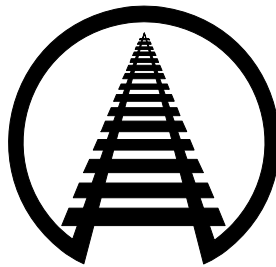


Rail Time Indicators

*A Review of Key Economic Trends
Shaping Demand for Rail Transportation*



**Policy & Economics Department
Association of American Railroads
Washington, D.C.**

December 9, 2011

Rail Time Indicators is a non-technical summary of many of the key economic indicators potentially important to U.S. freight railroads. It is issued monthly by the Policy and Economics Department of the Association of American Railroads.
Rail Time Indicators is free of charge.

To get on the e-mail distribution list for *Rail Time Indicators*, send a request including your name and business affiliation, if any, to Beth Eagney at beagney@aar.org.

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The last six editions of *Rail Time Indicators* are available on the AAR web site [here](#).

Rail traffic data in *Rail Time Indicators* are sometimes presented on a seasonally adjusted basis and sometimes on a non-seasonally adjusted basis. Because of the nature of the AAR's weekly rail traffic data and the nature of rail traffic (e.g., daily data are not available; some months have four weeks of data and some have five; holidays may be in one rail traffic month one year and in a different month the next; rail traffic varies by the day of the week; some commodity categories can exhibit wide swings in carloads from month to month for reasons unrelated to seasonal variations; the weather can have significant effects on traffic, etc.), the seasonal-adjustment process for rail traffic is not completely precise. Seasonally adjusted rail traffic data should be considered a complement to, rather than a replacement for, unadjusted rail traffic data.

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SUMMARY OF MOST RECENT DATA

Economic Indicator	Most Recent Data
U.S. Freight Rail Traffic (p. 2)	<p><u>Not Seasonally Adjusted</u>: Carloads in November 2011 ↑ 2.3% over November 2010; intermodal in November 2011 ↑ 3.8% over Nov. 2010.</p> <p><u>Seasonally Adjusted</u>: Carloads in November 2011 ↑ 0.9 % over October 2011; intermodal in November 2011 ↑ 0.8% over October 2011.</p>
Canadian Freight Rail Traffic (p. 4)	<p><u>Not Seasonally Adjusted</u>: Carloads in November 2011 ↑ 2.6% over November 2010; intermodal in November 2011 ↑ 4.2% over Nov. 2010.</p> <p><u>Seasonally Adjusted</u>: Carloads in November 2011 ↓ 1.6% from October 2011; intermodal in November 2011 ↑ 1.6% over October 2011.</p>
Gross Domestic Product (p. 17)	↑ 2.0% in Q3 2011, according to the second preliminary estimate released on November 22. Revised downward from 2.5%.
Purchasing Managers Index (p. 20)	↑ to 52.7 in November 2011 from 50.8 in October 2011. New orders ↑ to 56.7 in November 2011 from 52.4 in October 2011.
Non-Manufact. Index (p. 20)	↓ to 52.0 in November 2011 from 52.9 in October 2011.
Manufacturing Inventories and Sales (p. 21)	Manufacturing sales ↑ 0.6% , manufacturing inventories ↑ 0.9% , and inventory-to-sales ratio ↑ 0.4% in October 2011 over September 2011.
Industrial Production (p. 23)	Overall industrial output ↑ 0.7% in October 2011 over September 2011; manufacturing output ↑ 0.5% in October 2011 over September 2011.
Capacity Utilization (p. 25)	↑ to 77.8% in October 2011 from 77.3% in September 2011.
Employment (p. 28)	120,000 net new jobs created in November 2011; job gains in September and October revised upward by a combined 72,000.
Unemployment Rate (p. 28)	↓ to 8.6% in November 2011 from 9.0% in October 2011. Lowest level since March 2009.
Class I RR Employment (p. 31)	↑ 11 in October 2011 over September 2011 to 160,251 employees.
Consumer Confidence (p. 32)	↑ to 50.6 in November 2011 from 40.9 in October 2011.
Retail Sales (p. 34)	↑ 0.5% (\$2.1 billion) in October 2011 over September 2011.
Light Vehicle Sales (p. 36)	↑ to 13.6 million (annualized) in Nov. 2011 from 13.2 million in Oct. 2011 and the highest of any non-clunkers month since June 2008.
Housing Starts (p. 37)	↓ 0.3% in October 2011 to 628,000 from 630,000 in September 2011.
Consumer Price Index (p. 38)	↓ 0.1% in October 2011 from September 2011 and ↑ 3.5% for the year ending October 2011.
Rail Freight Cars in Storage (p. 39)	↑ to 263,912 on December 1, 2011 (17.3% of the fleet), up 2,217 cars from November 1, 2011.

U.S. AND CANADIAN FREIGHT RAILROAD TRAFFIC

Who releases it and when?

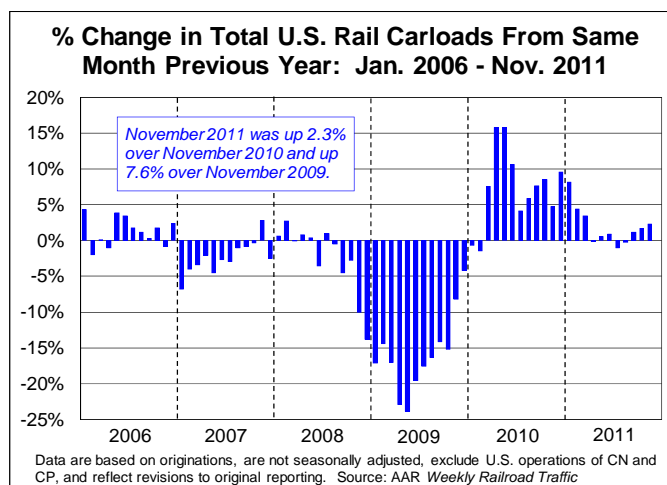
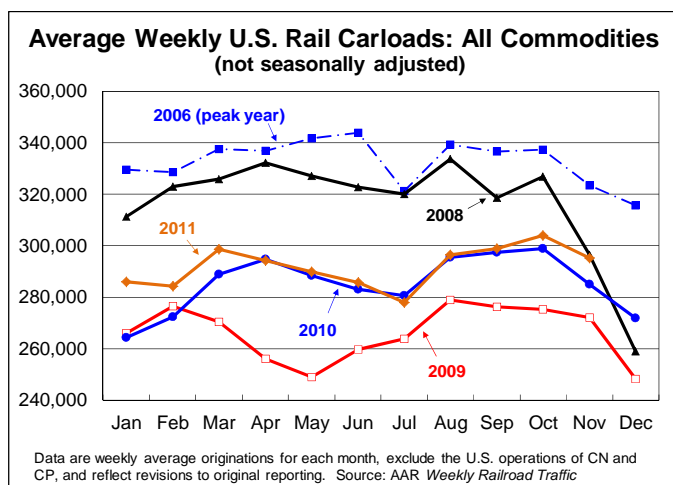
- The Association of American Railroads (AAR) releases its *Weekly Railroad Traffic* report every Thursday morning. The report contains rail traffic data for the previous week. Weekly data are aggregated into monthly figures in *Rail Time Indicators*. When comparing year-over-year rail traffic, comparisons are to the period 52 weeks prior to the present period.
- Rail traffic data in *Rail Time Indicators* are sometimes presented on a seasonally adjusted and sometimes on a non-seasonally adjusted basis. Unless stated otherwise, rail data herein should be assumed to be not seasonally adjusted. Generally speaking, non-seasonally adjusted rail traffic is compared on a year-over-year basis (e.g., June 2011 vs. June 2010) while seasonally adjusted rail traffic is compared on a month-over-month basis (e.g., June 2011 vs. May 2011).

What is it and why is it important?

- AAR rail traffic data are reported as carloads or as intermodal units. Carload traffic is classified into one of 20 different commodity categories (see the table on page 5 for a list) and is carried in a variety of rail car types (e.g., tank cars, covered hoppers, gondolas, boxcars, etc.). A unit of rail intermodal traffic is either a shipping container (currently about 85% of U.S. rail intermodal traffic) or a truck trailer (about 15% of intermodal traffic) carried on a railroad flat car. In the monthly rail traffic data reported in *Rail Time Indicators*, intermodal is not included in carload figures. Commodity detail on the freight inside the container or trailer is not available. Railroads reporting to the AAR collectively handle about 95% of total U.S. and Canadian freight rail traffic.
- Freight railroading is a “derived demand” industry: demand for rail service occurs as a result of demand elsewhere in the economy for the products railroads haul. Thus, rail traffic is a useful gauge of broader economic activity, especially of the “tangible” economy (see page 19).

What are the latest numbers for U.S. railroads?

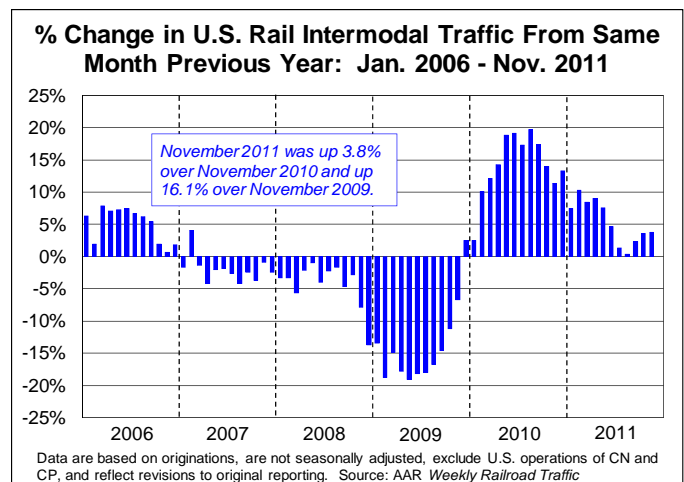
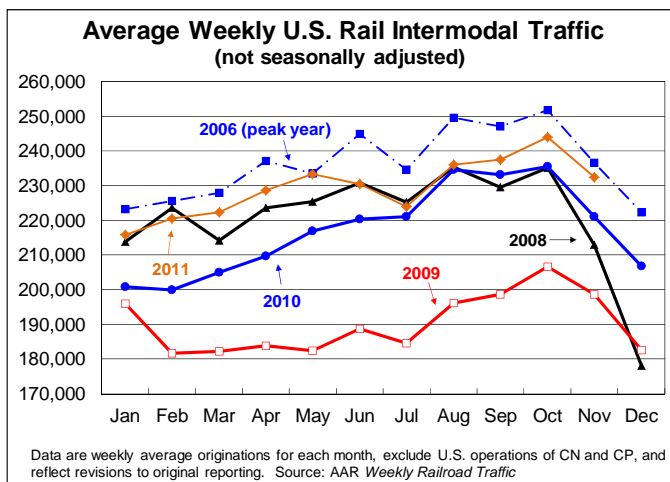
- U.S. freight rail traffic showed generally solid gains in November 2011 over November 2010. U.S. railroads originated 1,476,635 carloads in the five weeks that constitute November 2011, an average of 295,327 per week and **up 2.3% over November 2010** (see charts on the top of the next page) and the **biggest year-over-year percentage increase since March 2011**.
- Commodities showing carload gains on U.S. railroads in November 2011 included **motor vehicles and parts** (up 11,069 carloads, or 18.7%); **crushed stone, gravel, and sand** (up 9,740 carloads, or 12.0%); **coal** (up 8,455 carloads, or 1.3% — see the charts on page 8); and **primary metal products** (mainly steel, up 7,265 carloads, or 17.4%). On a percentage basis, the biggest increase in November was in carloads of **petroleum and petroleum products** (up 18.8%, or 6,058 carloads).



- Excluding grain**, U.S. rail carloads in November 2011 were up 3.7% over November 2010. **Excluding coal**, U.S. rail carloads in November 2011 were up 3.2% over November 2010, their biggest gain since July 2011. **Excluding coal and grain**, U.S. rail carloads in November 2011 were up 6.1% over November 2010 (see the charts on the bottom row of page 11). Carloads of **“industrial products”** — defined for our purposes as the combination of chemicals, paper, metal products, autos and auto parts, crushed stone and gravel, metallic ores, and stone and glass products (which includes cement, among other things) — were up 7.5% in November 2011 over November 2010 (see charts on the top row of page 12). In each of these commodity groups, percentage gains in November 2011 were the highest in at least several months.
- The main commodities showing carload declines on U.S. railroads in November 2011 were **grain** (down 15,037 carloads, or 12.4% — see page 10), **chemicals** (down 1,599 carloads, or 1.1% — see page 9), and **food products** (down 1,498 carloads, 4.5%). Like last month, four of the seven commodities showing carload declines in November were food-related (grain, farm products excluding grain, grain mill products, and food products).
- In November 2011, **13 of the 20 carload commodity categories** tracked by the AAR **saw increases** compared with November 2010 (see table at right). The table on page 5 has much more commodity-level detail for November 2011 for U.S. railroads.
- Year-to-date U.S. rail carloadings in 2011 through November were up 1.8% at 14,021,412 carloads.
- On a seasonally adjusted basis, total U.S. rail carloads were up 0.9% in November 2011 over October 2011** (see the top left chart on page 15). Seasonally adjusted carloads excluding coal were up 0.2% in November 2011 over October 2011. Seasonally adjusted carloads excluding coal and grain were up 1.2% in November 2011 over October 2011. Pages 15 and 16 have a number of charts detailing seasonally adjusted rail traffic.
- U.S. rail intermodal originations totaled 1,162,249 containers and trailers in November 2011, an **average of 232,450 per week**. That’s **up 3.8% over November 2010** on a non-seasonally adjusted basis and the third highest weekly average for any November in history (see the charts below). Intermodal volume in the first 11 months of 2011 on U.S. railroads totaled 11,019,041 containers and trailers, up 5.1% over the first 11 months of 2010.
- Seasonally adjusted U.S. rail intermodal traffic was up 0.8% in November 2011 over October 2011** (see the top right chart on page 15.)

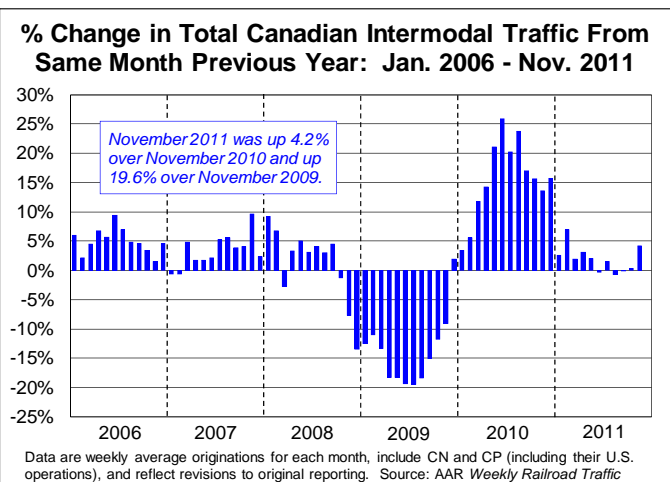
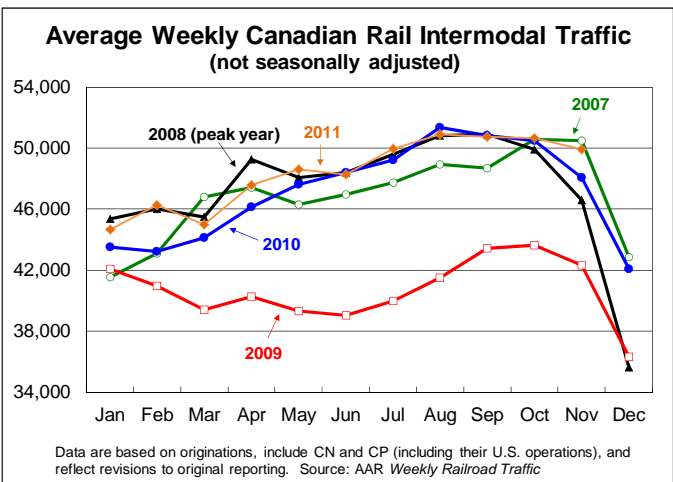
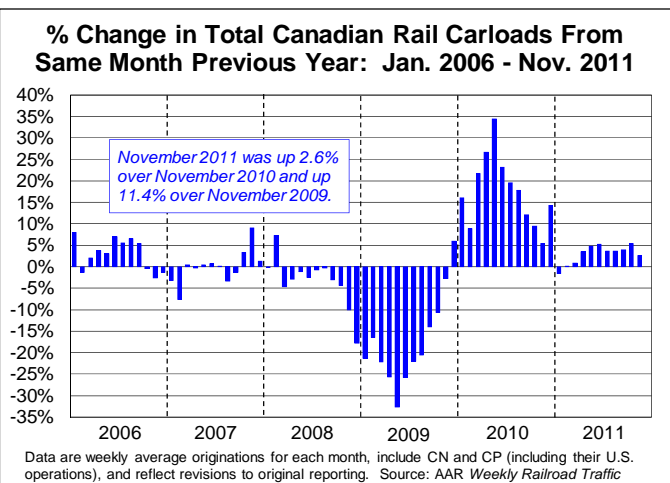
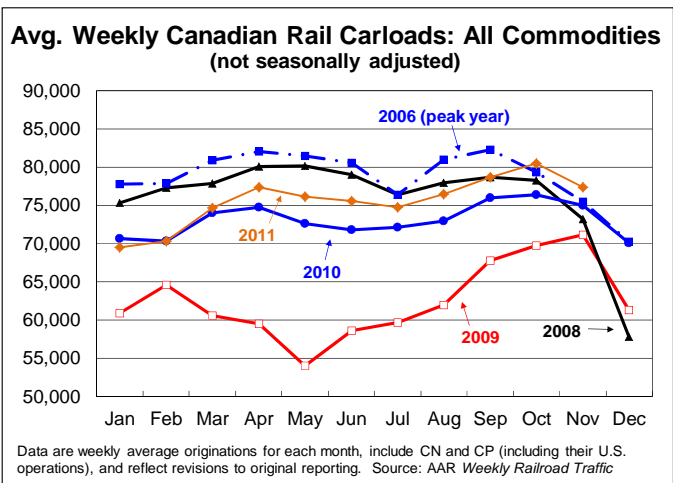
Month	2009	2010	2011
Jan	0	11	15
Feb	1	13	15
Mar	0	16	15
Apr	0	19	9
May	0	19	8
Jun	0	17	14
Jul	0	13	12
Aug	0	16	12
Sep	1	14	13
Oct	1	15	12
Nov	6	13	13
Dec	10	16	

*Out of 20. Source: AAR



What are the latest numbers for Canadian railroads?

- Canadian railroads originated 386,717 carloads of freight in November 2011, up 2.6%** (9,699 carloads) **over November 2010** on a non-seasonally adjusted basis and an average of 77,343 carloads per week (see top row of charts below). Canadian figures include Canadian railroads' extensive U.S. operations. In the **first 11 months of 2011, Canadian carloadings were up 3.0%** over the first 11 months of 2010.
- As was true for U.S. railroads, the commodity with the biggest carload gains on Canadian railroads in November 2011 was **motor vehicles and equipment**, up 4,066 carloads, or 17.6%. Other commodities with gains included **farm products excluding grain** (up 3,177 carloads, or 22.2); and **lumber and wood products** (up 2,217 carloads, or 20.2%). **Pulp and paper** (down 1,576 carloads, or 8.6%) and **metallic ores** (down 1,432 carloads, or 2.1%), among other commodities, saw declines. The table on page 6 has detailed commodity data for Canadian rail traffic in November 2011. Compared with November 2010, Canadian carloads in November 2011 were **higher in 11 of the 20 commodity categories**.
- Canadian railroads also originated 249,627 **intermodal containers and trailers in November 2011**, an average of 49,925 per week and **up 4.2% over November 2010** (see charts on the bottom of this page). **Year-to-date intermodal volume** on Canadian railroads through November was 2,324,195 containers and trailer, **up 1.8%** over the same period in 2010.
- Seasonally adjusted total Canadian rail carloads** in November 2011 were **down 1.6%** from October 2011 (see bottom left chart on page 15). **Seasonally adjusted Canadian intermodal traffic** in November 2011 was **up 1.6%** over October 2011 (see bottom right chart on page 15).

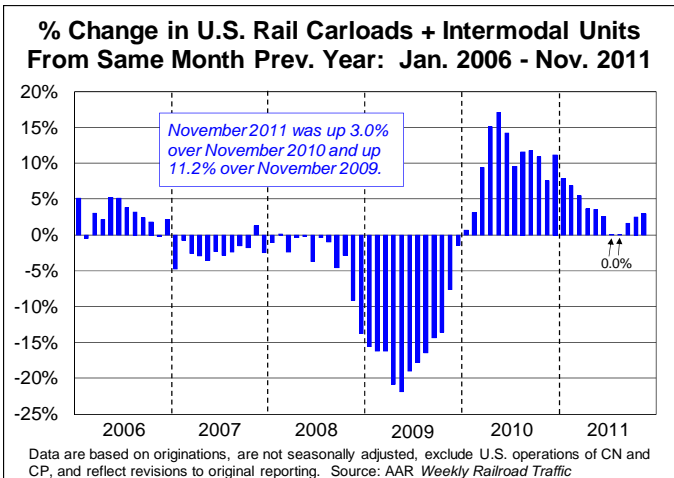
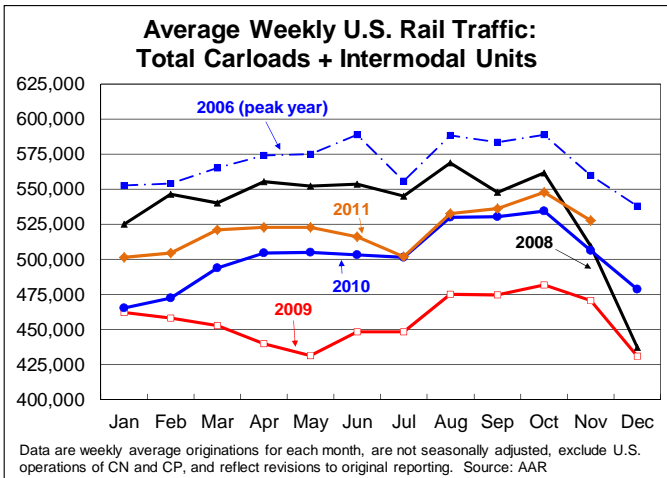


U.S. RAIL TRAFFIC: NOVEMBER 2011*
(5 weeks ending December 3, 2011)

Commodity	Nov 2011	Nov 2010	Nov 2009	Difference		% Change	
				'11-'10	'11-'09	'11-'10	'11-'09
Agricultural & food products	192,349	209,791	211,607	-17,442	-19,258	-8.3%	-9.1%
Grain	106,264	121,301	123,218	-15,037	-16,954	-12.4%	-13.8%
Farm products excl. grain	4,607	5,373	4,786	-766	-179	-14.3%	-3.7%
Grain mill products (1)	49,625	49,766	50,824	-141	-1,199	-0.3%	-2.4%
Food products	31,853	33,351	32,779	-1,498	-926	-4.5%	-2.8%
Chemicals and petroleum	180,440	175,981	164,044	4,459	16,396	2.5%	10.0%
Chemicals	142,096	143,695	135,478	-1,599	6,618	-1.1%	4.9%
Petroleum & petr. products (2)	38,344	32,286	28,566	6,058	9,778	18.8%	34.2%
Coal	671,393	662,938	641,294	8,455	30,099	1.3%	4.7%
Forest products	50,253	48,598	46,777	1,655	3,476	3.4%	7.4%
Primary forest products (3)	7,464	7,911	8,686	-447	-1,222	-5.7%	-14.1%
Lumber & wood products	13,292	11,539	10,547	1,753	2,745	15.2%	26.0%
Pulp & paper products	29,497	29,148	27,544	349	1,953	1.2%	7.1%
Metallic ores and metals	126,687	116,962	84,024	9,725	42,663	8.3%	50.8%
Metallic ores (4)	41,086	39,507	21,817	1,579	19,269	4.0%	88.3%
Coke	16,971	16,476	14,115	495	2,856	3.0%	20.2%
Primary metal products (5)	49,093	41,828	33,173	7,265	15,920	17.4%	48.0%
Iron & steel scrap	19,537	19,151	14,919	386	4,618	2.0%	31.0%
Motor vehicles & parts	70,377	59,308	67,638	11,069	2,739	18.7%	4.0%
Nonmetallic minerals & prod.	149,865	134,095	121,160	15,770	28,705	11.8%	23.7%
Crushed stone, gravel, sand	90,911	81,171	67,819	9,740	23,092	12.0%	34.0%
Nonmetallic minerals (6)	22,259	19,985	23,147	2,274	-888	11.4%	-3.8%
Stone, clay & glass prod. (7)	36,695	32,939	30,194	3,756	6,501	11.4%	21.5%
Other	35,271	35,492	35,937	-221	-666	-0.6%	-1.9%
Waste & nonferrous scrap (8)	16,517	17,543	17,326	-1,026	-809	-5.8%	-4.7%
All other carloads	18,754	17,949	18,611	805	143	4.5%	0.8%
TOTAL ALL CARLOADS	1,476,635	1,443,165	1,372,481	33,470	104,154	2.3%	7.6%
Trailers	169,475	174,163	164,626	-4,688	4,849	-2.7%	2.9%
Containers	992,774	945,915	836,800	46,859	155,974	5.0%	18.6%
TOTAL ALL INTERMODAL	1,162,249	1,120,078	1,001,426	42,171	160,823	3.8%	16.1%

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

*Data are originations not seasonally adjusted. Includes BNSF, CSX, KCS, NS, UP, Birmingham Southern, Florida East Coast, Lake Superior & Ishpeming, and Paducah & Louisville. Excludes CN's and CP's U.S. operations. Source: AAR *Weekly Railroad Traffic*



