The Durable Goods Report

September 2013

Executive Summary of US Economic Activity

Manufacturing Data Release of 9/5/2013 (July Preliminary)

Employment Data Release of 9/5/2013 (August Preliminary)

Retail Data Release of 8/13/2013 (July Advanced)

Industrial Production Data Release of 8/15/2013 (July Advanced)

Housing Data Release of 8/16 & 8/23 2013 (July Advanced)

Source Data: US Census Bureau, US Bureau of Labor Statistics, US Department of Commerce, Energy Information Administration, Federal Reserve Board, Baker Hughes

John E. Layden

By the Numbers

Durable Goods Key Measures			
	Current Mo	Prior Mo	Prior Yr
New Orders-Durable	226,257	244,351	228,588
12 month moving average	222,435		218,993
% Change from Prior Year	1.6%		
Growth Index - Durable New Orders	1.058	1.052	1.017
Unshipped Orders - Durable	1,033,906	1,029,877	995,852
% Change from Prior Year	3.8%		
Value of Shipments - Durable	228,815	229,600	229,046
Book to Bill Ratio	0.99	1.06	1.00
Inventory - Durables	378,869	377,602	369,847
% Change from Prior Year	2.4%		
Inv to shipments ratio - Durable	1.66	1.64	1.61
US Economy Key Measures			
	This period	Last period	Change
GDP 2012 Q4 (current $)	16,633.4	16,535.3	0.6%
Industrial Production	2,587.6	2,578.6	0.3%
Capacity Utilization %	77.6	77.7	-0.1
Manufacturing %	76.4	76.6	-0.2
Durable Goods %	75.6	75.9	-0.3
Primary Metals %	74.3	72.3	1.9
Autos and Parts %	74.7	76.1	-1.4
Machinery %	82.3	85.0	-2.7
Durable Goods ($Mil SA)			
New orders	226,257	244,351	-7.4%
Shipments	228,815	229,600	-0.3%
Inventory	378,869	377,602	0.3%
Unshipped Orders	1,033,906	1,029,877	0.4%
Retail ex Food Service ($Mil SA)	378,652	378,090	0.1%
Autos and Parts	73,974	74,804	-1.1%
Gasoline	45,784	45,390	0.9%
Core retail (ex auto, gas)	252,069	251,116	0.4%
Employment (000's SA)			
Civilian employed (Household Survey)	144,170	144,285	(115)
% of potential workforce (HS)	58.6%	58.7%	-0.1%
Civilian not employed (HS)	101,789	101,471	318
Non-Farm (Establishment Survey)	136,133	135,964	169
Private (ES)	114,302	114,150	152
Government (fed, state, local) (ES)	21,831	21,814	17
Goods Producing (ES)	18,638	18,620	18
Manufacturing (ES)	11,963	11,949	14
Construction (ES)	5,798	5,798	-
Durable Goods Mfg (ES)	7,518	7,496	22
Housing (000s of Units SA)			
Total housing starts	896	846	5.9%
Single family starts	591	604	-2.2%
Single family sales (new)	394	455	-13.4%
Single family for sale (new)	171	161	6.2%

US Economy – Quick Look:

US GDP

Q2 2013 GDP growth estimate was increased to 2.5% (from 1.7%) SAAR, 0.6% Q/Q, 2.9% Y/Y. Primary adjustment was due to changes in import, export and trade deficit.

Industrial Production

Industrial production excluding industrial supplies increased 0.3% to $2.59 trillion. Now stands 2.1% above prior year. Capacity utilization decreased 0.1 points to 77.6%.

Durable Goods

New orders for durable goods decreased 7.4% to $226.3 billion. The 12 month moving average slipped to 1.6% above last year.

Retail:

Retail sales (ex food service) increased 0.1% to $378.7 billion. Core retail (ex food service, autos, gasoline) increased 0.4% to $252.1 billion. Gasoline sales increased 0.9% to $45.8 billion, all due to price increases.

Employment:

Working-age population increased by 203,000.

Household survey shows: Employed: down 115,000. Not employed: up 318,000. Employed: 58.6% of population (down 0.1).

Establishment survey shows: 169,000 jobs added. Durable goods employment increased 22,000.

Housing:

Total starts: +5.9% to 896,000 SAAR. Single family starts: -2.2% to 591,000. Single family sales: -13.4% to 394,000. Median value: decreases to $256,933 (3mma) and 12% above prior year. Single-family share of starts dropped to 66%.

Random Thoughts, Stray Data and Rants:

Economy

- We've previously highlighted the Chinese practice of transferring debt to regional banks to make it less visible. Now there is a fear that these banks may default on holdings totaling 40% of Chinese GDP. No one has a clear idea of what this would do to world economies. http://www.japantimes.co.jp/opinion/2013/08/12/commentary/no-fluffing-up-chinas-slump/#.UgoJqz9VYSg
- Short term Chinese interest rates are increasing rapidly (7% to 25%) after the June crisis. No way to know how this effects business because of the shadow banking system that has always provided much of the short term credit at 40% rates.
- India is beginning to have serious economic problems. Responding with welfare and land reform. Both moves are known to worsen the problem of a slowing economy.
- Between 1990 and 2010 the number of people worldwide living in abject poverty (<$1.25 per day) has been halved, from 2 billion to 1 billion. Blame it on free markets. Especially in China where private business was allowed to prosper (creating massive inequality, but at a higher level of overall income).
- China has routinely puffed up GDP by "Investing in Infrastructure." When you do that it had better have an immediate economic purpose (meaning economic return - profit). If the investment is intended solely to "create jobs" you might as well invest in tulip bulbs. Every job created or financed by government destroys 2 jobs in the private sector. Possibly more.
- The US "green Jobs" initiatives will never produce an economic return. They cannot exist without government subsidies. This includes all forms of alternate and renewable energy: Wind, solar, ethanol, bio-diesel, electric cars, you name it.
- There are plenty of other examples in the US. The Bridge to nowhere and the Johnstown, PA commercial airport come to mind.
- Chronic shortage of truck drivers in the US. This article claims it's been going on since the late 80s. But if it's gone on for that long and the goods are getting delivered, how can there really be a shortage? In a free market there is no such thing as a "chronic shortage." Only a "market clearing price." http://innovationtrail.org/post/americas-truck-driver-shortage

- US Education Department reports that a record 57% of college students receive financial aid.
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- US Census Bureau shows 25% of New Jersey adults live with parents; 42% are over 24 years of age.

- Labor work hours based on a study of the Federal Reserve Economic Data.

