and the United States together account for an average of 88% of global soybean exports and 73% of global corn exports. The USDA says that average farm-level production costs per acre for corn and soybeans in Argentina and Brazil were between 11% and 28% below those in the United States, largely because of higher U.S. land and capital costs, though higher U.S. yields partially offset the higher costs. The report also states, "Lower shipping costs (including marketing, handling, and transporting) have helped the United States remain competitive with South America in international markets."



- The USDA report also notes that "recent… strengthening of the U.S. dollar [has] made U.S. commodities more expensive on world markets." The chart at right shows that over the past few months, the U.S. dollar has lost some value. All else equal, that means U.S. grain exports should become relatively more competitive globally. That might be behind some of the big increase in U.S. grain carloads in June. A different June 2016 USDA report, this one on soybeans (see here), states, "U.S. soybean exports this summer could be the strongest in 4 years" due to tightening supplies in South America. U.S. supplies filling the gap left by South American producers could also be behind some of the increase in U.S. grain carloads in June. For more on grain, see the top of page 14.

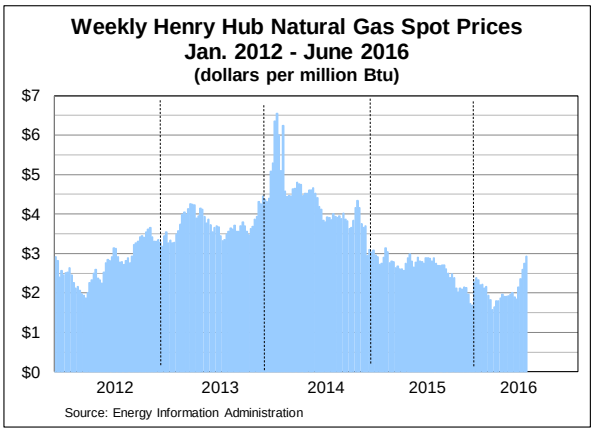
- Other categories with carload gains in June 2016 over June 2015 include the catch-all "**all other carloads**" (up 4,569 carloads, or 17.0% — we think much of this gain consists of empty cars moving in revenue service); **waste and nonferrous scrap** (up 2,907 carloads, or 16.4%), **coke** (up 1,256 carloads, or 6.2%); and **motor vehicles and parts** (up 756 carloads, or 0.8% — see the top of page 18 for data on combined U.S. and Canadian carloads of motor vehicles and parts).



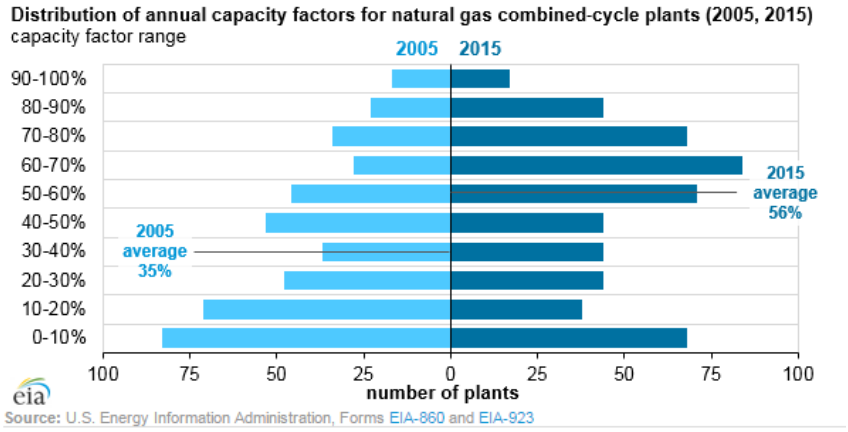


- U.S. railroads originated 373,761 carloads of **coal** in June 2016, down 73,194 carloads (16.4%) from June 2015. A 16.4% decline can't be good news, but it's the smallest year-over-year monthly decline for coal in eight months. Weekly average coal carloads in June 2016 were 74,752, their highest average in four months and 22.4% higher than in April 2016, when they averaged just 61,060. Could the worst be over for coal? It's way too early to say that, but coal was clearly "less bad" in June. For the first half of 2016, coal carloads were down 794,622 (30.4%).

- One reason for the bad-but-not-as bad coal numbers? Higher natural gas prices. The chart at right, from the Energy Information Administration, shows that natural gas spot prices (in this case, Henry Hub) have been trending upward for several weeks and are now near $3 per million British thermal units (MMBtu), their highest level since August 2015. Everything else equal, the higher natural gas prices go, the more competitive coal plants will be.



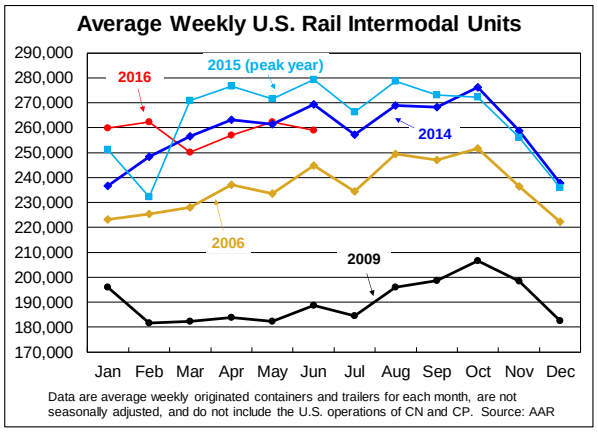
- We all know that the electric power industry has been building new natural gas capacity and retiring coal plants. But as a "Today in Energy" piece (here) from the Energy Information Administration explains, the day-to-day pattern of how existing power plants are used is another key factor behind changing electricity generation. In 2015, the average annual capacity factor (basically, the capacity utilization rate) for combined cycle natural gas plants was 56%. For coal plants in 2015, it was 55%, marking the first time ever that the rate was higher for natural gas plants than for coal plants. The average rate for natural gas plants was around 35% ten years ago, but today many operate in the 50%-80% range. The EIA further explains, "Nearly half of all coal plants ran at capacity factors above 70% in 2005….In 2015, less than one-fifth of all coal plants operated at capacity factors higher than 70%. In other words, natural gas plants have increasingly taken over baseload duties from coal plants.

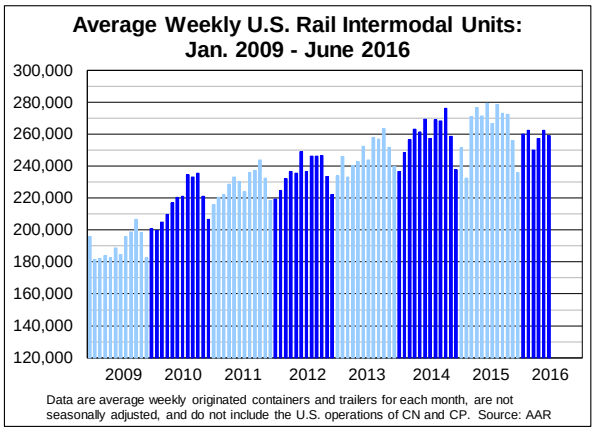


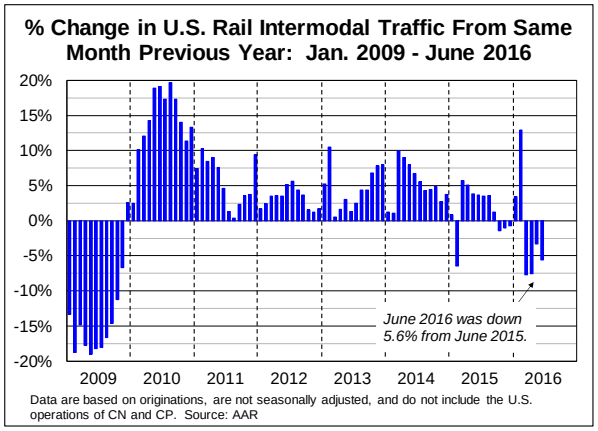
- The freefall in **petroleum and petroleum products** continues, with carloads down 15,415 (22.2%) in June 2016 from June 2015. That's the 12th straight double-digit monthly decline. Recent declines in petroleum and petroleum products is almost certainly due mainly to lower crude oil carloads; we hope to be able to confirm this with second quarter 2016 crude oil numbers in next month's RTI. For more on petroleum and petroleum products, see the bottom of page 17.
- Carloads of **crushed stone, gravel, and sand** (including frac sand) were down 7,727 (6.6%) in June 2016 from June 2015 (see page 15). U.S. carloads of **metallic ores** were down 6,523 (17.0%) in June 2016 from June 2015. For more on metallic ores, see page 18. Carloads of **chemicals** were down 587 (0.4%) in June 2016 from June 2015, their first year-over-year decline in ten months. For more on chemicals, see page 13.
- **U.S. rail carloads excluding coal** in June 2016 were down 2.3% (see the bottom of page 14); carloads excluding coal and grain were down 4.2% in June (see the top of page 15).

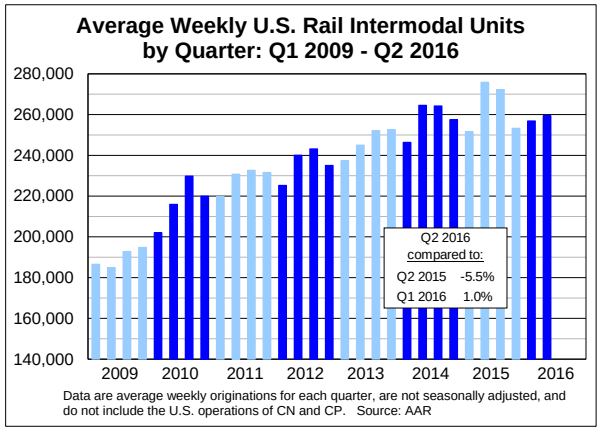
U.S. Rail Intermodal Traffic

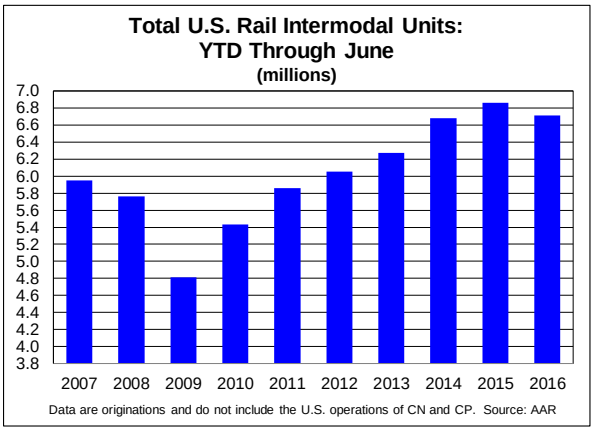
- Well, this wasn't supposed to happen. **U.S. railroads originated 1,295,240 intermodal containers and trailers in June 2016**, **down 76,920 (5.6%) compared with June 2015.** That's the fourth straight monthly decline for intermodal and the **seventh in the past nine months, going back to October 2015**. Prior to October 2015, intermodal volume had risen in 69 of the previous 70 months.
- In the second quarter of 2016, intermodal originations were down 5.5% (197,014 units) compared with the second quarter of 2015. In the first quarter, originations rose 1.5% over the first quarter last year.
- **In the first half of 2016, U.S. intermodal volume was 6,713,003 containers and trailers, down 2.1% (147,056 units) from the first six months of 2015** (see the chart on the top left of the next page). **Container volume was up 0.5%** (28,950 containers) from January to June, but **trailer volume was down 23.1%** (176,006 trailers). All of the railroads that provide their intermodal data to the AAR reported a sharp decline in trailer volume this year from last year.

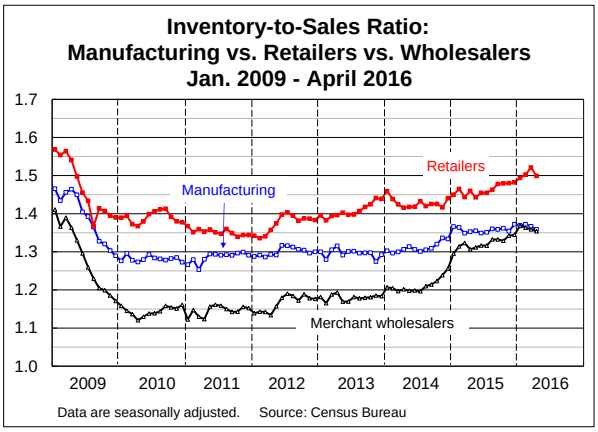




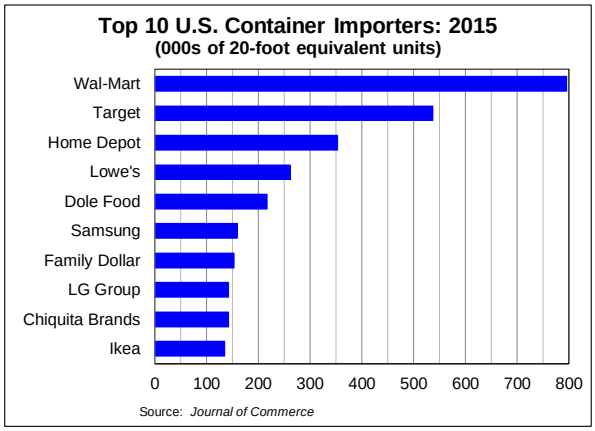


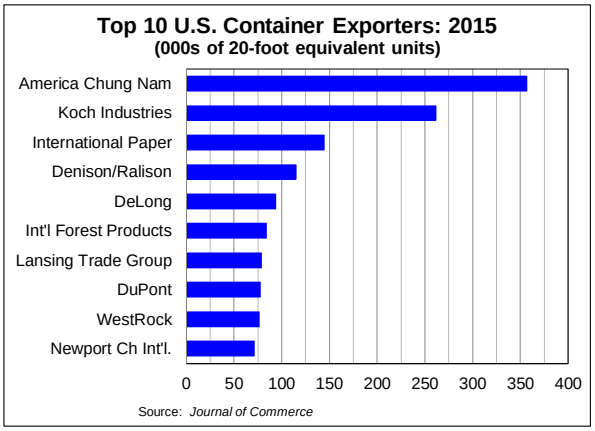






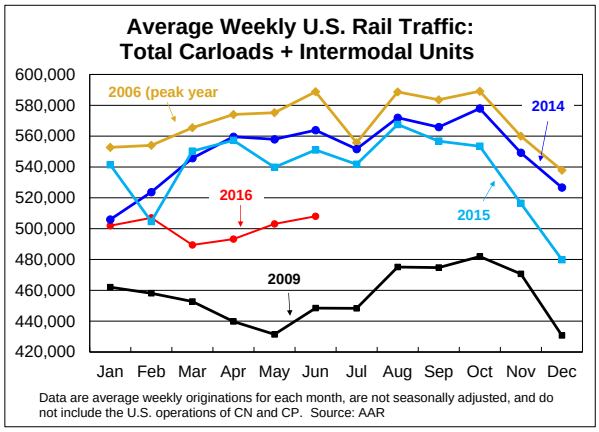
- We've shown the chart above right for several months in a row. It shows the inventory to sales ratio for retailers, merchant wholesalers, and manufacturers through April (the most recent month for which data are available at this writing). The ratios fell in April from March, but they're still relatively high. To the extent firms seek to lower them further, which would seem likely, it would mean a continued headwind for rail intermodal volumes.
- The Journal of Commerce (www.joc.com) is a terrific source of information on many different aspects of surface transportation. It has a sister company called PIERS (see here) that aggregates raw data from millions of bills of lading filed with U.S. Customs each year into useful information, then makes the data available either for purchase or, in some cases, to the general public. Among the latter are figures on the top U.S. container importers and exporters, which are summarized in the two charts below. On the import side (see the chart below left), the biggest players are all familiar names — big box stores, other large retailers, and suppliers to retail stores. Several of the top U.S. container exporters are well known (see the chart below right), but several are not. Most of the biggest exporters focus on recyclables (paper, plastics, scrap metal) or grain, often to Asia and especially to China.

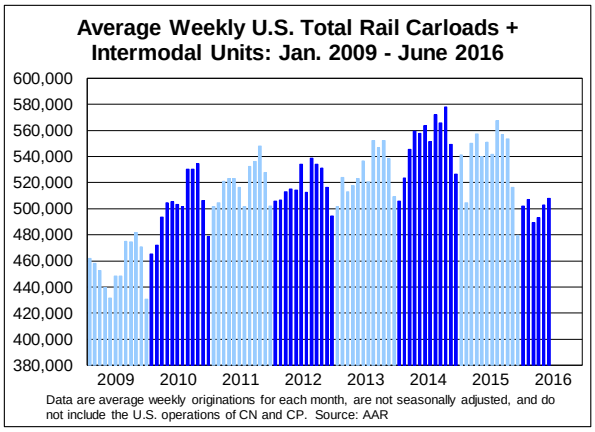


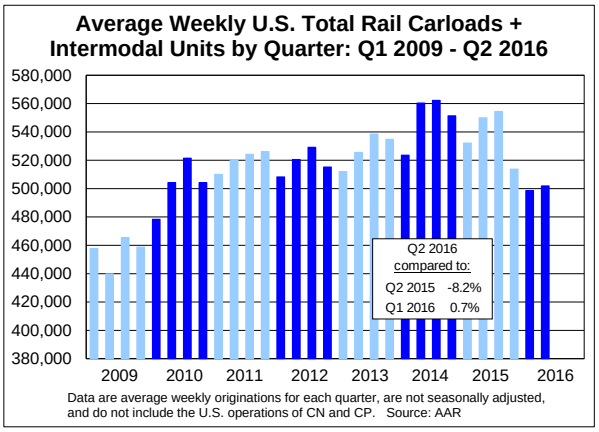


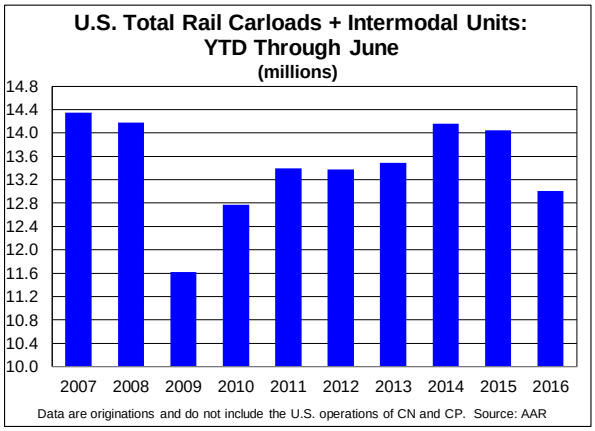
U.S. Rail Carloads + Intermodal Traffic

- Total rail traffic volume on U.S. railroads in June 2016 was 2,540,265 carloads, containers, and trailers, **down 170,607 units (6.3%) from June 2015**. June was the fourth straight month in which carloads and intermodal volume were both down compared with the prior year. That hasn't happened for four straight months since late 2009 during the Great Recession.
- For the second quarter of 2016, total rail volume was 6,525,296 units, down 8.2% (581,977 units) from the second quarter of 2015. For the first half of 2016, total volume was 13,008,219 units, down 7.4% (1,033,635 units) from the first half of 2015.
- June 2016 was the sixth straight month in which originated intermodal units on U.S. railroads exceeded originated carloads.









What are the latest numbers for Canadian railroads?

- Canadian railroads (including their U.S. operations) originated 340,706 carloads in June 2016, down 10.4% (39,459 carloads) from June 2015 and the 15th straight year-over-year monthly decline.
- Six of the 20 carload commodity categories the AAR tracks were higher on Canadian railroads in June 2016 than in June 2015. The table on page 11 has commodity detail for Canadian railroads in June. Gains in June were led by **lumber and wood products**, **motor vehicles and parts**, and **food products**. Commodities with carload declines in June were led by **grain**, **petroleum and petroleum products**, and **metallic ores**.
- For 2016 through June, Canadian carloads totaled 1,799,404, down 11.1% (224,689) from the first six months of 2015. Nine of the 20 commodity categories tracked had year-to-date carload increases, though several of those increases were miniscule.