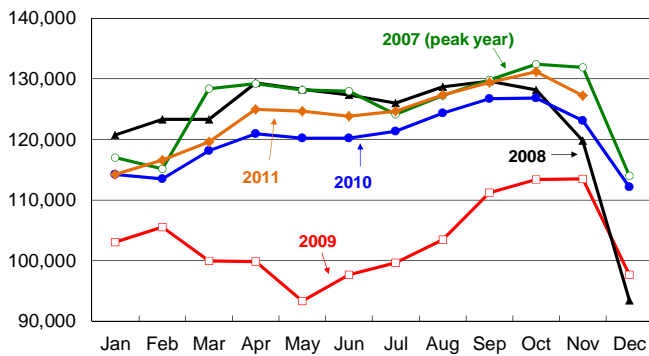
CANADIAN RAIL TRAFFIC: NOVEMBER 2011*
(5 weeks ending December 3, 2011)

Commodity	Nov 2011	Nov 2010	Nov 2009	Difference		% Change	
				'11-'10	'11-'09	'11-'10	'11-'09
Agricultural & food products	84,837	83,575	84,222	1,262	615	1.5%	0.7%
Grain	48,915	49,587	50,806	-672	-1,891	-1.4%	-3.7%
Farm products excl. grain	17,497	14,320	16,427	3,177	1,070	22.2%	6.5%
Grain mill products (1)	7,371	8,475	7,844	-1,104	-473	-13.0%	-6.0%
Food products	11,054	11,193	9,145	-139	1,909	-1.2%	20.9%
Chemicals and petroleum	76,448	76,222	66,464	226	9,984	0.3%	15.0%
Chemicals	52,330	53,399	44,541	-1,069	7,789	-2.0%	17.5%
Petroleum & petr. products (2)	24,118	22,823	21,923	1,295	2,195	5.7%	10.0%
Coal	41,864	40,377	33,835	1,487	8,029	3.7%	23.7%
Forest products	37,831	35,928	33,609	1,903	4,222	5.3%	12.6%
Primary forest products (3)	7,844	6,582	7,581	1,262	263	19.2%	3.5%
Lumber & wood products	13,195	10,978	9,411	2,217	3,784	20.2%	40.2%
Pulp & paper products	16,792	18,368	16,617	-1,576	175	-8.6%	1.1%
Metallic ores and metals	84,443	84,000	76,481	443	7,962	0.5%	10.4%
Metallic ores (4)	65,535	66,967	61,519	-1,432	4,016	-2.1%	6.5%
Coke	2,569	2,997	2,728	-428	-159	-14.3%	-5.8%
Primary metal products (5)	11,484	9,618	8,884	1,866	2,600	19.4%	29.3%
Iron & steel scrap	4,855	4,418	3,350	437	1,505	9.9%	44.9%
Motor vehicles & parts	27,193	23,127	22,816	4,066	4,377	17.6%	19.2%
Nonmetallic minerals & prod.	25,394	24,774	22,316	620	3,078	2.5%	13.8%
Crushed stone, gravel, sand	11,162	10,806	9,425	356	1,737	3.3%	18.4%
Nonmetallic minerals (6)	8,195	7,866	7,254	329	941	4.2%	13.0%
Stone, clay & glass prod. (7)	6,037	6,102	5,637	-65	400	-1.1%	7.1%
Other	8,707	9,015	7,438	-308	1,269	-3.4%	17.1%
Waste & nonferrous scrap (8)	3,093	1,952	1,508	1,141	1,585	58.5%	105.1%
All other carloads	5,614	7,063	5,930	-1,449	-316	-20.5%	-5.3%
TOTAL ALL CARLOADS	386,717	377,018	347,181	9,699	39,536	2.6%	11.4%
Trailers	7,793	7,854	8,113	-61	-320	-0.8%	-3.9%
Containers	241,834	231,788	200,662	10,046	41,172	4.3%	20.5%
TOTAL ALL INTERMODAL	249,627	239,642	208,775	9,985	40,852	4.2%	19.6%

- (1) - flour, animal feed, corn syrup, corn starch, soybean meal, DDGs, etc. (5) - primarily iron & steel; some aluminum, copper, etc.
 (2) - crude petroleum and all products of petroleum refining (liquefied gases, asphalt, fuel oil, lubricating oil, jet fuel, etc.) (6) - phosphate rock, rock salt, crude sulphur, clay, etc.
 (3) - wood raw materials such as pulpwood and wood chips (7) - cement, ground earths or minerals, gypsum, etc.
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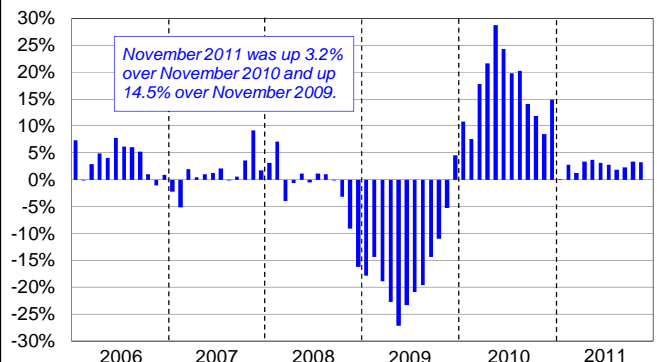
*CN and CP, including their U.S. operations. Data are originations not seasonally adjusted. Source: AAR Weekly Railroad Traffic

**Average Weekly Canadian Rail Traffic:
Total Carloads + Intermodal Units**



Data are weekly average originations for each month, are not seasonally adjusted, include CN and CP (including their U.S. operations), and reflect revisions to original reporting. Source: AAR

**% Change in Canadian Carloads + Intermodal Units
From Same Month Prev. Year: Jan. 2006 - Nov. 2011**



Data are weekly average originations for each month, include CN and CP (including their U.S. operations), and reflect revisions to original reporting. Source: AAR Weekly Railroad Traffic

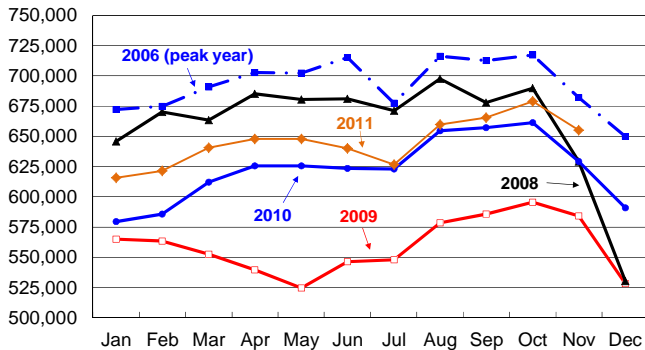
COMBINED U.S. AND CANADIAN RAIL TRAFFIC: NOVEMBER 2011*
(5 weeks ending December 3, 2011)

Commodity	Nov 2011	Nov 2010	Nov 2009	Difference		% Change	
				'11-'10	'11-'09	'11-'10	'11-'09
Agricultural & food products	277,186	293,366	295,829	-16,180	-18,643	-5.5%	-6.3%
Grain	155,179	170,888	174,024	-15,709	-18,845	-9.2%	-10.8%
Farm products excl. grain	22,104	19,693	21,213	2,411	891	12.2%	4.2%
Grain mill products (1)	56,996	58,241	58,668	-1,245	-1,672	-2.1%	-2.8%
Food products	42,907	44,544	41,924	-1,637	983	-3.7%	2.3%
Chemicals and petroleum	256,888	252,203	230,508	4,685	26,380	1.9%	11.4%
Chemicals	194,426	197,094	180,019	-2,668	14,407	-1.4%	8.0%
Petroleum & petr. products (2)	62,462	55,109	50,489	7,353	11,973	13.3%	23.7%
Coal	713,257	703,315	675,129	9,942	38,128	1.4%	5.6%
Forest products	88,084	84,526	80,386	3,558	7,698	4.2%	9.6%
Primary forest products (3)	15,308	14,493	16,267	815	-959	5.6%	-5.9%
Lumber & wood products	26,487	22,517	19,958	3,970	6,529	17.6%	32.7%
Pulp & paper products	46,289	47,516	44,161	-1,227	2,128	-2.6%	4.8%
Metallic ores and metals	211,130	200,962	160,505	10,168	50,625	5.1%	31.5%
Metallic ores (4)	106,621	106,474	83,336	147	23,285	0.1%	27.9%
Coke	19,540	19,473	16,843	67	2,697	0.3%	16.0%
Primary metal products (5)	60,577	51,446	42,057	9,131	18,520	17.7%	44.0%
Iron & steel scrap	24,392	23,569	18,269	823	6,123	3.5%	33.5%
Motor vehicles & parts	97,570	82,435	90,454	15,135	7,116	18.4%	7.9%
Nonmetallic minerals & prod.	175,259	158,869	143,476	16,390	31,783	10.3%	22.2%
Crushed stone, gravel, sand	102,073	91,977	77,244	10,096	24,829	11.0%	32.1%
Nonmetallic minerals (6)	30,454	27,851	30,401	2,603	53	9.3%	0.2%
Stone, clay & glass prod. (7)	42,732	39,041	35,831	3,691	6,901	9.5%	19.3%
Other	43,978	44,507	43,375	-529	603	-1.2%	1.4%
Waste & nonferrous scrap (8)	19,610	19,495	18,834	115	776	0.6%	4.1%
All other carloads	24,368	25,012	24,541	-644	-173	-2.6%	-0.7%
TOTAL ALL CARLOADS	1,863,352	1,820,183	1,719,662	43,169	143,690	2.4%	8.4%
Trailers	177,268	182,017	172,739	-4,749	4,529	-2.6%	2.6%
Containers	1,234,608	1,177,703	1,037,462	56,905	197,146	4.8%	19.0%
TOTAL ALL INTERMODAL	1,411,876	1,359,720	1,210,201	52,156	201,675	3.8%	16.7%

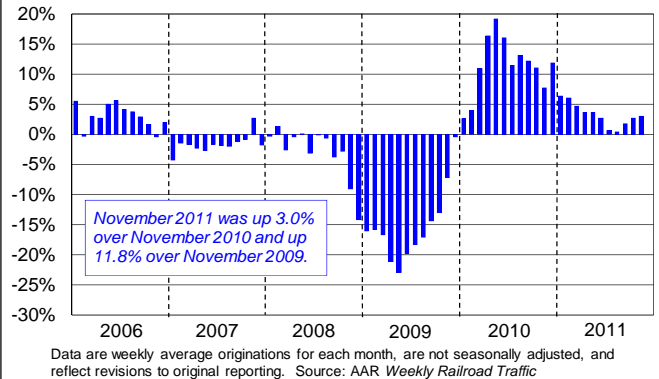
- (1) - flour, animal feed, corn syrup, corn starch, soybean meal, DDGs, etc. (5) - primarily iron & steel; some aluminum, copper, etc.
 (2) - crude petroleum and all products of petroleum refining (6) - phosphate rock, rock salt, crude sulphur, clay, etc.
 (liquefied gases, asphalt, fuel oil, lubricating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

*Data are originations and are not seasonally adjusted. Source: AAR Weekly Railroad Traffic

**Average Weekly U.S. + Canadian Rail Traffic:
Total Carloads + Intermodal Units**

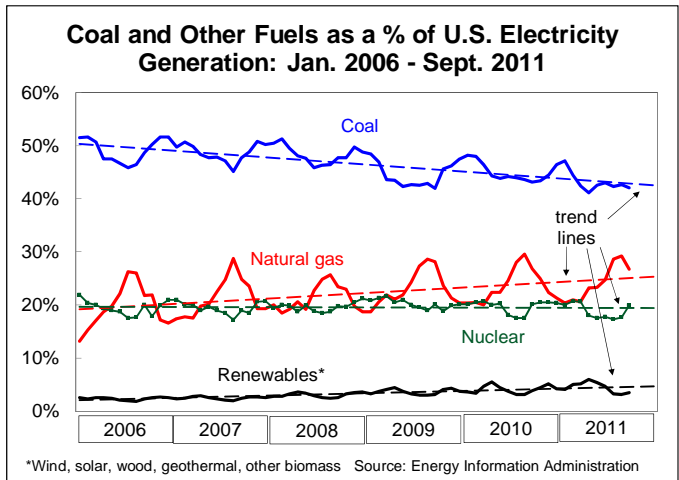
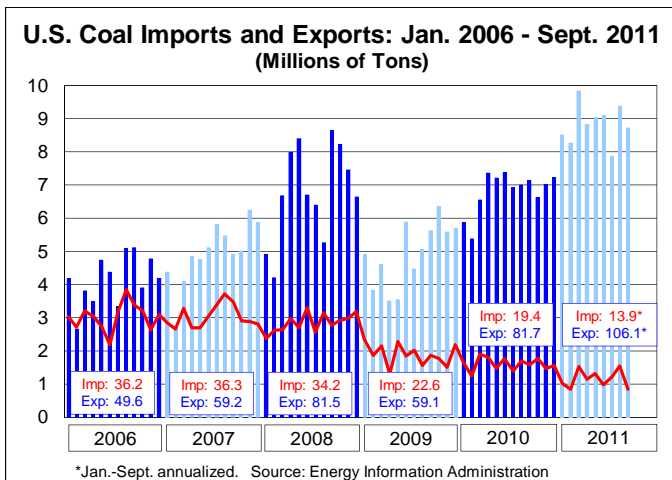
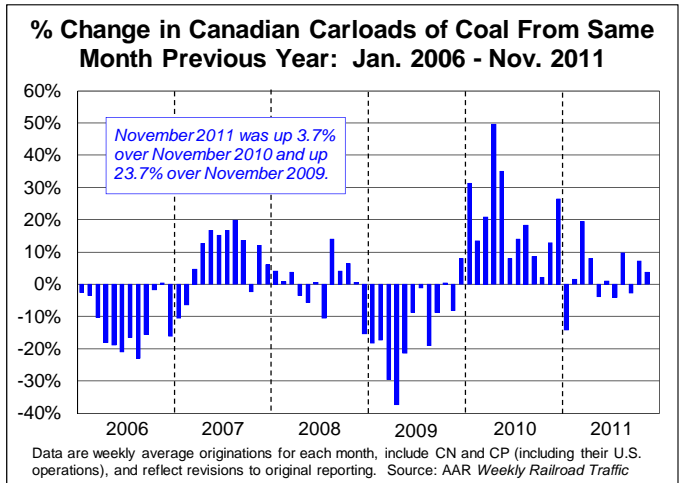
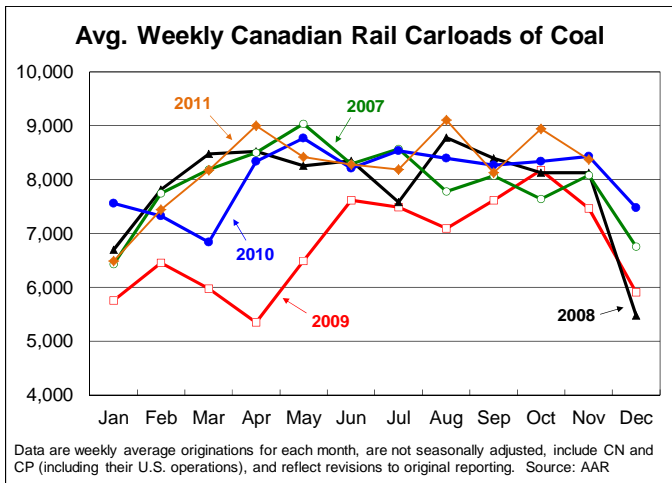
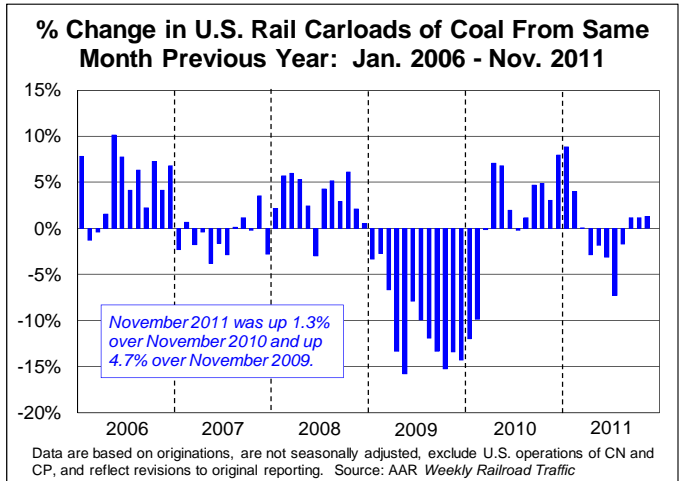
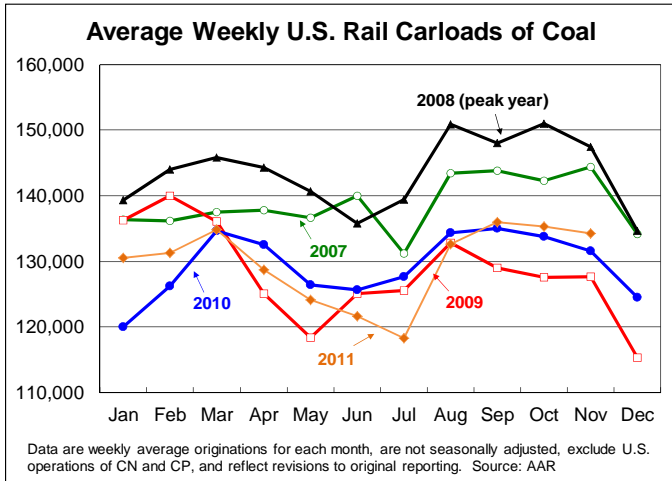


**% Change in Combined U.S. + Canadian Rail Carloads
+ Intermodal Units From Same Month Prev. Year:
January 2006 - November 2011**



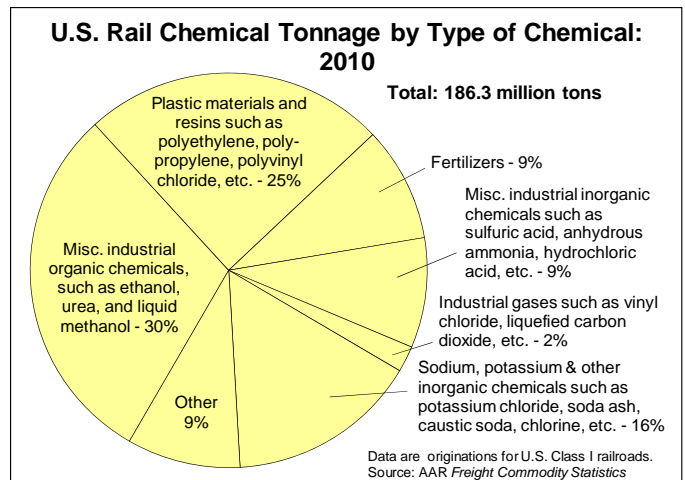
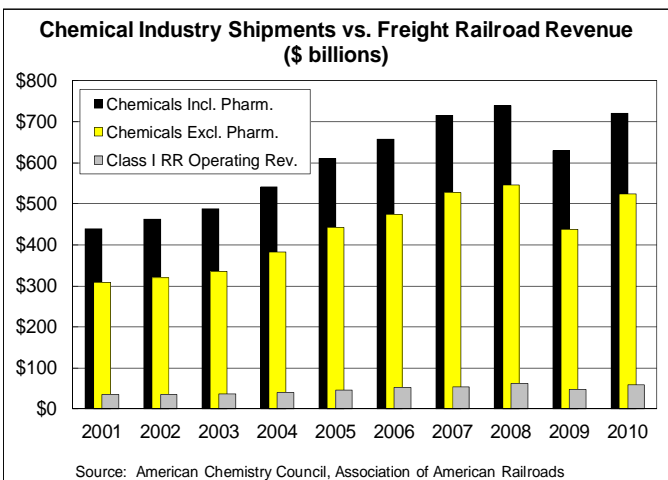
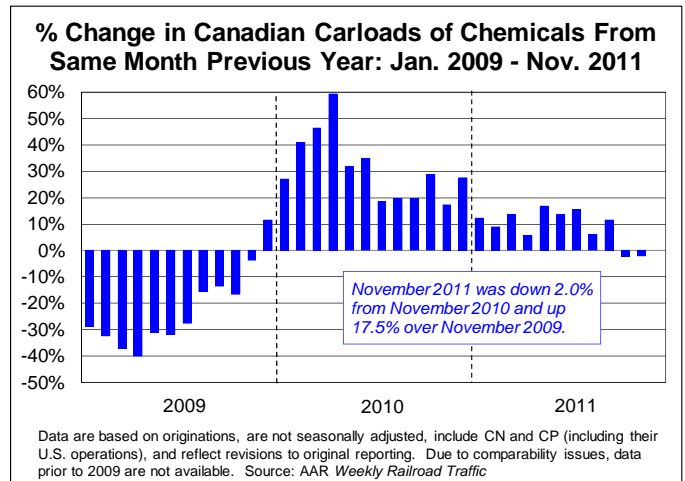
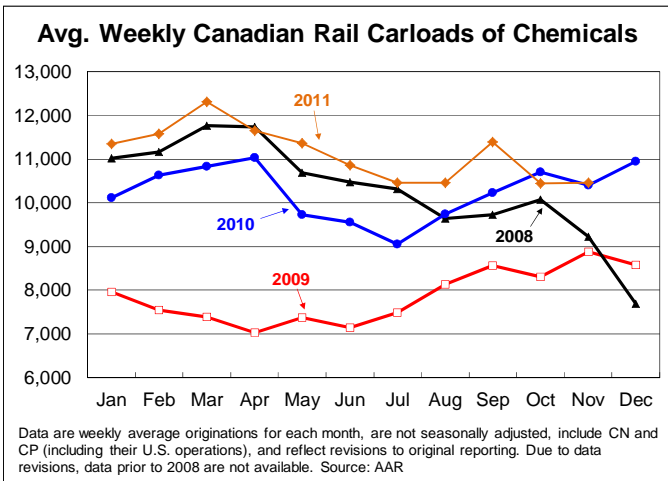
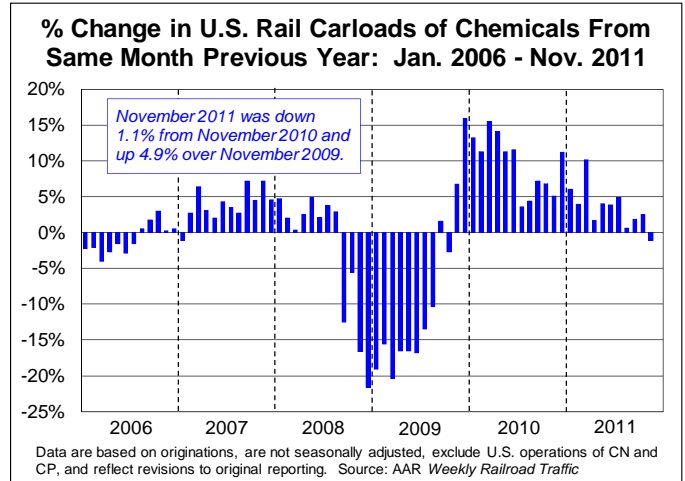
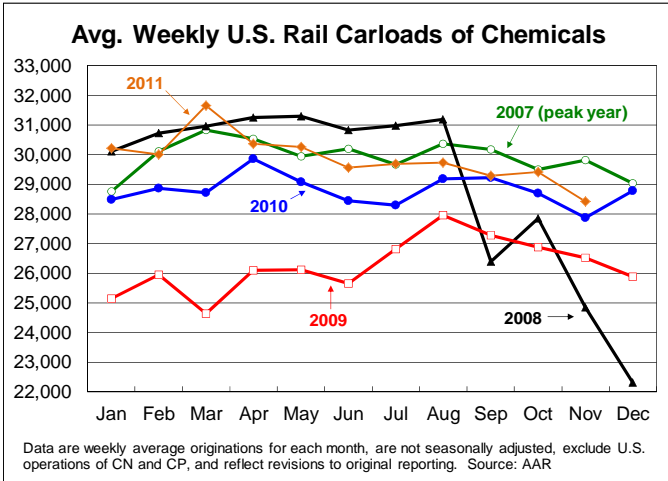
COAL

Year-over-year U.S. rail carloads of coal rose for the third straight month in November 2011, averaging 134,279 for the month — up 1.3% over November 2010. The chart on the bottom left shows that U.S. coal exports — most of which move by rail — are on pace to reach 106.1 million tons in 2011, which would be their highest since 1991. Coal imports are on pace to fall to 13.9 million tons in 2011, which would be their lowest since 2000. The chart at the bottom right shows that coal-based electricity generation continues to be in an intense competitive battle with electricity produced from other fuels.