	Annual hrs in 1950	Annual hrs in 2011
US	1900	1700
France	2150	1480
UK	2250	1650
Germany	1950	1400
Japan	2090	1700
Canada	2090	1700
Netherlands	2300	1400
Taiwan	2780	2180
Singapore	2480	2300
Hong Kong	2600	2350
Korea		

- Another report shows that Swedes work more than US http://www.powerlineblog.com/archives/2013/08/this-is-just-embarrassing.php

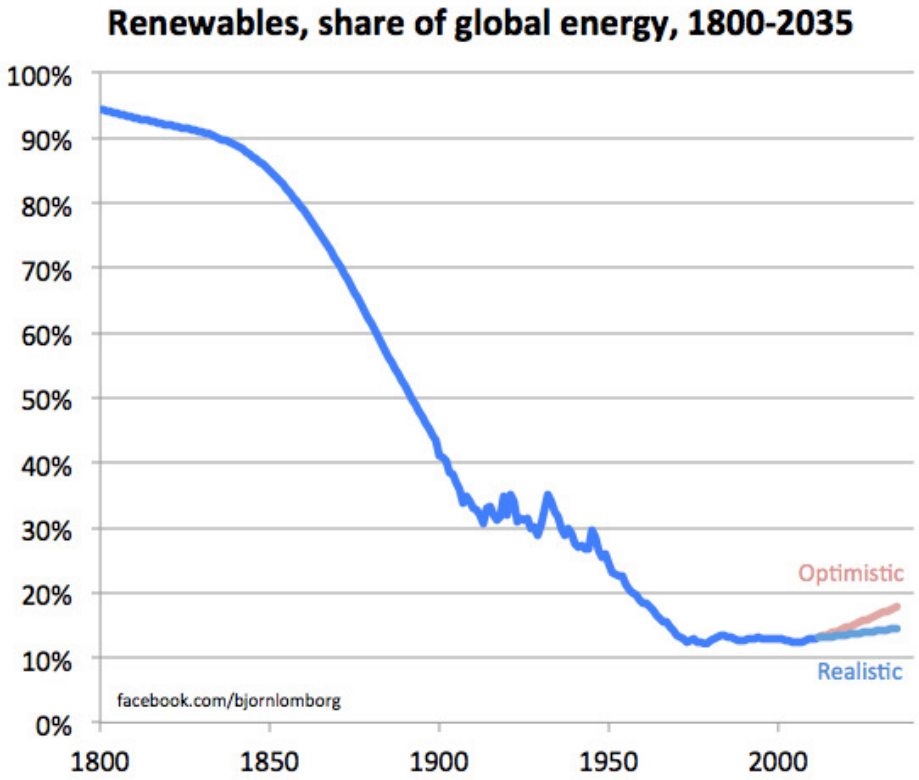
Energy: *A key driver of wealth, surplus wealth and demand. Used as a labor multiplier it generates wealth and improves living standards.*

- We will once again repeat our prediction for energy. It's about to become essentially free. Too cheap to bother using a meter on it.
- Compared to the carbon-hydrogen bond that is our current energy storage technology, nuclear fission delivers 1000 X the energy density. And fusion increases that by a factor of 1000 X again.
- The Rossi E-Cat system has an energy density at least 10x that of gasoline. This is the long term outgrowth of the controversial (at the time) "cold fusion" experiments of the late 1980s. I've been a fan since I saw a report buried on page 20 in a Tokyo newspaper (about 1993) describing a successful replication by a major semiconductor company. www.phys.org.
- But there's a problem with the technology. The current systems produce low grade energy. Steam at atmospheric pressure can't do much useful work. Maybe useful for space heating.
- This is an example of a problem that will probably be solved. No obvious barrier to building a high temperature version. There are reports of one of the systems getting out of control and melting the steel container.
- Around 1990 two systems in the US exploded while attempting to replicate the original Fleischmann – Pons experiment.
- There are still many critics. The isotope of copper produced in the reaction seems to be wrong for known fusion reactions. And the lack of gamma ray radiation raises questions about whether it's really a fusion reaction.

- But something is going on that isn't easily explained away. It may be a while before it becomes practical. But the stakes are huge.
- While we're waiting for fusion to deliver we have access to a better fission technology and it's available now. Thorium fission in the form of a Liquid Fluoride Thorium Reactor (LFTR) is far superior to uranium reactors.
- A five minute introduction to the next energy miracle. https://www.youtube.com/watch?v=uK367T7h6ZY
- Thorium eliminates the need for high pressure, water-cooled reactors. Replaces it with liquid salt operating at atmospheric pressure. No containment structure needed.
- Thorium is also scalable to extremely small size. School bus size to power a large subdivision. Initial cost about $500 per home. Operating cost less than $1 per year.
- Some current discussion on a LFTR that would replace a car engine.
- The Thorium bandwagon. Norway has started operation of a Thorium reactor that is a simple conversion of an existing Uranium plant.
- China and India are building full size power plants powered by Thorium.
- The world is rapidly waking up to a technology the US developed in the 60s and 70s and abandoned in the 80s. I've never heard a good explanation for why Uranium prevailed. Maybe to make bombs with the waste products, which Thorium systems can't support.
- In the meantime, we need to reduce regulation of coal, oil, gas to allow the economy to thrive. Only wealthy economies produce energy innovation.

- Given the above, can someone tell me why we should return to "renewable" energy? Does this mean burning wood? We stopped doing that as soon as an option became available in the mid-19th century (coal).
- After the European discovery of the Americas a major export back to Europe was timber. The supply seemed to be inexhaustible and Europe had been stripped of trees. But soon the by-product of land clearing for farming dried up.
- So why is "renewable" energy a bad idea? Lots of reasons including arguments related to land use for food as a moral imperative. But let's look at a simple example.
- All renewable energy sources are massively inefficient in terms of resource utilization. Huge demands for land (solar, wind, ethanol), water (ethanol), excess energy input (wind, solar, ethanol, battery). So there should be no support from the "sustainability" crowd, right? But they're the loudest activists. Why?
- A substantial part of the population believes we'll run out of everything soon. But history shows a different lesson:

- Nothing is sustainable forever if extrapolated at current rates of consumption. But…
- Nothing has ever been exhausted.
- Innovation always displaces everything before we run out or even get close. The stone age didn't end due to a lack of stones.



- Another "sustainability" problem. Electric vehicles are going to destabilize the grid. The new Tesla S comes with a home charger that draws 20 kw. Typical home in San Francisco draws 2 kw peak power. So each plug in charger is equal to adding 10 homes to the electric grid.
- If everyone had one of these the grid capacity plus generating capacity would need to be expanded 10 fold.
- Has anyone included the energy required to do that into the "efficiency" equation of an electric car?
- The lifetime energy budget of an automobile is 80-90% spent when it rolls off the assembly line. So how important is gas mileage? But for electric cars it's the cost of the infrastructure. The energy budget is spent before the car is ***started*** down the assembly line.
- We gave up on electric cars a century ago because they were heavy, expensive and could only go 40 miles. Modern electric cars are heavy, expensive, can only go 40 miles and will bring down the electric grid.
    - Should the discussion of electric cars be refilled under "Government"?