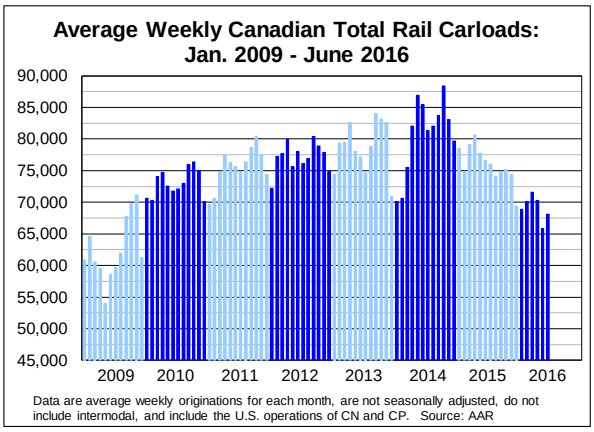
# of AAR Commodity Categories* With Year-Over-Year Gains For Canadian Railroads

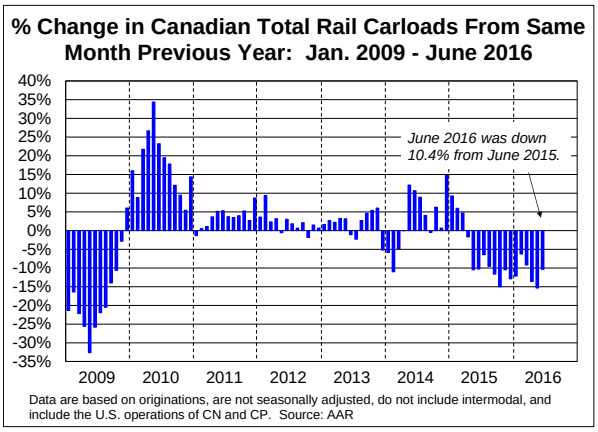
Month	2014	2015	2016
Jan	8	15	7
Feb	5	10	8
Mar	7	13	7
Apr	8	10	5
May	16	2	6
Jun	12	9	6
Jul	10	6	
Aug	8	9	
Sep	4	6	
Oct	10	6	
Nov	8	6	
Dec	12	6	

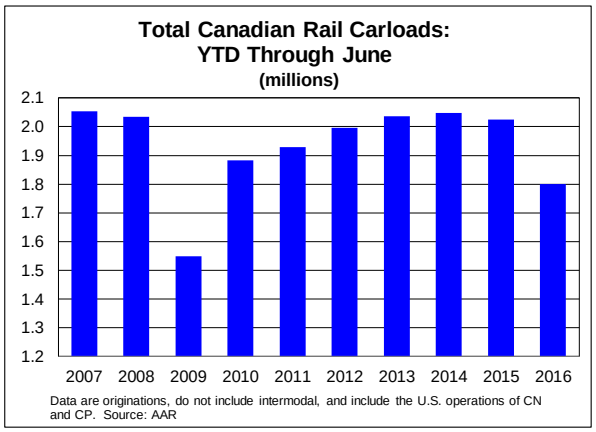
*Out of 20. Source: AAR

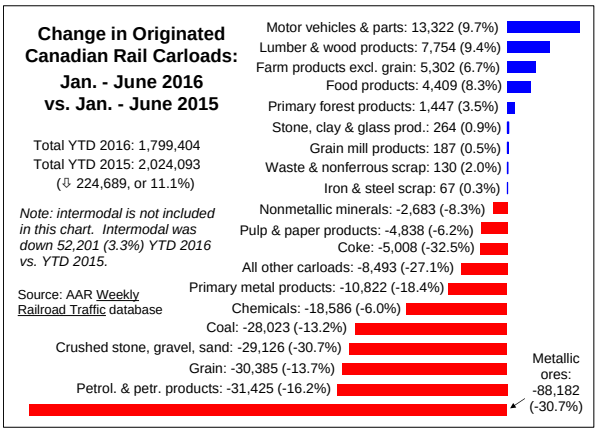
- Commodities with carload gains in 2016 through June include **motor vehicles and parts** (up 9.7%, or 13,322 carloads), **lumber and wood products** (up 9.4%, or 7,754 carloads), and **farm products excluding grain** (up 6.7%, or 5,302 carloads). Leading the way for commodities with year-to-date carload declines on Canadian railroads in the first half of 2016 were **metallic ores** (down 30.7%, or 88,182 carloads), **petroleum and petroleum products** (down 16.2%, or 31,425 carloads), and **grain** (down 13.7%, or 30,385 carloads).
- **Canadian railroads originated 289,309 intermodal containers and trailers in June 2016, down 6.4% (19,828 units) from June 2015**. Canadian intermodal volume in the second quarter of 2016 was down 5.8% (47,388 units); for the first half of 2016, intermodal volume was down 3.3% (52,201 units).

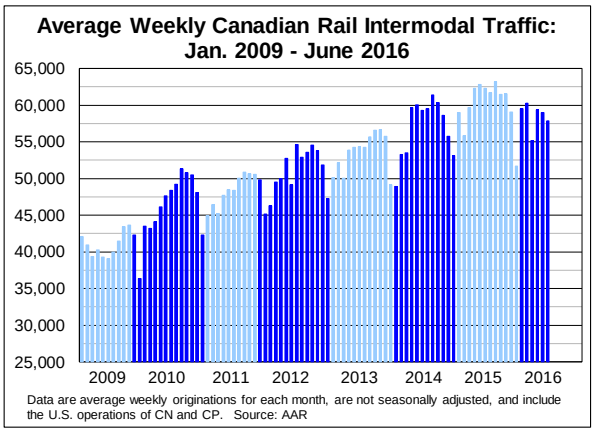
- Total rail volume on Canadian railroads in June 2016 was 630,015 carloads, containers, and trailers, down 59,287 units (8.6%) from last year. For the year to date through June, volume was 3,317,333 units, down 7.7% (276,890 units) from last year.

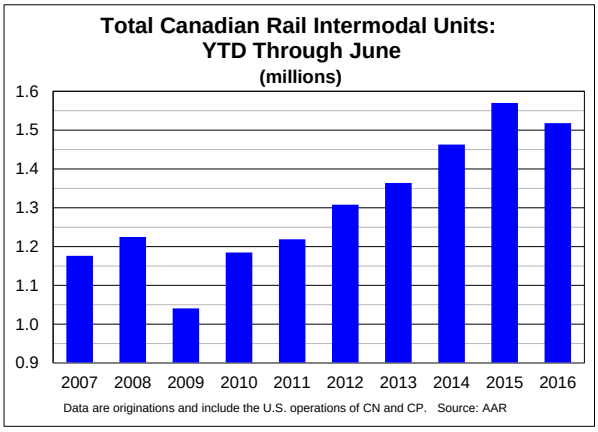












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U.S. RAIL TRAFFIC: JUNE 2016*

(5 weeks ending July 2, 2016, and Year-To-Date)

	JUNE 2016				YEAR-TO-DATE			
Commodity	**2016**	**2015**	**Change**	**Pct Chg**	**2016**	**2015**	**Change**	**Pct Chg**
Carloads								
Agricultural & food products	**186,895**	**175,443**	**11,452**	**6.5%**	**964,182**	**981,317**	**-17,135**	**-1.7%**
Grain	107,069	94,087	12,982	13.8%	543,714	544,478	-764	-0.1%
Farm products excl. grain	3,545	3,854	-309	-8.0%	20,583	22,395	-1,812	-8.1%
Grain mill products (1)	46,848	48,706	-1,858	-3.8%	240,094	254,134	-14,040	-5.5%
Food products	29,433	28,796	637	2.2%	159,791	160,310	-519	-0.3%
Chemicals and petroleum	**202,205**	**218,207**	**-16,002**	**-7.3%**	**1,105,361**	**1,168,504**	**-63,143**	**-5.4%**
Chemicals	148,209	148,796	-587	-0.4%	810,611	791,948	18,663	2.4%
Petroleum & petr. products (2)	53,996	69,411	-15,415	-22.2%	294,750	376,556	-81,806	-21.7%
Coal	**373,761**	**446,955**	**-73,194**	**-16.4%**	**1,815,549**	**2,610,171**	**-794,622**	**-30.4%**
Forest products	**51,408**	**55,502**	**-4,094**	**-7.4%**	**267,139**	**286,808**	**-19,669**	**-6.9%**
Primary forest products (3)	6,375	7,561	-1,186	-15.7%	34,123	38,388	-4,265	-11.1%
Lumber & wood products	16,401	17,590	-1,189	-6.8%	87,016	93,026	-6,010	-6.5%
Pulp & paper products	28,632	30,351	-1,719	-5.7%	146,000	155,394	-9,394	-6.0%
Metallic ores and metals	**116,104**	**125,189**	**-9,085**	**-7.3%**	**558,639**	**597,820**	**-39,181**	**-6.6%**
Metallic ores (4)	31,795	38,318	-6,523	-17.0%	130,787	161,646	-30,859	-19.1%
Coke	21,399	20,143	1,256	6.2%	107,288	96,907	10,381	10.7%
Primary metal products (5)	44,424	47,202	-2,778	-5.9%	227,282	242,343	-15,061	-6.2%
Iron & steel scrap	18,486	19,526	-1,040	-5.3%	93,282	96,924	-3,642	-3.8%
Motor vehicles & parts	**91,042**	**90,286**	**756**	**0.8%**	**475,953**	**453,622**	**22,331**	**4.9%**
Nonmetallic minerals	**171,616**	**182,612**	**-10,996**	**-6.0%**	**856,718**	**876,738**	**-20,020**	**-2.3%**
Crushed stone, sand & gravel	109,211	116,938	-7,727	-6.6%	550,181	564,543	-14,362	-2.5%
Nonmetallic minerals (6)	21,935	25,023	-3,088	-12.3%	113,263	118,601	-5,338	-4.5%
Stone, clay & glass prod. (7)	40,470	40,651	-181	-0.4%	193,274	193,594	-320	-0.2%
Other	**51,994**	**44,518**	**7,476**	**16.8%**	**251,675**	**206,815**	**44,860**	**21.7%**
Waste & nonferrous scrap (8)	20,593	17,686	2,907	16.4%	95,302	84,287	11,015	13.1%
All other carloads	31,401	26,832	4,569	17.0%	156,373	122,528	33,845	27.6%
TOTAL CARLOADS	**1,245,025**	**1,338,712**	**-93,687**	**-7.0%**	**6,295,216**	**7,181,795**	**-886,579**	**-12.3%**
Total carloads excl. coal	**871,264**	**891,757**	-20,493	-2.3%	**4,479,667**	**4,571,624**	-91,957	-2.0%
Total carloads excl. coal & grain	**764,195**	**797,670**	-33,475	-4.2%	**3,935,953**	**4,027,146**	-91,193	-2.3%
Industrial products**	**493,783**	**512,542**	-18,759	-3.7%	**2,534,088**	**2,563,090**	-29,002	-1.1%
Intermodal								
Containers	1,187,337	1,227,950	-40,613	-3.3%	6,128,246	6,099,296	28,950	0.5%
Trailers	107,903	144,210	-36,307	-25.2%	584,757	760,763	-176,006	-23.1%
TOTAL INTERMODAL	**1,295,240**	**1,372,160**	**-76,920**	**-5.6%**	**6,713,003**	**6,860,059**	**-147,056**	**-2.1%**
TOTAL CARS + INTERMODAL	**2,540,265**	**2,710,872**	**-170,607**	**-6.3%**	**13,008,219**	**14,041,854**	**-1,033,635**	**-7.4%**

(1) - flour, animal feed, corn syrup, corn starch, soybean meal, DDGs, etc.
(2) - crude petroleum and all products of petroleum refining (liquefied gases, asphalt, fuel oil, lubricating oil, jet fuel, etc.)
(3) - wood raw materials such as pulpwood and wood chips
(4) - overwhelmingly iron ore, but some aluminum ore, copper ore, etc.
(5) - primarily iron & steel; some aluminum, copper, etc.
(6) - phosphate rock, rock salt, crude sulphur, clay, etc.
(7) - cement, ground earths or minerals, gypsum, etc.
(8) - scrap paper, construction debris, ashes, etc.

*Data are originations not seasonally adjusted and do not include the U.S. operations of CN and CP. Source: AAR

**Data include chemicals; paper; metal products; autos & parts; crushed stone, sand & gravel; metallic ores, and stone & glass products.

CANADIAN RAIL TRAFFIC: JUNE 2016*

(5 weeks ending July 2, 2016, and Year-To-Date)

	JUNE 2016				YEAR-TO-DATE			
Commodity	**2016**	**2015**	**Change**	**Pct Chg**	**2016**	**2015**	**Change**	**Pct Chg**
Carloads								
Agricultural & food products	**67,539**	**75,825**	**-8,286**	**-10.9%**	**372,665**	**393,152**	**-20,487**	**-5.2%**
Grain	34,073	43,589	-9,516	-21.8%	190,661	221,046	-30,385	-13.7%
Farm products excl. grain	14,759	13,999	760	5.4%	84,354	79,052	5,302	6.7%
Grain mill products (1)	7,332	7,873	-541	-6.9%	39,954	39,767	187	0.5%
Food products	11,375	10,364	1,011	9.8%	57,696	53,287	4,409	8.3%
Chemicals and petroleum	**79,105**	**92,025**	**-12,920**	**-14.0%**	**453,631**	**503,642**	**-50,011**	**-9.9%**
Chemicals	52,543	56,974	-4,431	-7.8%	290,607	309,193	-18,586	-6.0%
Petroleum & petr. products (2)	26,562	35,051	-8,489	-24.2%	163,024	194,449	-31,425	-16.2%
Coal	**36,487**	**39,843**	**-3,356**	**-8.4%**	**183,636**	**211,659**	**-28,023**	**-13.2%**
Forest products	**38,064**	**38,297**	**-233**	**-0.6%**	**205,316**	**200,953**	**4,363**	**2.2%**
Primary forest products (3)	7,621	7,917	-296	-3.7%	42,319	40,872	1,447	3.5%
Lumber & wood products	17,095	15,677	1,418	9.0%	90,165	82,411	7,754	9.4%
Pulp & paper products	13,348	14,703	-1,355	-9.2%	72,832	77,670	-4,838	-6.2%
Metallic ores and metals	**55,880**	**64,530**	**-8,650**	**-13.4%**	**277,872**	**381,817**	**-103,945**	**-27.2%**
Metallic ores (4)	40,465	46,642	-6,177	-13.2%	198,973	287,155	-88,182	-30.7%
Coke	2,391	3,138	-747	-23.8%	10,423	15,431	-5,008	-32.5%
Primary metal products (5)	8,700	10,436	-1,736	-16.6%	47,921	58,743	-10,822	-18.4%
Iron & steel scrap	4,324	4,314	10	0.2%	20,555	20,488	67	0.3%
Motor vehicles & parts	**28,639**	**27,584**	**1,055**	**3.8%**	**150,384**	**137,062**	**13,322**	**9.7%**
Nonmetallic minerals	**28,292**	**33,763**	**-5,471**	**-16.2%**	**126,309**	**157,854**	**-31,545**	**-20.0%**
Crushed stone, sand & gravel	16,128	20,801	-4,673	-22.5%	65,760	94,886	-29,126	-30.7%
Nonmetallic minerals (6)	5,326	6,842	-1,516	-22.2%	29,659	32,342	-2,683	-8.3%
Stone, clay & glass prod. (7)	6,838	6,120	718	11.7%	30,890	30,626	264	0.9%
Other	**6,700**	**8,298**	**-1,598**	**-19.3%**	**29,591**	**37,954**	**-8,363**	**-22.0%**
Waste & nonferrous scrap (8)	1,589	1,695	-106	-6.3%	6,735	6,605	130	2.0%
All other carloads	5,111	6,603	-1,492	-22.6%	22,856	31,349	-8,493	-27.1%
TOTAL CARLOADS	**340,706**	**380,165**	**-39,459**	**-10.4%**	**1,799,404**	**2,024,093**	**-224,689**	**-11.1%**
Total Carloads excl Coal	**304,219**	**340,322**	-36,103	-10.6%	**1,615,768**	**1,812,434**	-196,666	-10.9%
Total Cars excl Coal & Grain	**270,146**	**296,733**	-26,587	-9.0%	**1,425,107**	**1,591,388**	-166,281	-10.4%
Intermodal								
Containers	285,321	301,995	-16,674	-5.5%	1,495,156	1,530,675	-35,519	-2.3%
Trailers	3,988	7,142	-3,154	-44.2%	22,773	39,455	-16,682	-42.3%
TOTAL INTERMODAL	**289,309**	**309,137**	**-19,828**	**-6.4%**	**1,517,929**	**1,570,130**	**-52,201**	**-3.3%**
TOTAL CARS + INTERMODAL	**630,015**	**689,302**	**-59,287**	**-8.6%**	**3,317,333**	**3,594,223**	**-276,890**	**-7.7%**

(1) - flour, animal feed, corn syrup, corn starch, soybean meal, DDGs, etc.
(2) - crude petroleum and all products of petroleum refining (liquefied gases, asphalt, fuel oil, lubricating oil, jet fuel, etc.)
(3) - wood raw materials such as pulpwood and wood chips
(4) - overwhelmingly iron ore, but some aluminum ore, copper ore, etc.
(5) - primarily iron & steel; some aluminum, copper, etc.
(6) - phosphate rock, rock salt, crude sulphur, clay, etc.
(7) - cement, ground earths or minerals, gypsum, etc.
(8) - scrap paper, construction debris, ashes, etc.

*CN and CP, including their U.S. operations. Data are originations not seasonally adjusted. Source: AAR

COMBINED U.S. AND CANADIAN RAIL TRAFFIC: JUNE 2016*

(5 weeks ending July 2, 2016, and Year-To-Date)

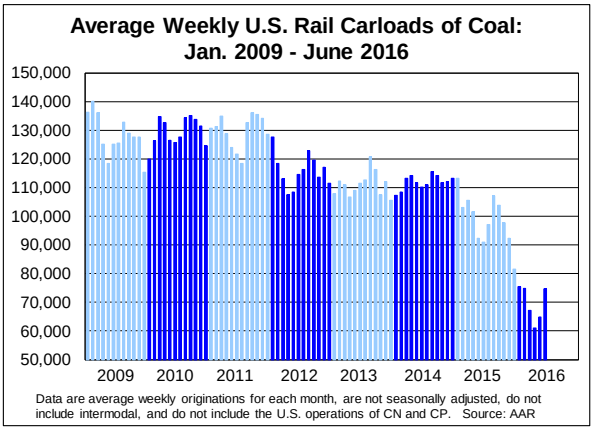
	JUNE 2016				YEAR-TO-DATE			
Commodity	**2016**	**2015**	**Change**	**Pct Chg**	**2016**	**2015**	**Change**	**Pct Chg**
Carloads								
Agricultural & food products	**254,434**	**251,268**	**3,166**	**1.3%**	**1,336,847**	**1,374,469**	**-37,622**	**-2.7%**
Grain	141,142	137,676	3,466	2.5%	734,375	765,524	-31,149	-4.1%
Farm products excl. grain	18,304	17,853	451	2.5%	104,937	101,447	3,490	3.4%
Grain mill products (1)	54,180	56,579	-2,399	-4.2%	280,048	293,901	-13,853	-4.7%
Food products	40,808	39,160	1,648	4.2%	217,487	213,597	3,890	1.8%
Chemicals and petroleum	**281,310**	**310,232**	**-28,922**	**-9.3%**	**1,558,992**	**1,672,146**	**-113,154**	**-6.8%**
Chemicals	200,752	205,770	-5,018	-2.4%	1,101,218	1,101,141	77	0.0%
Petroleum & petr. products (2)	80,558	104,462	-23,904	-22.9%	457,774	571,005	-113,231	-19.8%
Coal	**410,248**	**486,798**	**-76,550**	**-15.7%**	**1,999,185**	**2,821,830**	**-822,645**	**-29.2%**
Forest products	**89,472**	**93,799**	**-4,327**	**-4.6%**	**472,455**	**487,761**	**-15,306**	**-3.1%**
Primary forest products (3)	13,996	15,478	-1,482	-9.6%	76,442	79,260	-2,818	-3.6%
Lumber & wood products	33,496	33,267	229	0.7%	177,181	175,437	1,744	1.0%
Pulp & paper products	41,980	45,054	-3,074	-6.8%	218,832	233,064	-14,232	-6.1%
Metallic ores and metals	**171,984**	**189,719**	**-17,735**	**-9.3%**	**836,511**	**979,637**	**-143,126**	**-14.6%**
Metallic ores (4)	72,260	84,960	-12,700	-14.9%	329,760	448,801	-119,041	-26.5%
Coke	23,790	23,281	509	2.2%	117,711	112,338	5,373	4.8%
Primary metal products (5)	53,124	57,638	-4,514	-7.8%	275,203	301,086	-25,883	-8.6%
Iron & steel scrap	22,810	23,840	-1,030	-4.3%	113,837	117,412	-3,575	-3.0%
Motor vehicles & parts	**119,681**	**117,870**	**1,811**	**1.5%**	**626,337**	**590,684**	**35,653**	**6.0%**
Nonmetallic minerals	**199,908**	**216,375**	**-16,467**	**-7.6%**	**983,027**	**1,034,592**	**-51,565**	**-5.0%**
Crushed stone, sand & gravel	125,339	137,739	-12,400	-9.0%	615,941	659,429	-43,488	-6.6%
Nonmetallic minerals (6)	27,261	31,865	-4,604	-14.4%	142,922	150,943	-8,021	-5.3%
Stone, clay & glass prod. (7)	47,308	46,771	537	1.1%	224,164	224,220	-56	0.0%
Other	**58,694**	**52,816**	**5,878**	**11.1%**	**281,266**	**244,769**	**36,497**	**14.9%**
Waste & nonferrous scrap (8)	22,182	19,381	2,801	14.5%	102,037	90,892	11,145	12.3%
All other carloads	36,512	33,435	3,077	9.2%	179,229	153,877	25,352	16.5%
TOTAL CARLOADS	**1,585,731**	**1,718,877**	**-133,146**	**-7.7%**	**8,094,620**	**9,205,888**	**-1,111,268**	**-12.1%**
Total Carloads excl Coal	**1,175,483**	**1,232,079**	-56,596	-4.6%	**6,095,435**	**6,384,058**	-288,623	-4.5%
Total Cars excl Coal & Grain	**1,034,341**	**1,094,403**	-60,062	-5.5%	**5,361,060**	**5,618,534**	-257,474	-4.6%
Intermodal								
Containers	1,472,658	1,529,945	-57,287	-3.7%	7,623,402	7,629,971	-6,569	-0.1%
Trailers	111,891	151,352	-39,461	-26.1%	607,530	800,218	-192,688	-24.1%
TOTAL INTERMODAL	**1,584,549**	**1,681,297**	**-96,748**	**-5.8%**	**8,230,932**	**8,430,189**	**-199,257**	**-2.4%**
TOTAL CARS + INTERMODAL	**3,170,280**	**3,400,174**	**-229,894**	**-6.8%**	**16,325,552**	**17,636,077**	**-1,310,525**	**-7.4%**

(1) - flour, animal feed, corn syrup, corn starch, soybean meal, DDGs, etc.
(2) - crude petroleum and all products of petroleum refining (liquefied gases, asphalt, fuel oil, lubricating oil, jet fuel, etc.)
(3) - wood raw materials such as pulpwood and wood chips
(4) - overwhelmingly iron ore, but some aluminum ore, copper ore, etc.
(5) - primarily iron & steel; some aluminum, copper, etc.
(6) - phosphate rock, rock salt, crude sulphur, clay, etc.
(7) - cement, ground earths or minerals, gypsum, etc.
(8) - scrap paper, construction debris, ashes, etc.