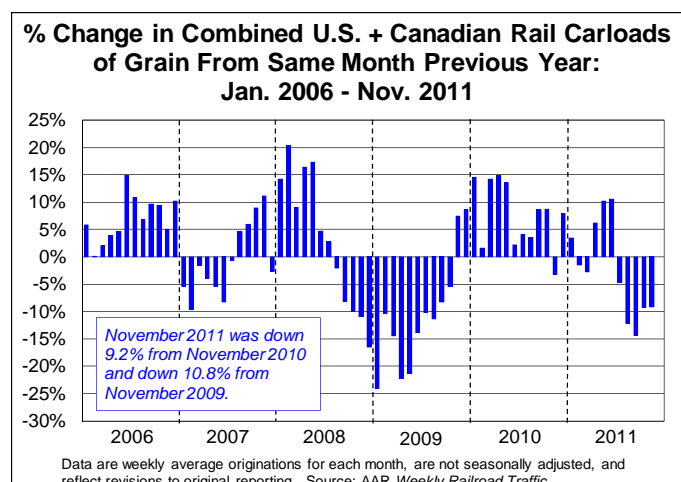
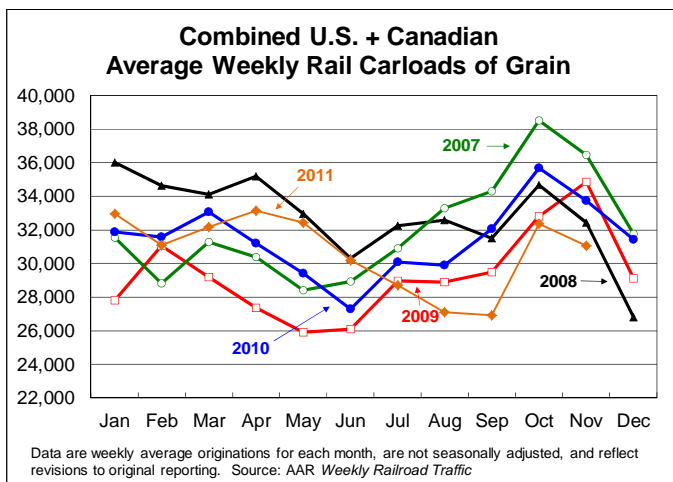
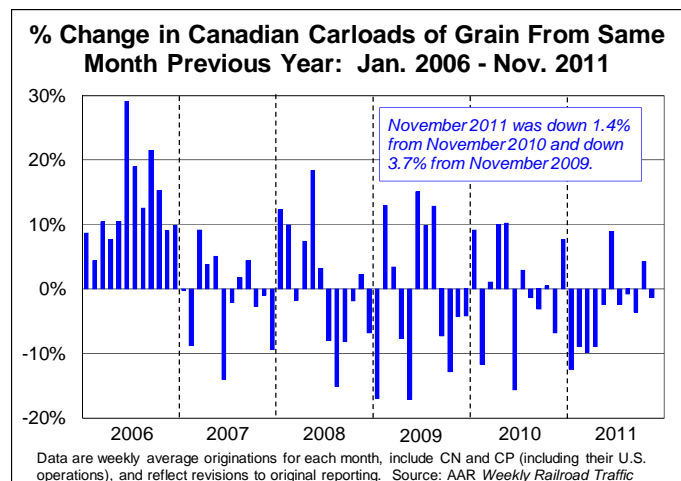
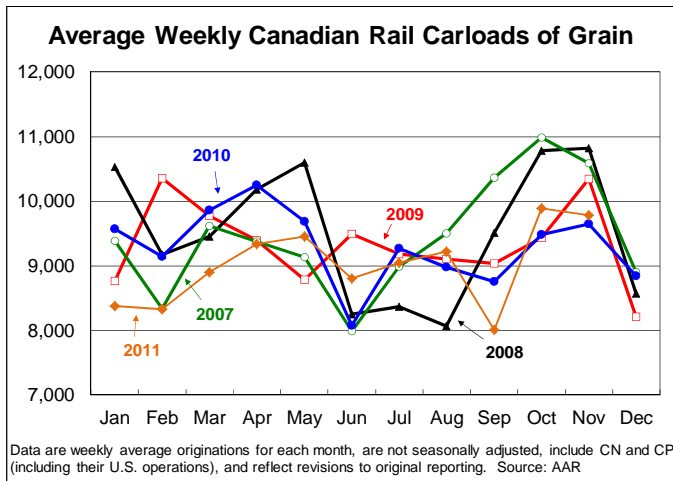
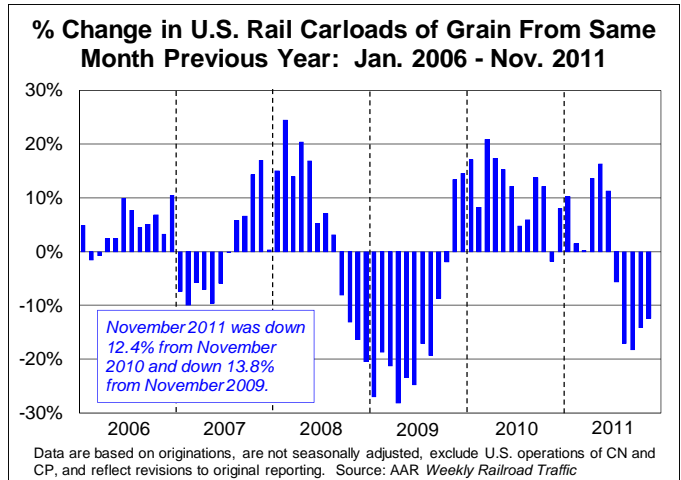
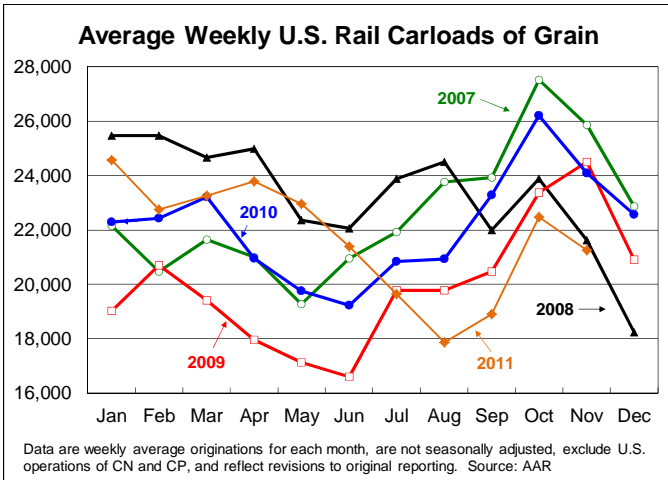
CHEMICALS

U.S. railroads averaged 28,419 carloads of chemicals per week in November 2011, down 1.1% from November 2010 and the first year-over-year monthly decline in more than two years (though it wasn't hard to see it coming — see the top right chart below.) According to data from the Federal Reserve, U.S. chemical production fell in seven of the first 10 months of the year (see page 24), so maybe rail carloads are just catching up with those declines. Year-over-year Canadian chemical carloads fell in November as well, their second straight decline after 22 straight monthly gains.

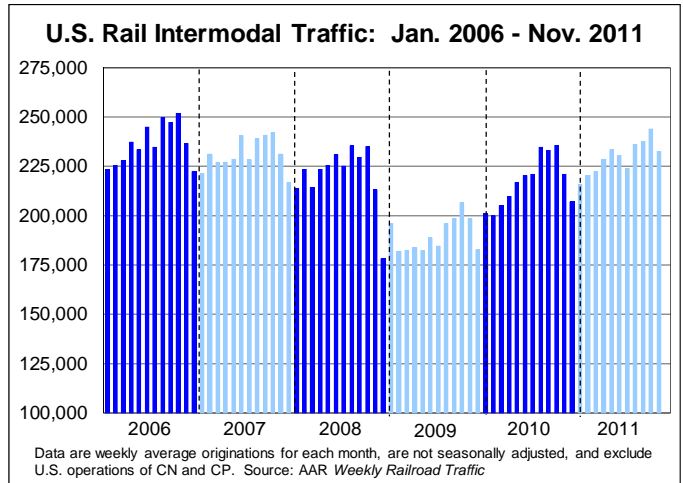
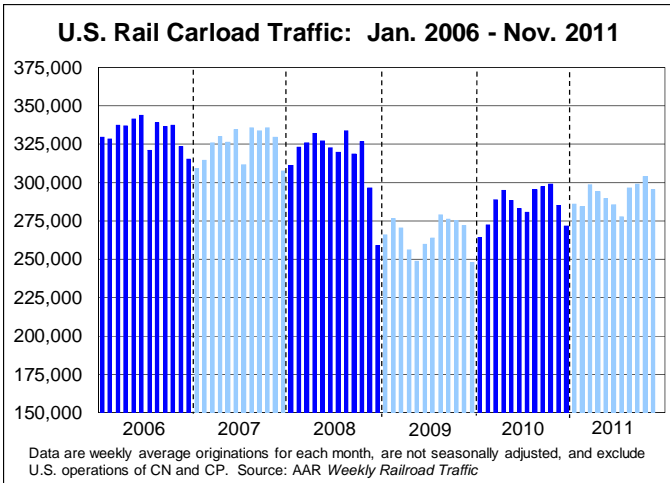


GRAIN

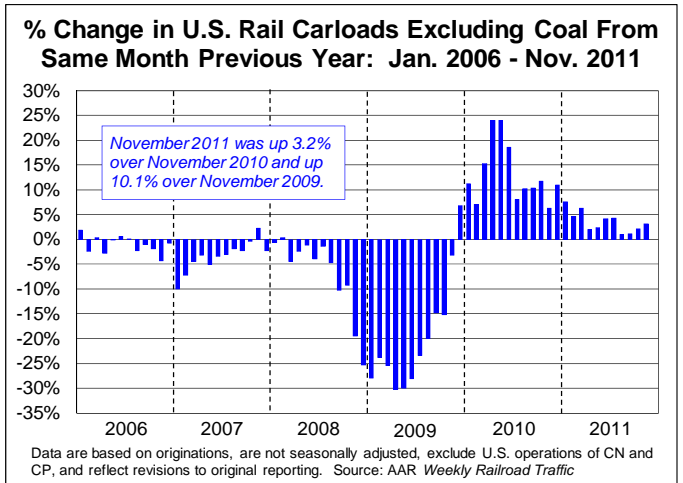
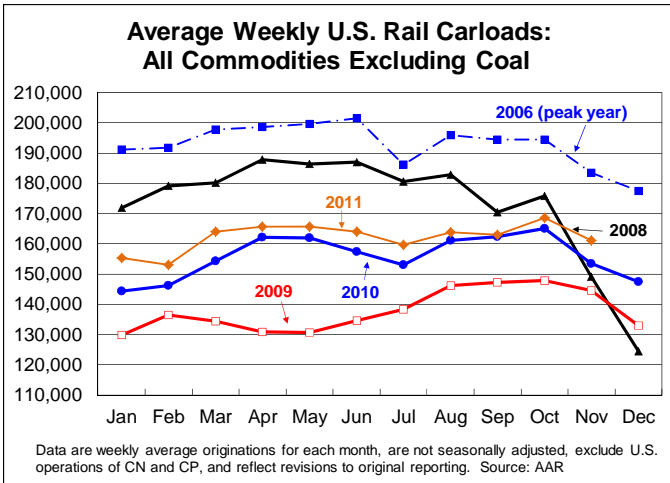
U.S. grain carloads fell yet again in November 2011, declining 12.4% for its fourth straight double-digit year-over-year monthly decline and fifth straight decline overall, due largely to lower grain exports. In late November, the USDA released an updated forecast for fiscal year 2012 grain exports (see [here](#) for the USDA report). The USDA now expects U.S. corn exports in FY 2012 to total 45.9 million tons, down from 50.4 million tons in FY 2011 and 55.6 million tons in FY 2010. U.S. wheat exports in FY 2012 are projected at 28.7 million tons, down from 38.6 million tons in FY 2011. Soybean exports are projected at 20.9 million tons in FY 2012, down from 22.8 million tons in FY 2011.



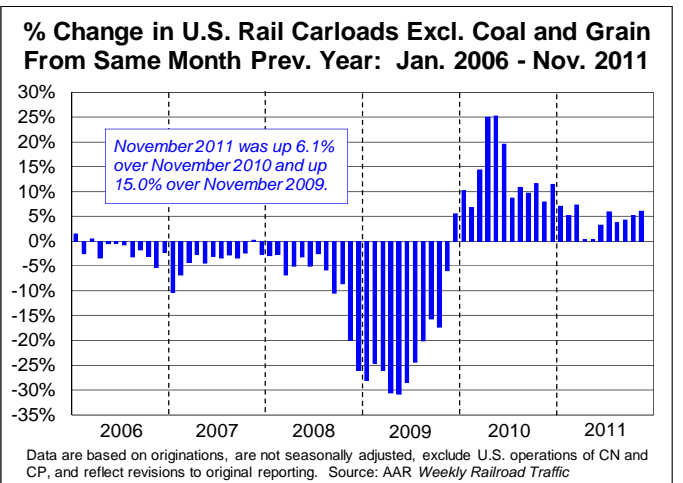
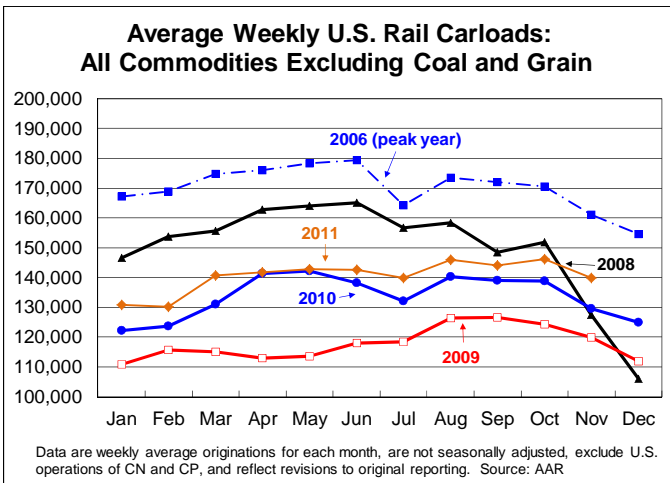
CARLOAD AND INTERMODAL TOTALS



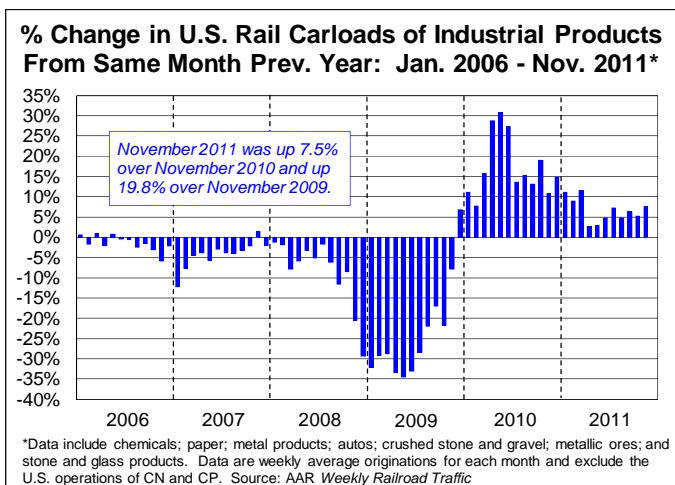
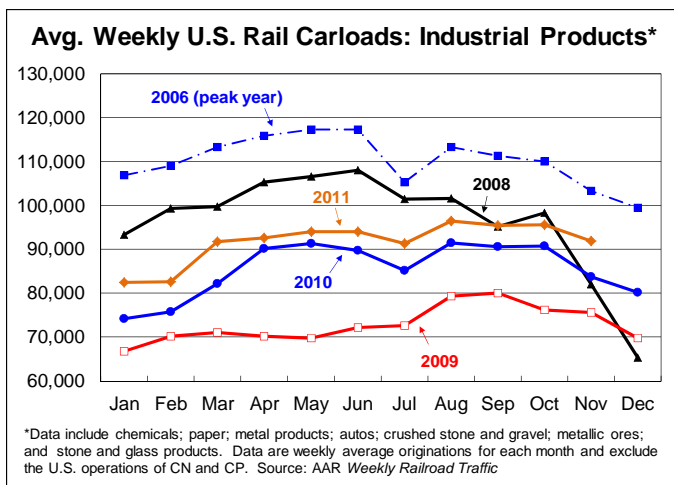
ALL COMMODITIES EXCLUDING COAL



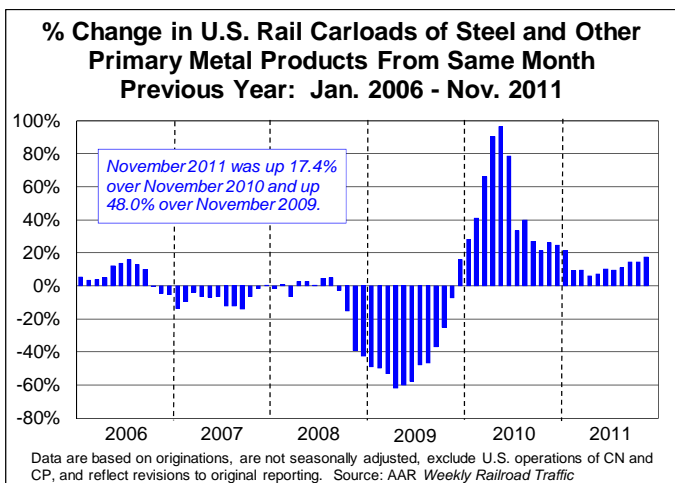
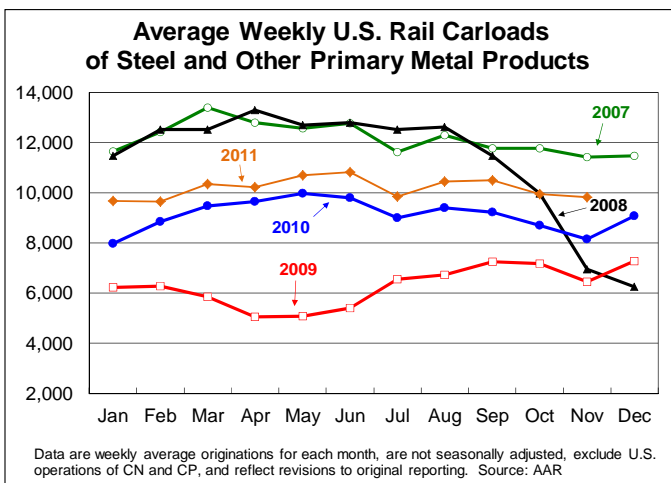
ALL COMMODITIES EXCLUDING COAL AND GRAIN



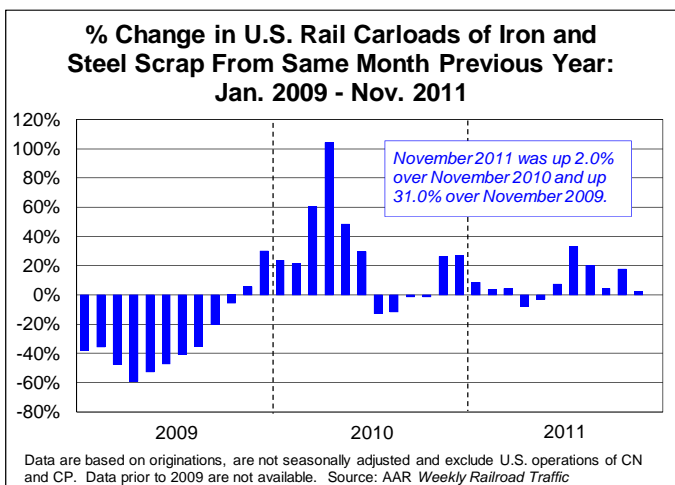
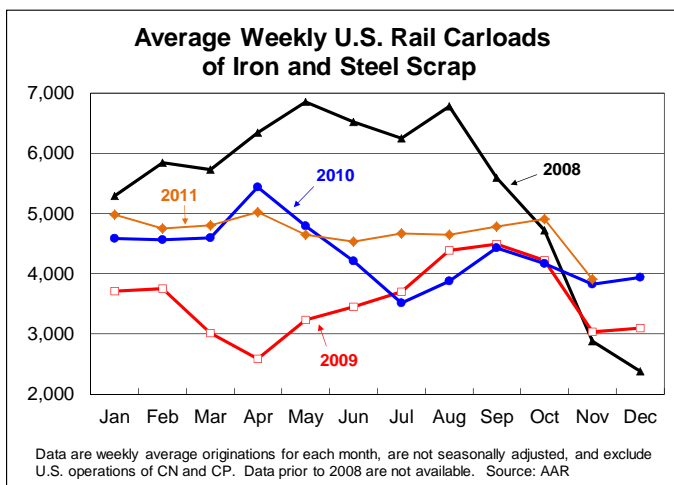
INDUSTRIAL PRODUCTS



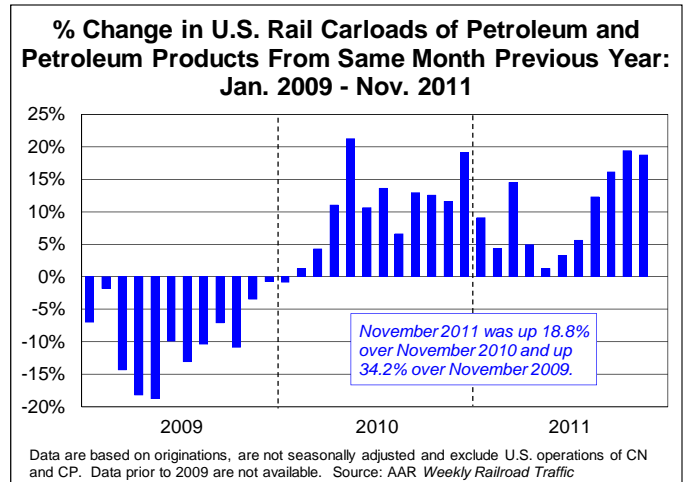
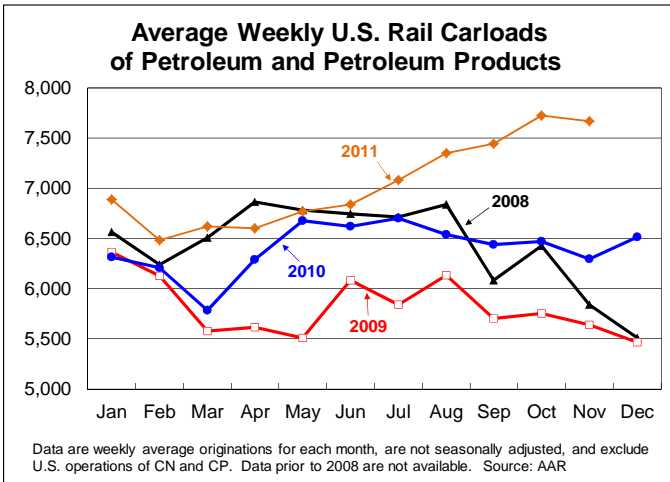
PRIMARY METAL PRODUCTS (MAINLY IRON AND STEEL)



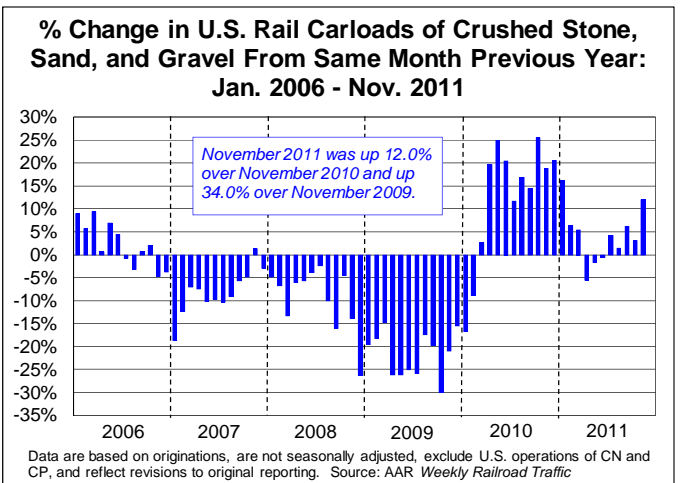
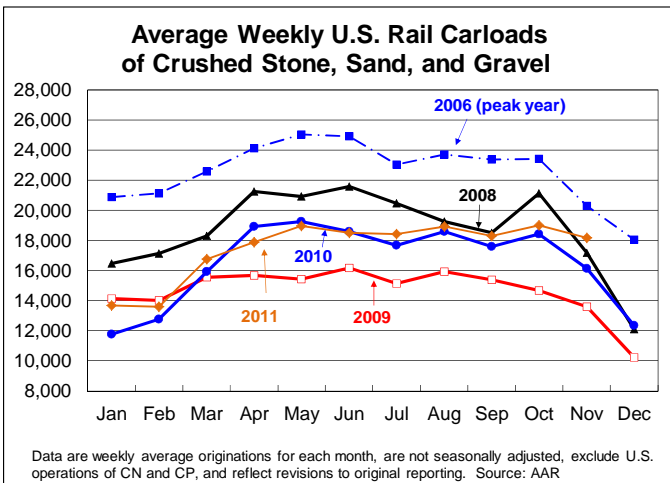
IRON AND STEEL SCRAP



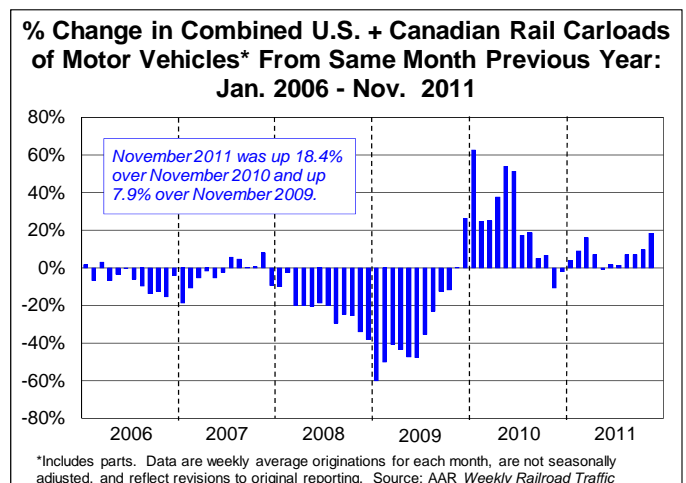
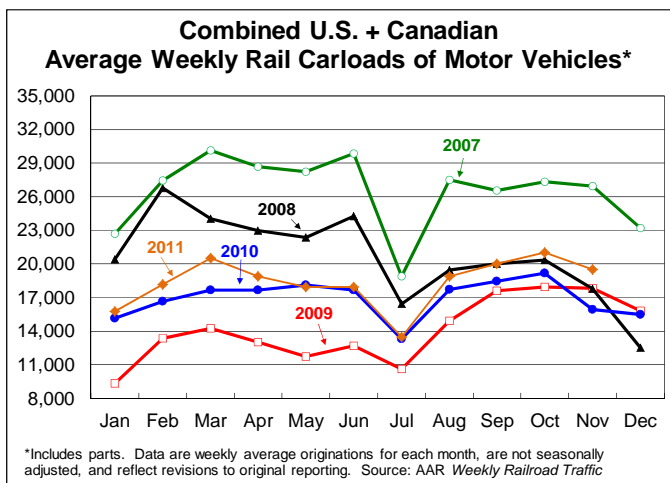
PETROLEUM & PETROLEUM PRODUCTS (LPGs, ASPHALT, FUEL OIL, LUBRICATING OILS, ETC.)