Government: *"Government is the great fiction through which everybody endeavors to live at the expense of everybody else." F. Bastiat.*

- Myth: We need government to invest in more STEM (science, technology, engineering, math) graduates. We've heard this for 50 years. Fact: 15 million US residents hold STEM degrees; 11.4 million work outside STEM jobs. Of the 7.6 million STEM workers, only 3.3 million hold STEM degrees. Does this suggest that we graduate more STEM majors than we can employ? Do the excess grads move to other areas because of a lack of jobs? Or are they promoted to management positions?
- If there were a real shortage there would be different market behaviors. Business would offer higher wages and benefits, provide internal training. None of this is evident. Sounds like the same argument as the truck driver case (see Economy).
- The marginal cost of labor due to Obamacare turns out to be huge. Roughly doubles the payroll tax burden for both employee and employer for half the population.

http://marginalrevolution.com/marginalrevolution/2013/09/average-marginal-labor-income-tax-rates-under-the-affordable-care-act.html?utm_source=twitterfeed&utm_medium=twitter&utm_campaign=Feed%3A+marginalrevolution%2Ffeed+%28Marginal+Revolution%29

- How companies are coping with health care cost increases:
  - UPS drops 15,000 spouses and families from medical coverage.
  - Cisco to lay off 4,000.
  - IBM moves 110,000 retirees off the company health care plan. Gives them a fixed allowance to buy their own.
  - Time Warner drops coverage for retirees, moves them to exchanges.
  - Kroger drops coverage for spouses and families.

- Manufacturing is facing higher costs for both energy and labor. Obamacare is driving part of this. But there is an increasing chorus calling for intervention at the low end of the income scale. Worst possible idea.
- The entry level wage is not intended to be a permanent condition. It's the bottom rung on a ladder that allows an individual to build skills up to their potential and ambition. Raise the cost of that bottom rung and many will be denied an entry point onto the ladder. Increasing the minimum wage decreases employment opportunities of unskilled workers.

- With the minimum wage debate being reopened, what you won't hear is that when we raise the minimum wage by $1 we put about 300,000 people out of work. What's the moral argument for that position? Who will speak for the displaced workers?
- The debate is justified on the idea of a "just wage" or "living wage." Neither of these concepts have any definition in the real world. The core idea that the wage you receive can be divorced from the value you create is mathematically impossible. It is also a logical tautology in the form of a false straw man argument. Your choice (or your employer's choice) is not between a just wage and an unjust wage. The alternate is no wage. And the moral case for any job is in the value you create for others, not your own needs or wants.
- For manufacturing executives, prepare for an increase. Regardless of the logic, something is likely to pass. Your options will be to 1) attempt to pass on the added cost for entry level indirect labor, or 2) to move to part time and forgo some of the work, or 3) automate the work, or 4) forget it and eliminate the positions.
- Note to those demanding a $15 wage for fast food work. When the cost of labor exceeds the value created, the job goes away. That saves you the embarrassment of a low wage. But the work then gets done by a robot hamburger flipper. http://singularityhub.com/2013/01/22/robot-serves-up-340-hamburgers-per-hour/
- That creates jobs for robot designers and builders. But the hamburger flipper can't qualify for that job.

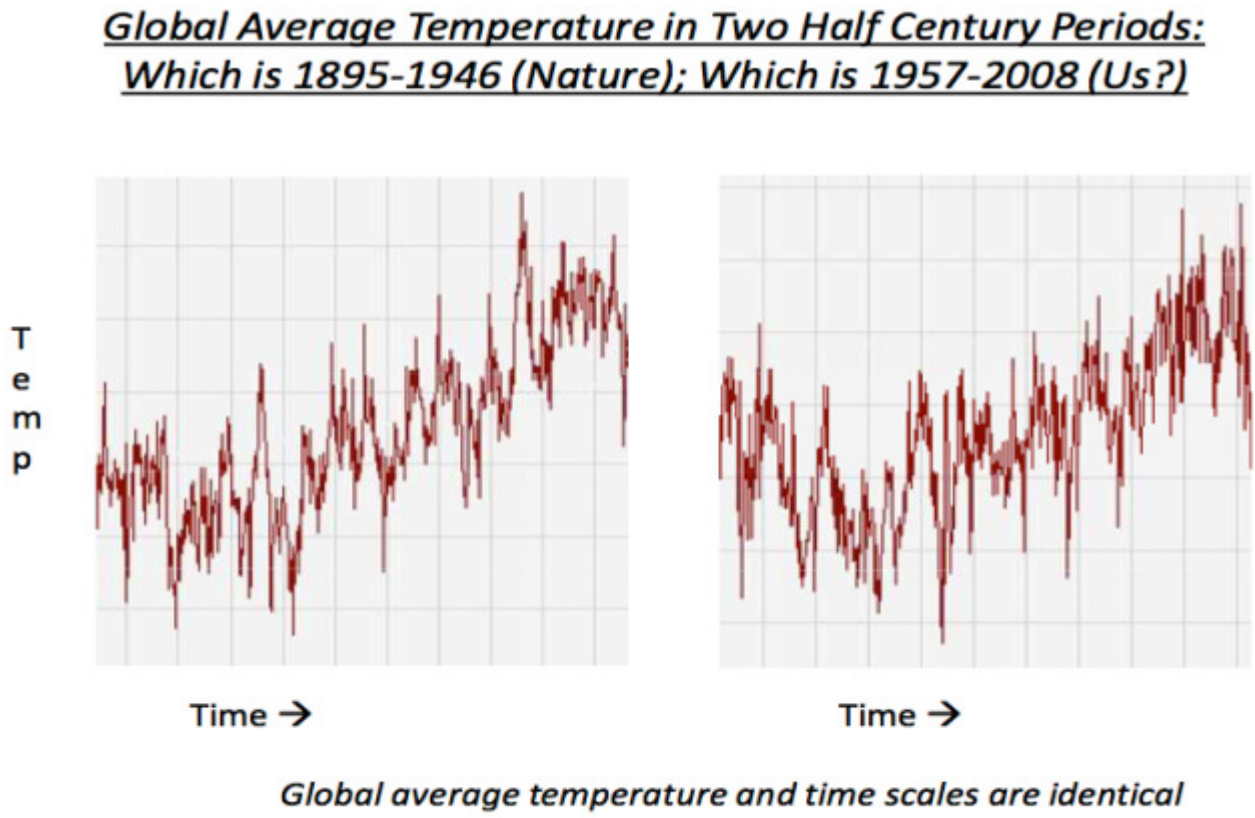
- Chris Christie, Governor of New Jersey, announces that he will save the dolphins.
    - Dolphins are found to be dying of a virus similar to measles.
    - Is he serious? Republicans are still in second place in the stupid race. But they're making a serious push to catch up.
- The cost of regulation in the US runs to about $2 -3 trillion by some estimates. But it can get worse. The EPA is going to regulate water vapor emissions.
- Water vapor is the primary emission from power plants. What most think is smoke is actually steam condensing to water vapor. Even nuclear power plants put out water vapor from the cooling towers.
    - The Democrat-Progressive administration isn't going to let the Republicans take the stupid lead without a fight.
    - Water, CO2 and Oxygen are the critical components of life. It's a good thing these government regulations prevent us from having too much life. Might not be good for us. Sort of like 32 ounce drinks.

- Reality is a hard taskmaster, and the political class isn't too comfortable with it. Seems they're starting to realize that the modern electronic reality leaves them out of the loop. Remember sequester? Neither does anyone else outside the beltway. Their debates are increasingly irrelevant. According to this article they were always behind the curve. http://www.realclearpolitics.com/articles/2013/09/02/reality_catching_up_to_the_political_class_119798.html#.UiUw88Ft8B8.twitter
- Speaking of the sequester, the DOD just launched a $7 billion spend on wind power. What the hell is DOD doing worrying about alternate energy?