*Data are originations not seasonally adjusted. Source: AAR

COAL

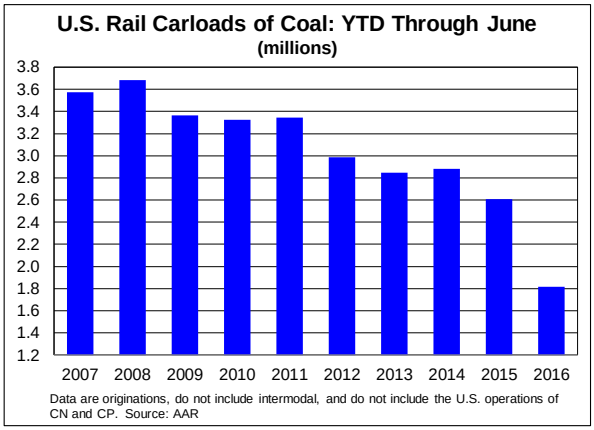
- U.S. rail carloads of coal averaged 74,752 in June 2016, down 16.4% from the average of 89,391 in June 2015 but up substantially from the weekly average in April and May (see the chart at right). Given how bad April and May were, June's gain isn't exactly earthshattering, but you take what you can get. In the 17 years since 2000, U.S. coal carloads have been higher in June than in May ten times.
- Year-to-date carloads of coal were 1.82 million in 2016 through June, down 30.4% (794,622 carloads) from the same time in 2015 and easily the worst first half of a year since our records begin in 1988.



U.S. RAIL CARLOADS OF COAL
(weekly averages)

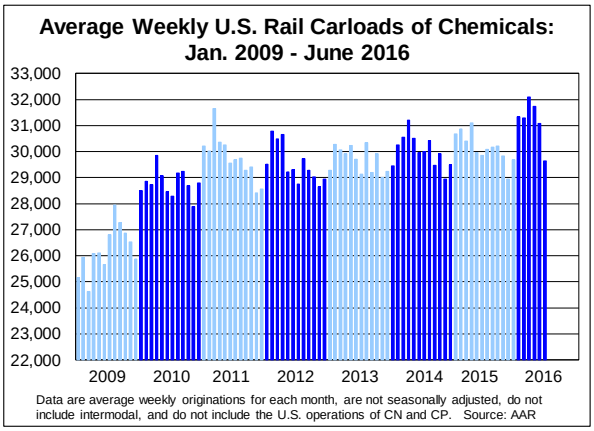
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	67,236	104,886	-37,650	-35.9%
Apr 16	61,060	101,216	-40,156	-39.7%
May 16	64,934	92,253	-27,319	-29.6%
Jun 16	74,752	89,391	-14,639	-16.4%
Q3 '15	102,324	112,953	-10,628	-9.4%
Q4 '15	89,905	112,707	-22,801	-20.2%
Q1 '16	72,140	106,873	-34,733	-32.5%
Q2 '16	67,518	93,910	-26,392	-28.1%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



CHEMICALS

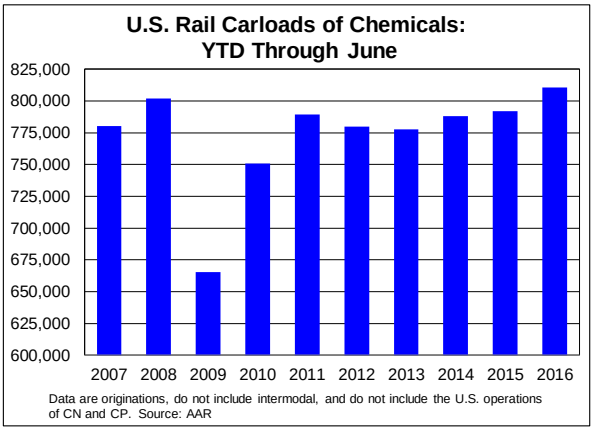
- U.S. carloads of chemicals in June 2016 were 148,209, down 0.4% (587 carloads) from June 2015 and the first year-over-year monthly decline for chemicals since August 2015. Weekly average carloads in June 2016 were 29,642, the lowest weekly average in seven months.
- Carloads of chemicals totaled 810,611 in the first half of 2016, up 2.4% (18,663 carloads) over the first half of 2015 and the highest year-to-date total through June on record (which is back to 1988).



U.S. RAIL CARLOADS OF CHEMICALS
(weekly averages)

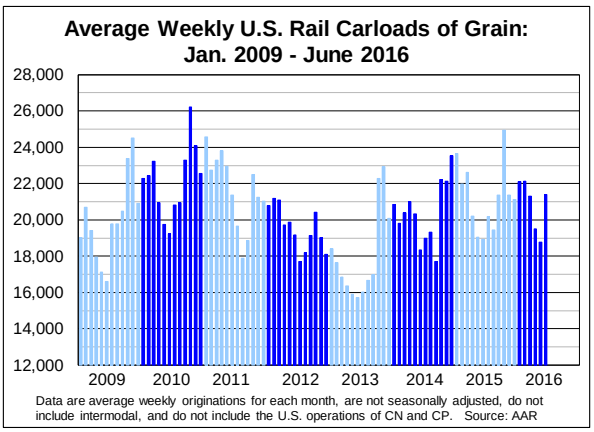
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	32,106	30,418	1,688	5.5%
Apr 16	31,734	31,257	477	1.5%
May 16	31,088	29,959	1,129	3.8%
Jun 16	29,642	29,759	-117	-0.4%
Q3 '15	30,158	30,018	140	0.5%
Q4 '15	29,502	29,398	104	0.4%
Q1 '16	31,624	30,638	987	3.2%
Q2 '16	30,730	30,282	449	1.5%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



GRAIN

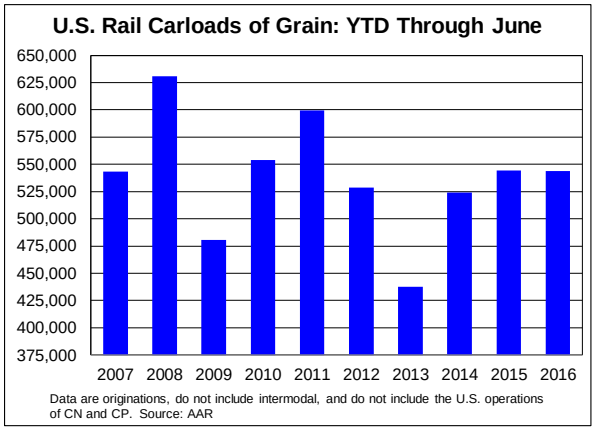
- U.S. grain carloads surged 13.8% in June 2016 over June 2015, their biggest percentage gain in nine months. Weekly average grain carloads of 21,414 in June 2016 were the highest for June since 2008. Year-to-date grain carloads were 543,714, down 0.1% (764 carloads) from the first half of 2015 but otherwise the most for a first half since 2011.
- On June 30, the USDA reported (here) that estimated U.S. soybean planted area is a record 83.7 million acres this year, up 1 percent over last year, and estimated U.S. corn acreage is 94.1 million acres, up 7 percent from last year and the third highest corn planted acreage since 1944.



U.S. RAIL CARLOADS OF GRAIN (weekly averages)

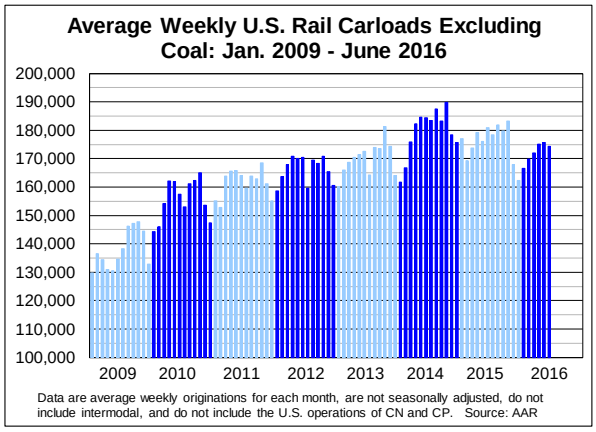
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	21,305	22,269	-964	-4.3%
Apr 16	19,508	20,064	-556	-2.8%
May 16	18,768	19,047	-279	-1.5%
Jun 16	21,414	18,817	2,596	13.8%
Q3 '15	20,401	18,982	1,419	7.5%
Q4 '15	22,371	22,668	-296	-1.3%
Q1 '16	21,811	22,611	-801	-3.5%
Q2 '16	20,013	19,271	742	3.8%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



CARLOADS EXCL. COAL

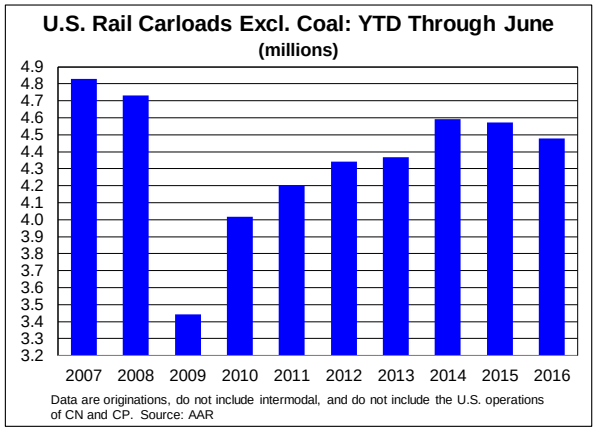
- U.S. rail carloads excluding coal were down 2.3%, or 20,493 carloads, in June 2016 from June 2015, their 15th year-over-year decline in the past 16 months.
- For the second quarter of 2016, carloads were down 1.8% (41,869 carloads) from the second quarter of 2015.
- Year-to-date carloads in 2016 through June were 4.48 million, down 91,957 carloads, or 2.0%, from last year and down 112,674, or 2.5% from 2014 (see the chart below right).



U.S. RAIL CARLOADS EXCLUDING COAL (weekly averages)

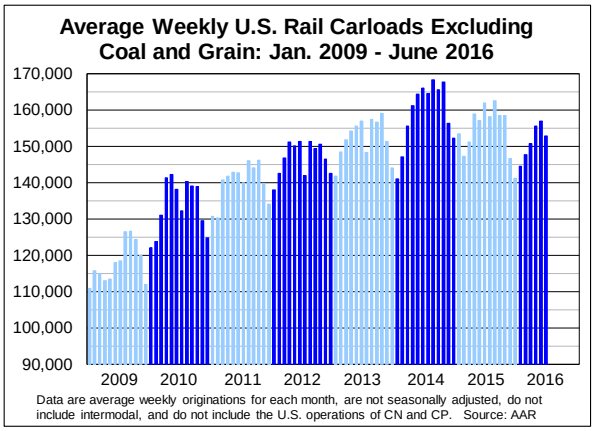
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	171,997	174,095	-2,097	-1.2%
Apr 16	175,033	180,026	-4,994	-2.8%
May 16	175,709	176,060	-351	-0.2%
Jun 16	174,253	178,351	-4,099	-2.3%
Q3 '15	179,854	185,198	-5,344	-2.9%
Q4 '15	170,519	180,742	-10,223	-5.7%
Q1 '16	169,649	173,502	-3,853	-2.2%
Q2 '16	174,941	178,162	-3,221	-1.8%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



CARLOADS EXCL. COAL & GRAIN

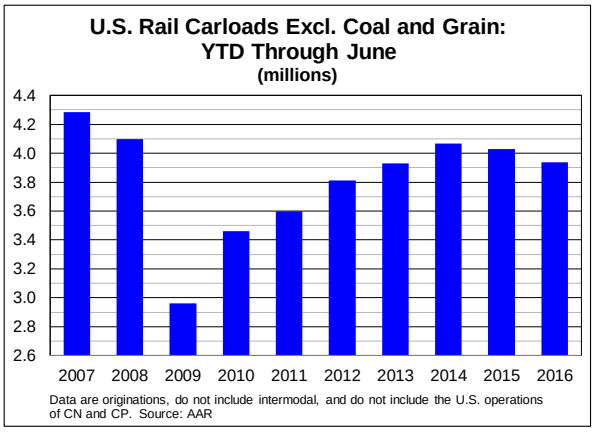
- Carloads excluding coal and grain were down 4.2% in June 2016 from June 2015, their biggest percentage decline in five months. Year-over-year carloads have fallen in 15 of the 16 months since March 2015.
- For the first half of the year, carloads were 3,935,953, down 2.3% (91,193 carloads) from the first half of 2015 and about equal to where they were in 2013.
- See the chart on page 5 and the table on page 10 for details on what commodities are mainly to blame (hint: petroleum, ores).



U.S. RAIL CARLOADS EXCLUDING COAL AND GRAIN (weekly averages)

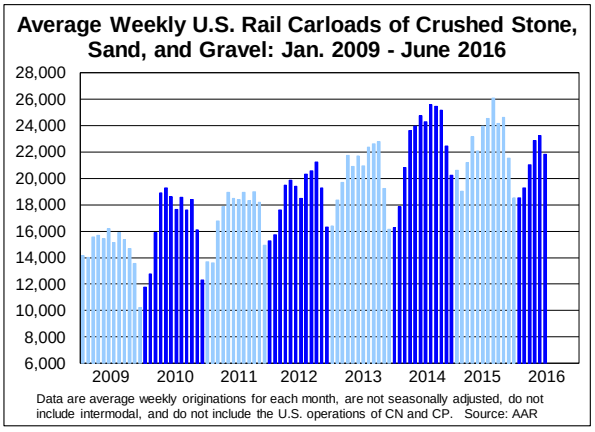
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	150,692	151,826	-1,134	-0.7%
Apr 16	155,525	159,963	-4,438	-2.8%
May 16	156,942	157,013	-71	0.0%
Jun 16	152,839	159,534	-6,695	-4.2%
Q3 '15	159,454	166,216	-6,762	-4.1%
Q4 '15	148,148	158,074	-9,926	-6.3%
Q1 '16	147,838	150,890	-3,052	-2.0%
Q2 '16	154,928	158,890	-3,962	-2.5%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



CRUSHED STONE, SAND & GRAVEL

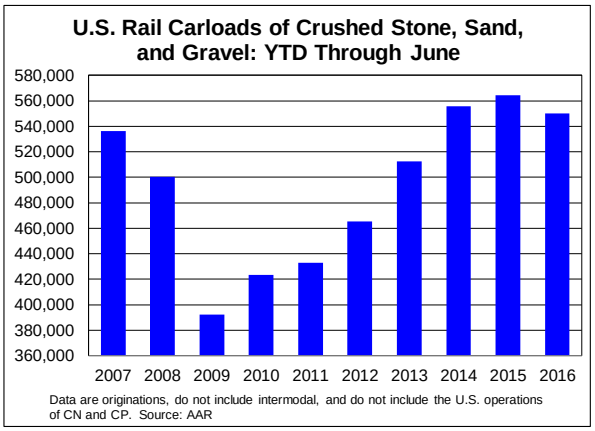
- Carloads of crushed stone, sand, and gravel — around 58% of this category is crushed stone and another 31% or so is crude industrial sand — were down 6.6% (7,727 carloads) in June 2016, their eighth decline in the past ten months. Year-to-date carloads this year through June were down 2.5% (14,362 carloads) from last year.
- The National Stone, Sand & Gravel Association says that 1.2 million pounds of stone, sand, and gravel are used by every American over the course of their lives.



U.S. RAIL CARLOADS OF CRUSHED STONE, SAND, AND GRAVEL (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	21,040	21,483	-443	-2.1%
Apr 16	22,891	23,303	-412	-1.8%
May 16	23,253	22,086	1,168	5.3%
Jun 16	21,842	23,388	-1,545	-6.6%
Q3 '15	24,855	25,097	-242	-1.0%
Q4 '15	21,330	22,411	-1,081	-4.8%
Q1 '16	19,723	20,466	-743	-3.6%
Q2 '16	22,599	22,961	-362	-1.6%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



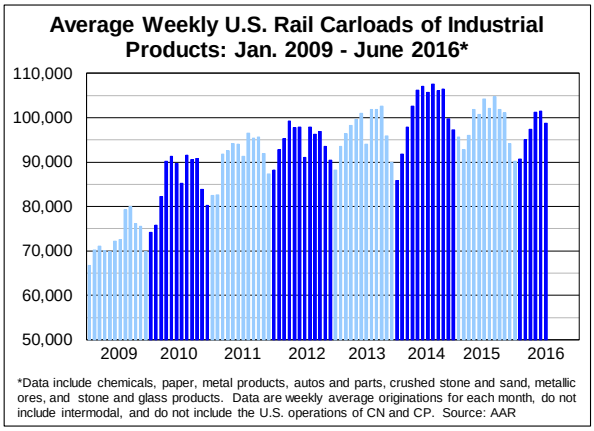
INDUSTRIAL PRODUCTS

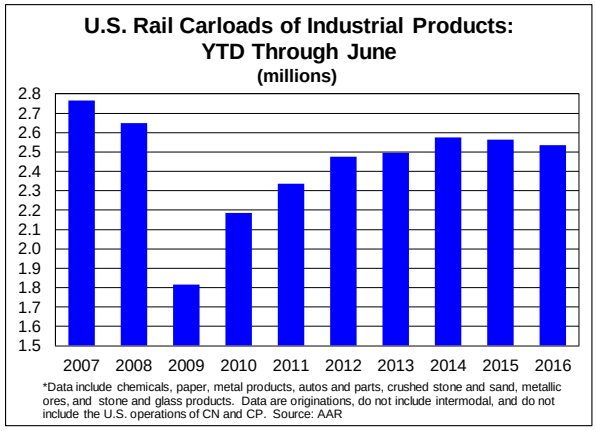
- There is a close positive correlation between U.S. manufacturing output and U.S. carloads of industrial products (see the chart on page 25). Manufacturing output has been relatively flat for the past two years, and so, more or less, have U.S. carloads of industrial products.
- In June 2016, carloads of this category were down 3.7% from June 2015. For the year to date, carloads are down 1.1% but are close to where they've been at this time for the past five years.