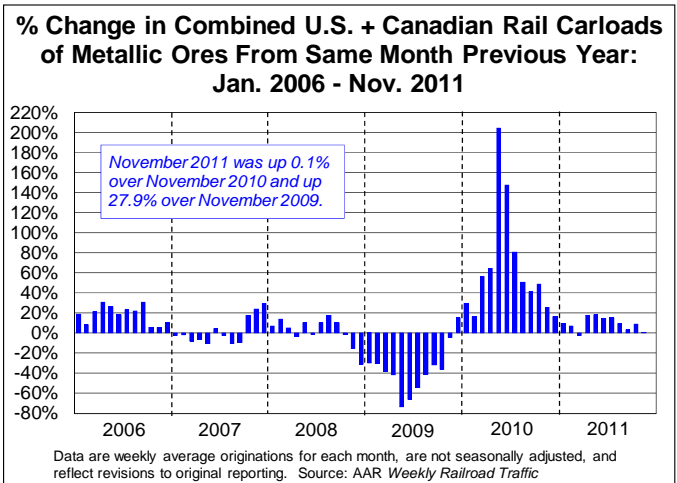
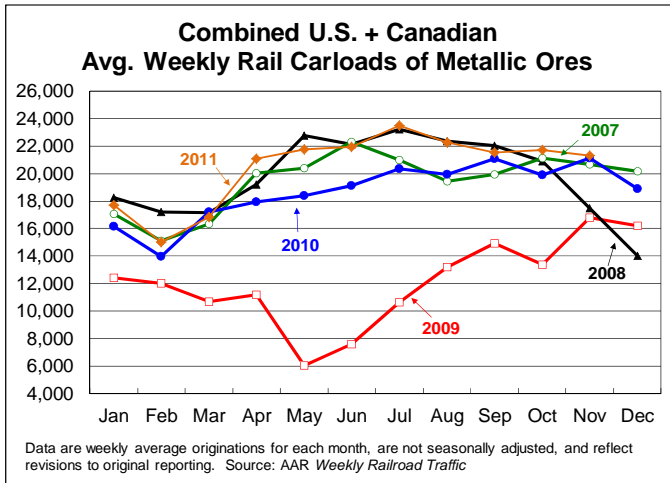
CRUSHED STONE, SAND, AND GRAVEL



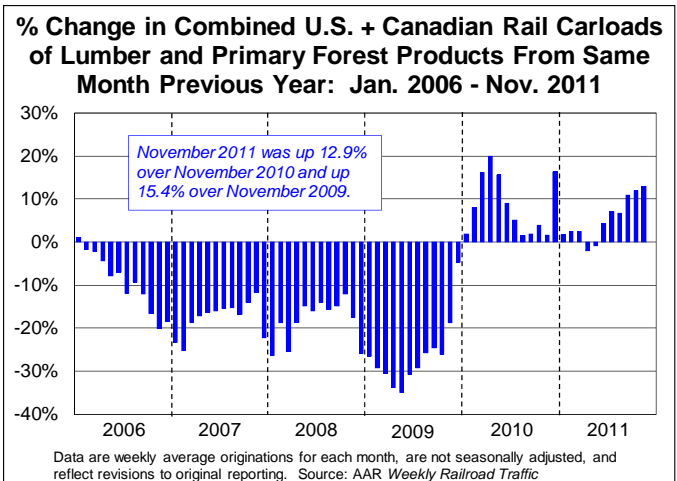
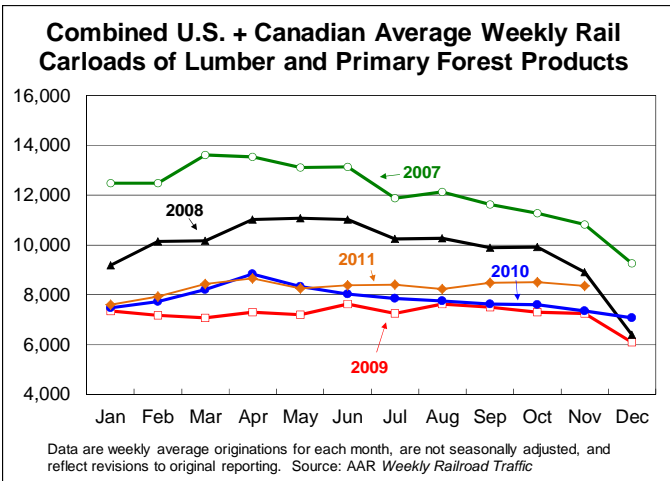
MOTOR VEHICLES AND PARTS



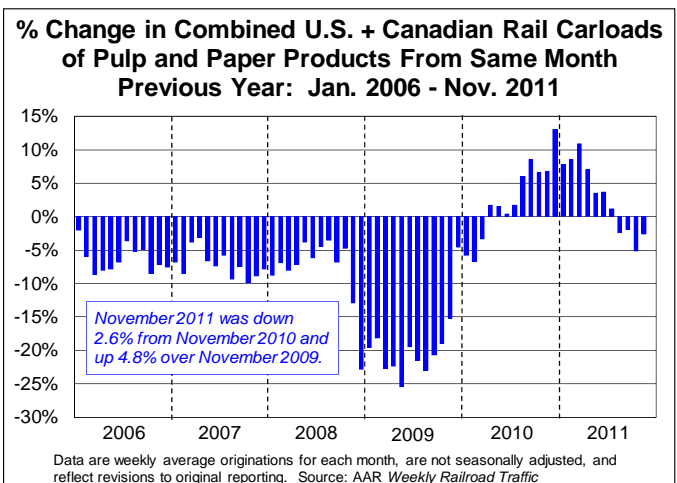
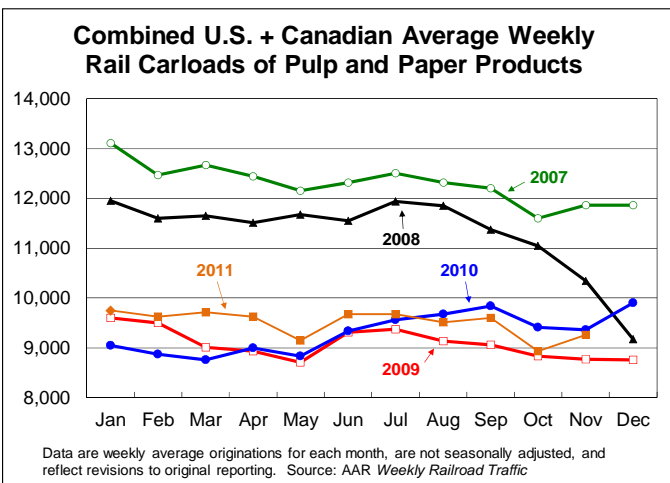
METALLIC ORES (OVERWHELMINGLY IRON ORE)



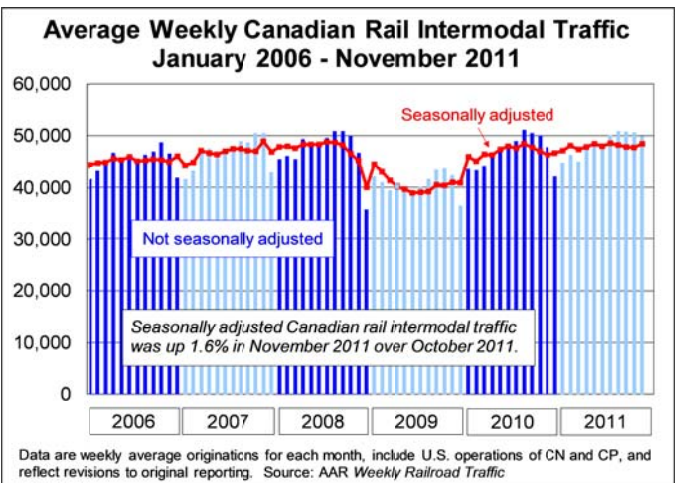
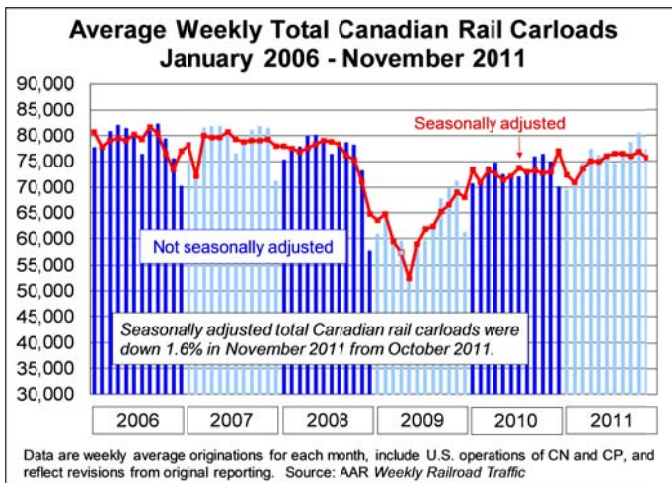
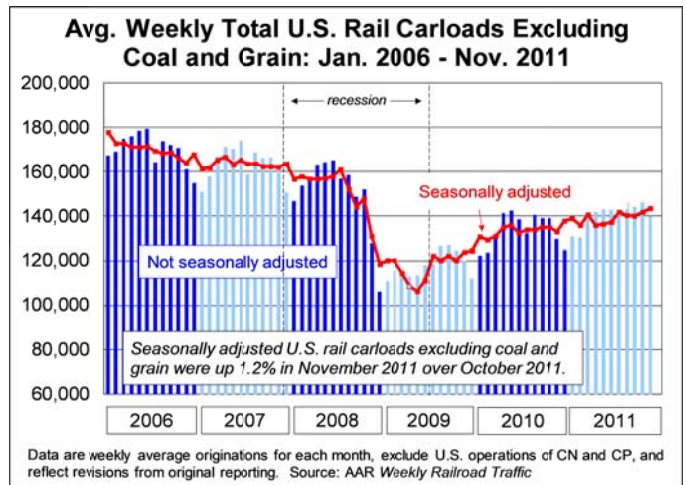
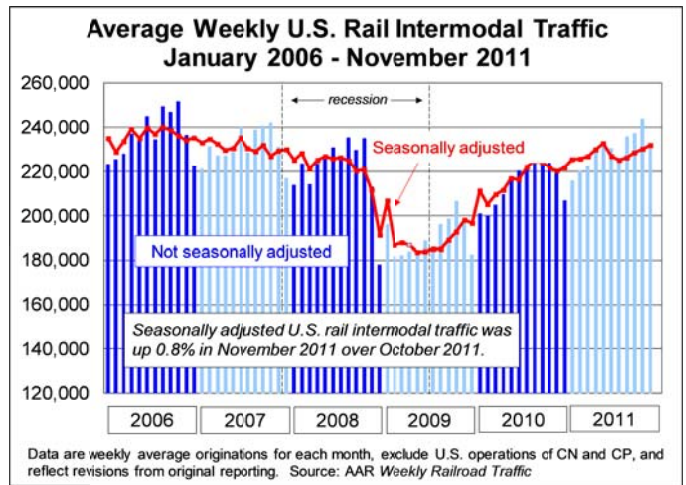
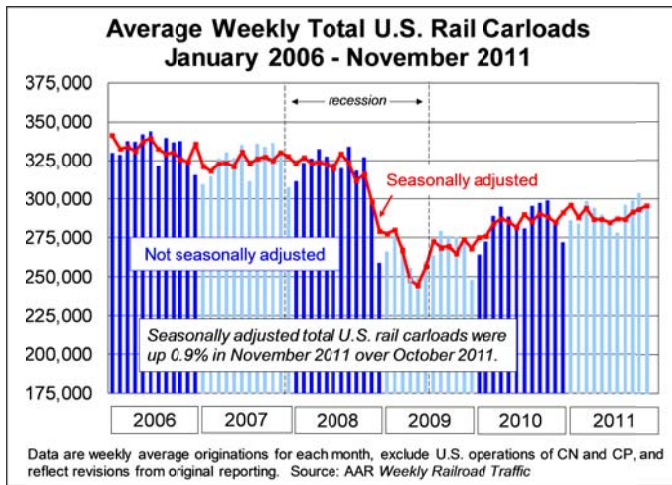
LUMBER AND WOOD PRODUCTS + PRIMARY FOREST PRODUCTS



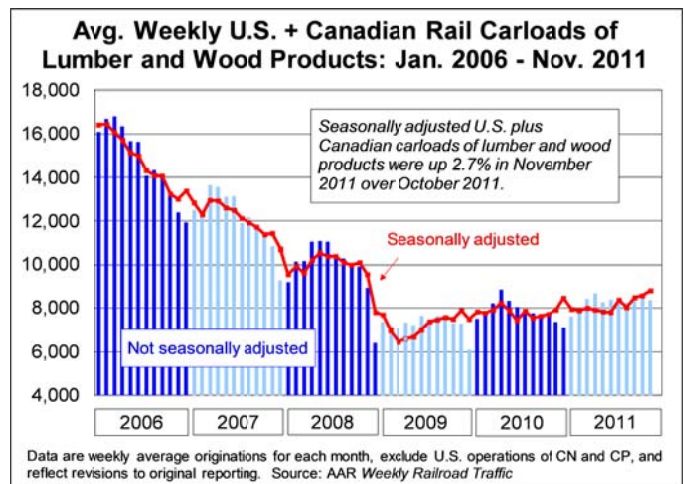
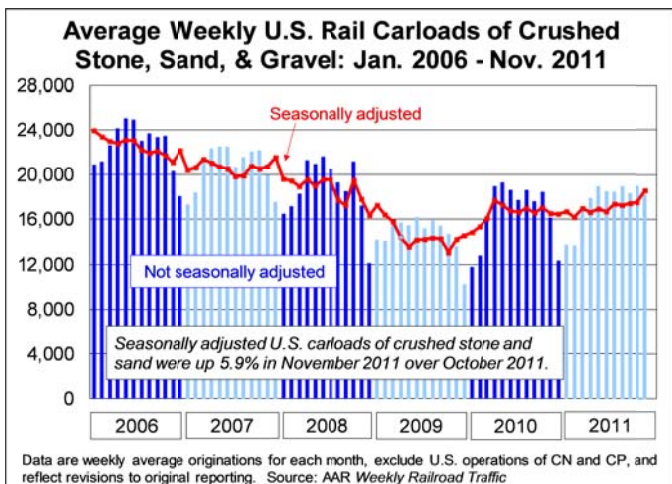
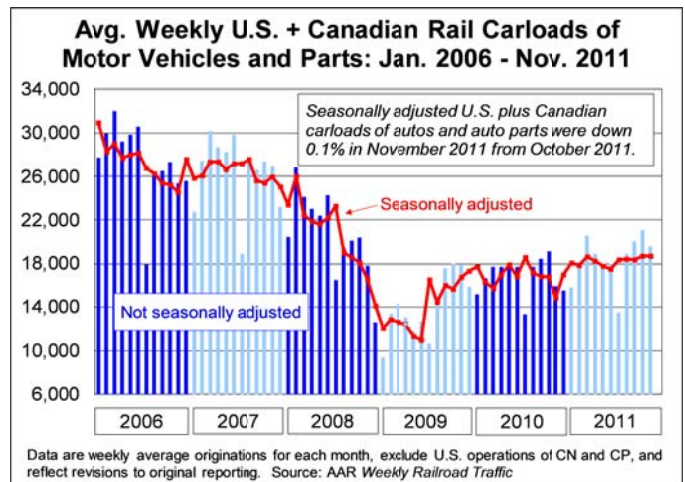
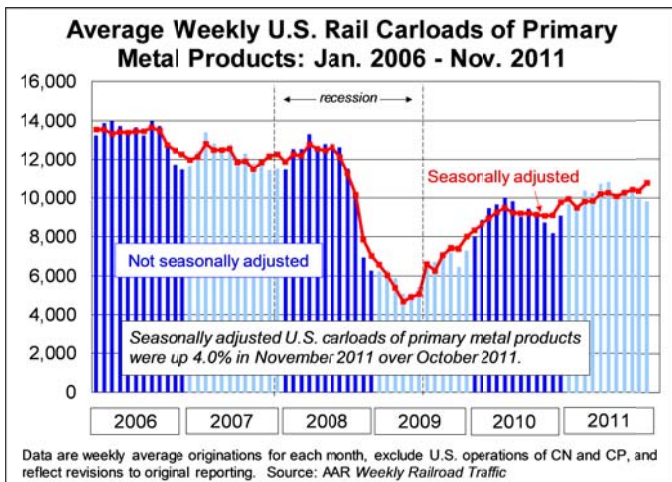
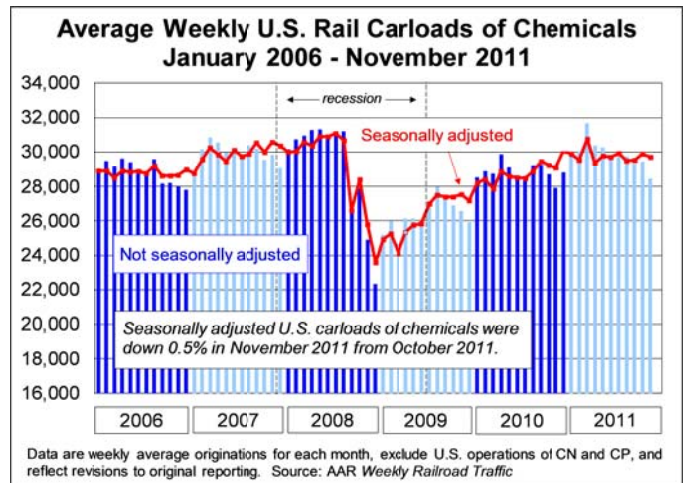
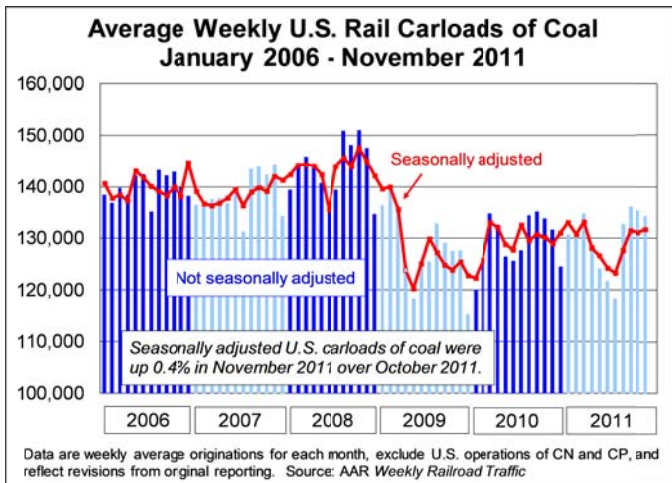
PULP AND PAPER PRODUCTS



SEASONALLY ADJUSTED RAIL TRAFFIC



SEASONALLY ADJUSTED RAIL TRAFFIC, cont.



Where to go for more information:

- Weekly AAR press releases on railroad traffic are available on the AAR web site [here](#). For a sample copy of an AAR *Weekly Railroad Traffic* report, e-mail Paul Posey at pposey@aar.org. *Weekly Railroad Traffic* is free to AAR members and available by subscription to others.

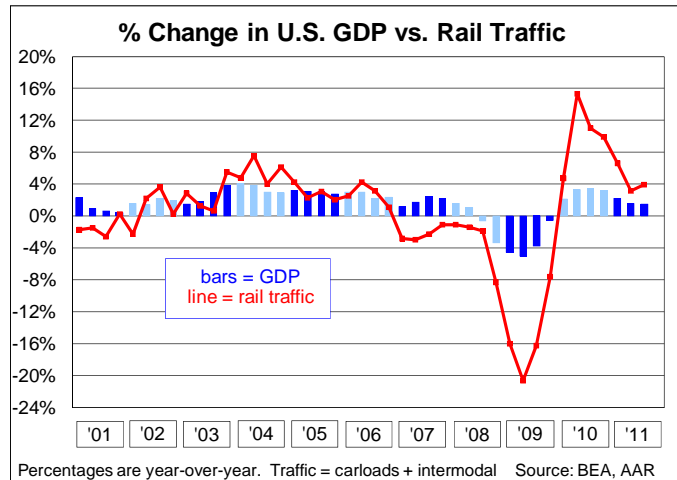
GROSS DOMESTIC PRODUCT (GDP)

Who releases it and when?

- U.S. Bureau of Economic Analysis (BEA), measured quarterly and revised several times as better data become available.

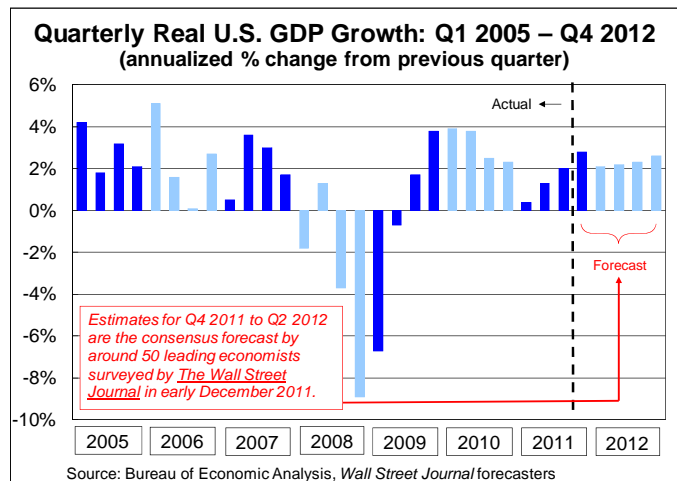
What is it and why is it important?

- GDP (the output of goods and services produced by labor and property in a country) measures the size of an economy and how fast it's growing. Assuming it's measured accurately, it's probably the single most conclusive piece of information on the health of an economy.
- The GDP figure that gets all the press is the annualized percentage change in inflation-adjusted GDP from one quarter to the next.
- GDP and freight rail traffic have historically been closely correlated, although rail freight traffic tends to be much more volatile than the economy as a whole. The chart at right shows the percentage change in rail traffic (horizontal axis) versus year-over-year (note: not quarter to quarter) real GDP growth. The correlation isn't perfect, but it is strong and positive.

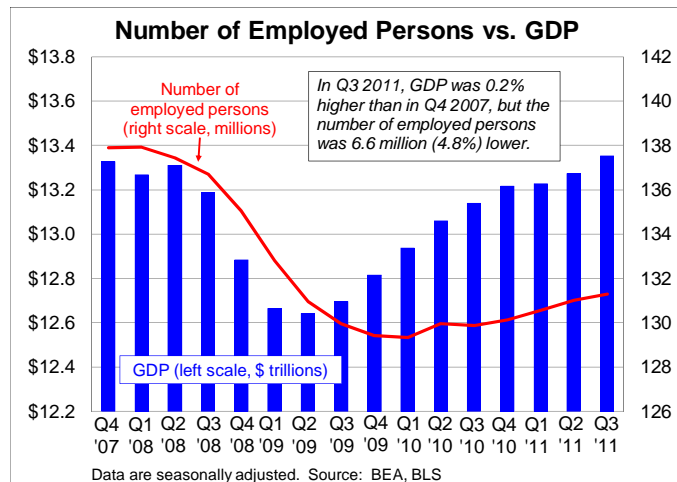


What are the latest numbers?

- On November 22, the BEA revised its estimate of Q3 2011 U.S. GDP growth from 2.5% to 2.0% because it determined, based on updated data, that GDP in Q3 2011 was \$15 billion lower than it thought it was. Further revisions will be released on December 22.
- On December 9, *The Wall Street Journal* discussed the results of its most recent survey of 50 or so prominent economists. The survey was taken in early December. According to the consensus of the panel, GDP will grow 2.8% in Q4 2011, up from a consensus increase of 2.5% in the survey from early November. The consensus forecast for Q1 2012 was 2.1% growth, followed by 2.2% in Q2 2012 and 2.3% in Q3 2012. Those growth rates won't win any awards, but they're better than some of the alternatives.
- One of the biggest current unknowns regarding the U.S. economy is what will happen in Europe. Every day seems to bring a new plan to deal with the debt crisis there. That the crisis is having a hugely damaging effect on European economies is not in doubt — many economists think the Euro zone is already in a recession or will be soon if it isn't already — but much less clear is what effect the economic troubles there is having or will have on the U.S. economy. Risks for the United States, to name just two, include a loss of export markets and, more ominously, a credit freeze similar to the one that caused so much damage here in 2008.



- There's no shortage of useful and not-so-useful information in the press and on the Internet — googling “European debt crisis” returns about 31 million results.¹ A good source is *The Economist* magazine (www.economist.com). This is a good recent short synopsis of the crisis from *The Economist*.
- The consensus of the *WSJ* panel mentioned above was that the unemployment rate would be 8.7% in June 2012 and 8.5% in December 2012. We discuss the latest employment news more fully on page 28, but the chart nearby is illustrative of the big disconnect between GDP and employment. By the third quarter of 2011, GDP had surpassed its pre-recession level, but the number of employed persons was 6.6 million (4.8%) lower.