Climate & Environment*: The scare topic du jour (actually, of the last 24 years) is used to justify higher taxes and more regulation.*

- The global public has figured out the climate change scam. Interest has plummeted.
- Press coverage of climate change issues has dropped to record low levels.
- And yet we see 193 of 194 national leaders endorsing initiatives to reduce CO2 emissions.
- The new head of the interior department announces that she "Wants no climate deniers in her department." Utopian dreams and anti-science often merge.
- We gave up burning wood as soon as there was an option. And for good reason.
- The argument from deep thinkers is that we should use renewable / alternate energy. Many of their proposals involve the conversion of cellulose to energy. Its carbon/hydrogen ratio is 10:1 (coal is 4:1, oil 2:1, methane 1:4). It doesn't matter what form it takes, cellulose is a terrible choice. Ferment switchgrass to ethanol and it takes 2 units of energy input to get 1 unit of energy out. Burn it and you release massive amounts of carbon soot.
- The use of plant starch or sugar is almost as bad. Corn ethanol takes 1.6 in to get 1 out. Cane sugar takes 1.2 in to get 1 out.
- Here's the real question. Where can we get enough extra coal and oil to be able to enjoy the feel-good luxury of "renewables"?

- The charts below show two 50 year periods of temperature trend. Can you tell which is which? I was able to correctly identify them immediately, but only because I've been studying the temperature profiles for 15 years.



Hadley CRUT3 global average temperature record

- Geophysical Research Letters: Sea levels dropped 7 mm in 18 months starting in 2010.
- Greenland ice sheet during the 2012 melt season caused a furor in the press. Truth is more interesting. At the end of the melt season there was 400 gigatons more ice than the prior year.
- More hysteria that melting Arctic ice allows commercial navigation of the Northeast Passage "for the first time." Balderdash! There are European records of commercial use of the Northeast Passage along the north coast of Scandinavia, Russia and Siberia going back to 1620.
- The "brave" adventurers trying to traverse the Northwest Passage this year have a problem. The passage iced-in early at both ends. Looks like they're stuck for the winter. Their attempts to highlight the devastation of "global climate change" will need to wait.
- For the first time in 11 years there was no Atlantic hurricane in August.
- There has been no Cat 3 or greater hurricane landfall in over 8 years. Longest period since before the civil war.
- Scientific ethics has been subverted in the climate debate. Dr. Judith Curry now says the science is uncertain and we just don't know what's going on with climate. She was a one-time supporter of the UN International Panel on Climate Change. Now reformed after finding it wasn't about science but about a cause. And it was a

way for a scientist to become famous without the normal need to earn the support of peers.
http://judithcurry.com/2013/08/20/scientists-and-motivated-reasoning/#more-12579

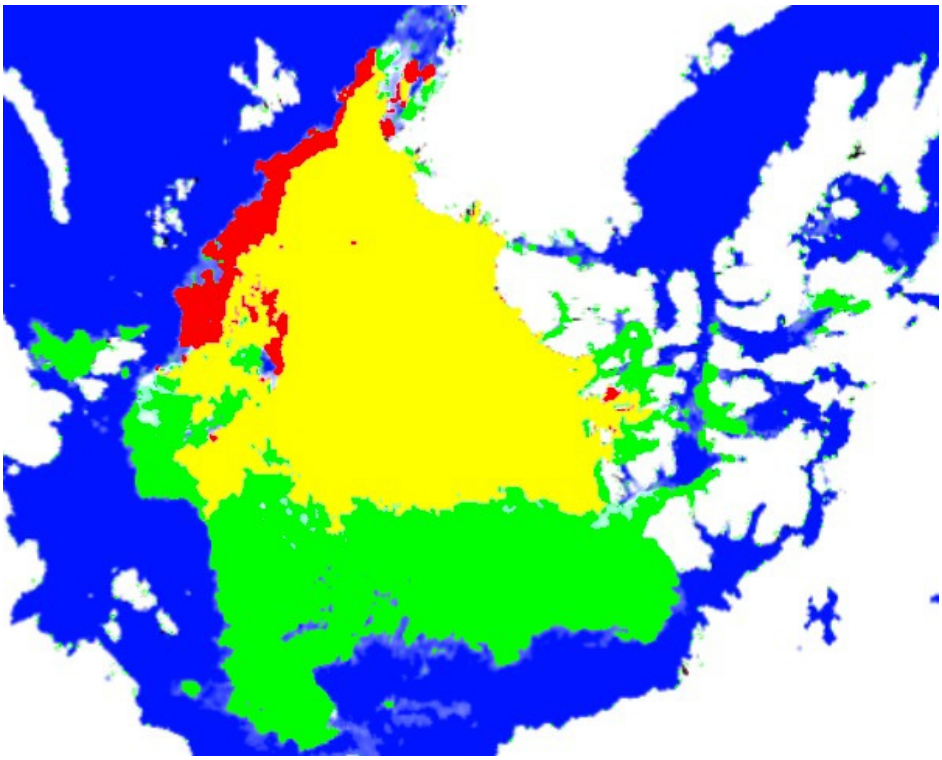
- US weather in the summer of 2013 has produced the fewest 100 degree days in a century.
- US summer 2013 produced about 2700 new low temperature records and less than 700 high temperature records.
- 15F in Alaska in August. New record low.
- As the evidence mounts that humans have no effect on global climate, the believers in human culpability use increasingly extreme arguments:
    - Sept 3, 2013, Seth Borenstien (AP): describes hurricane Sandy as a "Massive hybrid storm" but it was a pedestrian CAT 2 when it came ashore.
    - March 2013, Sierra Club: Arctic will be ice-free by September 2013.
    - June 23, 2013, James Hansen: Arctic will be ice-free in summer within 5-10 years.
    - June 26, Fairfax Climate Watch: Arctic ice-free in September 2013.
    - Fact: Arctic sea ice extent 73% above last year on August 31. http://stevengoddard.wordpress.com/2013/08/29/73-increase-in-arctic-ice-since-last-year/
    - Too bad they're all wrong. An ice-free Arctic would be an economic boon. It would also benefit the polar bears. But it isn't going to happen soon.

    - Tweet from Katharine Hayhoe **@KHayhoe**

      @bkparallax **@IamDonCheadle** the power to change climate lies in hands of every individual on the planet, not a single gov't--or technology!

      5:18 PM - 29 Aug 2013

    - Is she kidding? We have produced a couple of generations incapable of critical thought and immune to fact. At the same time we produced a generation of politicians skilled at manipulating their feel-good mentality.
- We've seen a flood of peer-reviewed papers published in August exposing the folly of the UN IPCC position on global warming. Too bad their next report is already out for comment. None of the new information will be included.
- Winter in Peru is setting records for cold and snow. Tens of thousands of animals perish. Paraguay reports 4,000 cattle dead.
- Chart below shows Arctic ice extent. Green shows new ice compared to last year. Red shows missing ice compared to last year.