U.S. RAIL CARLOADS OF INDUSTRIAL PRODUCTS* (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	97,372	96,758	614	0.6%
Apr 16	101,237	102,400	-1,163	-1.1%
May 16	101,503	100,791	712	0.7%
Jun 16	98,757	102,508	-3,752	-3.7%
Q3 '15	102,715	106,589	-3,874	-3.6%
Q4 '15	94,717	100,637	-5,920	-5.9%
Q1 '16	94,565	95,214	-649	-0.7%
Q2 '16	100,365	101,946	-1,582	-1.6%

*Aggregate of chemicals; paper; metal products; autos and parts; crushed stone, gravel, and sand; metallic ores; and stone & glass products. Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR





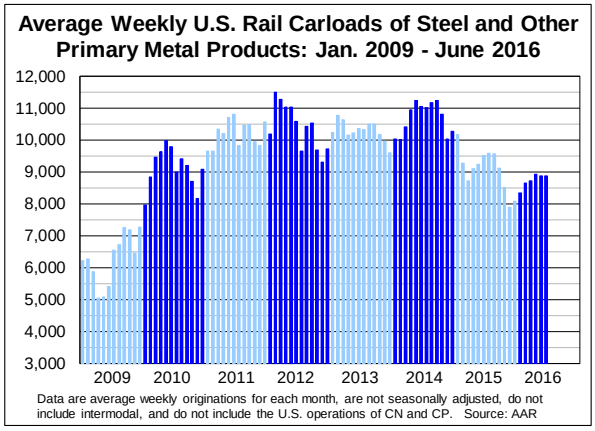
PRIMARY METAL PRODUCTS

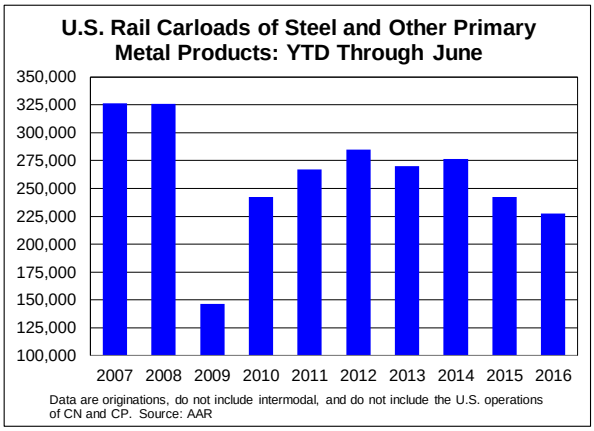
- Perhaps the best that can be said about rail carloads of primary metal products (mainly steel and steel products) is that it could be worse. Carloads in June 2016 averaged 8,885 per week, very close to where they've been for four straight months (see the chart at right). Carloads in June 2016 were down 5.9% from last year, their 17th straight year-over-year monthly decline.
- Year-to-date carloads are down 6.2% (15,061 carloads) so far in 2016 from 2015 and down 17.8% from the first six months of 2014.

U.S. RAIL CARLOADS OF STEEL AND OTHER PRIMARY METAL PRODUCTS (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	8,729	8,816	-86	-1.0%
Apr 16	8,934	9,095	-161	-1.8%
May 16	8,872	9,236	-364	-3.9%
Jun 16	8,885	9,440	-556	-5.9%
Q3 '15	9,413	11,144	-1,731	-15.5%
Q4 '15	8,160	10,334	-2,174	-21.0%
Q1 '16	8,587	9,371	-783	-8.4%
Q2 '16	8,896	9,271	-375	-4.0%

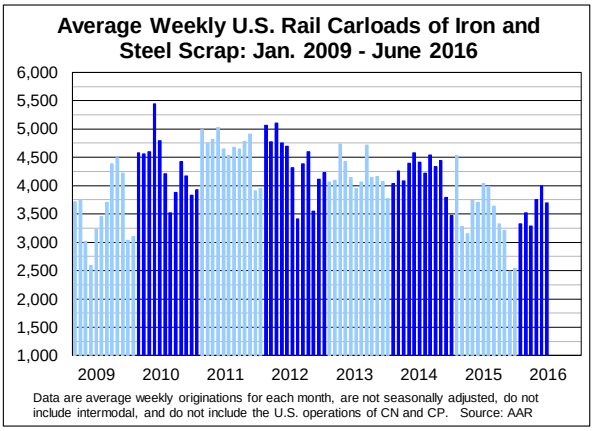
Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR





IRON AND STEEL SCRAP

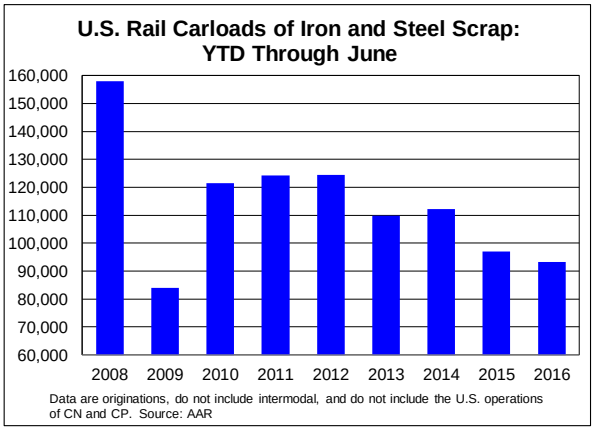
- U.S. carloads of iron and steel scrap were down 5.3% (1,040 carloads) in June 2016 from June 2015, following an 8.1% increase in May 2016 over May 2015.
- Year-to-date carloads were 93,282 through June, down 3.8% (3,642 carloads) from last year, down 16.9% from 2014, and the lowest January to June total since 2009, when the recession was ravaging metal markets.



U.S. RAIL CARLOADS OF IRON AND STEEL SCRAP (weekly averages)

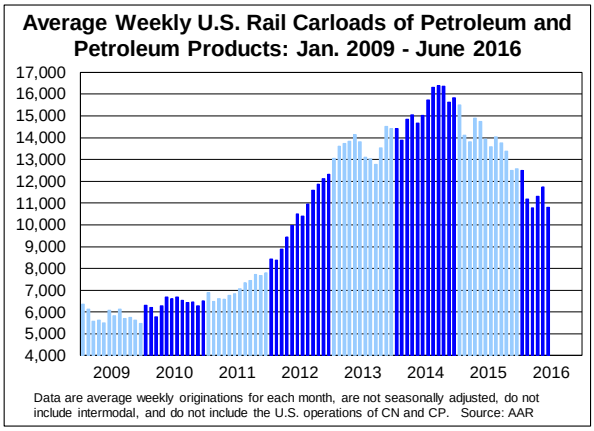
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	3,284	3,106	179	5.8%
Apr 16	3,751	3,957	-207	-5.2%
May 16	4,001	3,702	300	8.1%
Jun 16	3,697	3,905	-208	-5.3%
Q3 '15	3,654	4,370	-716	-16.4%
Q4 '15	2,732	3,860	-1,129	-29.2%
Q1 '16	3,368	3,597	-229	-6.4%
Q2 '16	3,807	3,858	-51	-1.3%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



PETROLEUM AND PETROL. PRODUCTS

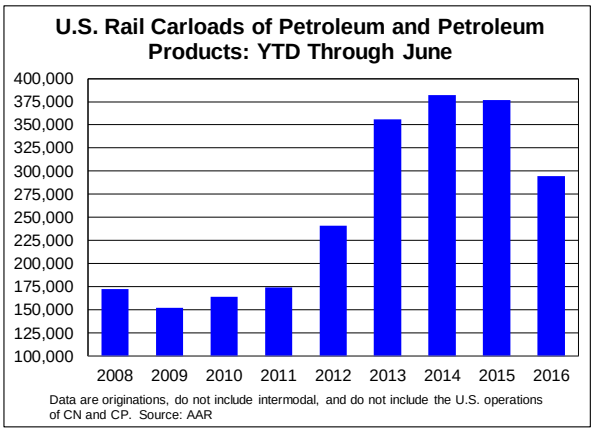
- U.S. rail carloads of petroleum and petroleum products were down 22.2% in June 2016 from June 2015, continuing a long series (12 months and counting) of double-digit monthly declines. Year-to-date volume on U.S. railroads was down 21.7% (81,806 carloads) from 2015 and down 22.8% from the peak year of 2014.
- Numbers aren't much different for Canadian railroads. Their carloads of petroleum and petroleum products were down 24.2% (8,489 carloads) in June 2016 from June 2015; year-to-date volume was down 16.2% (31,425 carloads).



U.S. RAIL CARLOADS OF CRUDE OIL AND OTHER PETROLEUM PRODUCTS (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	10,778	13,882	-3,105	-22.4%
Apr 16	11,300	15,080	-3,781	-25.1%
May 16	11,743	14,740	-2,997	-20.3%
Jun 16	10,799	13,882	-3,083	-22.2%
Q3 '15	13,782	16,101	-2,319	-14.4%
Q4 '15	12,800	15,956	-3,155	-19.8%
Q1 '16	11,430	14,451	-3,022	-20.9%
Q2 '16	11,244	14,515	-3,271	-22.5%

Data are originations, are not seasonally adjusted, do not include intermodal, and do not include the U.S. operations of CN and CP. Source: AAR



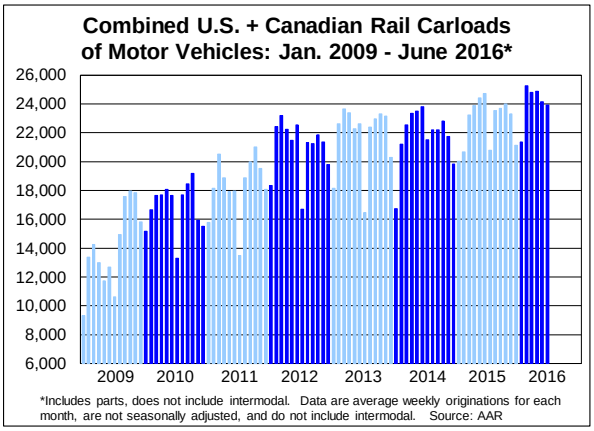
MOTOR VEHICLES AND PARTS

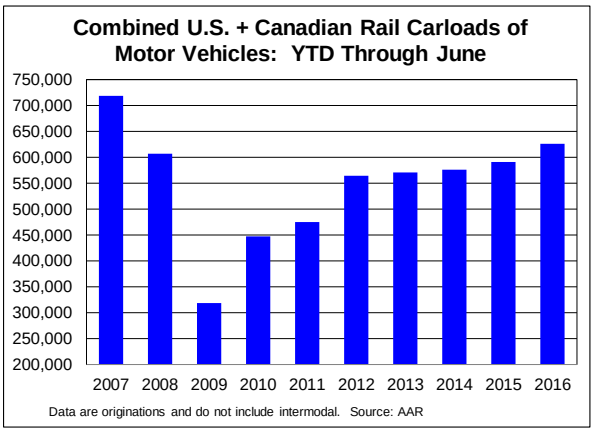
- Carloads of motor vehicles and parts on U.S. and Canadian railroads are hanging in there — volume was 119,681 carloads in June 2016, up 1.5% (1,811 carloads) over June 2015 and the 15th monthly increase in the past 18 months.
- Year-to-date carloads of 626,337 through June were up 6.0% (35,653 carloads) compared with June 2015 and the most since 2007.
- A chart on page 24 shows the correlation between auto assemblies and rail carloads.

U.S. + CANADIAN RAIL CARLOADS OF AUTOS AND AUTO PARTS (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	24,817	23,166	1,651	7.1%
Apr 16	24,879	24,159	721	3.0%
May 16	24,134	24,406	-272	-1.1%
Jun 16	23,936	23,574	362	1.5%
Q3 '15	22,622	22,069	553	2.5%
Q4 '15	22,674	21,279	1,395	6.6%
Q1 '16	23,892	21,427	2,465	11.5%
Q2 '16	24,287	24,010	277	1.2%

Data are originations, are not seasonally adjusted, and do not include intermodal. Source: AAR





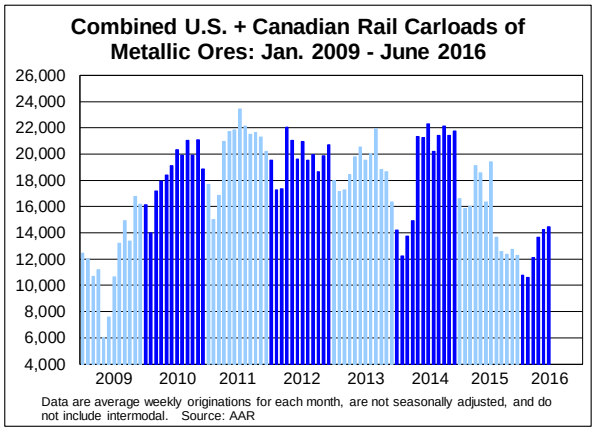
METALLIC ORES

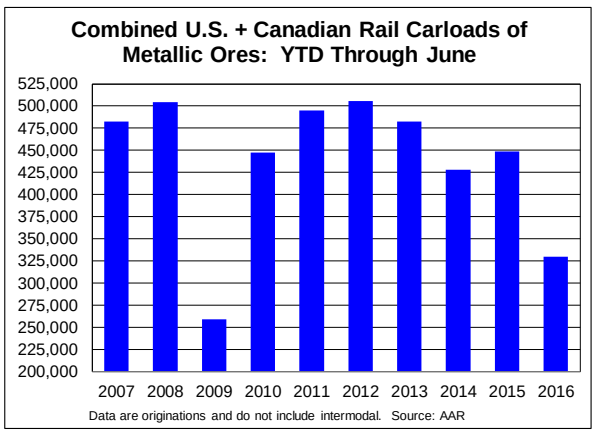
- U.S. plus Canadian carloads of metallic ores were down 14.9% (12,700 carloads) in June 2016 from June 2015. That's actually the smallest percentage decline in the past 10 months, which tells you something about how bad metallic ore traffic has been.
- On the bright side, weekly average carloads of 14,452 per week in June 2016 were the highest for any month since July 2015 (see the chart at right).
- Year-to-date carloads through June were down 26.5% (119,041 carloads) from last year. On a percentage basis, only coal is worse.

U.S. + CANADIAN RAIL CARLOADS OF METALLIC ORES (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	12,099	16,537	-4,438	-26.8%
Apr 16	13,659	19,282	-5,623	-29.2%
May 16	14,235	18,573	-4,338	-23.4%
Jun 16	14,452	16,992	-2,540	-14.9%
Q3 '15	15,338	21,440	-6,101	-28.5%
Q4 '15	12,467	21,779	-9,313	-42.8%
Q1 '16	11,225	16,340	-5,115	-31.3%
Q2 '16	14,141	18,183	-4,042	-22.2%

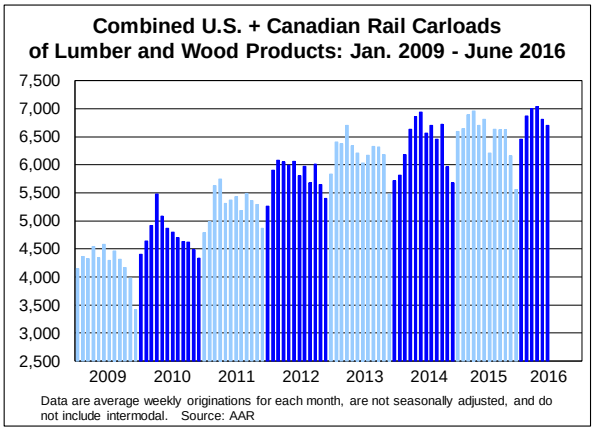
Data are originations, are not seasonally adjusted, and do not include intermodal. Source: AAR





LUMBER AND WOOD PRODUCTS

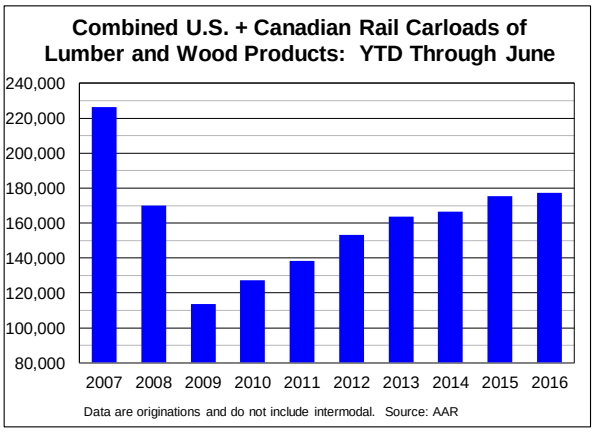
- U.S. plus Canadian carloads of lumber and wood continued their slow increase in June 2016, rising 0.7% (229 carloads) over June 2015. It was the fifth straight year-over-year increase.
- Year to date carloads were 177,181 in 2016 through June, up 1.0% (1,744 carloads) compared with last year and the highest January through June total since 2007.
- Rail carloads of lumber and wood products are closely correlated with housing starts, as the chart on page 33 shows.



U.S. + CANADIAN RAIL CARLOADS OF LUMBER AND WOOD PRODUCTS (weekly averages)

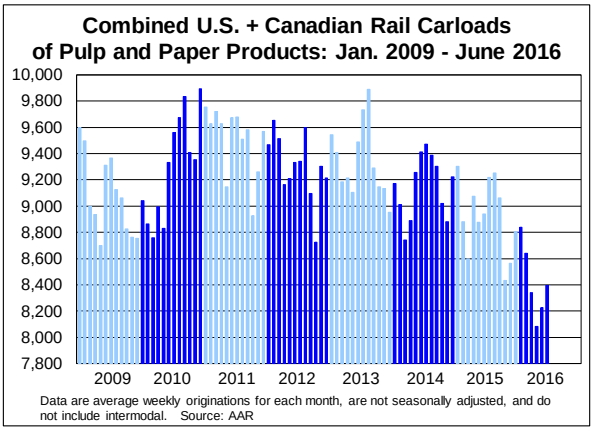
	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	7,002	6,890	112	1.6%
Apr 16	7,037	6,982	55	0.8%
May 16	6,812	6,704	108	1.6%
Jun 16	6,699	6,653	46	0.7%
Q3 '15	6,476	6,592	-116	-1.8%
Q4 '15	6,069	6,075	-5	-0.1%
Q1 '16	6,792	6,725	67	1.0%
Q2 '16	6,838	6,770	68	1.0%

Data are originations, are not seasonally adjusted, and do not include intermodal. Source: AAR



PULP AND PAPER PRODUCTS

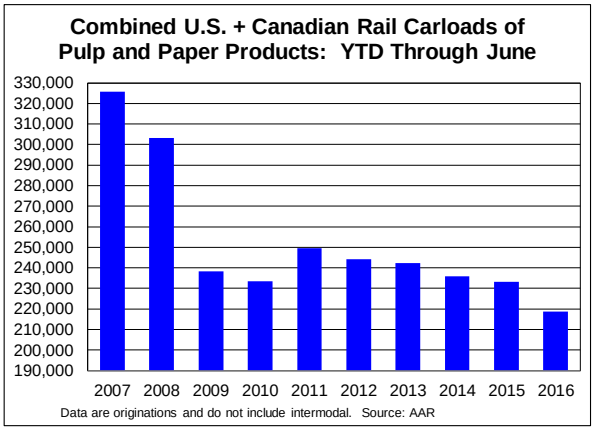
- There is almost always an increase in rail carloads of paper in June from May and April, and that happened again this year. Weekly carloads on U.S. and Canadian railroads combined averaged 8,396 in June 2016, up from 8,226 in May 2016 and 8,083 in April.
- Don't break out the champagne, though. June 2016's weekly average was the worst for June on record (our data go back to 1996) and the fourth worst for any month on record.
- Year-to-date volume through June was down 6.1% (14,232 carloads) from last year.