Rail traffic as a gauge of economic activity

- There are many, many statistics that can serve, in one way or another, as gauges of economic activity. One of the major purposes of *Rail Time Indicators* is to highlight some of the most useful economic indicators. To many people, including, we suspect, many of the people who read *Rail Time Indicators*, rail traffic is a useful economic indicator in its own right.
- The idea is that no one ships a carload of something by rail — say, scrap steel — just for fun. Rather, a scrap steel dealer will sell the scrap to a steelmaker, who will turn it into new steel that, in turn, it sells to someone else to be used to make a car, a refrigerator, a pipe, or something else. Ultimately, consumer demand for the car, the refrigerator, the pipe, or the something else is the reason for the rail shipment of the scrap steel in the first place. In other words, all else equal, the more “stuff” people and firms are buying, the higher rail traffic levels are likely to be. And the more “stuff” people and firms are buying (everything else equal), the stronger economic growth is likely to be. In theory, this makes rail traffic a useful gauge of broader economic activity.
- But how true is this in practice? To help find out, we recently compared U.S. rail traffic by commodity back to 1989 (which is as far back as our data go) against GDP growth. Econometric models that attempt to quantify relationships between economic variables can be extremely complex. However, we intentionally kept the analysis very simple.
- Specifically, we calculated the correlation between the percentage change in year-over-year quarterly rail traffic and the percentage change in year-over-year annualized quarterly U.S. GDP for four different time periods: Q1 1989 to Q3 2011; Q1 1995 to Q3 2011; Q1 2000 to Q3 2011; and Q1 2005 to Q3 2011. Correlation can range from -100% (a perfect negative correlation) to 100% (a perfect positive correlation). Perfect correlation (either positive or negative) between two economic variables never happens, but the closer a correlation is to one of the extremes, the stronger it is.
- The table on the next page summarizes our results. In all four periods we examined, the traffic category “total carloads plus intermodal” had the strongest correlation with GDP. It’s average correlation for the four periods was 81%, ahead of “total carloads” (80%) and “intermodal” (76%).

¹ At the risk of offending millions of “tweens,” it’s a sad commentary on the state of our society that if you type “Justin Bieber” in Google, you get about 454 million hits.

**CORRELATION BETWEEN PERCENTAGE CHANGE IN YEAR-OVER-YEAR
QUARTERLY RAIL TRAFFIC AND PERCENTAGE CHANGE IN YEAR-OVER-
YEAR GDP FOR SAME PERIOD BY COMMODITY**

Commodity*	Q1 '89 to	Q1 '95 to	Q1 '00 to	Q1 '05 to	Avg. 4 Periods
	Q3 '11	Q3 '11	Q3 '11	Q3 '11	
Total carloads + intermodal	75%	75%	84%	90%	81%
Total carloads	74%	75%	83%	90%	80%
Total intermodal	69%	69%	80%	87%	76%
Lumber & wood products	72%	74%	75%	79%	75%
Crushed stone, gravel, sand	71%	71%	74%	80%	74%
Stone, clay, & glass products	73%	71%	75%	75%	74%
Motor vehicles & parts	68%	71%	69%	76%	71%
Pulp & paper products	57%	61%	73%	77%	67%
Waste & scrap materials	55%	59%	73%	74%	65%
Petroleum products	52%	54%	68%	83%	64%
Primary metal products	53%	60%	67%	74%	64%
Chemicals	57%	57%	65%	74%	63%
Primary forest products	56%	58%	66%	69%	62%

Source: AAR

- In other words, rail traffic totals appear to better reflect how well the overall economy is currently performing than rail traffic for any individual commodity does. Among individual commodity categories, the strongest average correlations over the four periods examined were “lumber and wood products” (75%), “crushed stone, gravel, and sand” (74%), and “stone, clay, and glass products” (74%).
- We also were interested in finding out what rail commodities might be most useful as a gauge of future near-term economic health. To that end, we ran the numbers again, but this time we calculated the correlation between the percentage change in year-over-year rail traffic for various commodities and the year-over-year percentage change in GDP one quarter later. For example, year-over-year changes in rail traffic from Q1 1989 through Q2 2011 were compared to year-over-year changes in GDP from Q2 1989 through Q3 2011.
- The table on the top of the next page summarizes the results of that part of our analysis. For nearly all commodities, the correlation between rail traffic and GDP growth is weaker when the comparison is made to GDP one quarter later than to GDP for the current period. For example, for “total carloads plus intermodal,” the average correlation between rail traffic and GDP for the same period was 81%, but the average correlation between rail traffic and GDP one period later for was a much lower 68%.
- The strongest average correlation for the four time periods examined between rail traffic in one period and GDP one quarter later was 77%, for the commodity “motor vehicles and parts.” This was one of the few commodities for which the average correlation was higher when traffic was compared to GDP one quarter later (77%) than when it was compared to GDP for the same quarter (71%). “Motor vehicles and parts” had the highest correlation for each of the four time periods examined, making it clearly the best single rail commodity to use as a gauge of near-term economic strength.
- No one can claim — we certainly don’t — that rail traffic is a perfect gauge of current or future GDP growth, but the results above suggest that, while past results are not a guarantee of future results and correlation does not always indicate causation, rail traffic really is a useful metric to watch. We are putting the final touches on a longer and more detailed (but still non-technical) discussion of the results of our examination. In the long version, we discuss our procedure in

**CORRELATION BETWEEN PERCENTAGE CHANGE IN YEAR-OVER-YEAR
QUARTERLY RAIL TRAFFIC AND PERCENTAGE CHANGE IN
YEAR-OVER-YEAR GDP ONE QUARTER LATER BY COMMODITY***

Commodity**	Q1 '89 to	Q1 '95 to	Q1 '00 to	Q1 '05 to	Avg. 4 Periods
	Q3 '11	Q3 '11	Q3 '11	Q3 '11	
Motor vehicles & parts	73%	76%	75%	82%	77%
Lumber & wood products	73%	72%	73%	75%	73%
Total carloads + intermodal	63%	62%	72%	74%	68%
Total intermodal	61%	61%	73%	76%	68%
Total carloads	59%	59%	68%	70%	64%
Chemicals	54%	56%	67%	75%	63%
Crushed stone, gravel, sand	61%	61%	62%	63%	62%
Stone, clay, & glass products	63%	60%	64%	58%	61%
Waste & scrap materials	51%	54%	69%	67%	61%
Primary forest products	53%	55%	65%	61%	59%
Primary metal products	47%	53%	61%	67%	57%
Coke	42%	42%	69%	73%	56%
Pulp & paper products	49%	53%	63%	58%	56%

*For example, the percentage change in rail traffic from Q1 2000 to Q2 2011 is compared to the percentage change in GDP from Q2 2000 to Q3 2011.

Source: AAR

more detail; provide more results, including some commodity combinations that actually have slightly higher correlations than those summarized above; and discuss some factors that might explain why we got the results we did. **If you want a copy of this longer paper, send an email request to dkeen@aar.org and we'll send it to you when it is finalized.**

Where to go for more information:

- The most recent BEA news release on GDP, including links to detailed data tables, is [here](#). BEA will release its third estimate of third quarter 2011 GDP on December 22.

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

Who releases it and when?

- Institute for Supply Management (ISM – formerly the National Association of Purchasing Managers), on the first (PMI) and third (NMI) business days of each month.

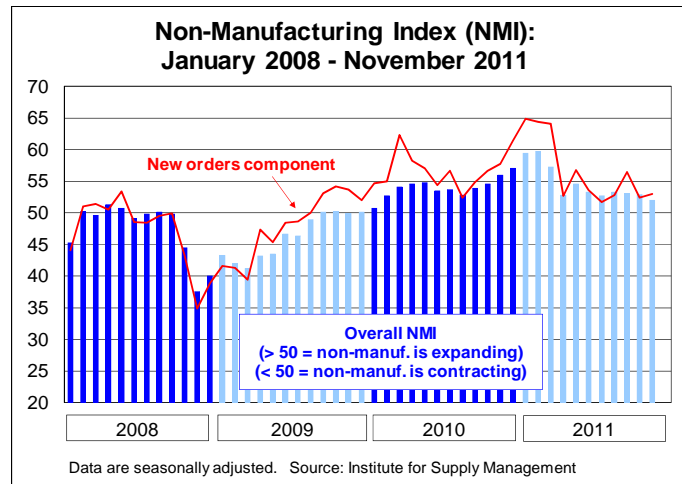
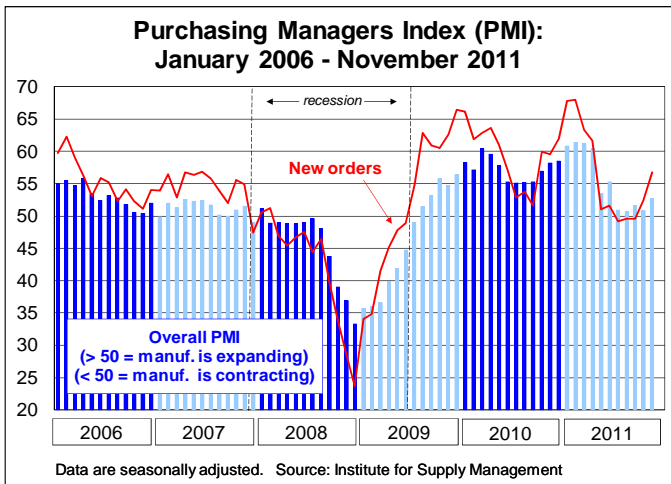
What is it and why is it important?

- The PMI combines data on new orders, inventory, production, supplier deliveries, and employment. It is based on a survey of several hundred supply managers at manufacturers throughout the country. Supply managers typically handle purchasing/procurement, inventory control and management, and physical distribution and warehousing. The PMI is considered an indicator both of actual “on-the-ground” conditions as well as near- to medium-term sentiment. The NMI is like the PMI, except that it tracks services.
- Manufacturing accounts for around 12% of U.S. GDP — not as much as it used to, but the U.S. is still by far the world’s top manufacturer. Much of what railroads haul, of course, consists of raw materials for manufacturing or finished manufactured goods. Services account for around two-thirds of U.S. GDP and around 80% of private-sector employment.
- According to the ISM, a **PMI > 50 indicates that overall manufacturing is expanding**; a PMI < 50 indicates that manufacturing is contracting. Also according to the ISM, a **PMI greater than**

41.2, over time, generally indicates an **expansion of the overall economy**. Likewise, an NMI < 50 indicates the non-manufacturing sector is generally contracting; an NMI > 50 indicates that the non-manufacturing sector is generally expanding.

What are the latest numbers?

- Not great news, but certainly good news: the **PMI rose to 52.7 in November 2011 from 50.8 in October 2011**, reaching its highest level since June 2011 (see chart below left). The **new orders component of PMI rose to 56.7 in November** from 52.4 in October, reaching its highest level since April 2011.
- What the ISM said about the November PMI: “Respondents cite continuing concerns about the general economic environment, government regulations and European financial conditions, but are cautiously more optimistic about the next few months based on lower raw materials pricing and favorable levels of new orders.”



- Not so good news from the ISM regarding the NMI: it **fell to 52.0 in November 2011 from 52.9 in October 2011** (see the chart above right), falling to its lowest level since January 2010. The “new orders” component of the NMI rose to 53.0 in November from 52.4 in October. In reference to November’s NMI, the ISM said, “Respondents’ comments for the most part project continued slow, incremental growth. There still remains a strong concern about lagging employment.”

Where to go for more information:

- The ISM’s press release on the November PMI is [here](#). The December PMI will be released on January 3. The ISM’s press release on the November NMI is [here](#). The December NMI will be released on January 5.

MANUFACTURING INVENTORIES AND SALES

Who releases it and when?

- The U.S. Census Bureau, at the beginning of each month.

What is it and why is it important?

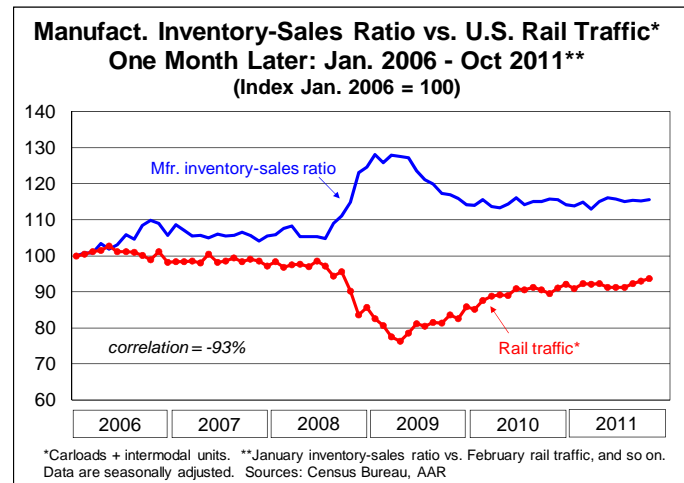
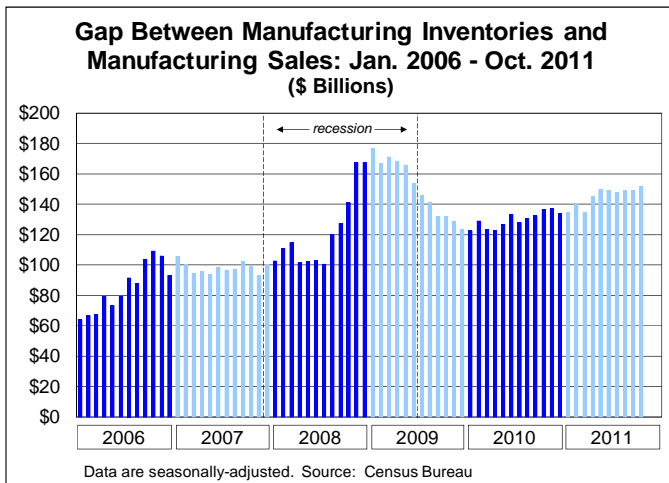
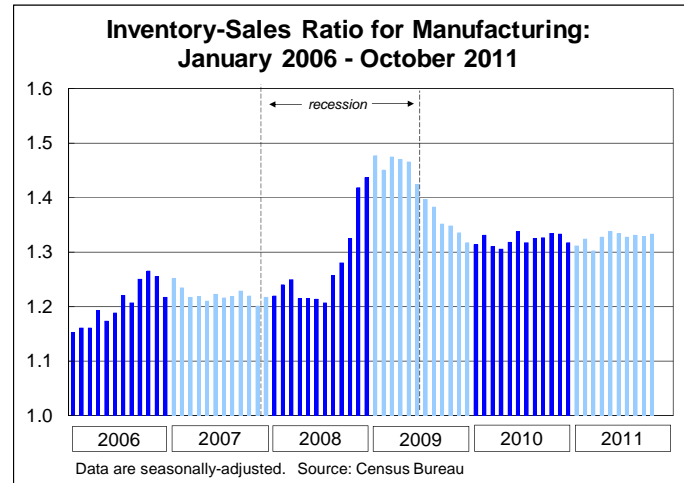
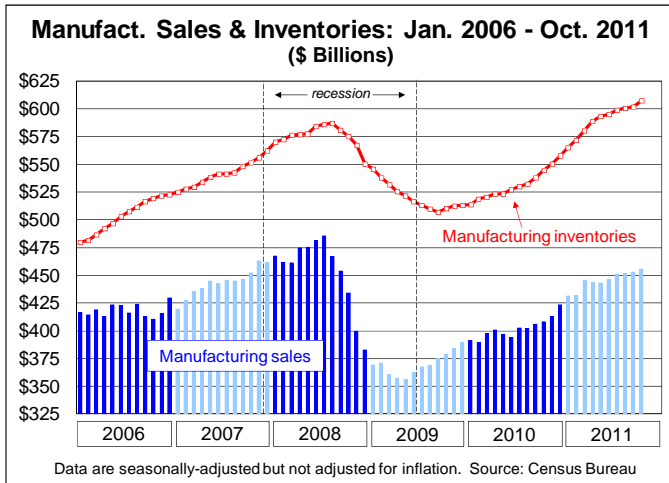
- The report is based on data reported from manufacturing establishments with \$500 million or more in annual shipments covering 89 industry categories. Figures are seasonally adjusted and are subject to revision for a month or two after initial release.
- Manufacturers **don’t want to hold too much inventory** because it costs money to store it and it can become obsolete or spoil. Moreover, inventory earns no return on investment. But

manufacturers **don't want too little inventory either**, or they could lose sales. Like Goldilocks, they want an inventory level that's "just right."

- When sales fall, inventories must rise if production is kept at the same pace. Eventually, **when inventories are too high, "destocking" occurs** via production cuts. This leads to job losses, fewer raw material purchases, and other negative economy-wide effects. When sales rise, either inventories must fall, production must increase, or both. Eventually, inventories become too low and **"restocking"** occurs via production increases. This means more employment, more raw material purchases, and other positive economy-wide effects.

What are the latest numbers?

- **Manufacturing sales rose 0.6%** (\$2.6 billion) in October 2011 over September 2011. Meanwhile, **manufacturing inventories rose 0.9%** (\$5.6 billion, their biggest increase since April 2011) in October. The resulting **inventory-sales ratio for manufacturing rose 0.4% in October**.



- As we've mentioned before, over the past two years (including in October 2011) there has been a slow but fairly steady upward creep in the gap between manufacturing inventories and manufacturing sales (see chart on the bottom left above). We can't help thinking it should be a bit lower. The chart on the bottom right of the previous page shows the strong negative correlation between the inventory-sales ratio for manufacturing and rail traffic one month later.

Where to go for more information:

- The Census Bureau's report on manufacturing sales and inventories in October is [here](#). Figures for November 2011 will be released on January 4, 2012.

INDUSTRIAL PRODUCTION

Who releases it and when?

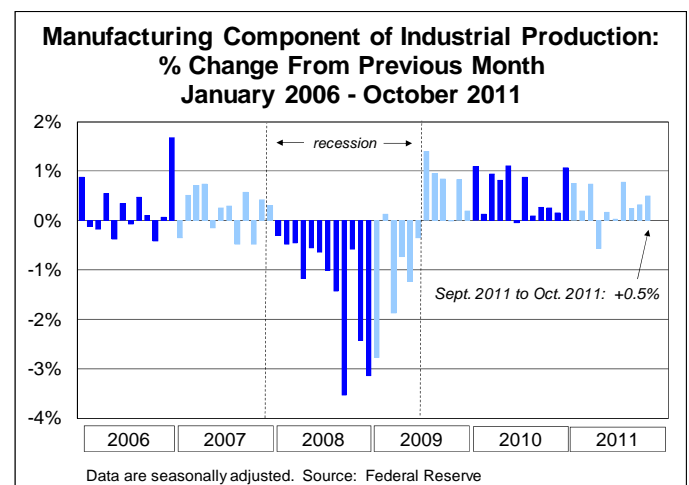
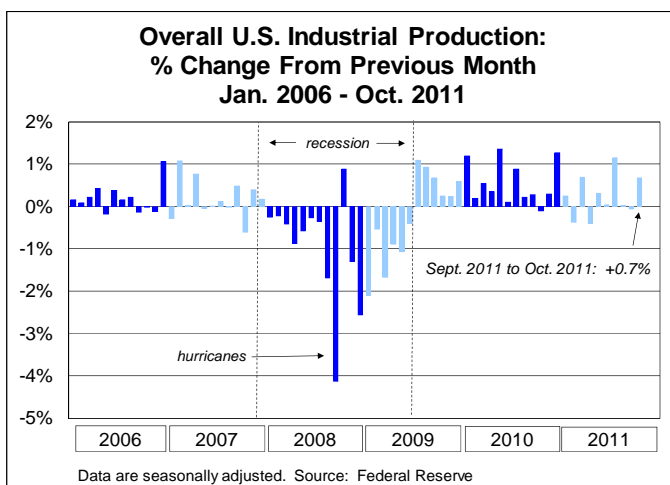
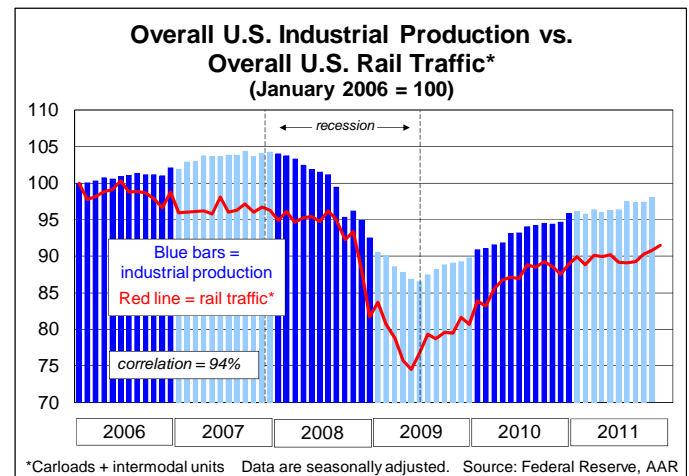
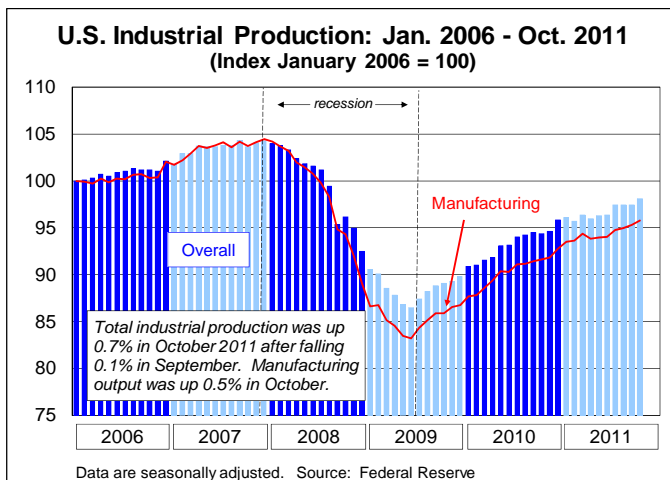
- The Federal Reserve, around the middle of each month. Data from the previous few months are subject to revision.

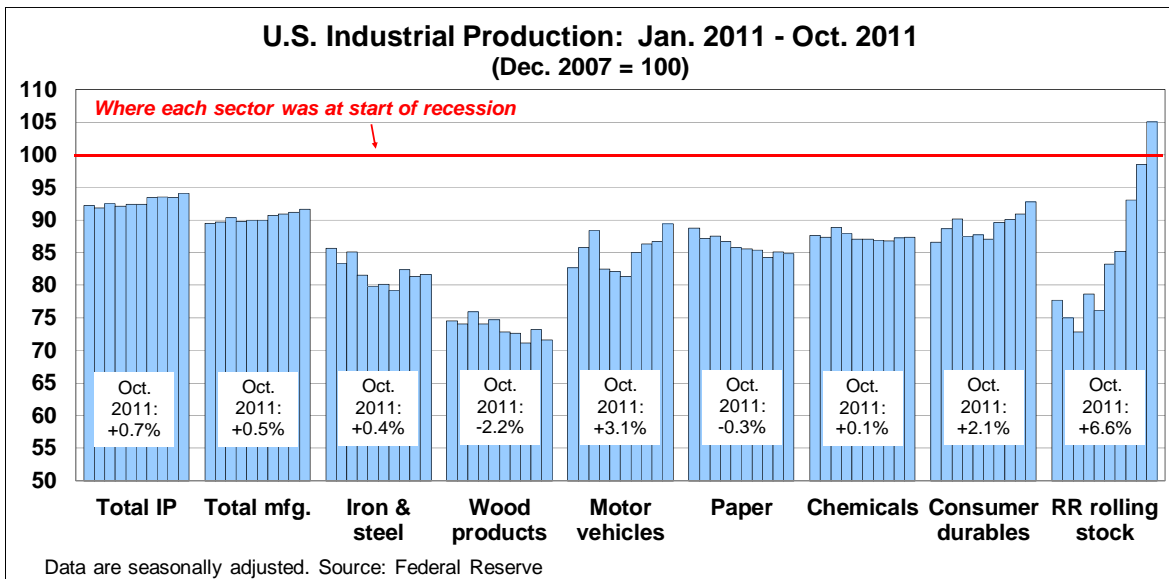
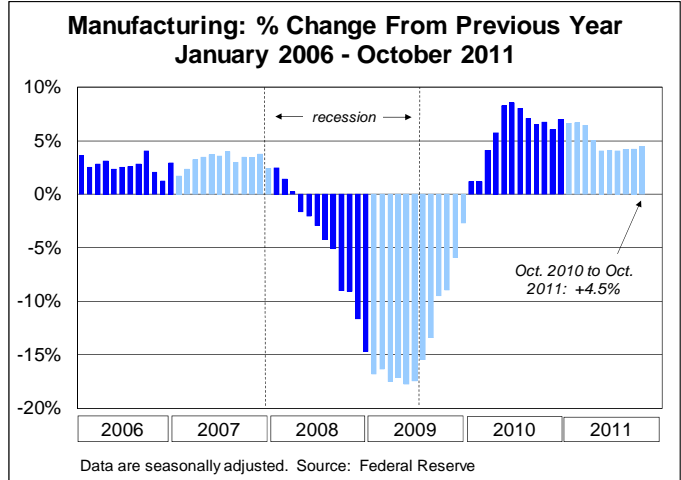
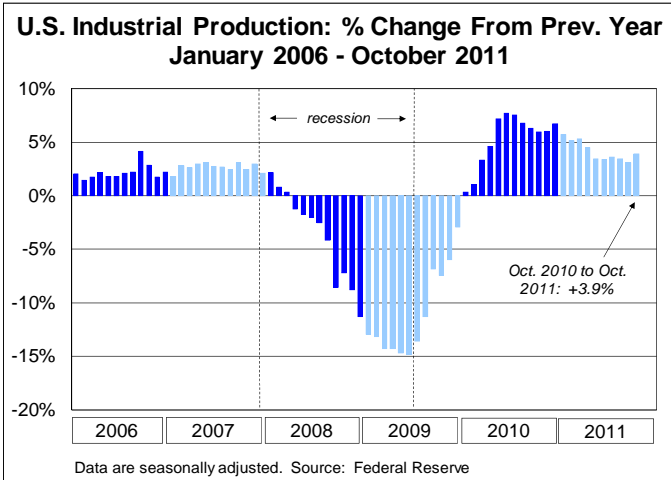
What is it and why is it important?