Corruption of the Language Department

- George Orwell is best known for his popular book "1984." But he was a prolific writer against tyranny and pointed out that it was always dependent on the ability of the elites to redefine and corrupt the meaning of the language. Hence this new department where we can collect modern examples. To get on this list the phrase only needs to be intentionally misleading, mathematically impossible, or oxymoronic.
    - "Common sense _____." Phrase used by a politician when they can't think of an argument on substance. If you need to explain that it's common sense, it isn't.
    - "The _____ system in the US is broken. It's time for action." Has anyone asked what's actually broken about health care or immigration? The old health care system was the most creative and pervasively available in the world. The only inefficiencies came from government regulations and inefficient cost allocation for treatment of several million who depended on emergency room services. So the solution is more government regulation?

      The immigration system in the US seems to be in fine working order except that several decades of administrations have chosen not to enforce it. There is an existing "path to citizenship" and it's been used effectively for almost a century in its current form.
    - "Settled Science": Used by someone who has no factual case to make. Science is never settled. Science is defined as continuous challenge.

  - "Water prevents de-hydration": This phrase is banned on bottled water by the EU commission in charge of bottled water after a three year study because they could find no scientific evidence. Don't look at me that way. I'm not creative enough to make up this kind of stuff.
  - "Let me be clear on this…:" When from a politician it means "I'm about to obfuscate." First popularized by President Richard Nixon.
  - "We're accumulating phone records, not collecting them": NSA and other bureaucrats claim they compile the records but don't look at them. Collection only occurs when they look. Really?
  - "Common sense gun-control": Today it means "Disarm the victims." If you need to point out that your proposal is "common sense" it probably isn't.
  - "…post- industrial economy": Means that math and science was too hard and my self-esteem coach told me that soon no one would need them. Sorry, your self-esteem coach was happy-talking you. There's no such thing as the "Post-industrial economy." Only failed economies.
  - "Obstructionist" is anyone who refuses to cave in and do it my way.
  - "Fair and Balanced": means talking heads concurrently reciting opposing talking points no matter how unbalanced. (thanks to Rollie in Austin)
  - "Security": now means the absence of civil rights (thanks to Rollie in Austin).
  - "It's for the Children": Nothing that involves government debt is a positive for the children. It's a cover story for stealing their future before they can vote against the idea.
  - "Affordable housing": I don't know about you, but I've always lived in an affordable house. When this term is used by politicians it means government subsidized housing. That means you pay for someone else's mortgage. Giving free stuff to voters.
  - "We're all in this together" means "it's not my fault."
  - "Sharing" (when used by a politician) means they covet your money.
  - "Fair share": would that mean everyone paying the same %? Guess not.
  - "Social Justice": I thought justice was a matter of law. Silly me.
  - "Targeted tax cuts": The real issue is that someone besides the market gets to pick winners. Taxpayers are always the losers.
  - "Living wage": You deserve a good wage even if you don't produce that much value. In that case your job goes away and you no longer receive the embarrassment of a low wage.
- We'll keep the list growing as we get time.

US GDP

GDP estimate for Q2 2013 at 2.5%, up from the previous estimate of 1.7% SAAR. Based on current $ it comes in at 0.6% QtoQ and 2.9% above prior year same period. All of these numbers are below the performance of Q1. Appears to be driven by a shift in the balance of payments. But lower imports suggests a slowing economy.

Calvin Y. from Indianapolis notes that if we start with the $2 trillion in growth since Q1 2008, subtract the stimulus (debt funded), subtract quantitative easing (more debt), and subtract inflation, we are left with a negative growth number of roughly $1 trillion. There has been no real growth in 4.5 years. That is why employment statistics remain flat.

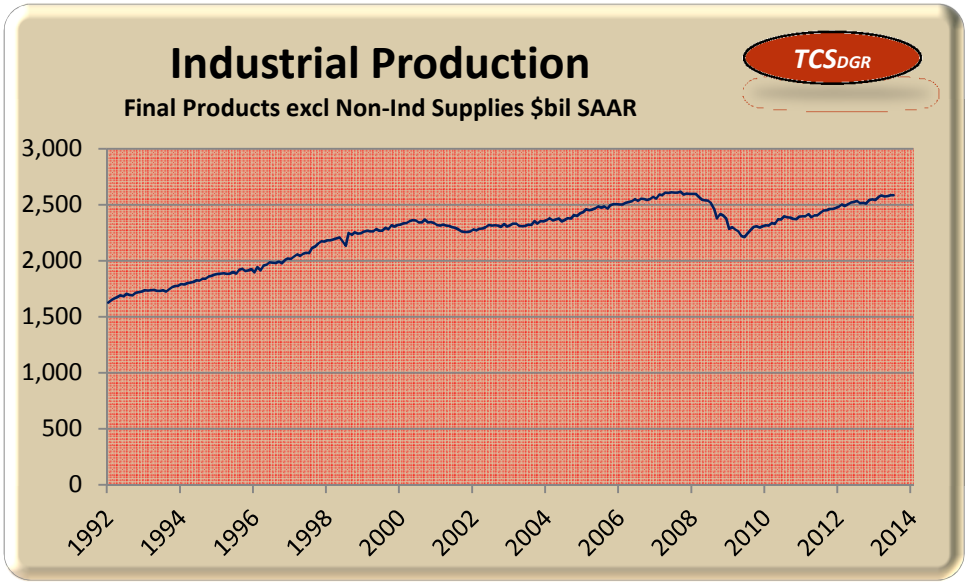
The ultimate test of GDP is measured in the quality and quantity of employment. By those measures we are facing a train wreck. See the employment section for details.

Gross Domestic Product				
Year	Qtr	GDP $b (SAAR)	Chg from Prior Pd	Chg from Prior Year
2008	1	14,672.9	-0.1%	3.1%
2008	2	14,817.1	1.0%	2.7%
2008	3	14,844.3	0.2%	1.9%
2008	4	14,546.7	-2.0%	-1.0%
2009	1	14,381.2	-1.1%	-2.0%
2009	2	14,342.1	-0.3%	-3.2%
2009	3	14,384.4	0.3%	-3.1%
2009	4	14,564.1	1.2%	0.1%
2010	1	14,672.5	0.7%	2.0%
2010	2	14,879.2	1.4%	3.7%
2010	3	15,049.8	1.1%	4.6%
2010	4	15,231.7	1.2%	4.6%
2011	1	15,242.9	0.1%	3.9%
2011	2	15,461.9	1.4%	3.9%
2011	3	15,611.8	1.0%	3.7%
2011	4	15,818.7	1.3%	3.9%
2012	1	16,041.6	1.4%	5.2%
2012	2	16,160.4	0.7%	4.5%
2012	3	16,356.0	1.2%	4.8%
2012	4	16,420.3	0.4%	3.8%
2013	1	16,535.3	0.7%	3.1%
2013	2	16,633.4	0.6%	2.9%

Industrial Production (excluding industrial supplies)

Industrial production was flat in July. The year to year comparison stands at 2.1% above the same month prior year. The gradual decline in the Y/Y comparison since mid-2012 suggests the economy is slipping closer to another decline.