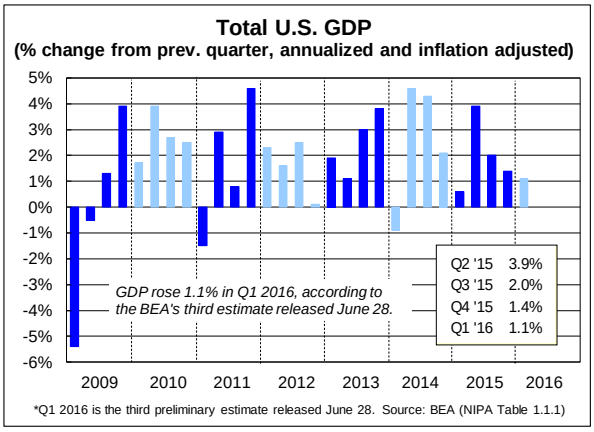
U.S. + CANADIAN RAIL CARLOADS OF PULP AND PAPER PRODUCTS (weekly averages)

	Current Year	Previous Year	Change From Previous Year Cars	Change From Previous Year %
Mar 16	8,339	8,721	-382	-4.4%
Apr 16	8,083	9,041	-958	-10.6%
May 16	8,226	8,877	-651	-7.3%
Jun 16	8,396	9,011	-615	-6.8%
Q3 '15	9,172	9,390	-218	-2.3%
Q4 '15	8,617	9,033	-416	-4.6%
Q1 '16	8,586	8,949	-363	-4.1%
Q2 '16	8,247	8,979	-731	-8.1%

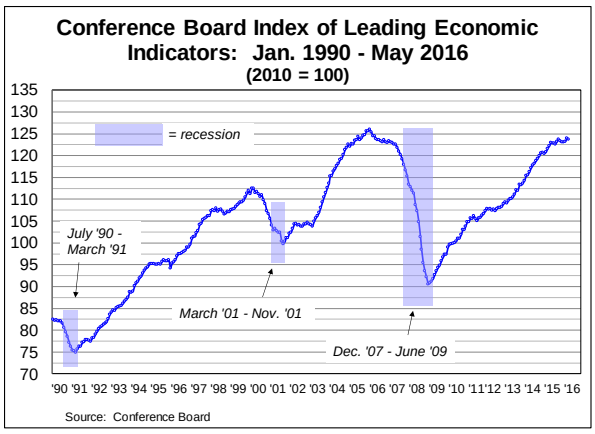
Data are originations, are not seasonally adjusted, and do not include intermodal. Source: AAR



GROSS DOMESTIC PRODUCT (GDP)



- U.S. GDP grew 1.1% in the **first quarter of 2016, according to the BEA's third estimate released on June 28** (see the chart at right). It's a revision from the second estimate of 0.8% made a month earlier.
- 2016 marks the third straight year in which first quarter growth was terrible, at least as measured by the BEA.[1] In 2014 and 2015, growth rebounded sharply in the second quarter. It'll be several weeks before the BEA releases its first estimate of second quarter GDP, but most economists think the economy rebounded in the second quarter this year too.
- For example, the July 8 edition of the Federal Reserve Bank of New York's Nowcasting Report — a weekly report designed to track U.S. GDP growth in real time by incorporating into a sophisticated model new data as they become available (see here) — says GDP grew 2.1% in the second quarter. The Federal Reserve Bank of Atlanta produces a similar weekly report called GDPNow (see here). The July 6 GDPNow report says GDP grew 2.4% in the second quarter; since June 1, the GDPNow estimate has fluctuated from 2.4% to 2.8%.
- Of course, these estimates are for the economy as a whole. The parts of the economy that generate most rail freight — things like exports and consumption of goods, business investment, and new homes — can and do grow (or shrink) at different rates than the overall economy. We suspect that, in a couple of months when complete BEA data on the second quarter are out, we'll see that the sectors of the economy most important to railroads grew more slowly in the second quarter than the economy as a whole did. That would be consistent with the underwhelming rail volumes in the second quarter.
- We first showed the chart at right several months ago. It's the Conference Board's Index of Leading Economic Indicators (LEI). The LEI is designed to identify turning points in the business cycle before they happen. Like it's supposed to, it turned down prior to each of the three recessions since 1990. The most recent LEI was released on June 23 and showed a 0.2% decline for May. Regarding the most recent LEI, the Conference Board's economist in charge of it said, "While the LEI suggests the economy will continue growing at a moderate pace in the near term, volatility in financial markets and a moderating outlook in labor markets could pose downside risks to growth."

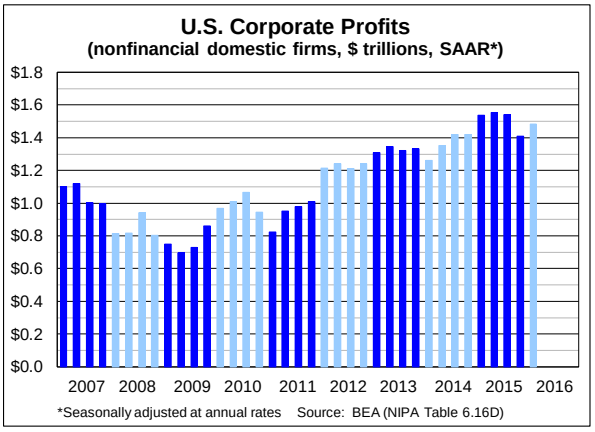


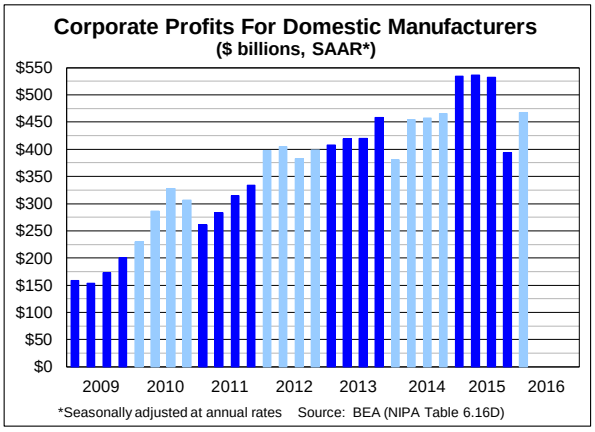
- There are many "economic outlook" reports out there.[2] One such report, which we think is better than most we've seen, is the Quarterly Economic Review and Outlook written by Robert DeLucia of Prudential. (His most recent outlook, dated July 5, 2016, is here.) Mr. DeLucia is bullish on the economy. He says fears of imminent recession are misguided, for three basic reasons: (1) Most recent economic data point to stronger growth immediately ahead; (2) Classic preconditions for recession (e.g., excessive wage inflation, a weakening housing market, tightening monetary policy, to name a few) are not present; and (3) Governments worldwide are prepared to provide a powerful coordinated policy response if needed.

[1] Some economists think the BEA's seasonal adjustment methodology for the first quarter is a bit off, causing it to understate actual economic growth.

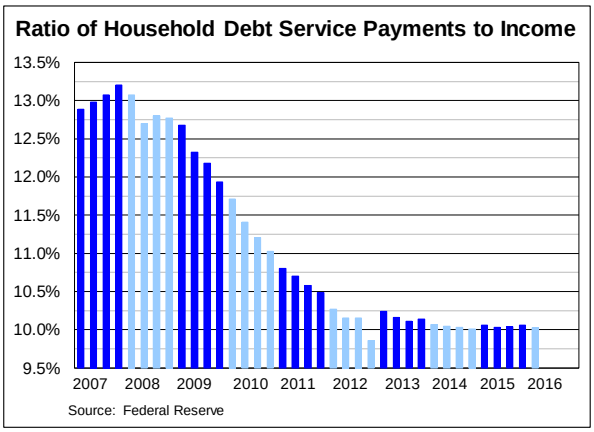
[2] We're not aware of any with anywhere near the level of rail traffic data that RTI has; if you know of any, please let us know!

- Regarding recent economic data, Mr. DeLucia points to, among other things, nascent recovery in corporate profits (see the top row of charts below); healthy auto sales (see page 32); growing real disposable income (see page 31); a reasonably solid-looking index of leading indicators (see the chart on the previous page); solid job growth (see page 26 — 287,000 net new jobs in June!); and a steady, albeit not spectacular, cyclical housing recovery (see page 32). He also notes that household and banking sector finances are the strongest in decades (see the chart below right that shows improvements in household financial conditions).





- What are potential roadblocks? Business confidence — DeLucia refers to the Keynesian term "animal spirits," meaning a willingness by firms to take risks — has been lacking in recent years because of excess uncertainty (e.g., Will consumer demand stay strong? Will new regulations come down the pike?). A decrease in uncertainly and an increase in risk taking would probably bode well for the economy, while events that increase uncertainly (e.g., Brexit) tend to make things worse. DeLucia also suggests that a spike in the value of the dollar (see page 4) would harm global growth, and that manufacturing needs to continue to recover. (The PMI suggests recovery in manufacturing might be underway — see page 22.)



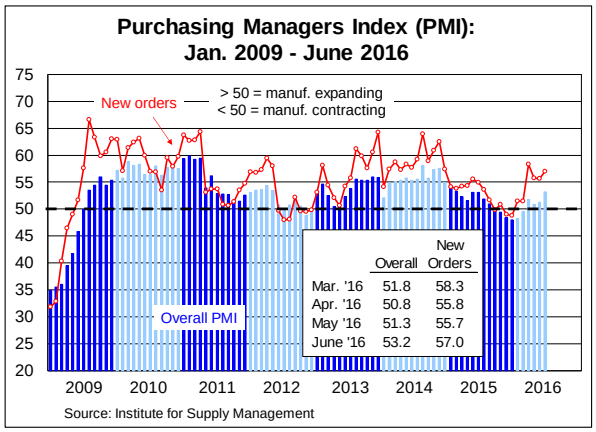
- It's not hard to come up with counterpoints to DeLucia's bullishness. For example, one could argue that auto sales are slipping. Meanwhile, industrial output is still weak, metrics like the employment population ratio and high labor participation rate suggest the labor market may not be as strong as it appears, and labor productivity has been weak in recent periods. In short, making sense of the economy has perhaps never been harder.
- That's something that Roger Altman would probably agree with. Altman was, among other things, the deputy secretary of the U.S. Treasury during the first Clinton administration.[3] On June 24, he had an op-ed in the Wall Street Journal entitled, "The End of Economic Forecasting." An excerpt: "Why have economic forecasters recently been so wrong? Just two years ago, for example, the common perception was that the big emerging markets would drive global growth. That oil prices would remain above $100 per barrel. That interest rates would move higher. All of the predictions have been wildly wrong….Yet these variances are neither a coincidence nor a temporary phenomenon. We have entered an age in which economic and financial forecasting is much harder and less reliable. Why? Because financial markets and financial investors are increasingly driving the world economy and it is

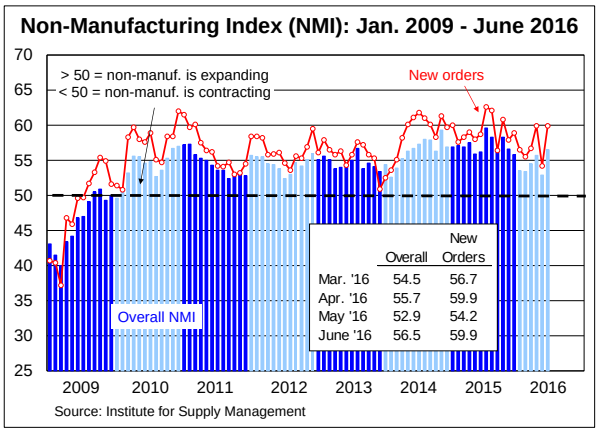
[3] Altman is also the founder of the investment bank Evercore, which advised BNSF during negotiations that culminated in Berkshire Hathaway's purchase of the railroad in 2009.

inherently volatile…Finance now represents the most powerful force on earth…Commodity prices, corporations and governments are increasingly at its mercy. Which is why reliable economic and financial forecasting may be history." It's an interesting theory, though we're not sure there's ever been a time when economic forecasting was reliable.

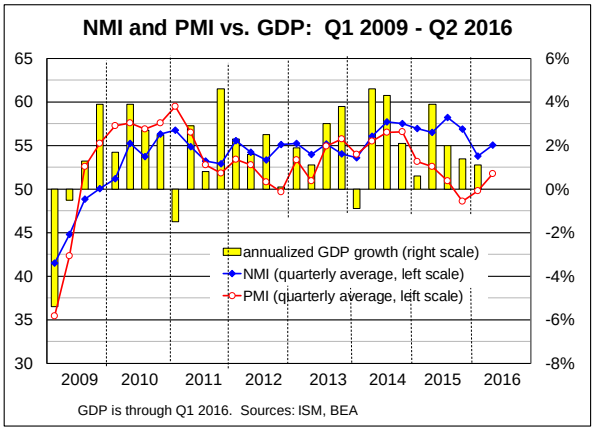
PURCHASING MANAGERS INDEX (PMI) and NON-MANUFACTURING INDEX (NMI)

- The Institute for Supply Management's **Purchasing Managers Index rose to 53.2 in June 2016, up from 51.3 in May and its highest level in 16 months** (see the bars in the chart below left). **June is the fourth straight month in which the index was above 50** (indicating manufacturing in general is expanding), following six months in which it was 50 or below. The hope, of course, is that the PMI is signaling that the manufacturing sector is recovering from its recent malaise and is well positioned going into the third quarter.
- **The new orders component of the PMI rose to 57.0 in June from 55.7 in May** (see the line in the chart below left). June's reading is the second highest since January 2015, trailing only March 2016.
- The ISM reported that 13 of the 18 manufacturing sectors it tracks reported growth in June, up from 12 in May and 11 in April.

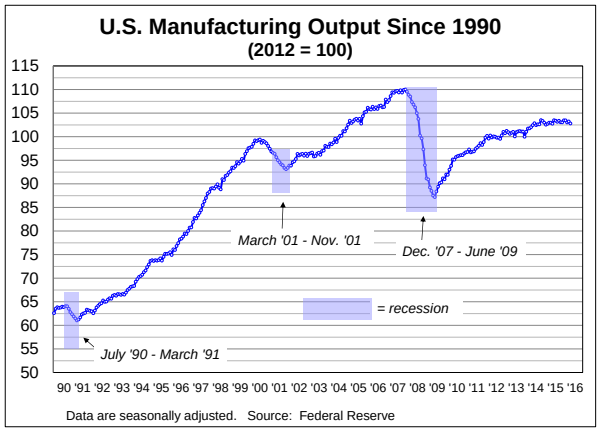




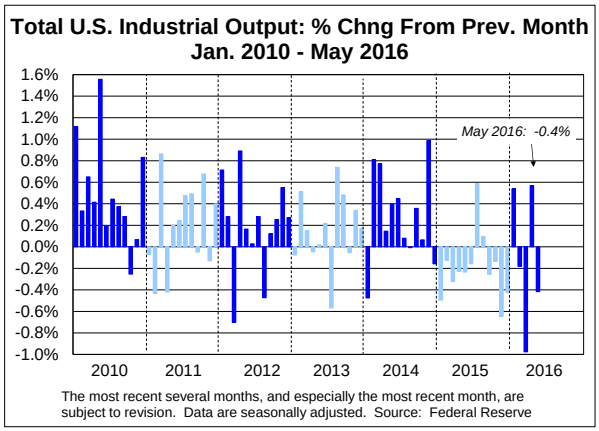
- Meanwhile, on July 6 the ISM announced that its **Non-Manufacturing Index (NMI)** — similar to the PMI, except that it covers services instead of manufacturing — **rebounded to 56.5 in June from 52.9 in May**, returning it to near where it was at the end of 2015 (see the bars in the chart above right) and alleviating fears that the index's decline in May was a portent of rough sailing ahead. The NMI's increase in June was much higher than most economists expected.
- **The new orders component of the NMI rebounded sharply in June too, rising to 59.9 from 54.2 in May** (see the line in the chart above right). Of the 18 non-manufacturing industries tracked by the ISM, 15 reported growth in June.
- Regarding the June NMI, the ISM said, "Respondents' comments are mostly positive about business conditions and the economy. Overall, the report reflects a strong rebound from the 'cooling-off' of the previous month."
- Taken together, the PMI and NMI for June are clearly encouraging. They support the view that broad swaths of the economy are at least moving in the right direction. They give no reason to think that recent trends — slower but not disastrous growth — won't continue.

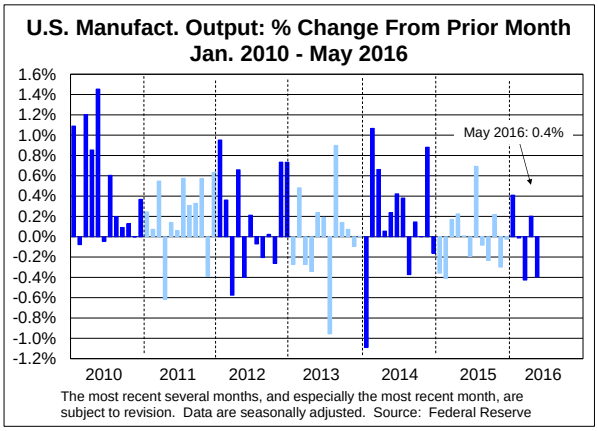


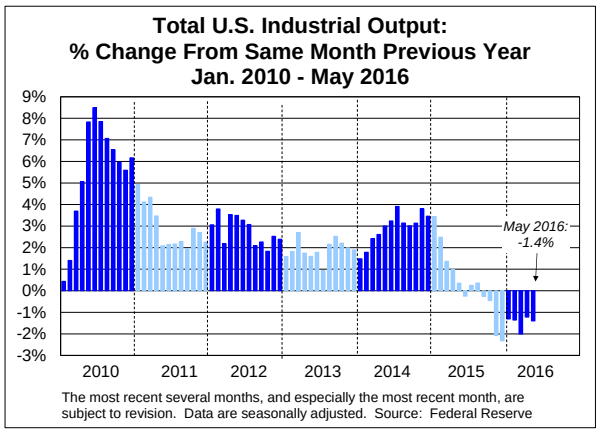
INDUSTRIAL OUTPUT

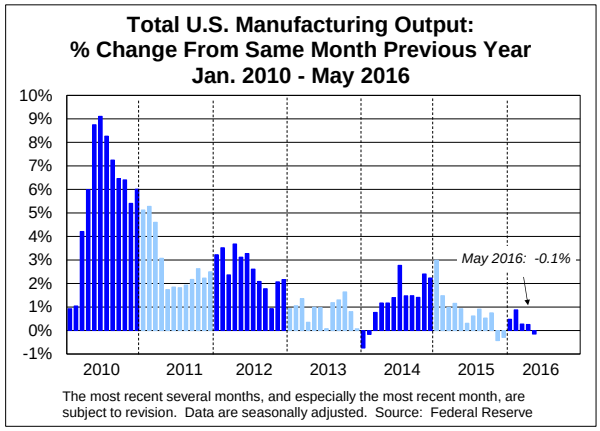


- The Online Etymology Dictionary says that the use of the word "see-saw" to mean "go up and down" dates to 1712. It's an apt word to describe recent industrial and manufacturing output. In May 2016, **total industrial output fell a preliminary 0.4%** after rising 0.6% in April, which followed a 1.0% decline in March (see the top left chart below). **Manufacturing output followed a similar pattern, falling a preliminary 0.4% in May** after rising 0.2% in April and falling 0.4% in March (see the top right chart below).
- Total industrial output peaked in November 2014 (see the chart on the bottom left of the next page). In May 2016, it was 2.9% below that peak and 1.4% below where it was in May 2015 (see the bottom left chart below), largely because of declines in energy and mining output over the last 18 months. In fact, industrial output has been negative year-over-year for nine straight months. In an article in the Wall Street Journal on June 20, Jason Schenker, the president of Prestige Economics, points out that, since 1919, industrial production has never fallen for so long without an accompanying recession. When it comes to the economy, past patterns do not necessarily guarantee future patterns, but it seems obvious that the longer industrial output is down, the greater the chance that the rest of the economy will follow suit.
- Manufacturing output peaked back in December 2007. In other words, it hasn't fully recovered its losses from the Great Recession (see the chart above right). In May 2016, manufacturing output was 6.5% below its December 2007 peak and 0.1% below where it was in May 2015 (see the chart below right). Manufacturing output has basically been flat for the past 18 months, roughly consistent with a broader economy that hasn't done much over that period either.