- Industrial production figures are based on the monthly raw volume of goods produced by U.S. industrial firms such as factories, mines, and electric utilities. Data are obtained from a variety of government and industry sources. Manufacturing accounts for about 75% of industrial production, but utility and mine output are key components as well.
- The industrial sector typically exhibits the most volatility in output during a business cycle. Large changes in industrial output can mean that a business cycle has reached an inflection point.

What are the latest numbers?

- **U.S. industrial production rose 0.7% in October 2011 over September 2011**, a clear improvement over the (revised) 0.1% decline in September over August. The **manufacturing** component of industrial production **rose 0.5% in October**, its sixth straight monthly increase (see chart on the bottom right). The top right chart below shows the strong positive correlation between industrial production and rail traffic in recent years and suggests that industrial production rose in November as well.





- The charts at the top of this page show that total industrial production and total manufacturing have seen steady, significant year-over-year growth over the past couple of years, but the improvements in the past two years aren't enough to offset the declines in the two years before that.
- The chart immediately above shows the extent to which various key industrial sectors are still behind (or, in the case of railroad rolling stock, now ahead of) their December 2007 start-of-the-recession points. The chart above also shows that most manufacturing sectors saw growth in October 2011 over September 2011 (see the text boxes on each set of bars).

Where to go for more information:

- The Federal Reserve release on industrial production in October 2011 is [here](#). November 2011 data will be released on December 15.

CAPACITY UTILIZATION

Who releases it and when?

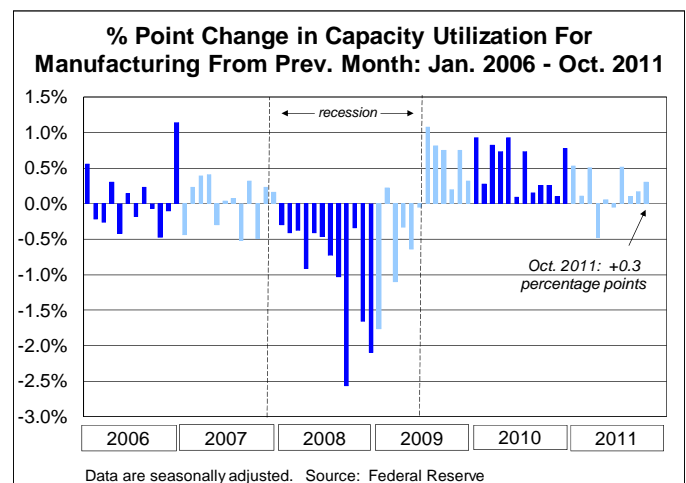
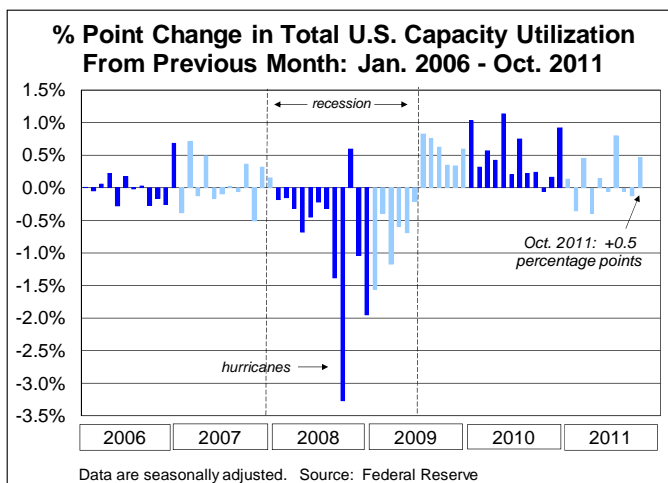
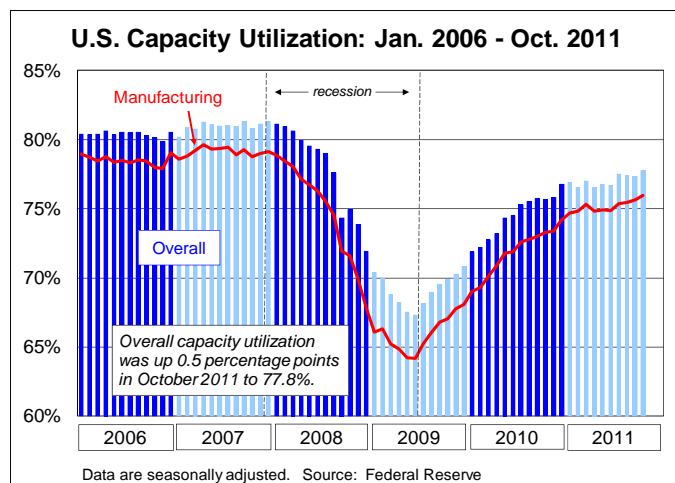
- The Federal Reserve, around the middle of each month.

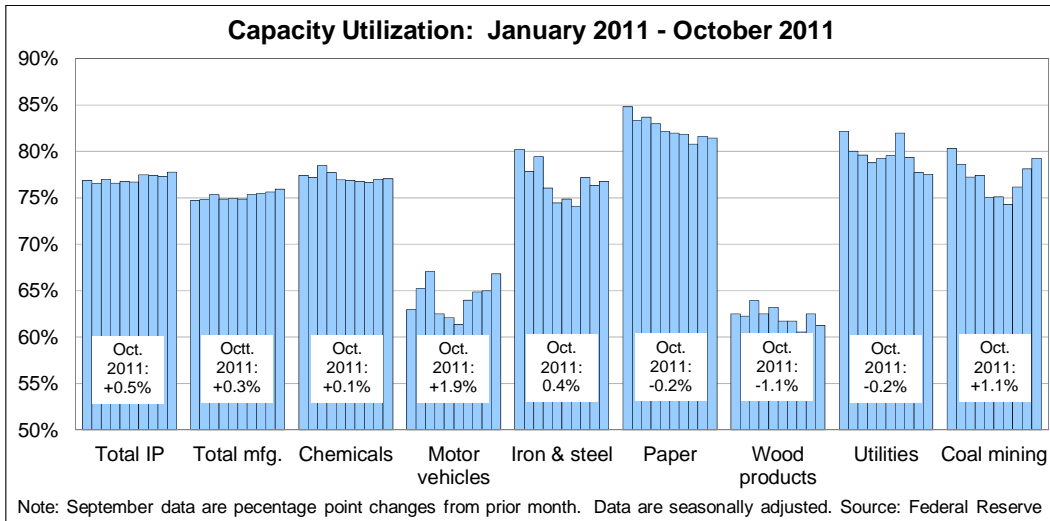
What is it and why is it important?

- Capacity utilization attempts to capture the concept of sustainable maximum output — *i.e.*, the highest output a plant can maintain assuming a realistic work schedule, normal downtime, and sufficient availability of inputs to operate the capital in place. The data cover manufacturing, mining, and electric and gas utilities. Figures for the current month are subject to sometimes significant revision the following month.
- In theory, a capacity utilization rate of, say, 70% means there is room to increase production up to 100% without having to build new plants or add equipment. In practice, capacity utilization rates (at least on an economy-wide basis) never come close to 100%. Utilization levels above 82%-85% are generally considered "tight" and portend price increases or supply shortages in the near future. The farther below this level, the more slack there is in the economy or particular sector.
- Firms in every industry walk a tightrope when it comes to capacity. If they take too long to bring back idled capacity or build new capacity, they risk shortages and lost sales. Or, they could face higher costs in other areas (*e.g.*, higher overtime costs). On the other hand, adding capacity that ends up not being used adds costs with no offsetting returns.

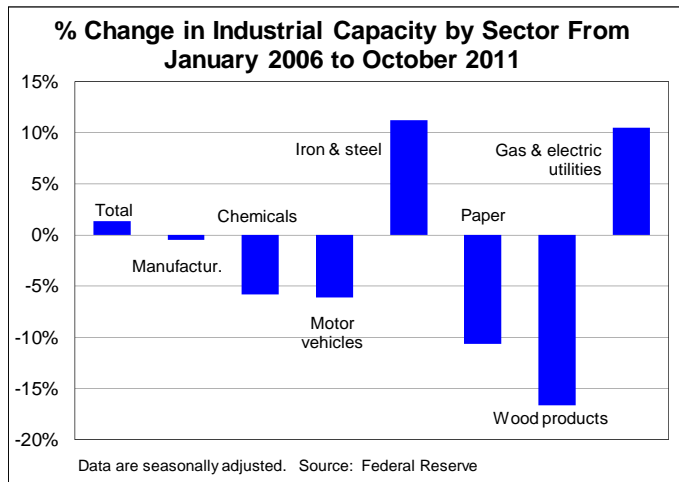
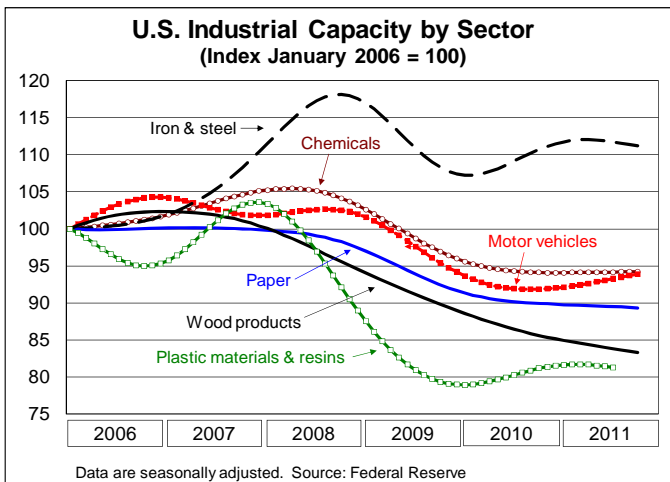
What are the latest numbers?

- **Overall U.S. capacity utilization jumped to 77.8% in October 2011 from 77.3% in September**, its first increase in three months (see chart below left).
- **Capacity utilization for manufacturing**, which is the primary but not the only component of total capacity utilization (mining and utilities are the other components), **rose to 75.9% in October 2011** from 75.6% in September 2011, its fourth straight monthly increase and its highest level since June 2008 (see chart below right).

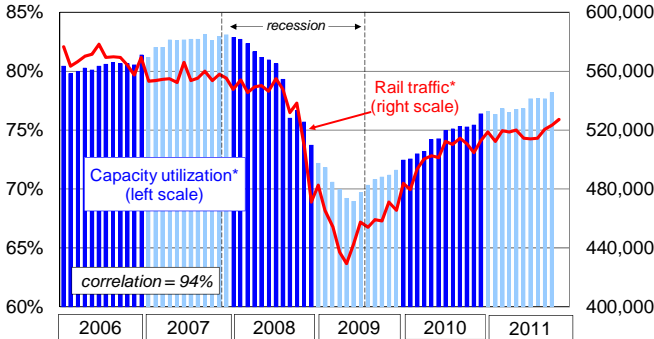




- We show the chart on the bottom left every few months. An industry's productive capacity changes over time as new capacity is added (usually when times are good) or is removed (usually when times are bad). Capacity might be increasing in one industry at the same time it's falling in another, but things were so bad during the recent recession that capacity fell across the board, though by varying amounts. The chart below left shows the changes in capacity for several key sectors since 2006. Since early 2010, capacity has been generally stable in chemicals and paper, it's been falling for wood products, and it's been slowly rising for motor vehicles. Most U.S. industrial sectors, including those shown below, still have materially lower total capacity than they did in 2006 and 2007. The chart on the bottom right summarizes those changes for several important industrial sectors.
- As we last noted in June, when an industry's capacity changes by a large amount, the capacity utilization rate by itself doesn't tell the whole story. To use wood products as an example, total wood industry output when the industry's capacity utilization rate is 75% and the amount of wood-making capacity is at January 2006 levels is likely to be higher than if the capacity utilization rate is the same 75% but the amount of wood capacity is at the much lower October 2011 level.
- A smaller base, all else (including capacity utilization rate) equal, could be expected to mean less production and fewer rail carloads from that sector. A higher base, all else equal, could be expected to mean more production and, consequently, more rail carloads. That's why, when comparing rail carloads to capacity utilization for particular sectors over time, it's sometimes useful to adjust the capacity utilization rate to account for changes in that industry's base capacity. The charts on the next page, which compare rail carloads and capacity utilization for various sectors, do this.

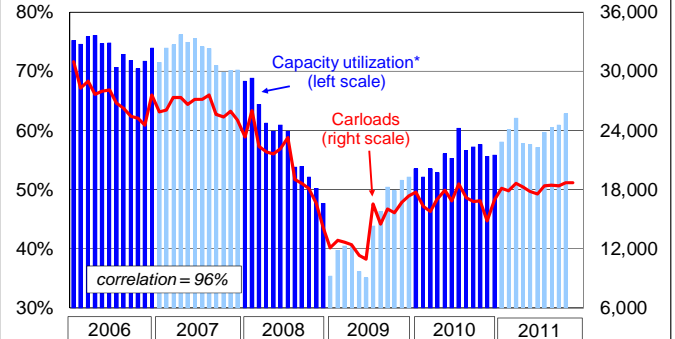


**Overall Capacity Utilization* vs. Total U.S. Rail Traffic
Jan. 2006 - Oct. 2011**



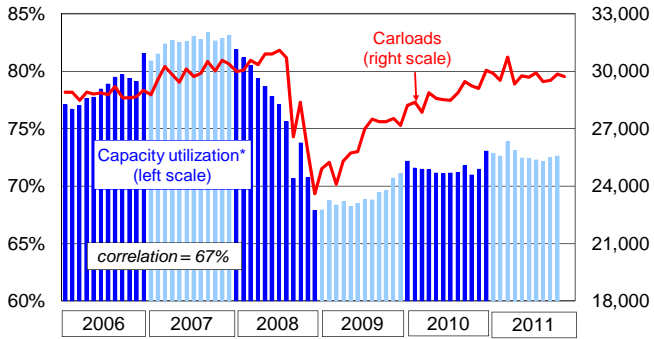
*Adjusted to take into account changes in total industry's "capacity base" since January 2006. Data are for U.S. and are seasonally adjusted. Carloads are weekly averages per month. Source: Federal Reserve, AAR

**Capacity Utilization* vs. Rail Carloads: Motor Vehicles
Jan. 2006 - Oct. 2011**



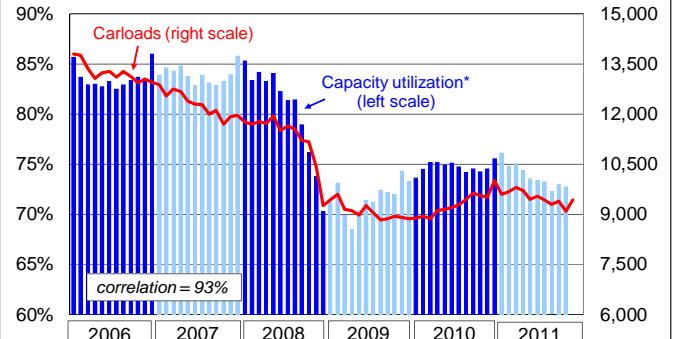
*Adjusted to take into account changes in the motor vehicle industry's "capacity base" since January 2006. Data are for U.S. and Canada combined and are seasonally adjusted. Carloads are weekly averages per month. Source: Federal Reserve, AAR

**Capacity Utilization* vs. Rail Carloads: Chemicals
Jan. 2006 - Oct. 2011**



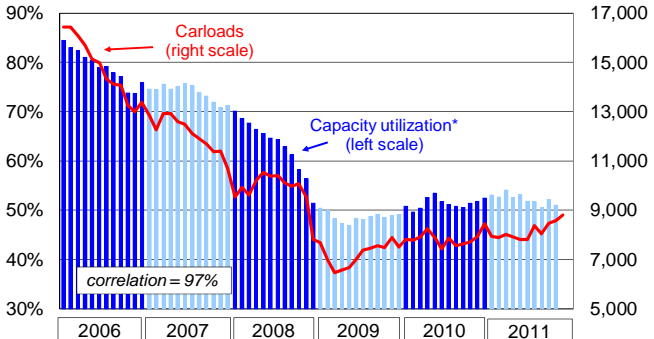
*Adjusted to take into account changes in the chemical industry's "capacity base" since January 2006. Data are for U.S. and Canada combined and are seasonally adjusted. Carloads are weekly averages per month. Source: Federal Reserve, AAR

**Capacity Utilization* vs. Rail Carloads: Paper
Jan. 2006 - Oct. 2011**



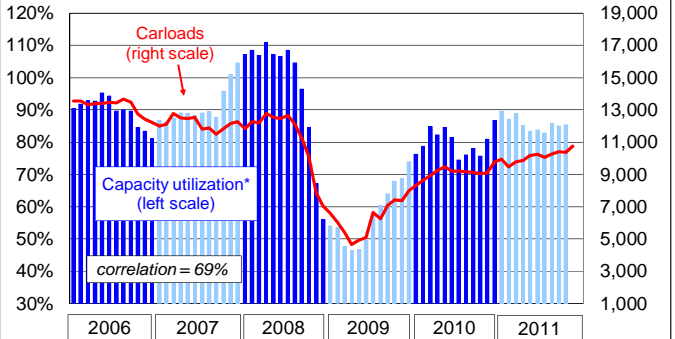
*Adjusted to take into account changes in the paper industry's "capacity base" since January 2006. Data are for U.S. and Canada combined and are seasonally adjusted. Carloads are weekly averages per month. Source: Federal Reserve, AAR

**Capacity Utiliz.* vs. Rail Carloads: Lumber & Wood
Jan. 2006 - Oct. 2011**



*Adjusted to take into account changes in the wood industry's "capacity base" since January 2006. Data are for U.S. and Canada combined and are seasonally adjusted. Carloads are weekly averages per month. Source: Federal Reserve, AAR

**Capacity Utiliz.* vs. Rail Carloads: Primary Metal Prod.
Jan. 2006 - Oct. 2011**



*Adjusted to take into account changes in the metal industry's "capacity base" since January 2006. Data are for U.S. and Canada combined and are seasonally adjusted. Carloads are weekly averages per month. Source: Federal Reserve, AAR

Where to go for more information:

- The Federal Reserve release on capacity utilization in October 2011 is [here](#). November 2011 data will be released on December 15.

NUMBER OF EMPLOYED PERSONS AND UNEMPLOYMENT RATE

Who releases it and when?

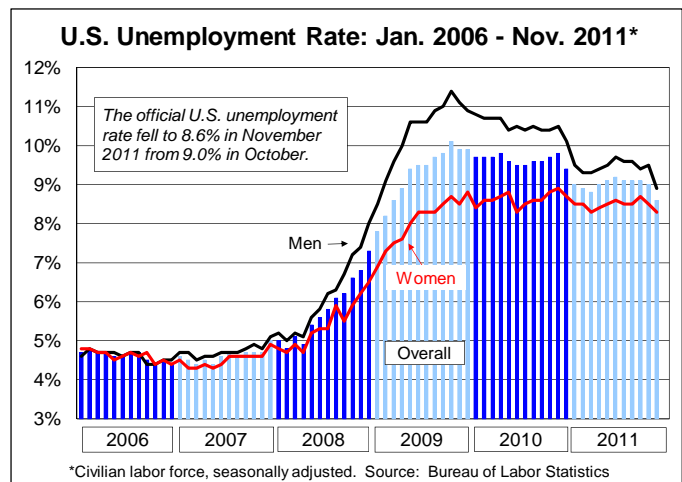
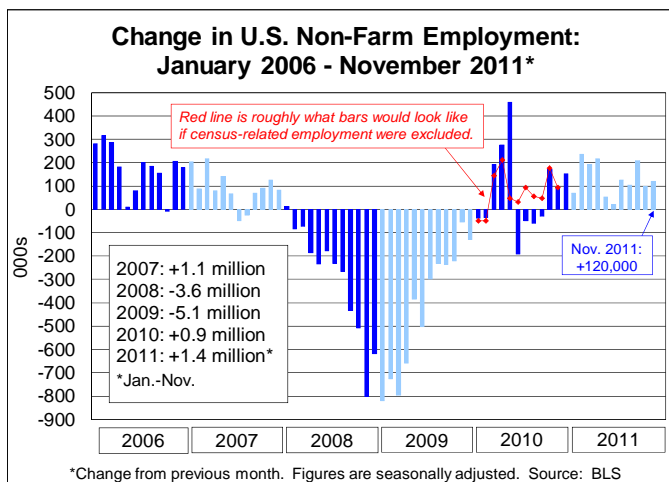
- U.S. Bureau of Labor Statistics (BLS) near the beginning of each month.

What is it and why is it important?

- The figures provide a snapshot of the strength of the U.S. labor market. Because of their simplicity and political importance, they are probably the single most anticipated and widely publicized economic indicators in the world.
- **They are based on two separate surveys:** 1) an “**establishment survey**” of more than 400,000 businesses, and 2) a “**household survey**” of 60,000 households. Among other things, the net number of jobs gained or lost in a given month and the employment by industry figures come from the survey of businesses. The unemployment rate, the size of the labor force, and the labor force participation rate, among other data, come from the household survey. The two different surveys sometimes produce puzzling results. For example, in the same month there can be a sharp drop in the unemployment rate (household survey) without many new jobs created (establishment survey).
- In the United States, **a gain of 150,000 or more jobs** from one month to the next is **generally considered solid job growth**. (Average monthly U.S. job growth from September 2003 through December 2007 was 157,000 jobs.) Job growth of 100,000-120,000 is needed just to keep up with the typical growth in the labor force from one month to the next.
- Employment is often considered a lagging indicator because employers often decide to wait until they’re sure an economic recovery is here to stay before making new permanent hires. In the meantime, they might rely on more hours for existing workers or on temporary workers. Weak job numbers cause even the still-employed to become less confident of the future, and, therefore, less prone to spend money (see “Consumer Confidence” and “Retail Sales” below).

What are the latest numbers?