Industrial Production - Final products $bil SAAR				
Year	Mo	Ind Prod - Value of Prod	Chg from Prior Pd	Chg from Prior Year
2012	1	2,483.6	0.4%	3.6%
2012	2	2,502.3	0.8%	4.3%
2012	3	2,488.1	-0.6%	3.0%
2012	4	2,502.9	0.6%	4.8%
2012	5	2,521.5	0.7%	4.8%
2012	6	2,527.6	0.2%	5.1%
2012	7	2,533.8	0.2%	4.4%
2012	8	2,516.1	-0.7%	2.8%
2012	9	2,518.8	0.1%	2.7%
2012	10	2,510.8	-0.3%	1.9%
2012	11	2,544.4	1.3%	3.3%
2012	12	2,548.1	0.1%	3.0%
2013	1	2,543.7	-0.2%	2.4%
2013	2	2,568.1	1.0%	2.6%
2013	3	2,584.4	0.6%	3.9%
2013	4	2,574.1	-0.4%	2.8%
2013	5	2,578.6	0.2%	2.3%
2013	6	2,587.2	0.3%	2.4%
2013	7	2,587.6	0.0%	2.1%



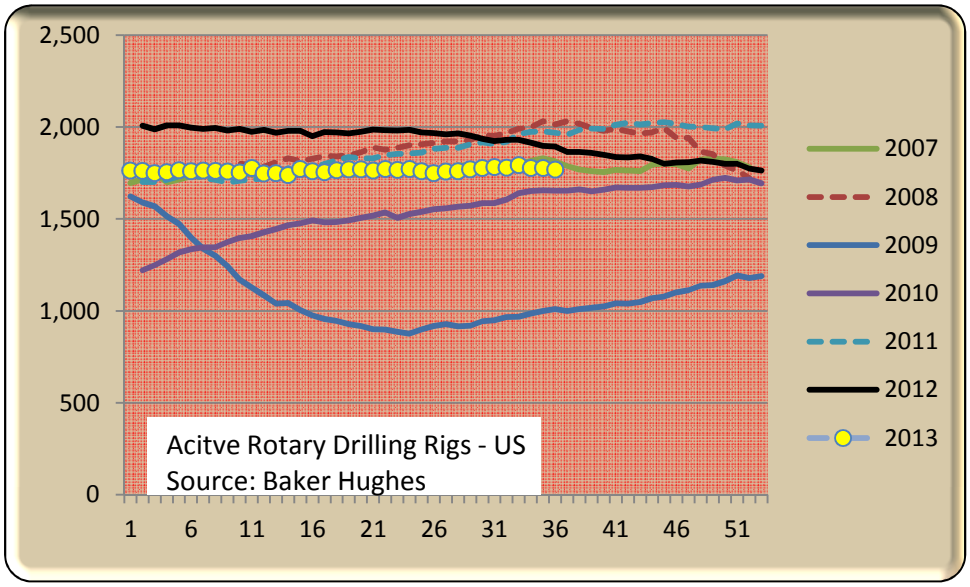
Capacity Utilization:

Industrial capacity utilization decreased 0.1 points to 77.6%. All tracked categories were down except primary metals. Manufacturing was down 0.2 to 76.8; Durable goods manufacturing decreased 0.3% to 75.6%; Primary metals countered the trend with an increase of 1.9 points to 74.3%; Autos down 1.4 to 74.7%; Machinery down 2.7 to 82.3%.

Capacity Utilization %							
Year	Month	Ind Prod	Mfg	Durable	Primary Metals	Auto	Mach-inery
2011	1	76.1	73.8	71.6	72.8	61.0	78.8
2011	2	75.7	73.8	71.9	72.3	63.3	79.0
2011	3	76.5	74.3	72.2	73.7	65.7	78.5
2011	4	76.0	73.7	71.2	73.0	60.9	77.4
2011	5	76.1	73.9	71.7	72.7	61.9	78.2
2011	6	76.2	73.9	71.6	72.7	61.7	78.8
2011	7	76.5	74.4	72.0	73.0	63.5	79.3
2011	8	76.8	74.5	72.4	73.2	65.2	79.1
2011	9	76.7	74.7	72.6	74.1	65.5	79.4
2011	10	77.0	75.1	73.1	75.1	67.7	79.7
2011	11	77.0	74.9	73.2	75.9	66.6	80.1
2011	12	77.3	75.6	74.0	76.6	69.4	81.7
2012	1	77.7	76.3	74.9	76.8	72.2	83.0
2012	2	77.9	76.7	75.4	77.4	71.9	83.6
2012	3	77.3	76.2	75.2	74.8	72.4	84.0
2012	4	77.7	76.6	75.7	76.3	74.0	83.9
2012	5	77.8	76.3	75.4	74.9	73.4	83.3
2012	6	77.7	76.5	75.8	73.5	74.4	85.0
2012	7	77.9	76.6	75.9	75.4	75.3	82.3
2012	8	77.2	76.0	75.0	75.1	72.5	81.4
2012	9	77.2	75.9	74.7	71.7	71.2	81.6
2012	10	77.0	75.5	74.5	72.6	71.1	79.6
2012	11	77.9	76.4	75.8	74.6	74.6	80.2
2012	12	77.8	77.0	76.4	77.4	76.3	80.4
2013	1	77.7	76.9	75.8	75.7	73.7	83.0
2013	2	78.1	77.3	76.6	75.2	74.5	83.6
2013	3	78.2	77.0	76.3	73.6	75.4	84.0
2013	4	77.8	76.5	75.8	73.4	74.9	83.9
2013	5	77.7	76.6	75.9	73.8	75.3	83.3
2013	6	77.7	76.6	75.9	72.3	76.1	85.0
2013	7	77.6	76.4	75.6	74.3	74.7	82.3
Year	Month	Ind Prod	Mfg	Durable	Primary Metals	Auto	Mach-inery

Energy:

No major changes in the level of drilling activity. Energy prices are likely to spike if there is a major action in Syria. But that is uncertain at this writing. US continues to make progress in reducing dependence on external sources, especially the Middle East. The goal of full independence is unlikely since that would reduce the global price of oil, causing imports to be attractive again. It really is a global market.



Energy Density measured by Heat of Combustion

The following energy density analysis is repeated from prior reports to address the contiuned stream of questions on the viability of various liquid fuels. Before you write about your latest wonder-scheme, check out these numbers.

The table below tells the story of energy concentration of various fuel sources, measured in energy per unit weight (mega-joules per kilogram) and energy per unit volume (mega-joules per liter). In the process of searching for an alternate energy source it's important to understand the handling characteristics, and these two measures provide an easy way to rank the options.

For the space shuttle the most important consideration is weight. Putting anything into orbit means picking a fight with gravity. Hydrogen has the highest energy concentration per unit weight by far compared to any other fluid source. But it's energy per unit volume (mega-joules per liter) is terrible. To take advantage of the low weight, engineers are willing to go to technical extremes (high pressure, refrigeration) to condense the hydrogen gas to a liquid.

On the other hand, coal is the most concentrated per unit of volume, so it is efficient to transport by rail.