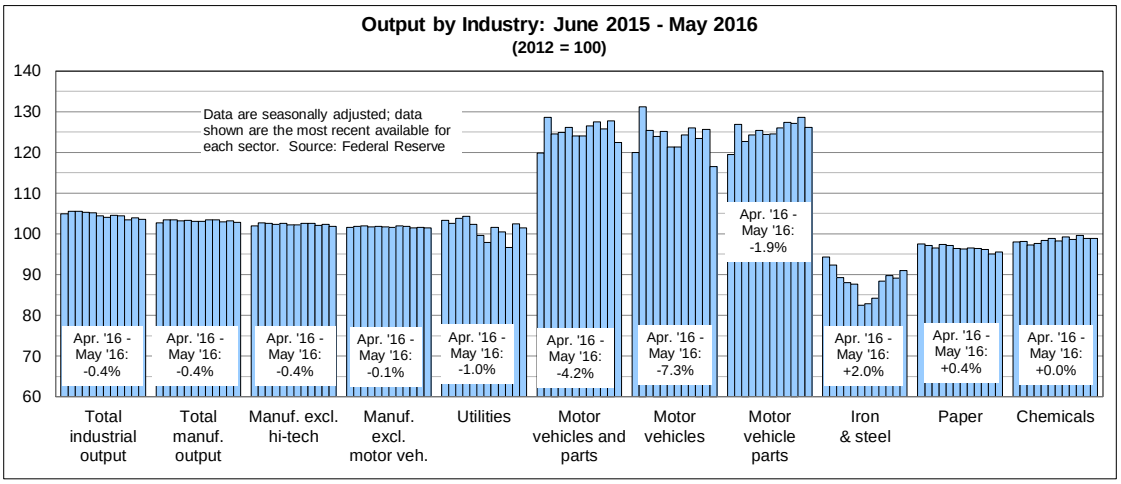


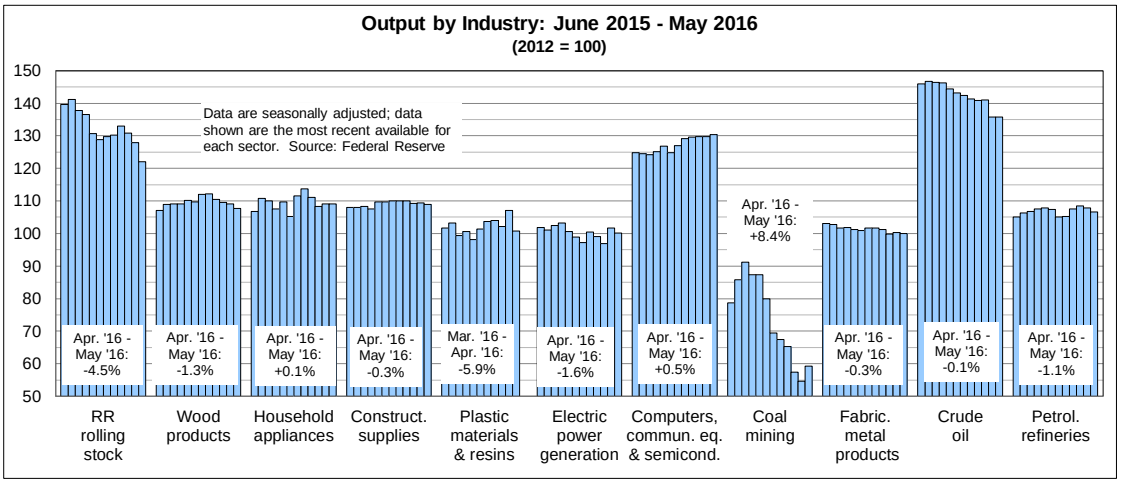


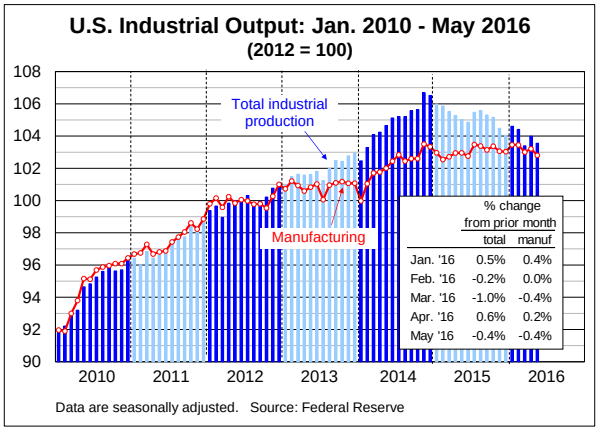


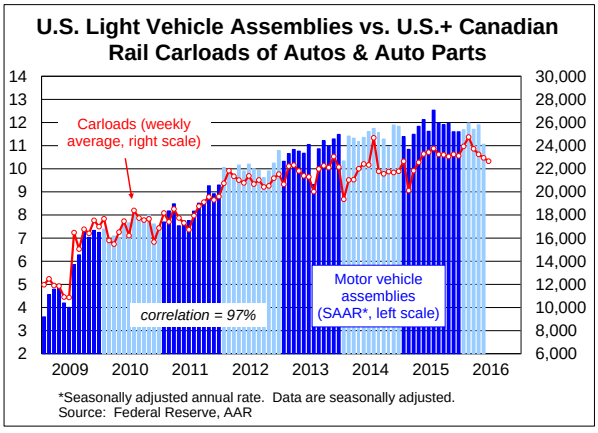


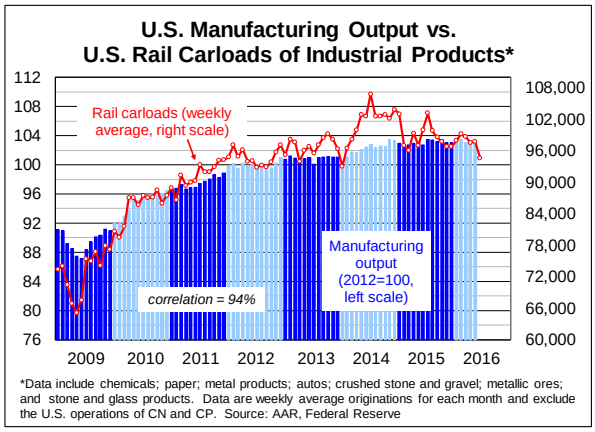
- The charts below show changes in output over the most recent 12 months for a number of key industrial sectors. In the top chart, note how flat total manufacturing output has been over the past year. Utility output has been all over the place, as has motor vehicle output. Chemical output has been growing incrementally (rail carloads of chemicals have been slowly growing too), while paper output has been slowly falling. Iron and steel output plunged and has since partially recovered. In the middle chart below, note how output of railroad rolling stock has been falling, which shouldn't be a surprise given the state of rail traffic over the past year and the increase in the number of rail cars in storage (see pages 34-35). Coal mining has been getting crushed, and crude oil output is down too.

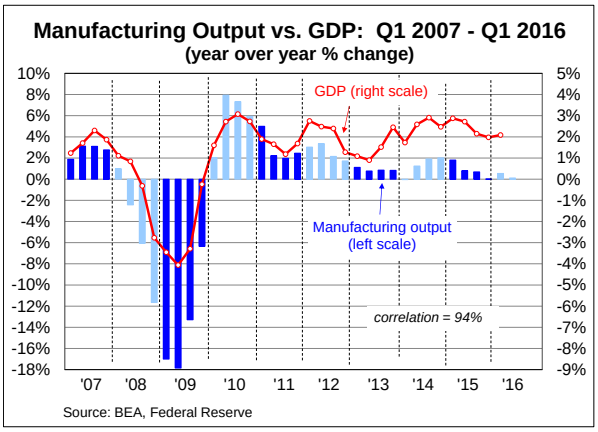








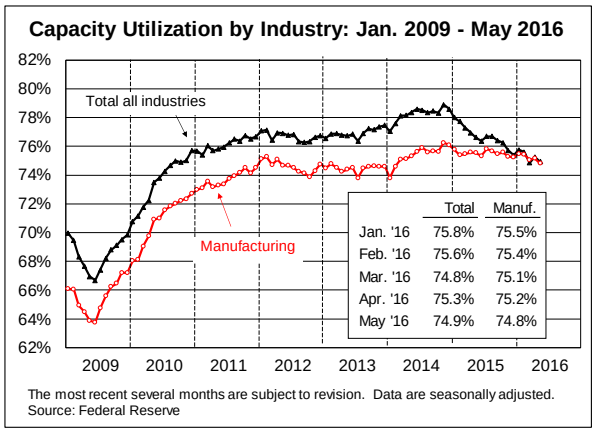




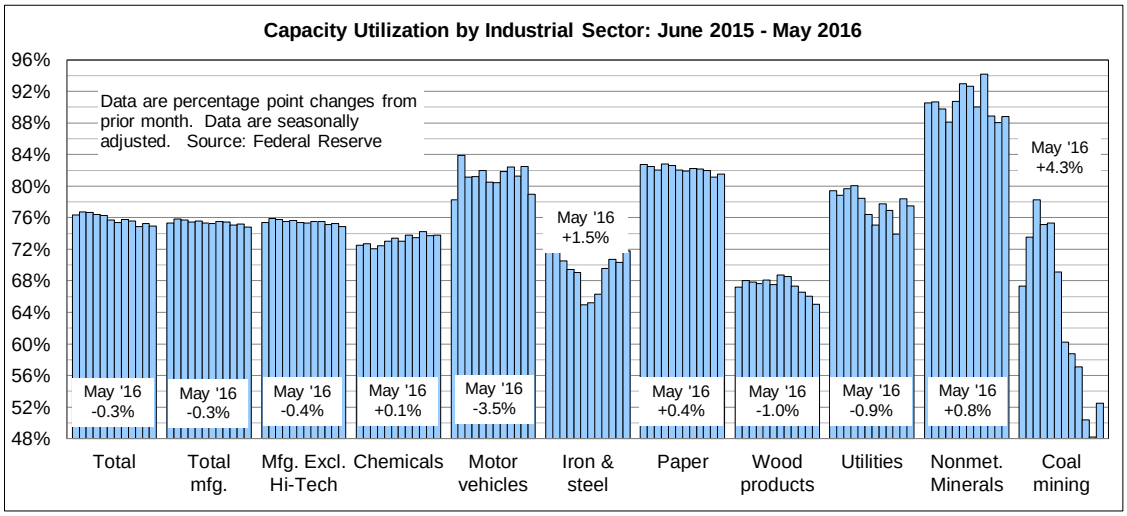
- Manufacturing accounts for only around 12% of U.S. GDP, but as the chart above right shows, there's a close positive correlation between changes in manufacturing output and GDP growth. Readers of RTI also know that, for many industrial and manufacturing sectors, there's a close positive correlation between output and rail carloads. The chart on the bottom right of the previous page and above left on this page show that this is the case for auto assemblies and industrial products, respectively.

CAPACITY UTILIZATION

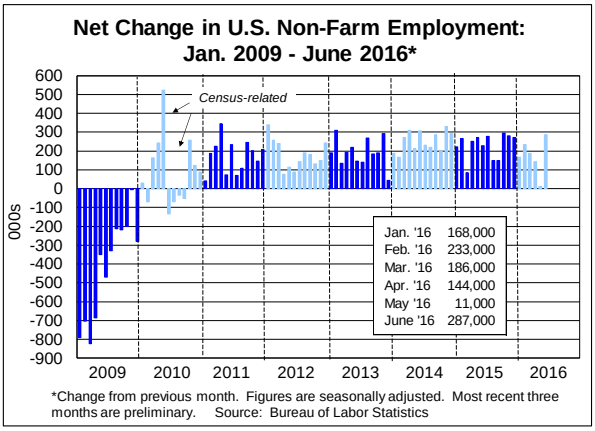
- The **overall capacity utilization rate** for the nation's mines, utilities, and factories **fell to a preliminary 74.9% in May 2016 from 75.3% in April**. The May 2016 figure is close to March 2016's 74.8%. The last time the overall capacity utilization rate was that low was late 2010 (see the top line in the chart at right).
- Overall capacity utilization peaked in November 2014 at 78.9%, a full 4 percentage points higher than it is now. The steady decline since late 2014 is due mainly to sharply lower utilization rates for utilities and, even more so, resource extraction (coal mines, oil, etc.).



- For manufacturing, **capacity utilization fell to a preliminary 74.8% in May, down from 75.2% in April** and the lowest it's been since February 2014.

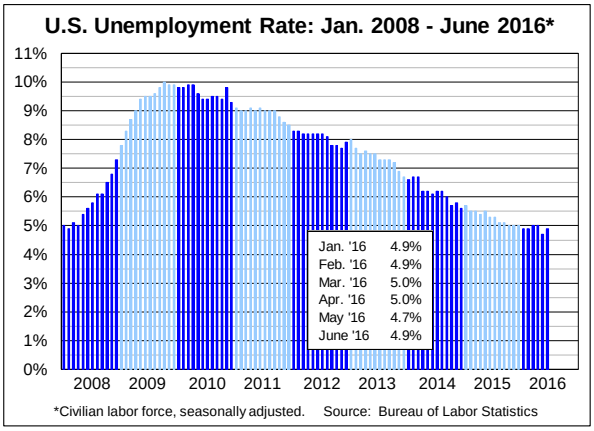


EMPLOYMENT SITUATION



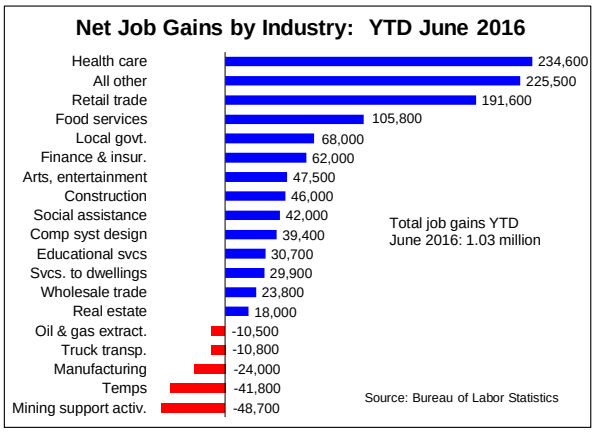
- Last month, it was hard to believe the BLS when it said just 38,000 net new jobs were created in May (since revised to just 11,000). This month, it's hard to believe the BLS when it says **287,000 jobs were created in June** (see the chart at right). How can two consecutive months be so dramatically different? We have no idea (but see below for a few paragraphs on the uncertainty associated with the payroll numbers).

- But, the numbers are what they are. The 287,000 jobs supposedly created in June are (if they aren't revised away) the most for a month since October 2015. For the first half of 2016, job gains were 1.03 million, an average of 172,000 per week. Unlike the May and June numbers, which just don't seem right, the 172,000 average for the first half seem entirely reasonable given what's been going on in the rest of the economy.



- Making things even more confusing, **the official unemployment rate rose to 4.9% in June from 4.7% in May**, thanks largely to a nearly 350,000 increase in the number of persons considered unemployed and a slight uptick (from 62.6% in May to 62.7% in June) in the labor force participation rate.[4]

- Job gains in June were spread among a wide swath of industries. They included 38,500 in **health care**, 29,900 in **retail trade**, 28,100 in **telecommunications** (a result of the end of the Verizon strike — they were counted as jobs lost last month), 21,900 in **food services**, 19,900 in **social assistance**, 17,000 in **local government**, 15,200 for **temporaries**, and 14,000 in **manufacturing**. Construction employment was unchanged in June.

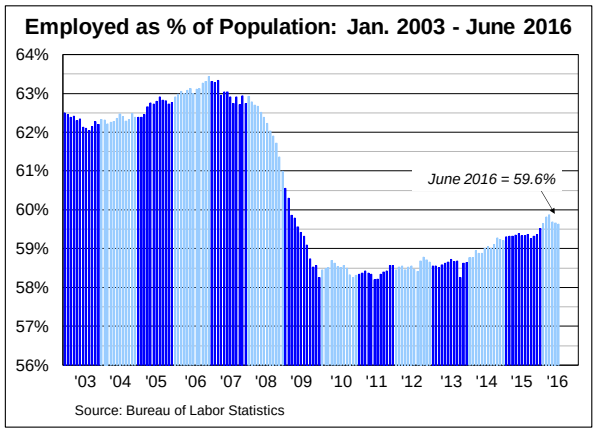


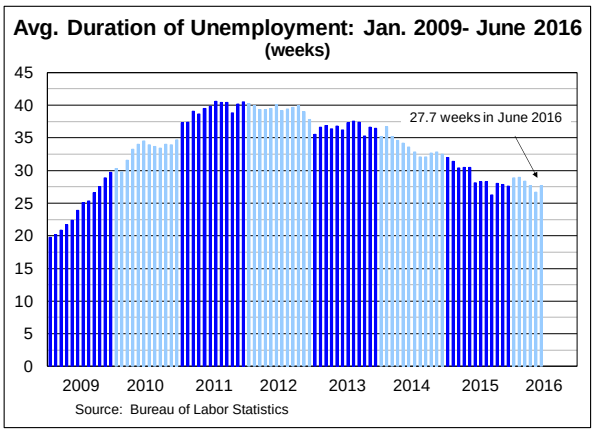
- In the first half of 2016, of the 1.03 million jobs gained (subject to further revision), 950,000 were in the private sector and 79,000 were in government. The chart at right shows job gains for many major industries over this period. **Health care** led the way with 234,600 net new jobs, followed in order by **retail sales**, **food services**, **local government**, and **finance and insurance**. Relatively few industries lost jobs in the first half of 2016. Some that did include **mining support activities** (down almost 49,000 jobs),

[4] To repeat something we mentioned last month, when the opposite to this month occurred — that is, the unemployment rate fell even though job gains were very low — two separate BLS surveys are involved: an "establishment survey" that uses payroll data from around 486,000 businesses, and 2) a "household survey" of around 55,000 households. The net number of jobs gained or lost in a month and employment by industry come from the survey of businesses. The unemployment rate, the size of the labor force, and the labor force participation rate, among others, come from the household survey. It's not uncommon for the two surveys to have seemingly paradoxical results. When we were explaining this in last month's RTI, we said that in May a decline in the number of unemployed was more than enough to offset a decline in the labor force, resulting in a lower unemployment rate. We said, "Who knows, next month we might get the exact opposite." That's exactly what happened.

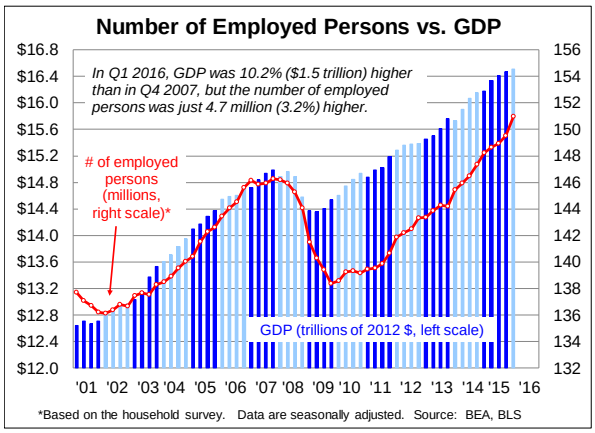
temporaries, and **manufacturing**. **Truck transportation** lost 10,800 jobs in the first half of 2016, according to BLS, so it's not just freight rail jobs that have disappeared (see page 28) among transport industries.

- James MacKintosh had an interesting story in the June 7 Wall Street Journal entitled "You Know Almost Nothing About the Economy; Get Used to It" (see here). The story appeared the day after the May employment report came out that said only 38,000 net new jobs were created in May, far fewer than expected. MacKintosh points out that the jobs number has a huge margin of error. In May, BLS said that it was 90% sure that its conclusion (38,000 new jobs) was right to within 115,000 jobs. As MacKintosh explains, that's like saying the BLS is 90% sure that actual job growth in May was somewhere between a loss of 77,000 jobs and a gain of 153,000. The same issue arises with the June jobs number. If you read the fine print, the BLS says it's 90% confident that actual job growth in June is correct to within 115,000 jobs – in other words, it's 90% sure that the correct number is somewhere between a gain of 172,000 jobs and a gain of 402,000 jobs. And as MacKintosh explains, in one month out of ten, on average, we can expect the correct jobs number to be outside the indicated range. If the 38,000 (now 11,000) in May is one of those one-in-ten deals — or for that matter, if June's gain of 287,000 jobs is one of them — it's meaningless and should be ignored.
- Making matters worse, the payroll number is subject to potentially huge revisions, averaging 43,000 per month in either direction since 2003, according to MacKintosh, with revisions exceeding 100,000 for a month in the worst cases.
- So should we just ignore the jobs data? MacKintosh doesn't recommend that, but he does remind us that the best thing to do is consider the jobs number in the context of other economic data.
- The chart below left shows the employment-population ratio. It's the number of employed persons divided by the working age population. This ratio plummeted during the recession and has only slowly recovered. It was 59.6% in June 2016, still well below the 62% to 63% it was before the recession. All else equal, the higher the ratio, the higher GDP and GDP per capita will be. When considered in conjunction with other data, it provides a useful snapshot of labor market conditions.