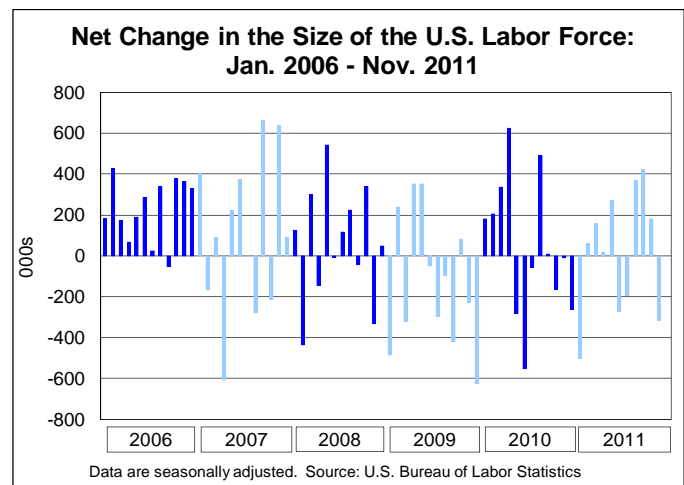
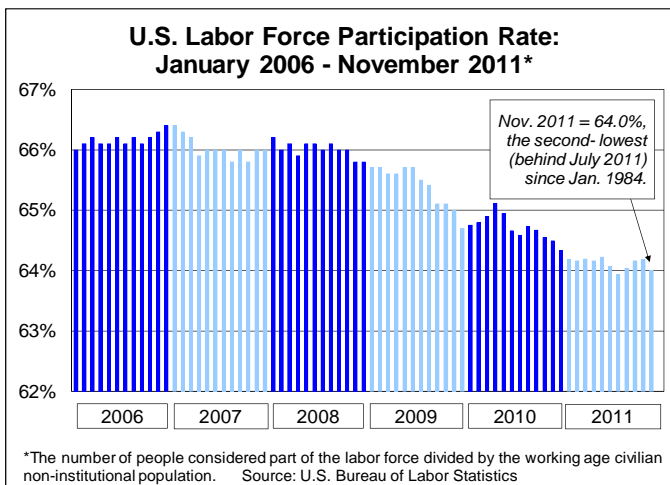
- The November employment numbers, announced on December 2, were clearly good news. **120,000 net new jobs were created**, and for the second month in a row BLS substantially raised its estimates of job gains for the previous two months: job gains in September were raised from 158,000 to 210,000, while job gains in October were raised from 80,000 to 100,000.² With one



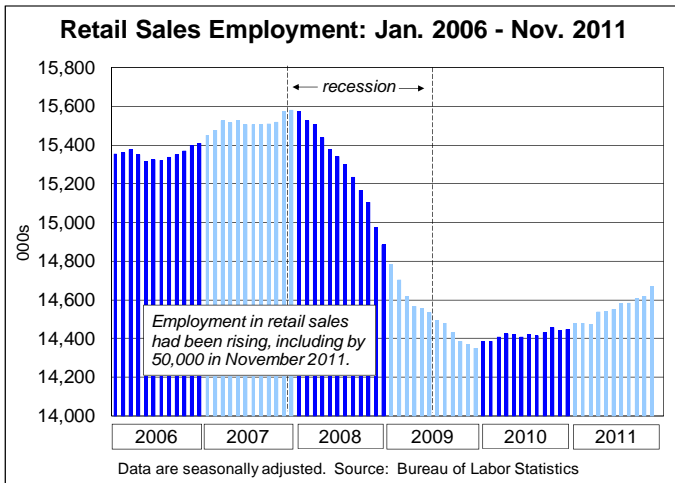
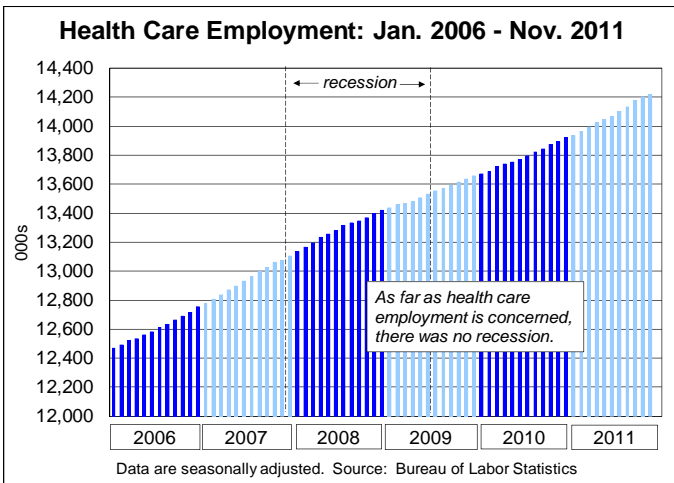
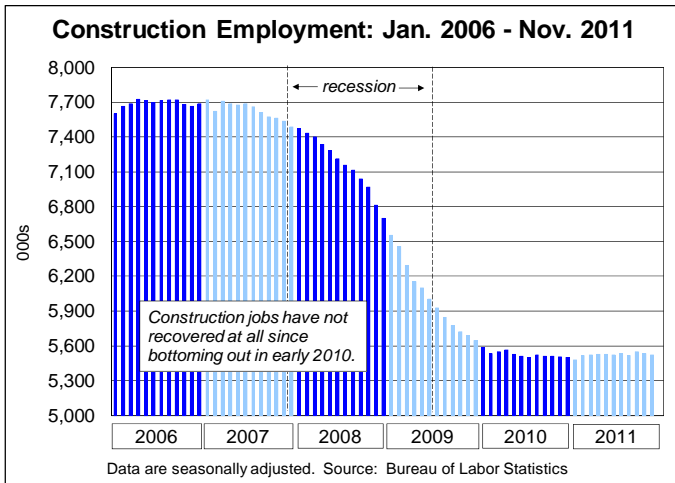
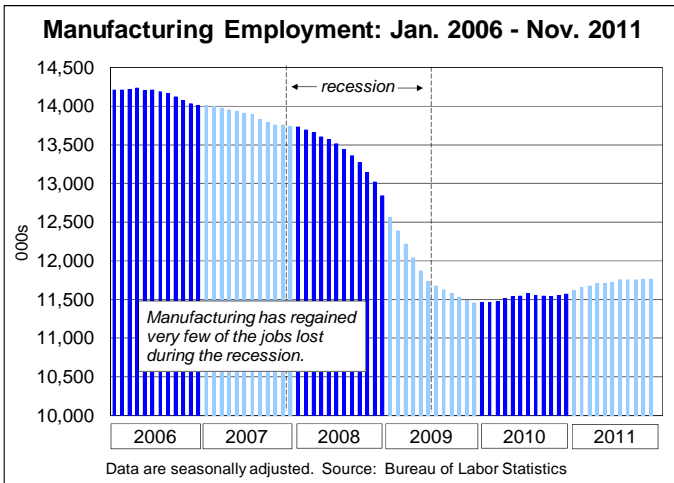
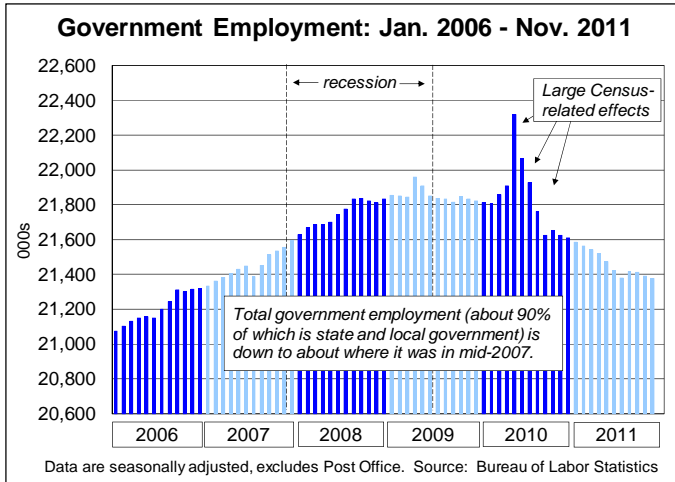
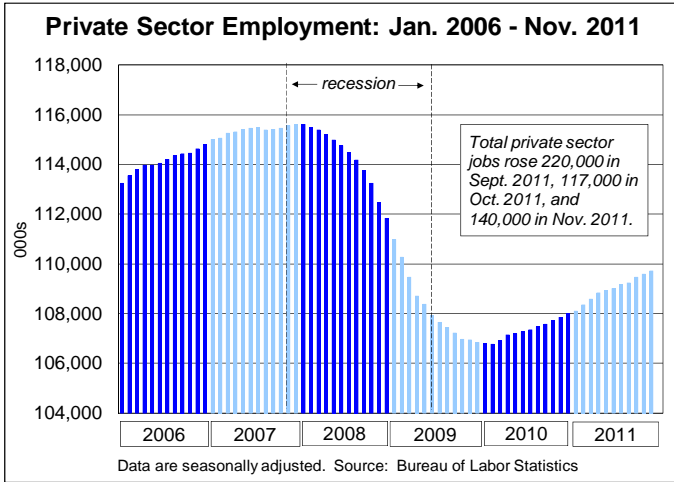
² It would be nice if they could “get the numbers right” the first time, but most of us probably don’t appreciate just how difficult it is for the BLS to come up with the employment numbers each month. Many economic indicators, including most of those discussed in *Rail Time Indicators*, are subject to potentially large revisions as better data become available. AAR’s rail traffic data are an exception — revisions to past data are almost always very minor.

month to go, 1.45 million net new jobs have been created in 2011, **making 2011 the best year for job creation since 2006**. The problem is that 3.6 million jobs were lost in 2008 and another 5.1 million in 2009, so 2011's gain (and 2010's gain of 940,000) is like a football team scoring a touchdown late in the fourth quarter when it's down by 28 points.

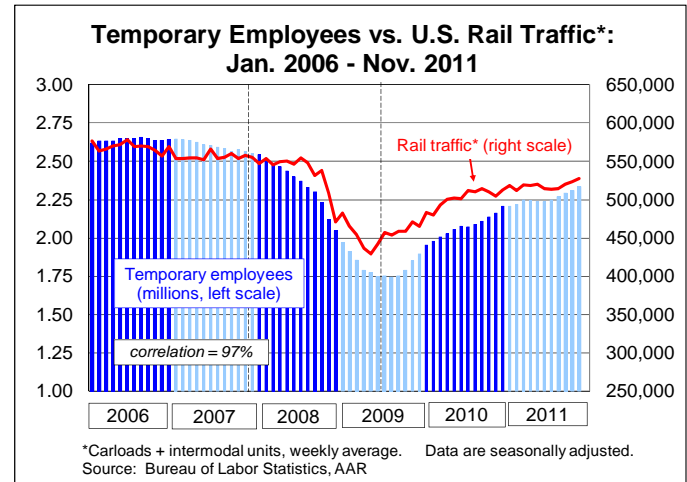
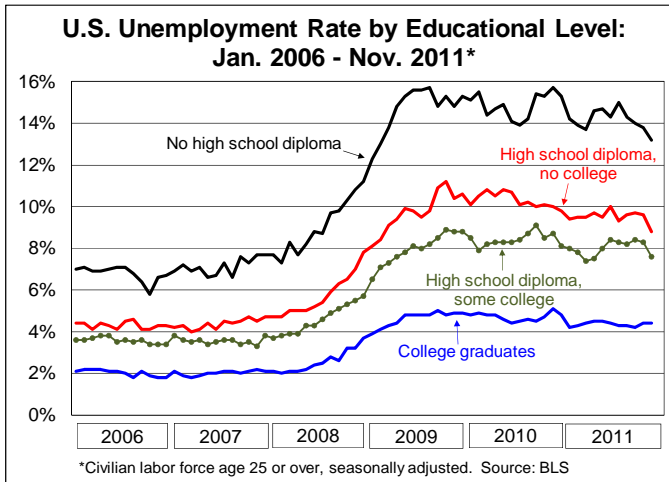
- The number of new jobs created in November was more or less expected. Completely unexpected was the fact that the **official unemployment rate fell from 9.0% in October 2011 to 8.6% in November 2011**, its lowest level since March 2009 (see chart on the bottom right of the previous page).
- The unemployment rate for women fell from 8.5% in October to 8.3% in November, while the unemployment rate for men plunged from 9.5% in October to 8.9% in November. The gap between the men's and women's unemployment rates fell to 0.6 percentage points in November, down from its peak of 2.7% in October 2009 and the smallest it's been since August 2008.
- When something seems too good to be true, it usually is, which is why a lot of questions have been asked regarding how the unemployment rate could fall so much in November, especially since the number of net new jobs created in the month wasn't particularly high. One factor is something we've mentioned several times in the past: the labor force participation rate. Defined as the number of people with a job or looking for a job divided by the working age population, the participation rate has been trending down for more than three years (see chart below left) and is now at levels not seen since the early 1980s. From 2006 through 2008, the labor force participation rate averaged 66.1%. If that had been the participation rate in November 2011, the labor force in November would have been about 5 million people larger than it was and, if we're doing the math right, everything else equal the unemployment rate would have been about 11.5%, not 8.6%.



- Related to the drop in the participation rate in November is a drop of 315,000 in the size of the labor force for the month (see chart above right). As the chart shows, the size of the labor force as measured by the BLS is extremely volatile, and the 315,000 decline in November isn't out of line with previous months. Still, if you aren't formally part of the labor force — *i.e.*, either employed or actively looking for a job — you don't count as unemployed and the unemployment rate will be correspondingly lower. That played a role in November's unemployment rate decline.
- The charts on the next page show total employment for several sectors since January 2006. For most (including sectors not shown in the charts), the recession was brutal and there's been only modest improvement in the past couple of years. For example, construction employment hasn't increased at all and manufacturing employment is up only slightly. Retail sales' jobs have been trending upward; they accounted for nearly 50,000 of the 120,000 net increase in jobs in November; total government employment withstood the recession well, but has fallen since then to 2007 levels; and based on health care employment, you can't tell there even was a recession.



- In past editions of *Rail Time Indicators* we've shown charts showing the widely different unemployment rates for various age groups and racial groups. As the chart at the top left of the next page shows, there is also a big difference in unemployment rates by educational attainment. In November, the unemployment rate for college graduates (4.4%) was half that of those with only a high school diploma (8.8%) and one-third that of those without a high school diploma (13.2%). The unemployment rate for college graduates peaked in November 2010 at 5.1%.



- Finally, employment of temporaries rose by 22,000 in November 2011, continuing its upward trend since the recession ended. For reasons that are not entirely clear — and maybe it's pure chance — rail traffic continues to be very closely correlated with temporary employment, as the chart above right shows and as we last noted in April.
- As of November 2011, total temporary employment was up 588,000 (34%) since bottoming out in August 2009. By contrast, total private sector employment in November 2011 was up 2.9 million (2.8%) since it bottomed out in February 2010.

Where to go for more information:

- The BLS press release on the November 2011 employment situation is [here](#). Data for December 2011 will be released on January 6, 2012.

CLASS I FREIGHT RAILROAD EMPLOYMENT

Who releases it and when?

- The Surface Transportation Board (STB), around the middle of the month.

What is it and why is it important?

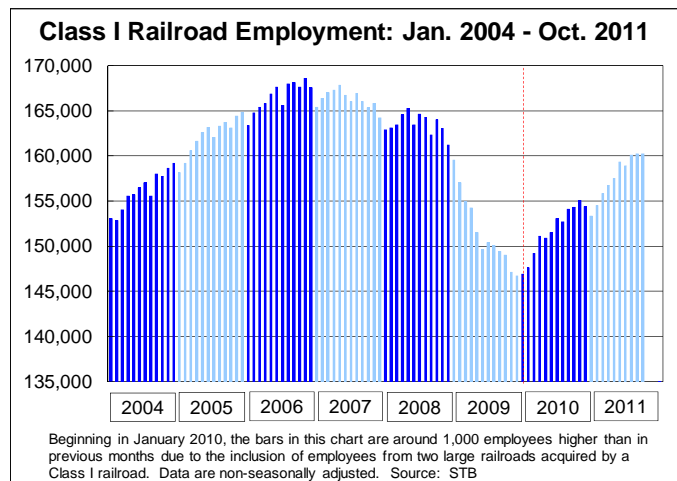
- The data show the average number of Class I freight railroad employees at mid-month. As in other industries, employment in the rail industry is largely a function of the level of business.

What are the latest numbers?

- Class I freight rail employment was virtually unchanged (up 11 employees) at 160,251 in October 2011 over September 2011. Total Class I rail employment in October 2011 was 5,966 (3.9%) higher than it was in October 2010. Rail employment has been flat for three months.

Where to go for more information:

- The STB web site for railroad employment data is [here](#).



CONSUMER CONFIDENCE

Who releases it and when?

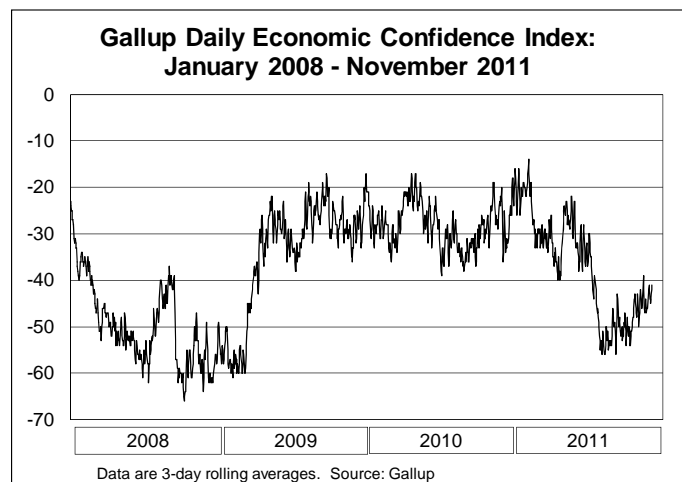
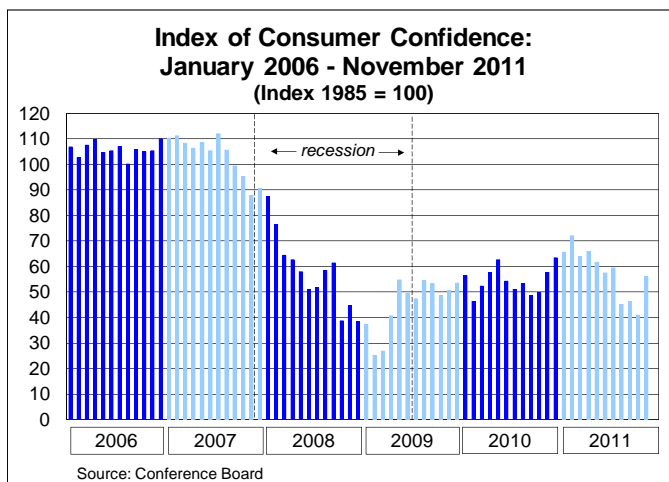
- The Conference Board on the last Tuesday of the month.

What is it and why is it important?

- The index is based on surveys received from about 3,000 U.S. households. It is designed to gauge the financial health, spending power, and confidence of the average U.S. consumer. Respondents are asked about current conditions and their expectations for the next six months.
- The index is designed to predict future consumer spending, on the theory that the more confident consumers are about their job prospects, income, etc., the more likely they are to make purchases, especially big-ticket items. As David Wyss (the chief economist at Standard & Poor's) has said, "A confident consumer buys a new car. A cautious consumer repairs the old one."
- Consumers' psyches are most heavily influenced by economic factors, such as gas prices, the unemployment rate, and how much money they have to spend, but non-economic factors — such as terrorist attacks, a military victory, or even a good performance at an international sporting event — can come into play too. Because there is always going to be some "noise" and month-to-month volatility in consumer confidence, trends are more important than a single data point.

What are the latest numbers?

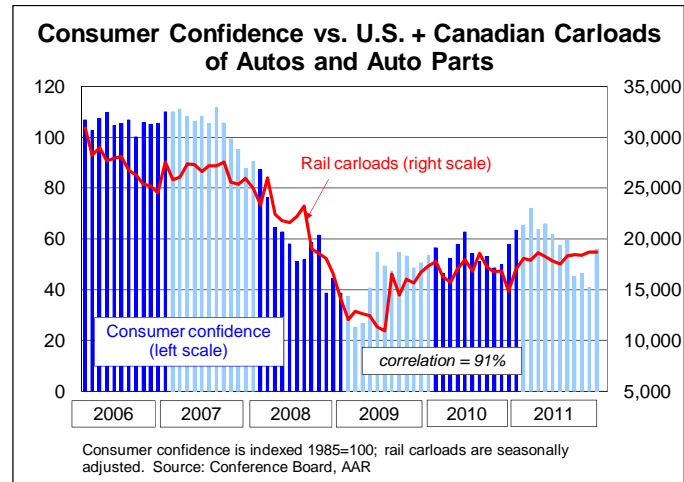
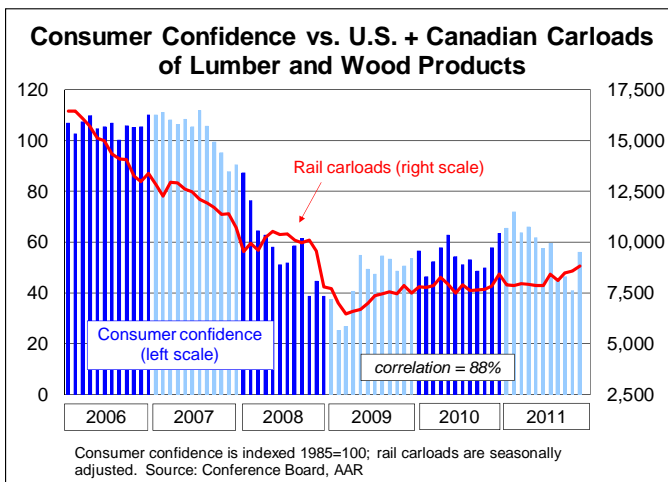
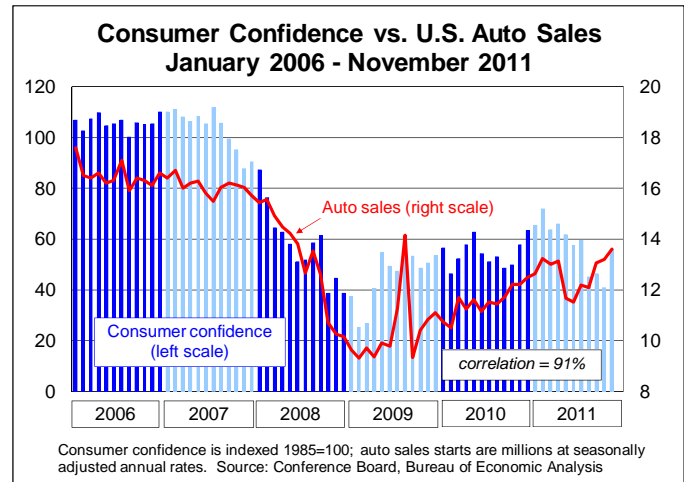
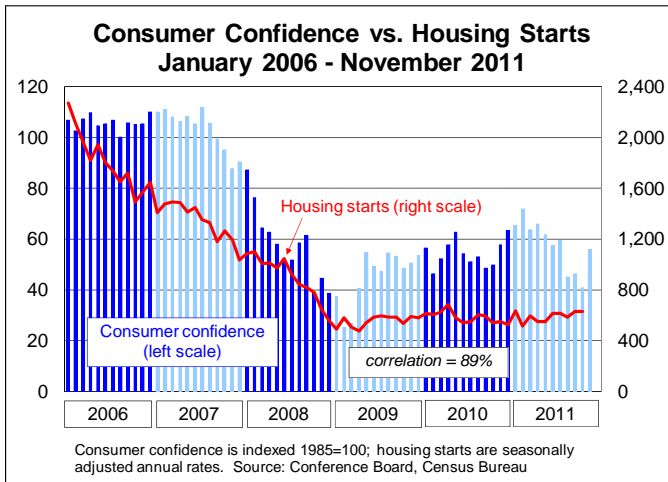
- **Consumer confidence rebounded sharply to 50.6 in November 2011, up from 40.9 in October 2011** and its highest level in four months (see chart below left). This was the highest month-to-month increase since March to April 2003 and appears to be sort of a positive "market correction" after the big decline in confidence in August. Despite the big jump, confidence is still lower than it was in November 2010 (57.8).
- What the Conference Board said about the November index: "Confidence has bounced back to levels last seen during the summer (July 2011, 59.2). Consumers' assessment of current conditions finally improved, after six months of steady declines. Consumers' apprehension regarding the short-term outlook for business conditions, jobs and income prospects eased considerably. Consumers appear to be entering the holiday season in better spirits, though overall readings remain historically weak."



- In recent months we've referred to another well-known survey of consumer sentiment from Thomson Reuters / University of Michigan. Yet another source of consumer sentiment data is Gallup, the polling firm. Since January 2008, Gallup has conducted daily telephone interviews with approximately 1,700 U.S. adults and asked, among other things, what they think of current economic conditions and outlook. Results are shown in the chart above right. Note the big

decline in mid-2011 — not unlike the big decline in the Conference Board's index around the same time — and the partial rebound since then. Clearly, Gallup's results too show that consumer confidence has a long ways to go before it can be considered healthy.³

- We note above that the more confident consumers are about their job prospects, income, etc., the more likely they are to make big-ticket purchases. Thus, it shouldn't be surprising, as we've shown in previous issues of *RTI* and again in the top row of charts below, that there's a strong positive correlation between consumer confidence, on one hand, and housing starts and auto sales on the other. And because there's also a strong positive correlation between auto sales and rail carloads of autos and auto parts, and between housing starts and rail carloads of lumber and wood products, it stands to reason that there should be a strong positive correlation between consumer confidence and rail carloads of autos and lumber. That is, in fact, the case, as the bottom charts below show.



Where to go for more information:

- The Conference Board's press release on November's consumer confidence index is [here](#). December's consumer confidence index will be released on December 27. Information on the Gallup Daily Consumer Confidence Index is [here](#).

³ On a completely unrelated note, an October 2007 Associated Press / Ipsos poll found that 34% of Americans believe in ghosts and the same percentage believes in UFOs. An August 2011 Ipsos survey found that, when given a list of 100 celebrities, Americans chose Betty White, Denzel Washington, and Sandra Bullock as their favorite and most trusted personalities. Paris Hilton and Charlie Sheen were the least favorite.

RETAIL SALES

Who releases it and when?

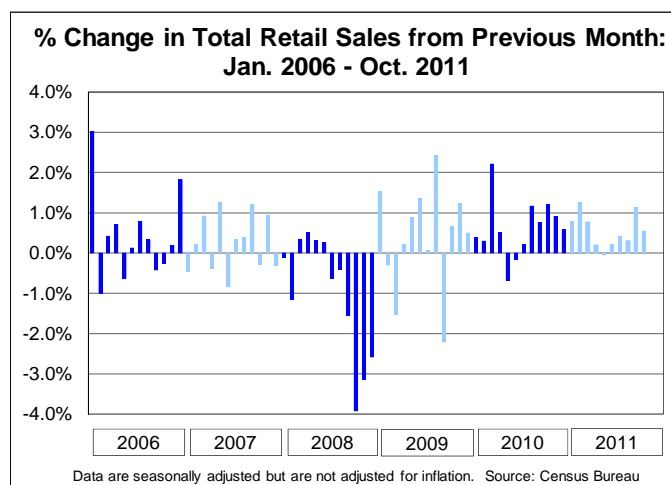
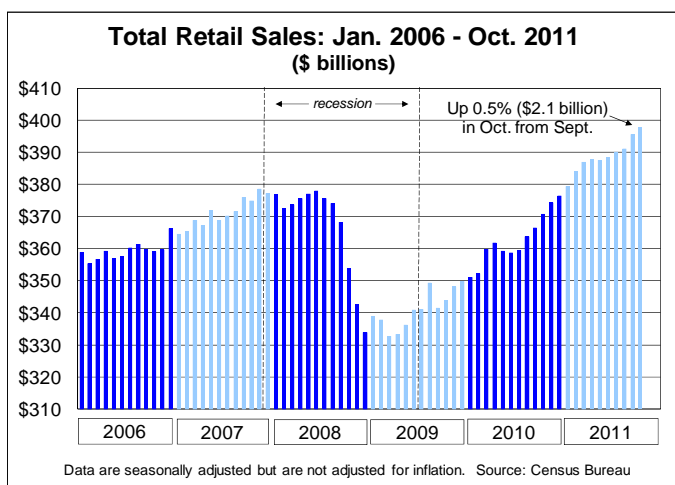
- The U.S. Census Bureau, around the ninth business day of each month.

What is it and why is it important?

- The Census Bureau surveys 5,000 retailers of all types to track the dollar value of physical merchandise sold. The data are adjusted for holiday differences and seasonal variations but are not adjusted for inflation. (The “personal consumption expenditures” component of GDP is adjusted for inflation, but is less timely than retail sales.)
- Personal consumption accounts for approximately 70% of U.S. GDP. Thus, the health of the economy depends largely on how much people buy.