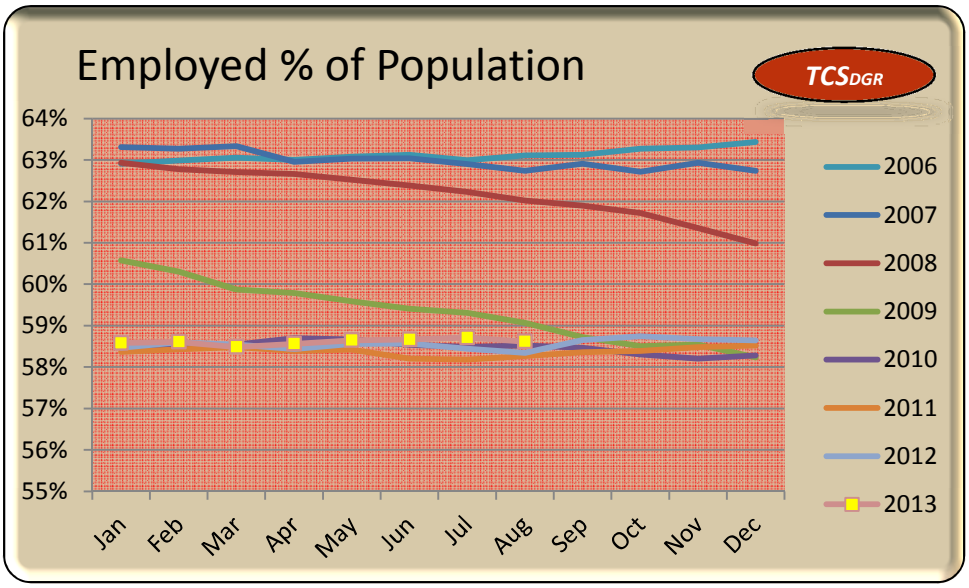
For autos and trucks the ideal is pretty much where we ended up a century ago (gasoline and diesel). If you were going to invent the perfect energy source for transportation it would look like gasoline. But propane isn't too bad. A modest amount of pressure will keep it liquid and it's been a big business for 50 years. Methane (LNG or CNG) is harder, but still viable.

Batteries are not a source of energy. They replace the fuel tank as a storage device. But we included them to give you an idea of how challenging an electric vehicle is. We gave up on electric vehicles a century ago because batteries were expensive, heavy and only had a 40 mile range. Today's modern batteries are expensive, heavy and only have a 40 mile range.

Measurements are in mega-Joules per kilogram (energy per unit weight) and mega-Joules per liter (energy per unit volume).

Heat of Combustion		
	MJ/KG	MJ/L
Hydrogen	143	0.01
Methane, CH4	56	0.04
Ethane, C2H6	52	29.7
Propane C3H8	50	29.2
Butane C4H10	50	30.0
Gasoline	47	34.0
100LL AvGas	47	34.0
Jet fuel - Kerosene	47	38.0
Diesel	46	39.0
Paraffin Wax	46	
Kerosene	46	36.0
Pentane	45	28.2
Body fat metabolism	38	35.0
Gasahol e85	33	26.0
Coal, Anthracite	32	72.0
Ethanol	31	24.0
Wood	22	
Methanol	20	18.0
Carb metabolism	17	26.0
Coal, Lignite	15	
Peat - damp	6	
Battery Lithium Ion	0.72	2.20
Battery, NiMH	0.25	0.50
Battery, NiCd	0.14	1.08
Battery, Lead Acid	0.14	0.36

Employment:

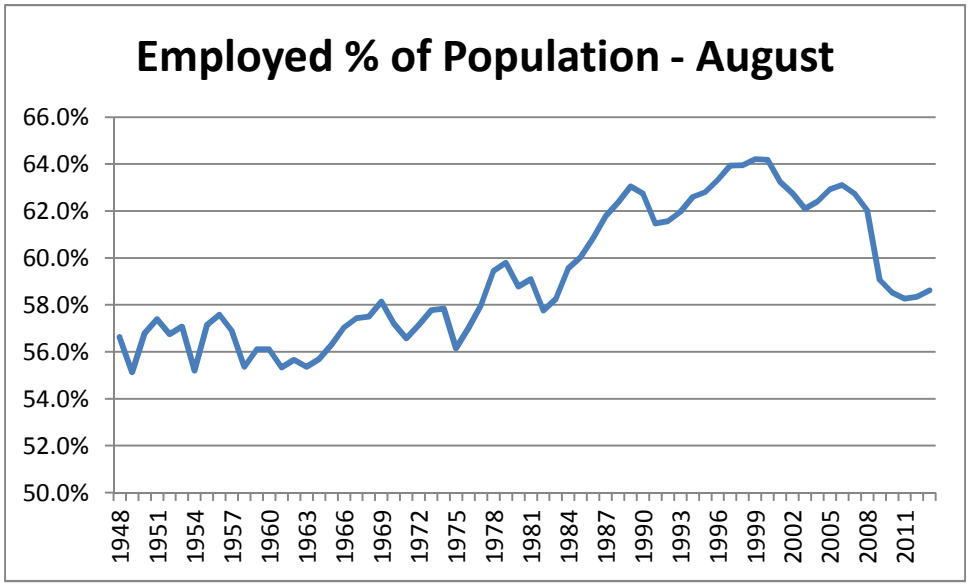


August employment data looked to be stable. Reality is far worse. The employed % of the non-institutional population was down 0.1 to 58.6%. This key measure has been stagnant since the beginning of the recession. But the most serious problem is that half the population is now employed part time. The number not employed increased by 318,000 to 101.8 million, and remains 324,000 above last year.

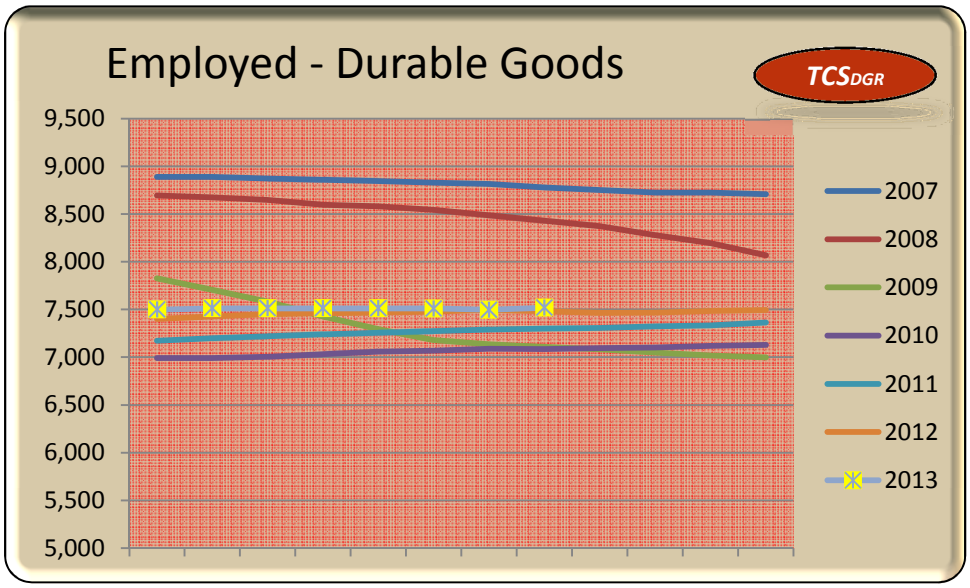
The establishment survey (large organizations) showed 169,000 new jobs. The household survey showed 115,000 fewer employed than last month.