- The chart above right shows that the average duration of unemployment remains stubbornly high. It was 27.7 weeks in June 2016, which is well below the peak of near 40 weeks in 2011 and 2012 but well above the average of 17 weeks from 2005 to 2008.
- We show the chart at right every once in a while. It shows that from 2002 through 2007, employment and GDP were strongly correlated (around 85%). The recession took care of that, with employment taking much longer than GDP to surpass pre-recession levels. Lately, employment has begun closing the gap.



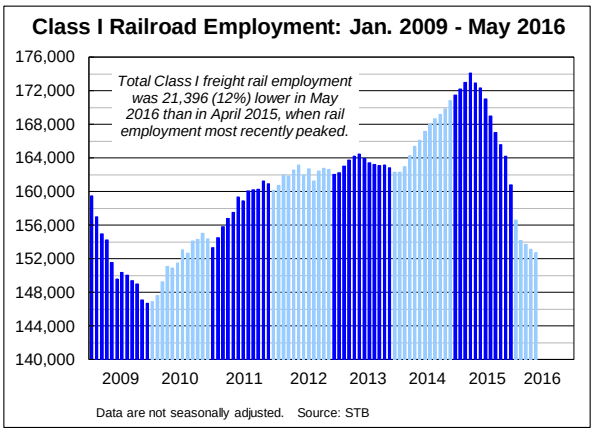
CLASS I FREIGHT RAILROAD EMPLOYMENT

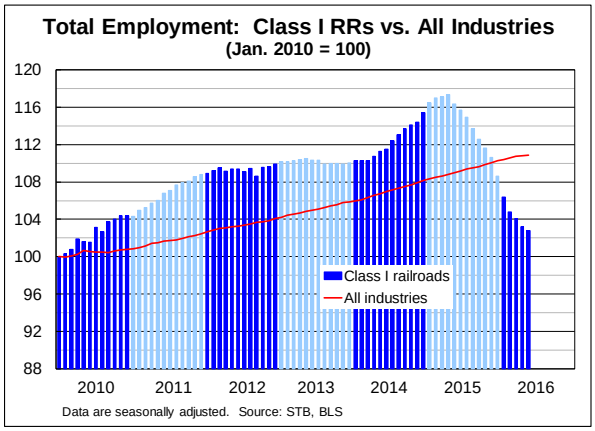
- The ongoing decline in railroad employment continues, but more slowly. Class I railroads employed 152,726 persons in May 2016, down 417 from April 2016. That's the smallest month-to-month decline since the total employment peaked in April 2015 (see the chart below left). Since April 2015, Class I rail employment has fallen each month and by 21,396 (12%) in aggregate. As of May 2016, total employment was about where it was in August 2010.

Total U.S. Class I Railroad Employment

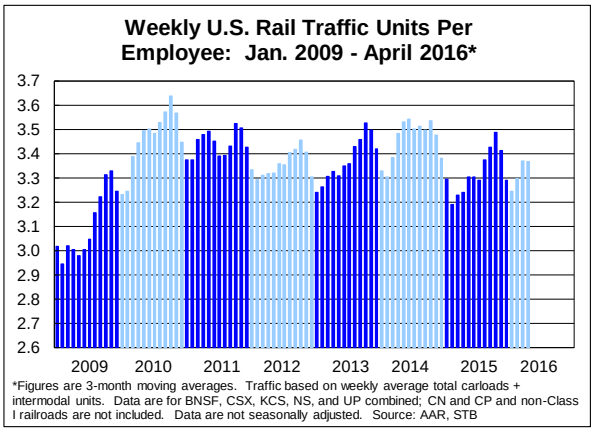
	April '15	May '16	change	% chng
Train and engine	73,725	58,114	-15,611	-21%
Trans. other than T&E	6,718	6,187	-531	-8%
Execs and staff assts	9,905	9,273	-632	-6%
Professional & admin	14,240	13,678	-562	-4%
Maintenance of equip.	31,406	29,104	-2,302	-7%
Maintenance of way	38,128	36,370	-1,758	-5%
TOTAL	174,122	152,726	-21,396	-12%

- In 2014, rail employment was growing rapidly in response to higher traffic volumes and as a response to service problems that were challenging the industry. At that time, rail employment growth was sharply outpacing employment growth in the broader economy (see the top right chart below). Today, the situation is reversed, with freight railroads one of the relatively few industries showing employment losses over the past year. (Other industries sharing the rail industry's fate are related to energy and mining — e.g., coal mining, crude oil extraction, steelmaking.)
- The table above right shows that employment has fallen for each of the six major categories of rail employees over the past 13 months, with train and engine employees (conductors and engineers who operate the trains) falling much more, on a percentage basis, than other categories of rail employees.

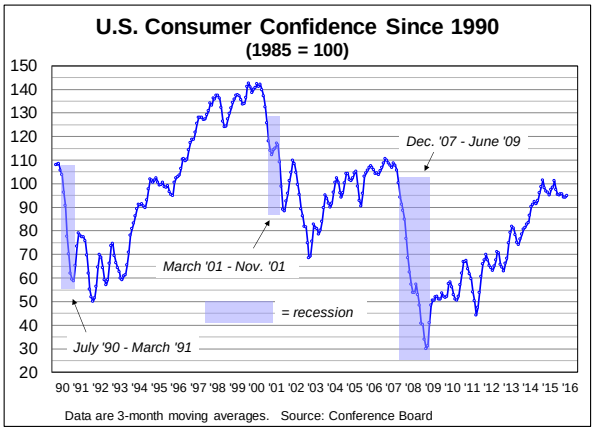




- Last month we showed a chart showing rail traffic units per train and engine employee for a group of major railroads. The chart showed that the decline in train and engine employment over the past year has been very large, but so has the decline in rail traffic. Consequently, today the traffic-units-per-train-and-engine-employee ratio is about at its "normal" level. The chart at right is similar, except that it includes all rail employees, not just train and engine employees. This chart too shows that the recent decline in rail employment has brought the traffic-per-employee ratio closer to its "normal" level. It confirms that railroads are like other industries in that employment levels are largely a function of the level of business.

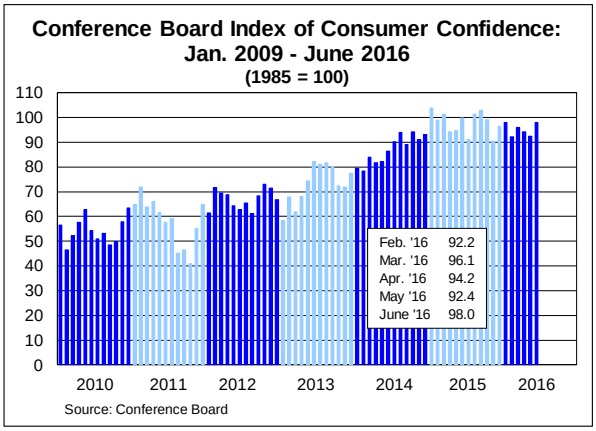


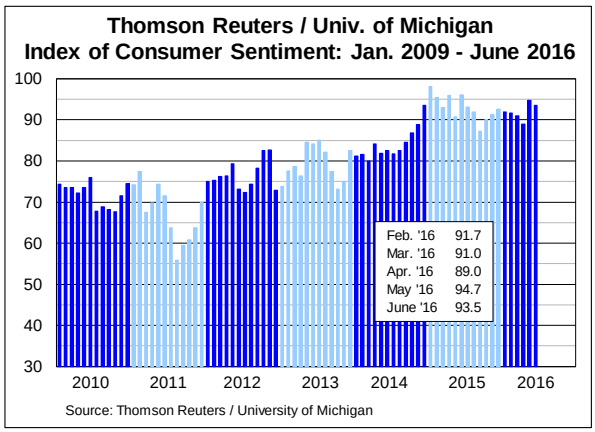
CONSUMER CONFIDENCE



- The two best-known gauges of consumer sentiment — from the Conference Board and Thomson Reuters / University of Michigan — generally follow similar patterns (see the bottom chart below), but some months they go different directions. June 2016 was one of those months.

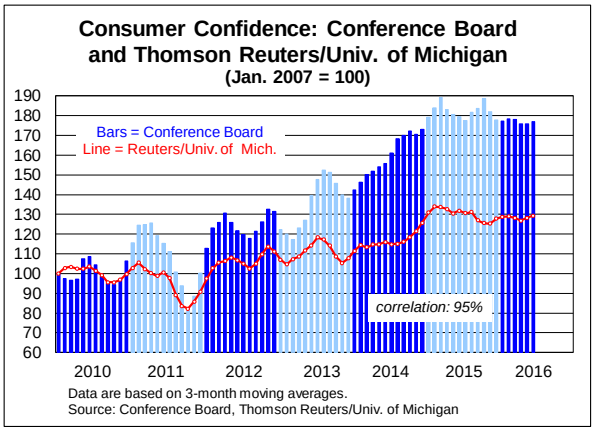
- In June, **the Conference Board's index rose sharply to 98.0, up from 92.6 in May and bringing the index to its highest point since this past January** (see the chart below left). The Conference Board executive in charge of the index said, "Consumers were less negative about current business and labor market conditions, but only moderately more positive, suggesting no deterioration in economic conditions, but no strengthening either. Expectations regarding business and labor market conditions, as well as personal income prospects, improved moderately. Overall, consumers remain cautiously optimistic about economic growth in the short-term."





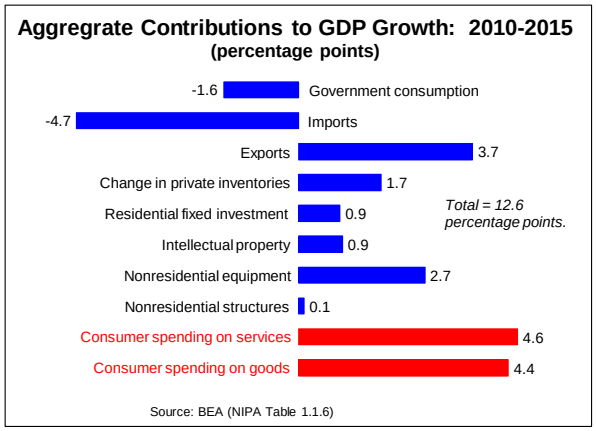
- **The Reuters / University of Michigan index of consumer sentiment was different — it fell to 93.5 in June from 94.7 in May** (see the chart above right). The economist behind the survey said, "Consumers were a bit less optimistic in June due to rising concerns about prospects for the economy. While no recession is anticipated, consumers increasingly expect a slower pace of growth in the year ahead."

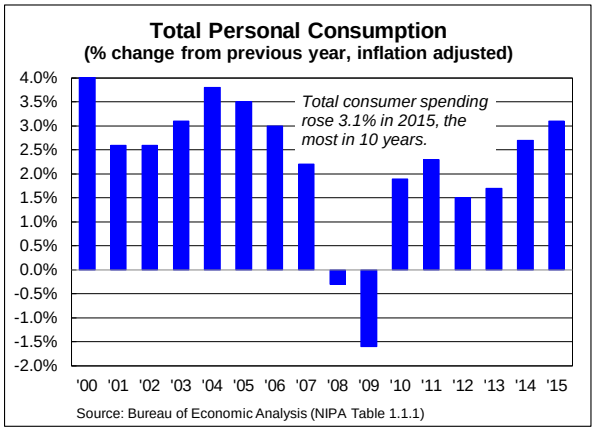
- Over the past 18 months, there's been some month-to-month fluctuations in both the Conference Board and University of Michigan indexes, but the trend line for both over this period has been mostly flat, in contrast to clearly upward trends from 2012 through 2014. That's shown in the chart at right, which shows that the two confidence indexes have very similar shapes, even if their respective scales are different (the University of Michigan index is more vertically constrained). And, both indexes are much higher than they were a few years ago. Clearly, consumers recognize solid improvement in their conditions compared to the past. That said, the recent general lack of improvement in confidence seems to indicate an "OK, we've stopped getting much better, now what?" mentality. This seems likely to remain until the economy starts growing much faster than it has been.



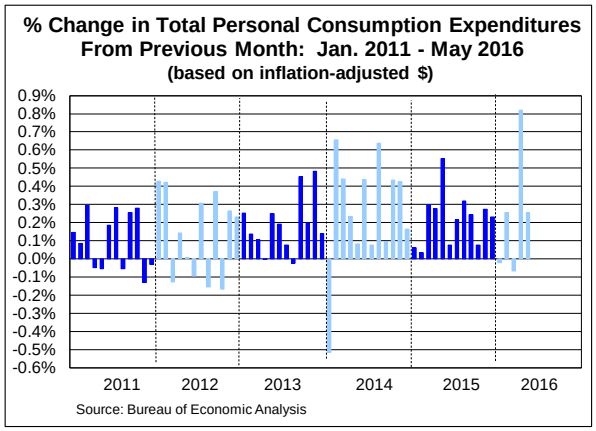
RETAIL SALES AND CONSUMER SPENDING

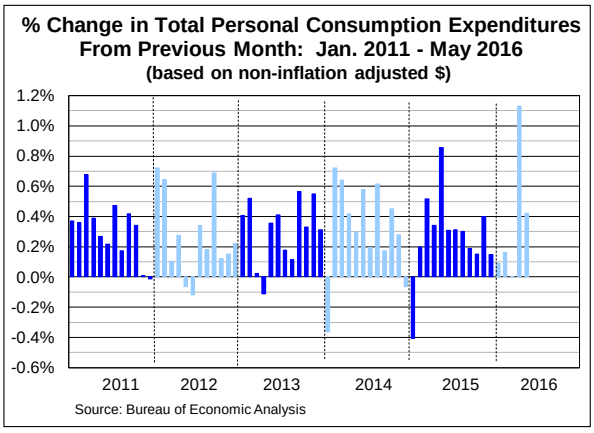
- As we say often in RTI, personal consumption expenditures account for around 70% of GDP, so it's hard to imagine rapid economic growth when personal consumption is weak. For the past several years, personal consumption — i.e., consumer spending — has, in fact, been the main driver of U.S. economic growth. As the chart below left shows, from 2010 to 2015, it accounted for 9.0 percentage points out of the total GDP growth of 12.6 percentage points, more than any other GDP component.





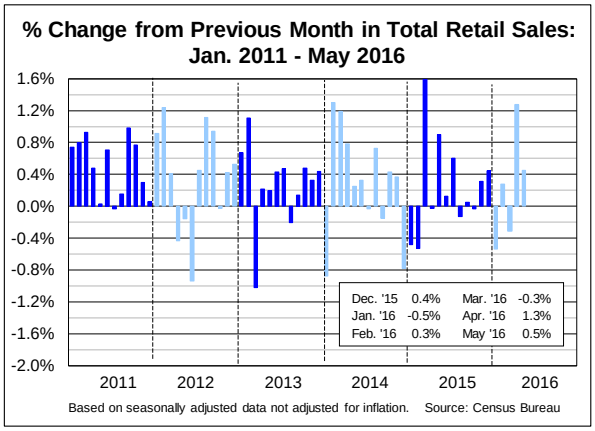
- That said, recent growth in consumer spending has been mediocre at best, at least compared to the past. From 1990 to 2007, average annual growth in consumer spending adjusted for inflation was 3.3%; from 2000 to 2007, it was 3.2%. But from 2008 to 2015, it averaged just 1.4%; from 2010 to 2015, it averaged just 2.2% (see the chart above right). In other words, consumer spending might be driving GDP growth, but it's as though it's in a wimpy normally aspirated 4-cylinder engine rather than a turbocharged one.





- Consumer spending is fairly volatile, making conclusions about month-to-month numbers tricky. The first five months of 2016 are a good example. From January to March 2016, the average month-to-month, adjusted for inflation growth in total consumer spending was 0.06% (see the chart below left), which is terrible and helps explain why first quarter overall GDP growth was just 1.1%. In April 2016, though, consumer spending adjusted for inflation was 0.8% higher than in March 2016 — the biggest month-to-month gain since August 2009. In May 2016, growth was back down to a preliminary 0.3%. (By the way, not adjusted for inflation, growth in total consumer spending was 1.1% in April 2016 and 0.4% in May 2016 — see the chart above right.)
- Many economists point to the higher levels in consumer spending in April and May as evidence that "the consumer is back." We see it as evidence that the consumer is as muddled as every other economic actor seems to be. Put another way, we don't think anybody knows what next month will bring, much less next year.

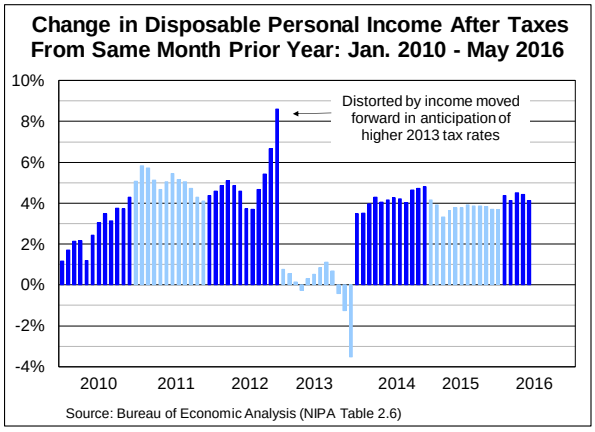
- **Retail sales** are a less comprehensive measure of consumer spending than the personal consumption expenditures discussed above, but they're still worth following. Retail sales rose 0.5% in May 2016 from April, following a revised 1.3% gain in April from March (see the chart at right). That's the **best two-month performance for retail sales in more than two years**. Most retail segments were up in May, led by gas stations and online retailers.

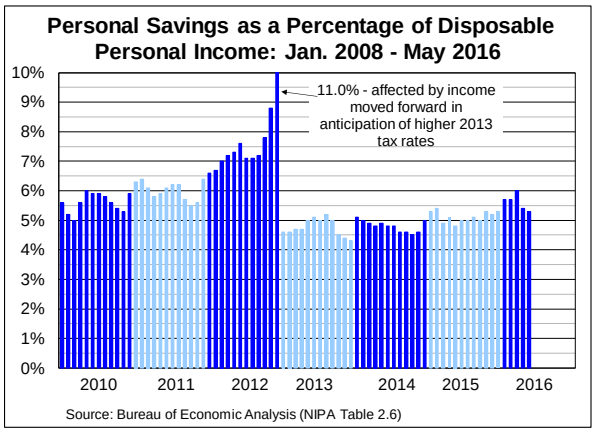


- Retail sales excluding automobiles, gasoline, building materials, and food services are referred to as "core" retail sales. They are thought to most closely correspond to the consumer spending component of GDP. In May, core retail sales rose 0.4% over April, following a 1.0% increase in April over March. That too is the best two-month performance in more than two years.

- In response to the April retail sales numbers, economist Jeremy Schwartz of Credit Suisse told the Wall Street Journal, "The persistence of strong consumer spending suggests household fundamentals are not breaking down significantly."

- It's easy to see why retail sales and consumer spending more broadly should be healthy. The labor market has been adding jobs rapidly for several years, consumer confidence is high (albeit no longer rising — see page 29), and very low inflation (see page 34) means that even though wage growth isn't great, wages are still growing faster than inflation. The chart below right shows that another measure of consumer purchasing power — disposable personal income after taxes — has been rising more than 4 percent this year, also well above inflation. And personal savings as a percentage of disposable income has come down a bit over the past two months (see the chart below right), meaning more money available for consumers to spend if they want to.