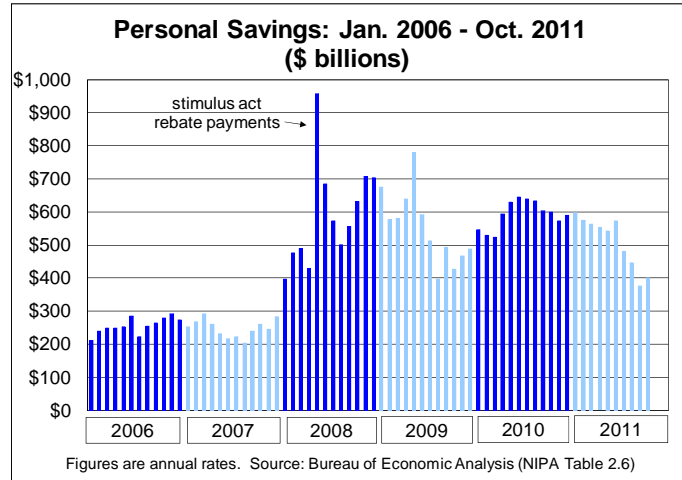
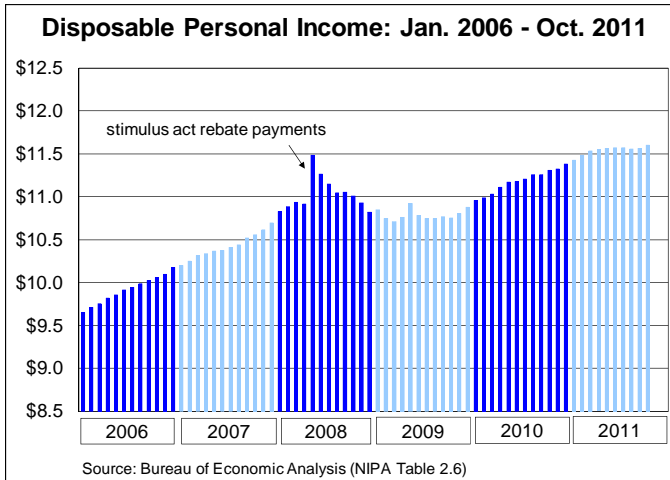
What are the latest numbers?

- **Retail sales in October 2011 rose 0.5% (\$2.1 billion) over September 2011** to a record \$397.7 billion (see chart below left). The increase was 7.2% (\$26.9 billion) over October 2010.
- The increase in October 2011 over September was broad based, led by food and beverage stores (up 1.1%, or \$584 million, no doubt aided by higher food prices described on page 39), non-store retailers (up 1.5%, \$495 million), building and garden suppliers (up 1.5%, \$382 million), and appliance and electronics stores (up 3.7%, \$311 million). Sales at gasoline stations in October 2011 were down 0.4% (\$183 million) from September, thanks largely to lower gasoline prices that month (see page 39).
- So-called “core” retail sales — sales excluding autos and gasoline — were up 0.7% (\$1.7 billion) in October, their biggest monthly increase in eight months.

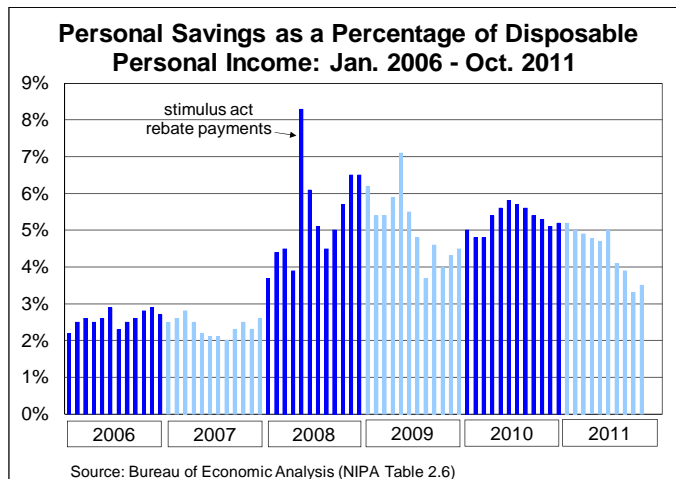


- As you probably saw in the news because of how much media play it received, the National Retail Federation announced that a survey conducted on its behalf found that “a record 226 million shoppers visited stores and websites over Black Friday weekend, up from 212 million last year.” The survey found that “the average holiday shopper spent \$398.62 that weekend, up from \$365.34 last year.” The NRF called this “a promising sign for the economic recovery,” and they might be right, but it’s way too soon to tell for sure. See [here](#) for a short piece from *The Wall Street Journal* on why gauging holiday sales’ impact on GDP is tricky.
- Every few months we show a chart or two dealing with “disposable personal income” (DPI), which is what households have left to spend or save after accounting for income taxes. The chart on the top left of the next page shows that DPI rose from the end of 2009 through the beginning of 2011, but it’s been basically level since then. Since income can only be saved or spent, if

spending is rising at the same time that DPI is stagnant — as the retail sales numbers discussed seem to indicate is happening — then savings must be falling. The chart on the top right below, which shows personal savings, confirms this.



- The chart at right puts the charts above together by showing personal savings as a percentage of disposable personal income. This percentage trended slightly downward from mid-2010 through mid-2011, but it's fallen much more quickly in the past few months — October 2011's 3.5% is much closer to the 2.7% average from 2000 through 2007 than the 5% to 6% seen for much of 2009 and 2010.
- Consumers are clearly dipping into their savings now, but at some point this source of funds could dry up. Moreover, a return to higher levels of savings could crimp spending unless incomes start increasing more than they have.
- On the flip side, higher personal savings would improve households' balance sheets and provide a cushion if the economy turns south again. It should also boost the broader economy in the long run by making domestic savings available more cheaply to investors, who presumably would turn it into new machines, factories, and so on.



Where to go for more information:

- The Census Bureau's press release covering October 2011 retail sales is [here](#). November 2011 retail sales will be released on December 13.

NEW LIGHT VEHICLE SALES

Who releases it and when?

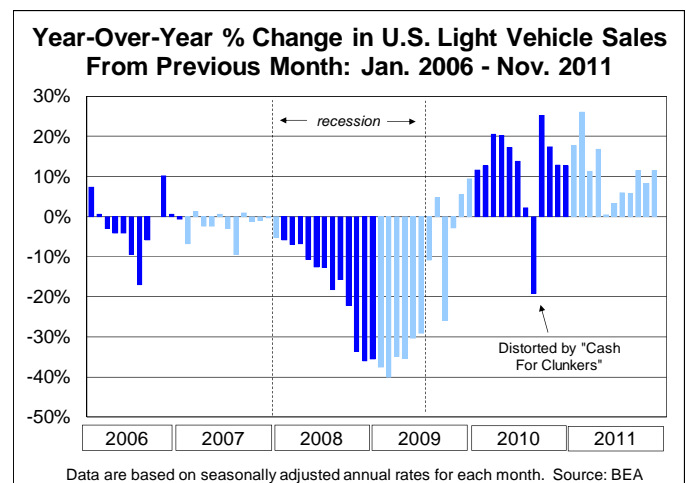
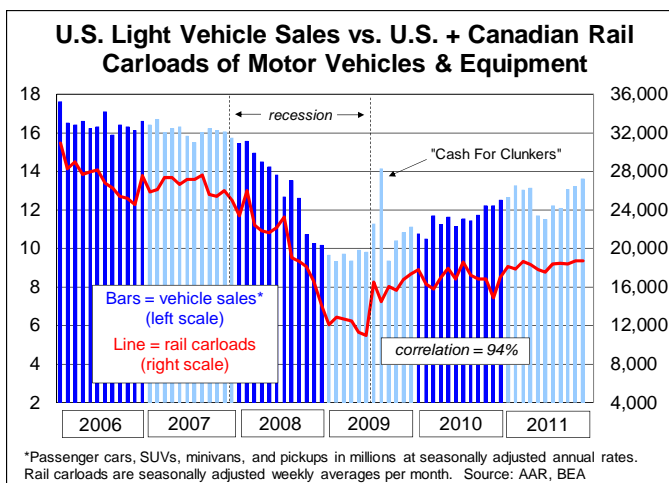
- The U.S. Bureau of Economic Analysis early in the month.

What is it and why is it important?

- Data cover U.S. sales of cars and light trucks, including pickups and SUVs. Over the past 50 years, spending on motor vehicles has accounted, on average, for about 3.7% of U.S. GDP. Monthly auto sales are often referred to in terms of seasonally-adjusted annualized rates (SAAR). In 2010, 6% of U.S. Class I railroad gross revenue came from hauling autos and auto parts.

What are the latest numbers?

- **New light vehicle sales rose to 13.6 million** on an annualized and seasonally-adjusted basis in **November 2011, their highest level since June 2008** (not including August 2009's 14.1 million, which was distorted by "cash for clunkers"). Sales were 13.2 million units in October 2011. As the chart below left shows, at November's level, light vehicle sales have recovered about 2/3 of the losses they experienced during the recession. The chart below right shows that, with the exception of August 2010, year-over-year auto sales have now risen each month for the past two years. It's a refrain we see in many different indicators, including rail traffic: real improvement as the recovery has progressed, it's just taking a long time.



- The chart above left shows U.S. and Canadian rail carloads of motor vehicles and equipment. As we explain in more detail on page 19, rail carloads of motor vehicles and equipment show the highest correlation with GDP one quarter out (in other words, is a better "leading indicator") than any other individual rail commodity category.
- The key question for auto sales is whether the improved sales over the past four or five months is caused by pent-up demand that's a result of delayed purchases caused by supply shortages and associated price increases earlier in the year that will soon run their course, or if the higher sales are a function of a real economic resurgence that will last. Click [here](#) for a video of a short Bloomberg Television discussion with Jeremy Anwyl, CEO of Edmunds.com, a prominent auto-information firm, in which Mr. Anwyl opines that sales will slow in the new year. Others think differently. For example, in its announcement of the company's November sales, Ford's vice sales and marketing chief said, "The industry sales rate has exceeded 13 million in each of the last three months. This suggests the current momentum is not an aberration." We'll see.

Where to go for more information:

- BEA data on auto sales are [here](#).

HOUSING STARTS

Who releases it and when?

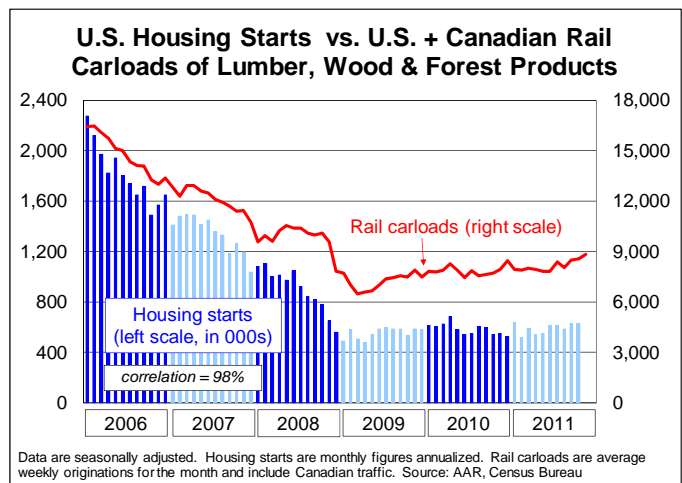
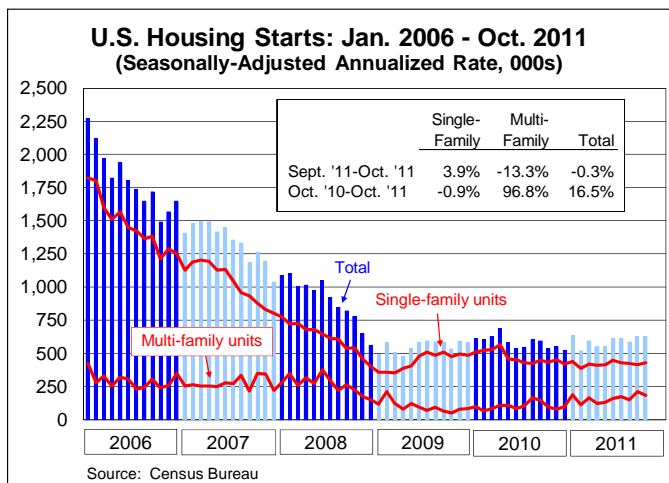
- U.S. Census Bureau, around the middle of each month.

What is it and why is it important?

- A housing start is beginning the foundation of a residential home. Historically, housing has directly accounted for around 5% of the overall economy and has large spillover effects on other sectors (such as retail sales and manufacturing), since people buying new homes tend to spend on other goods such as furniture, lawn and garden supplies, and appliances.
- It changes a bit from year to year, but since January 2006 single family homes have accounted for 79% of U.S. housing starts; multi-family buildings account for the other 21%. Housing starts — especially for multi-family homes, which are usually apartments — often fluctuate considerably from month to month, so trends are more important than a particular point in time.
- In the past, housing starts have usually been considered a “leading indicator” because construction growth usually picks up at the beginning of a business cycle. However, factors in today’s housing market — including a huge oversupply of existing houses due to slow sales and widespread foreclosures — means new construction is a big drag on the economy today.

What are the latest numbers?

- **Housing starts fell 0.3% in October 2011 from September 2011 to an annualized 628,000**, down from 630,000 (revised downward from 658,000, which turned out to be too good to be true) in September 2011 (see chart below left).
- The chart below right shows a very slow upward trend recently in rail carloads of lumber and wood products and suggests that housing starts could be heading slowly higher too.



Where to go for more information:

- The Census Bureau’s press release on housing starts in October 2011 is [here](#). November data will be released on December 20.

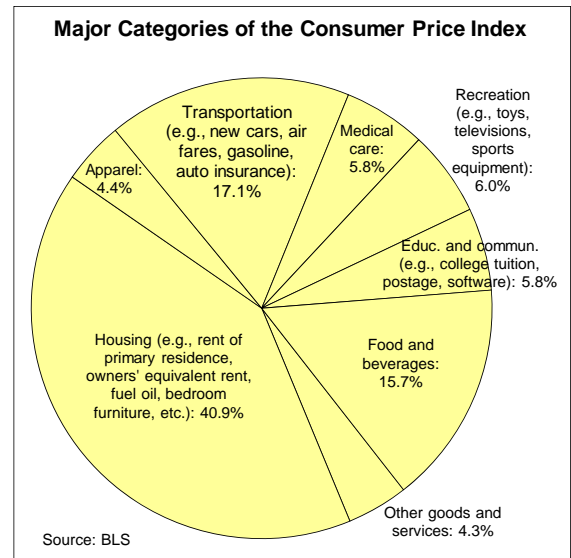
CONSUMER PRICE INDEX (CPI)

Who releases it and when?

- The U.S. Bureau of Labor Statistics (BLS) releases the data mid-month.

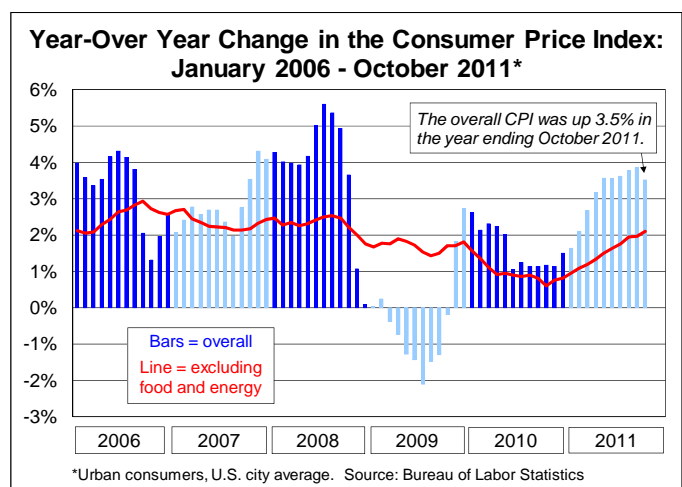
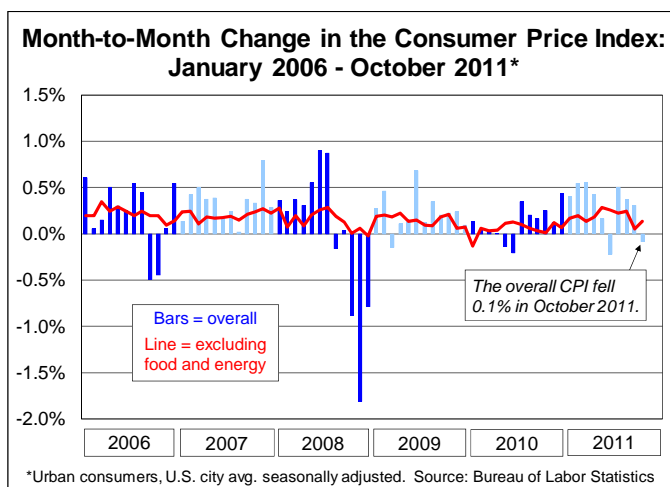
What is it and why is it important?

- The CPI is the benchmark inflation guide for the U.S. economy. It measures the changes in the cost of a representative basket of consumer goods and services. The BLS collects prices from more than 20,000 retail and service establishments throughout the country.
- The “CPI for All Urban Consumers” (CPI-U) is the inflation index most often reported by the media, although BLS publishes thousands of CPI indexes each month. The “core” CPI — defined as CPI less food and energy — is also commonly used. Food and energy prices are typically more volatile than other prices due in part to their susceptibility to external shocks.
- It's hard not to have at least a little inflation when an economy is growing, but inflation can harm economies in many ways. Just one example: inflation confuses price signals — producers don't know if higher prices are simply part of an inflation-related adjustment or if they signal higher demand that warrants expanded production. It is believed that the Federal Reserve regards inflation of 1.5% to 2% to be about right for the U.S. economy.
- The CPI-U or a related index is the basis for cost-of-living adjustments for Social Security, federal retirement payments, many private pensions, and food stamps.

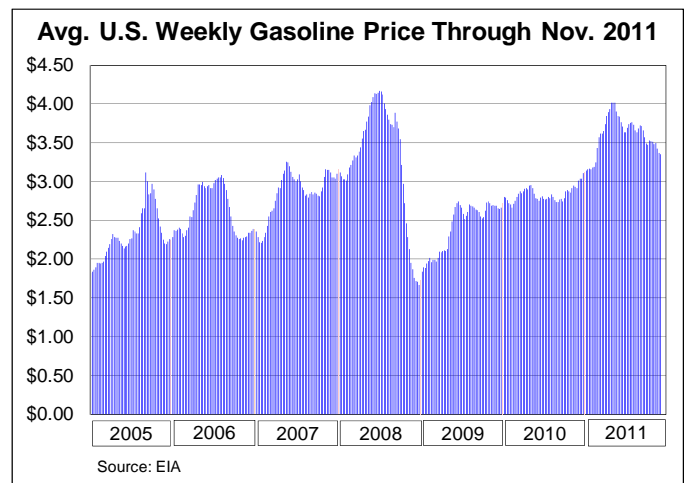
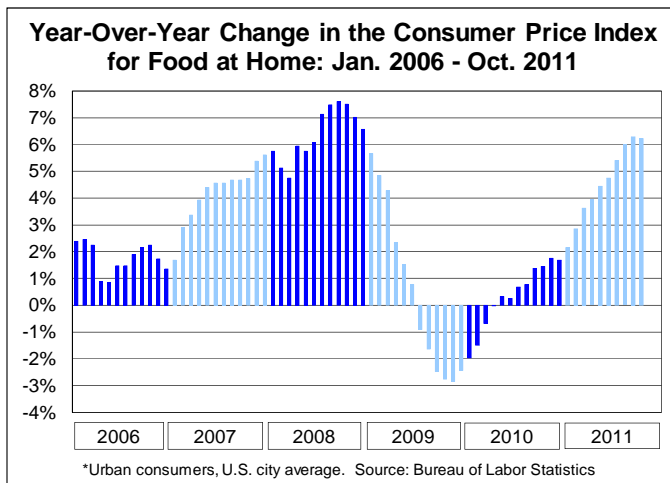


What are the latest numbers?

- The overall CPI fell 0.1% in October 2011 — the second time it's fallen so far in 2011 (see the chart below left). For the year ending October 2011, the overall CPI rose 3.5%, its lowest level since April 2011 (see chart below right). Could it be that the recent bout of inflation has peaked and is now heading down?



- The overall CPI consists of a basket of many different goods relevant to the “average” person. Obviously, to the extent that an individual’s actual purchasing patterns differ from that basket of goods, the CPI will be less relevant for that person. College tuition is part of the CPI basket, for example, even though most people at any particular point in time are not paying tuition and may not be aware how tuition prices are changing. (If you said “up a lot” you’d be right, as those of us who are writing checks to colleges know.) Food consumed at home and gasoline are two everyday things whose prices all of us more or less generally know and follow. The charts below show that food prices have been rising steadily for nearly two years, and that average gasoline prices have fallen about 65 cents per gallon since their recent peak in May 2011.



- Consumers don’t like paying higher prices than they have to, of course, but retailers want prices to be as high as they can get away with. Continued downward pressure on prices is a symptom of continued weak consumer confidence and feeble income growth. Lower inflation pressures would also make it easier for the Federal Reserve to take further action (assuming it can think of something that would do any good) to try to spur the economy.

Where to go for more information:

- The BLS press release on the October 2011 CPI is [here](#); the CPI for November 2011 will be released December 16.

RAIL FREIGHT CARS IN STORAGE

Who releases it and when?

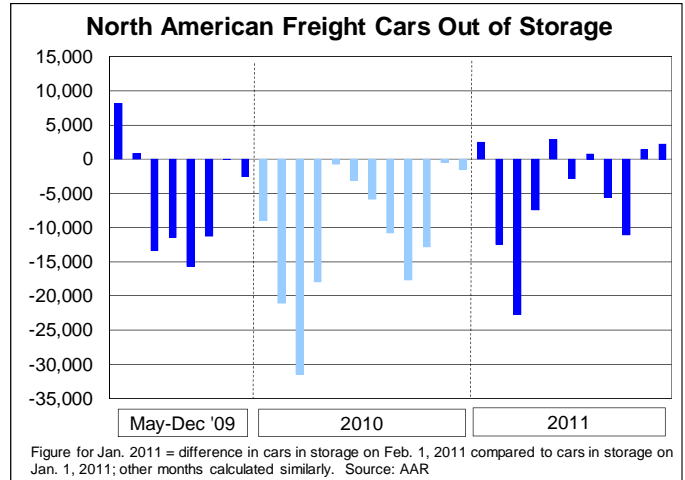
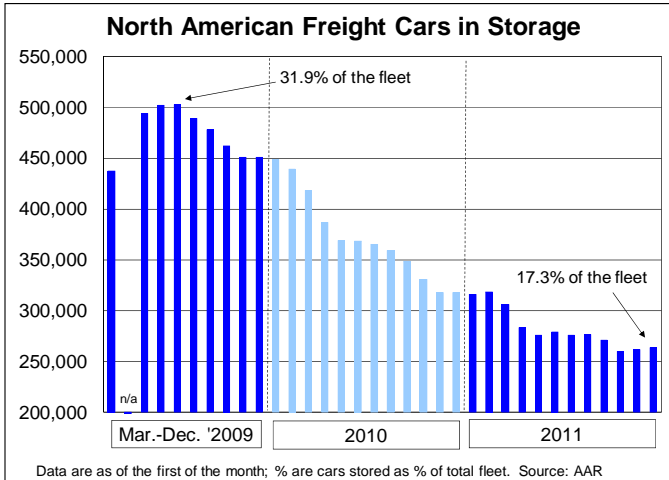
- The Association of American Railroads each month in *Rail Time Indicators*.

What is it and why is it important?

- A freight car is “in storage” if it has had a loaded revenue move since 2005, but not in the past 60 days. Rail cars are stored when they are not needed due to lack of demand; they come out of storage when demand improves. Figures are for the entire North American rail freight car fleet and include rail cars owned by railroads, leasing companies, shippers, and others. The total freight car fleet changes from month to month as new cars are added and old cars are scrapped.
- There is a great deal of complexity in freight car usage patterns. For example, increases in demand for rail service for a particular commodity relative to another mean that some car types might be in very short supply at the same time that others are plentiful; a freight car might go through cycles where it is stored for a few months and then returned to service for a few months; and changes in scrap metal prices might make scrapping cars more attractive at one time than another.

What are the latest numbers?

- As of December 1, 2011, **263,912 freight cars were in storage**, an increase of 2,217 from November 1 and equal to **17.3% of the North American fleet**, excluding cars without a load since before 2005 (see charts below).



- In July 2009, 1.603 million cars were in the fleet, including cars without a load since before 2005. From July 2009 through November 2011, 56,579 new cars were installed, while 124,823 cars were scrapped or otherwise removed, yielding a net reduction of 68,244 cars in the North American fleet.
- 527,060 cars were in storage on July 1, 2009 (including cars that haven't moved since before 2005). By December 1, 2011, that was down to 276,278, for a reduction of 250,782. Subtracting the 124,823 cars scrapped or otherwise removed yields 125,959 cars returned to service.

Where to go for more information:

- Contact Frank Hardesty (fhardesty@aar.org, 202-639-2321). Media inquiries should go to Holly Arthur (harthur@aar.org, 202-639-2344).

For more information on anything in Rail Time Indicators or if you have suggestions on ways to improve it, please contact:

Dan Keen (dkeen@aar.org, 202-639-2326)

or

Shannon Stare (sstare@aar.org, 202-639-2322).

Media inquiries should go to Holly Arthur (harthur@aar.org, 202-639-2344).

To get on the e-mail distribution list for Rail Time Indicators, send a request including your name and business affiliation, if any, to Beth Eagney at beagney@aar.org.