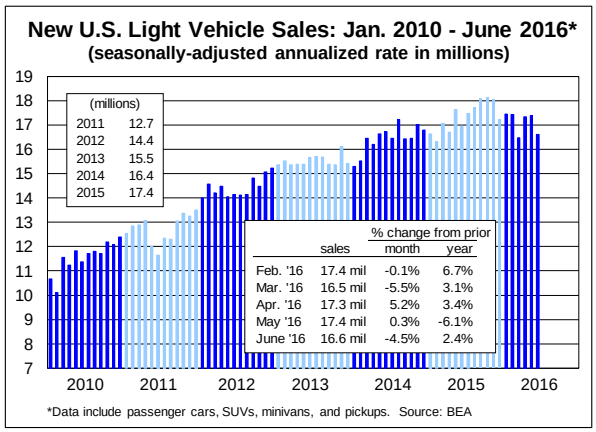


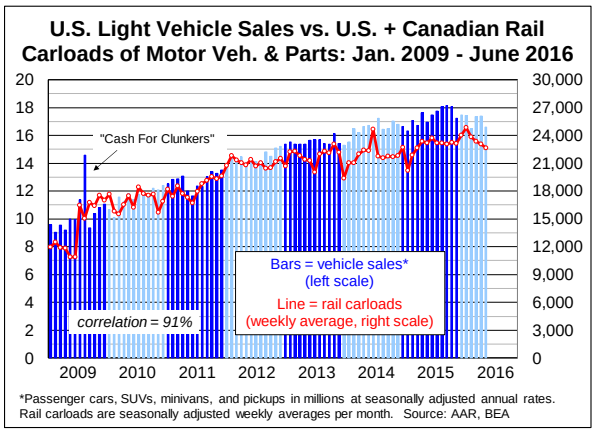
- In the end, it's one of those "you can lead a horse to water, but you can't make him drink" kind of things.[5] One of the reasons why economic forecasting is so difficult is that so much depends on what individuals, with free will, do. Maybe they go out and spend more, and maybe they don't. Throwing in things like Brexit make a hard job even harder. Some economists think Brexit could hurt consumer confidence and cause households to save more rather than spend more because the economic outlook becomes more uncertain. Other economists think Brexit is much ado about nothing, at least in terms of what it means for most U.S. firms and consumers, especially in the short run. Who's right? We have no idea.

[5] According to www.phrases.org.uk, this idiom might be the oldest English proverb still in regular use today. It was recorded as early as 1175 in Old English Homilies: "Hwa is thet mei thet hors wettrien the him self nule drinken," which translated is, "who can give water to the horse that will not drink of its own accord?"

NEW LIGHT VEHICLE SALES

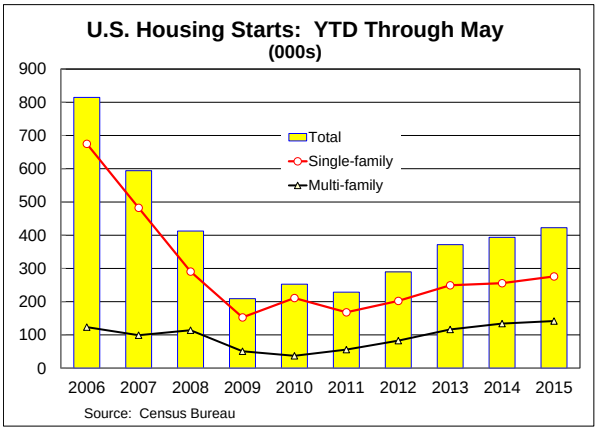
- **U.S. new light vehicle sales were an annualized 16.6 million in May 2016, down from 17.4 million in May 2016** (see the chart below left). The trend in the first half of 2016 is clearly down; it'll need to reverse course if 2016 is to beat the record of 17.4 million vehicles sold in 2015.



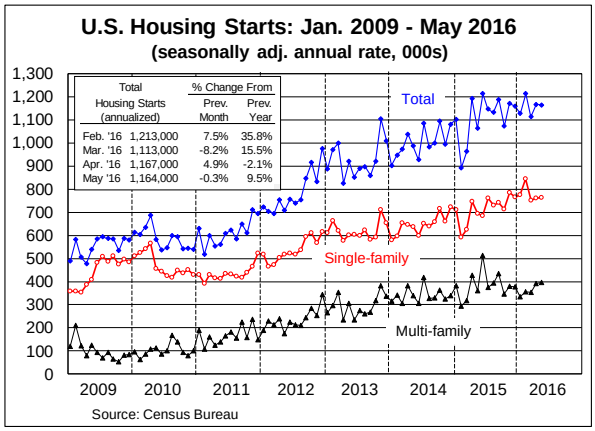


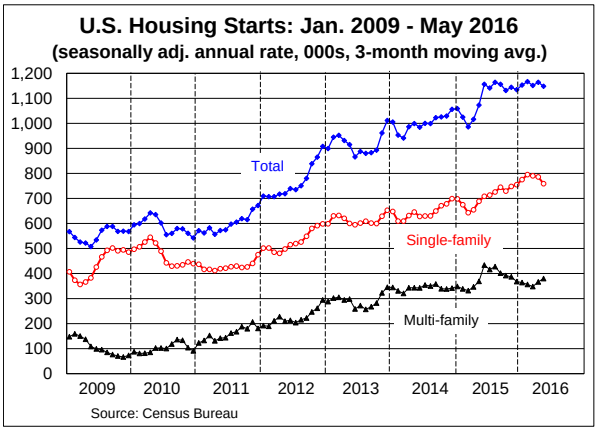
HOUSING

- **Total housing starts in May 2016 were an annualized 1.16 million, down fractionally from April 2016 and up fractionally from the average for the first five months of 2016** (see the top line in the chart below left). Both single-family housing starts (the middle line in the chart below left) and multi-family housing starts (the bottom line in the chart below left) were virtually the same in May as in April.

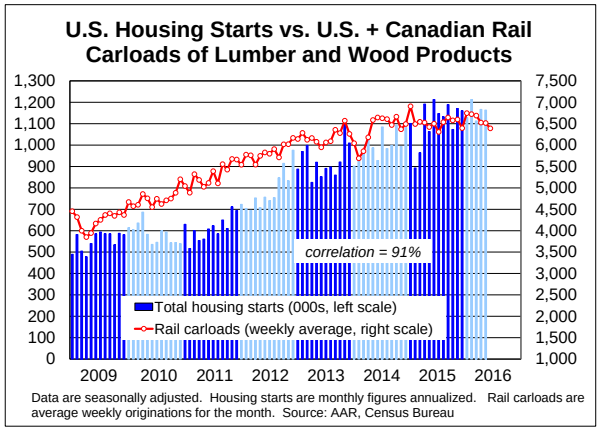


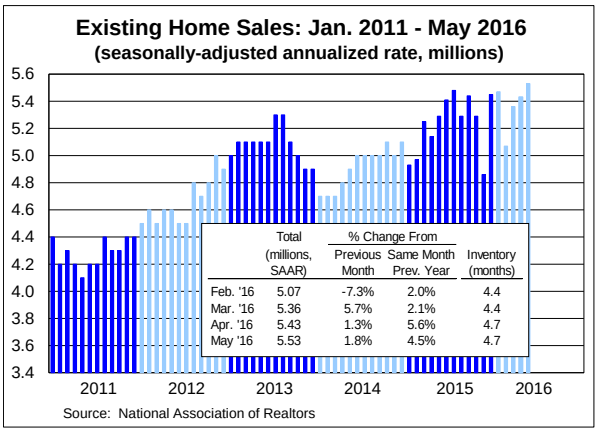
- The chart below right shows the same data except that it shows 3-month moving averages to reduce month-to-month noise. From that chart, it's clear that total housing starts have essentially plateaued over the past year in the 1.15 to 1.16 million annualized range. That's roughly twice what total housing starts were in 2009, but roughly half what they were in much of 2005 and 2006.



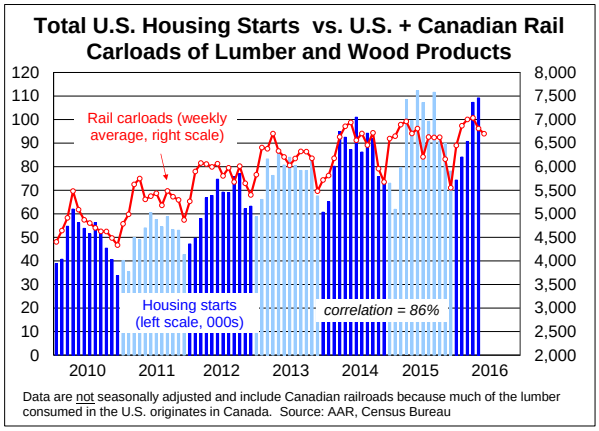


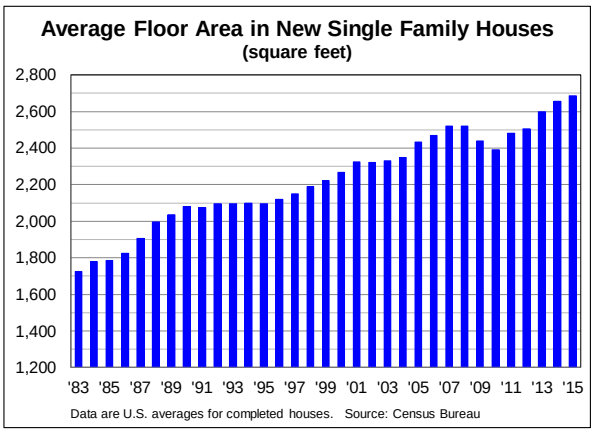
- Total housing starts in May 2016 were 9.5% higher than in May 2015; they were 10.2% higher in the first five months of 2016 compared with the first five months of 2015. For single-family starts, May 2016 was 10.1% higher than May 2015; year-to-date starts through May were up 14.5%. Multi-family starts were up 10.0% in May 2016 over May 2015; year-to-date starts were up 2.6% over last year.
- The middle right chart on the previous page shows January-to-May housing starts since 2006. Multi-family starts have recovered from the housing bust, but single family housing starts are far behind where they were. That suggests sizable pent-up demand for single-family homes, but builders have to be convinced that "if they build it, they (buyers) will come." Affordability and ability to obtain mortgages are big concerns for many people who'd like to become homebuyers, especially first-timers. The chart on the bottom right has data from the Census Bureau that show the average size of new single-family houses continued to rise in 2015. That doesn't enhance affordability for first-time homebuyers.
- As a June 17 article in the Wall Street Journal points out, "The housing market has been one of the economy's bright spots in recent months as low mortgage rates and a long stretch of job creation push more Americans toward buying a home. Builders have responded by breaking ground on more projects during much of this year but activity remains well below historical norms, leading to thin inventories and rising prices, factors keeping some would-be buyers at bay."
- Railroads care a great deal about housing starts, not only because it's a useful gauge of consumer confidence and general economic conditions, but also because there is a close positive correlation between rail carloads of lumber and wood products and housing starts, as the charts below show.





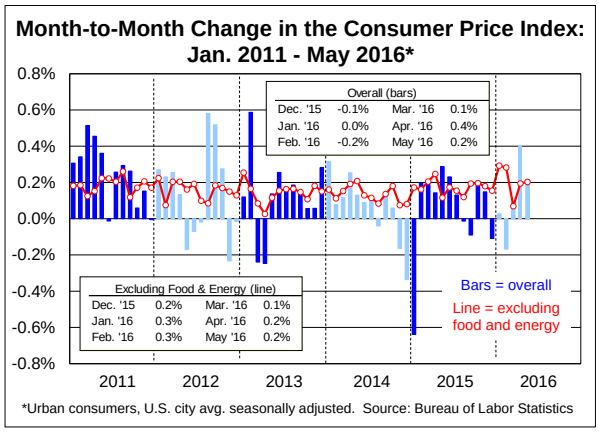
- The National Association of Realtors reports **that existing home sales were an annualized 5.53 million in May 2016. That's up 1.8% over April 2016, up 4.5% over May 2015, and the highest total since February 2007** (see the chart above right). It's a good sign for the economy. As Chris Rupkey, the chief economist at MUFG Union Bank in New York, told the New York Times, "The economy can't be going too far off course when home buying is picking up." Inventory in May was 4.7 months at the current sales pace, the same as in April. Six months is considered normal.

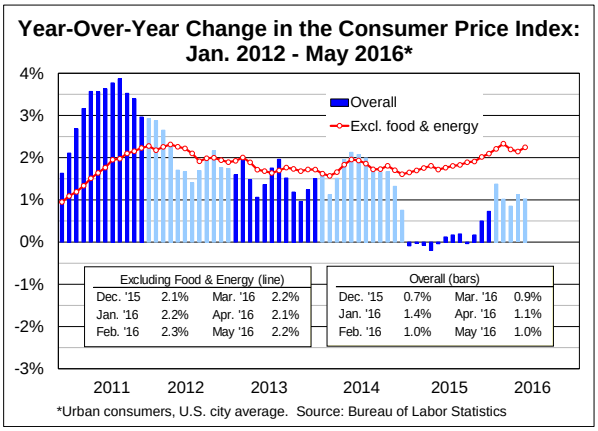


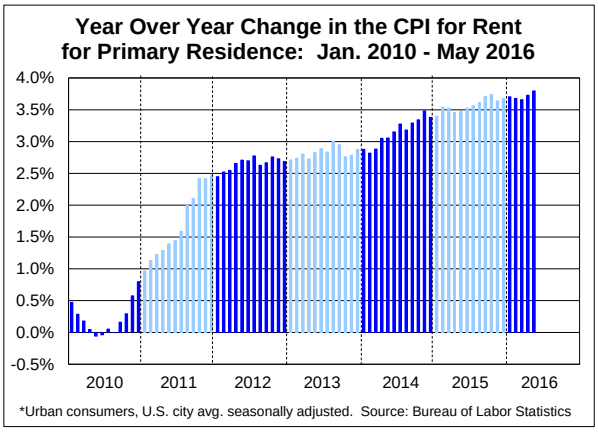


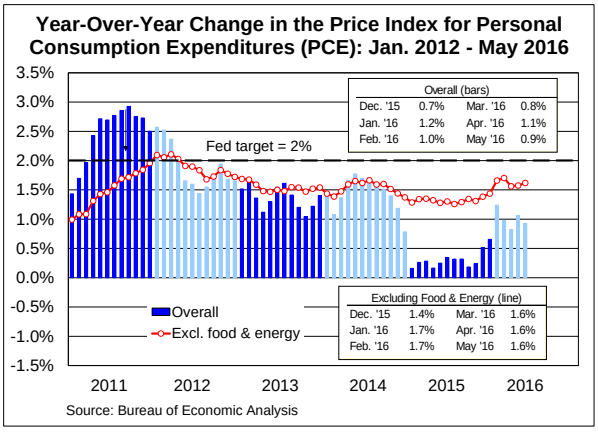
INFLATION

- The **overall consumer price index (CPI) rose 0.2% in May 2016 from April 2016**, its third straight increase. The increase in the index in those three months (0.7%) was the biggest three-month gain since October 2012 (see the bars in the chart below left). Excluding volatile food and energy prices, the CPI rose 0.2% in May, matching the increase in April (see the line in the chart below left).
- For the year ended in May, overall consumer prices rose 1.0%, down from 1.1% in April (see the bars in the chart below right), while prices excluding food and energy rose 2.2% in the 12 months ending in May, their seventh straight month at or above 2 percent (see the line in the chart below right).
- One of the reasons for the increase in the CPI over the past few months is an increase in the price of shelter, especially rent. The bottom left chart below shows that rent for primary residences rose 3.8% in the 12 months ending in May, the most since January 2008.
- The bottom right chart below shows changes in the price index for personal consumer expenditures, the Federal Reserve's preferred inflation measure. The overall index rose 0.9% in the 12 months ending in May; excluding food and energy, it rose 1.6%. Overall price growth has fallen short of the Federal Reserve's 2% target for four years.









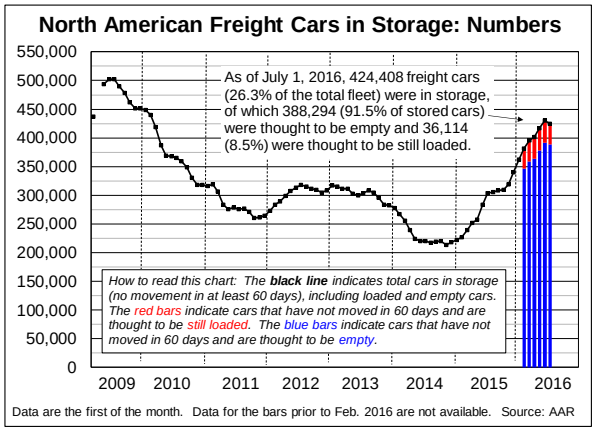
RAIL CARS IN STORAGE

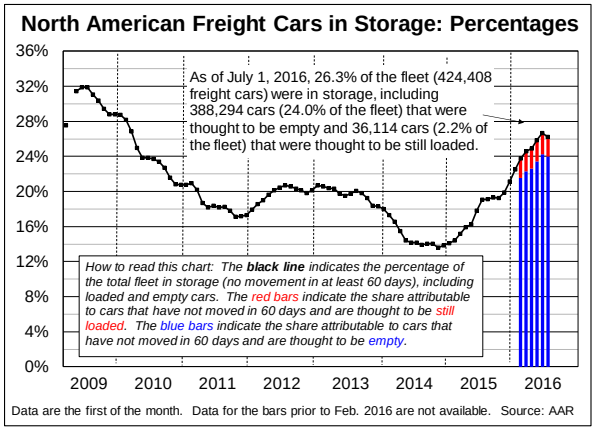
- If you've been getting Rail Time Indicators since before June 2014, you know we used to include data on rail cars in storage. With this issue of RTI, we're bringing rail cars in storage back.
- We first created this metric in early 2009, when an enormous number of rail cars were being placed into storage as traffic plunged due to the Great Recession. We defined a freight car as "in storage" if it had a loaded revenue move since 2005, but not in the prior 60 days. As the

economy and rail traffic slowly recovered from the recession, this metric offered a useful way to visualize how the recovery was proceeding. Changes in the number of cars counted as "in storage" largely reflected the fact that rail cars are stored when not needed due to lack of demand and taken out of storage when demand improves.

- By mid-2014, this metric had become less useful. With fewer cars moving in and out of storage as a result of changing economic conditions, we suspected that the way rail cars are used were adversely affecting the metric. Specifically, loaded rail cars are often used as temporary "warehouses" and might not move for more than 60 days, thereby counting as in storage when, in fact, they were being actively used. A change in the length of time a car is used this way could make the car appear to be moving into and then, later, out of storage. Because of these uncertainties, in June 2014 we decided to stop providing rail cars in storage data.

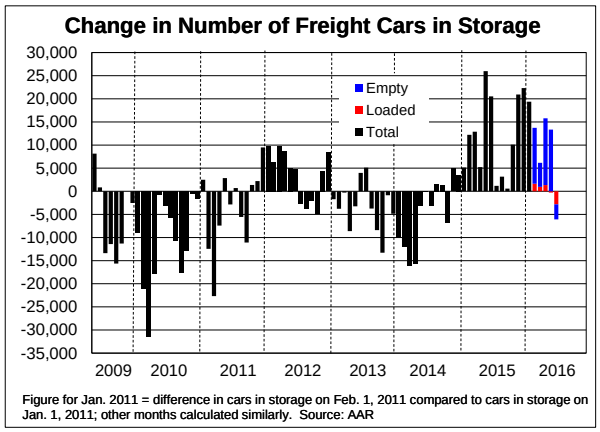
- Now, though, we've made some refinements. Specifically, we've begun splitting the cars that have not moved loaded in more than 60 days into two groups: those that have subsequently moved empty, and those that have not. This is a relatively straightforward way to determine whether cars that haven't moved for 60 days are still being used to store product and thus should not be counted as stored. This isn't a perfect fix. For example, a car may be unloaded and then moved by a customer into storage (using a car mover or small locomotive) without the railroad reporting an empty movement event. Our refined data go back only to February 1, 2016, giving us an initial 6-month series that will increase by one month each month going forward.





- The chart above left shows that, as of July 1 2016, 424,408 freight cars — 26.3% of the 1.6 million unit fleet — had not moved in the previous 60 days and thus count under our old definition as "in storage." Of the 424,408, 388,294 were cars believed to be empty, and 36,114 were cars believed to be still loaded (and thus, under our new definition, not really in storage).

- The charts above and at right make clear that the number of cars in storage surged beginning in early 2015. If our refinements are accurate, a small but not immaterial number of rail cars that were counted as stored under our old definition probably should not have been.



- Send an email to dkeen@aar.org if you have questions or if you want the data points behind the charts on this page.