It's hard to describe the dramatic change since January 2007. The following table may help. The economy has shed 1.9 million jobs during that period. In that same period the number not employed has increased 17.2 million. A smaller working pool supports a much larger dependent pool. There is no taxation or debt policy that can solve that problem. There's no one left to tax.

		Aug-13			Jan-07		Change
Employed		144,170	58.6%		146,028	63.3%	(1,858)
Unemployed	11,316		7.3%	7,116		4.6%	4,200
Not in the Labor Force	90,473			77,506			12,967
Total Not Employed		101,789	41.4%		84,622	36.7%	17,167
Working age pop		245,959			230,650		15,309
Employed per Not Working		1.42			1.73		
Source: Bureau of Labor Statistics							



August Employed % since 1948

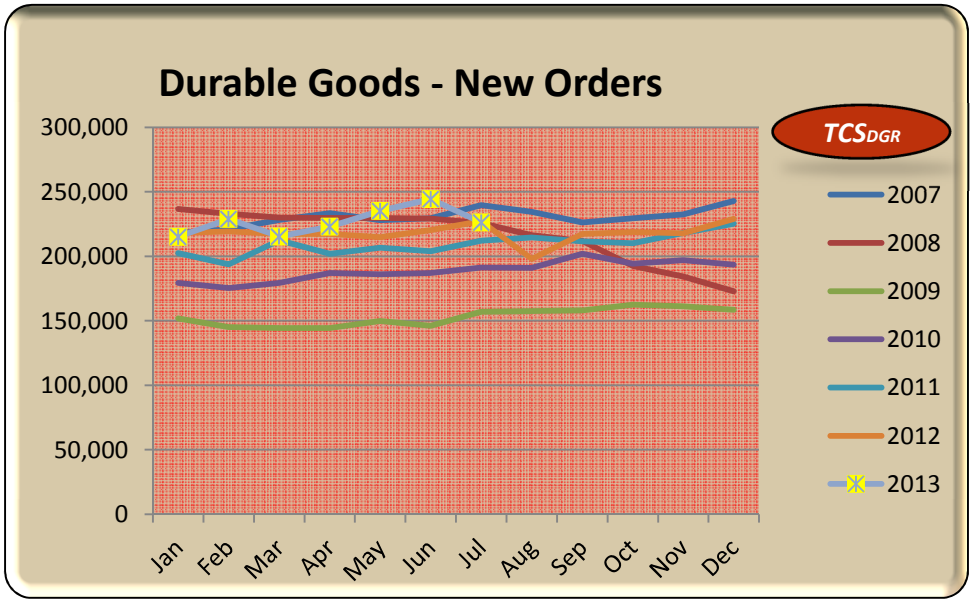


Durable goods employment increased 22,000 in August. But the prior month was revised to a negative. At this rate it will take a very long time to recover the 1.5 million jobs lost since January of 2007. The odds are strong that most of the jobs will not come back. They have either been outsourced or automated.

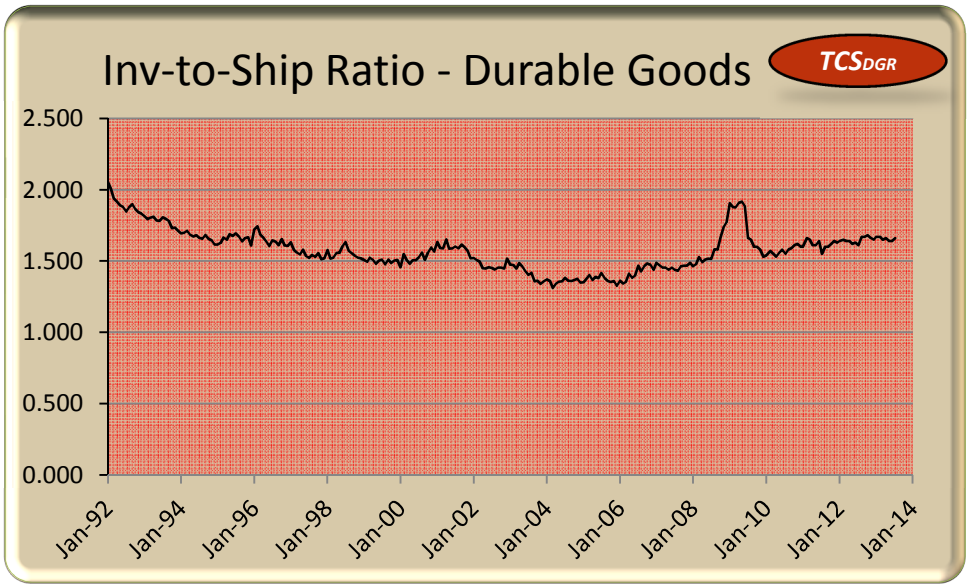
Sector Detail

The Durable Goods Sector:

New Orders: Durable new orders decreased 7.4% to $226.3 billion in July. A significant setback after several months of steady growth. Aircraft orders took the biggest hit, but many segments were down.

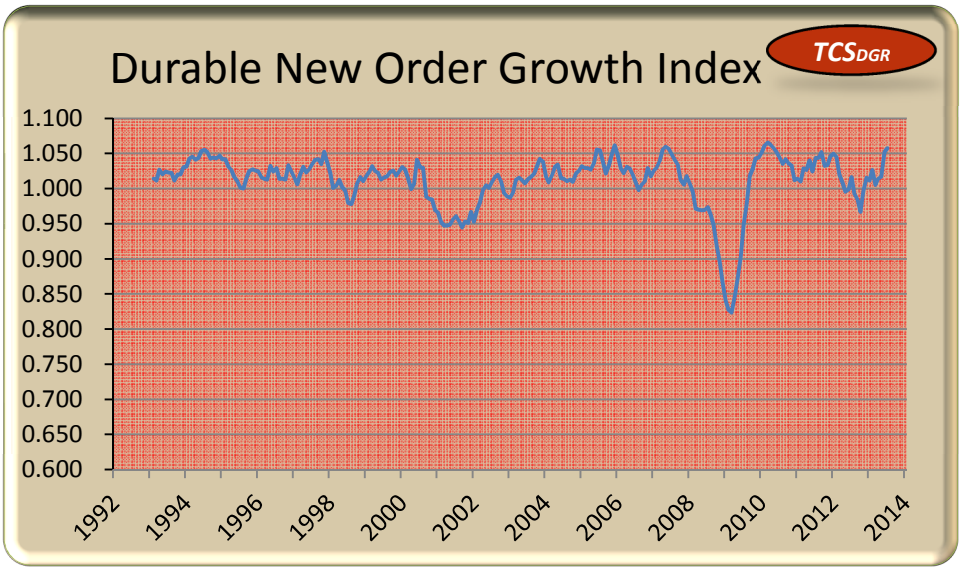


Inventory to shipments ratio increased slightly to 1.66. The Book to Bill ratio dropped to 0.99 from last month's 1.06. Long term average is 1.00. We cautioned last month that the uptick seen then might be a one-time blip due to aircraft orders. It now looks to be the case.

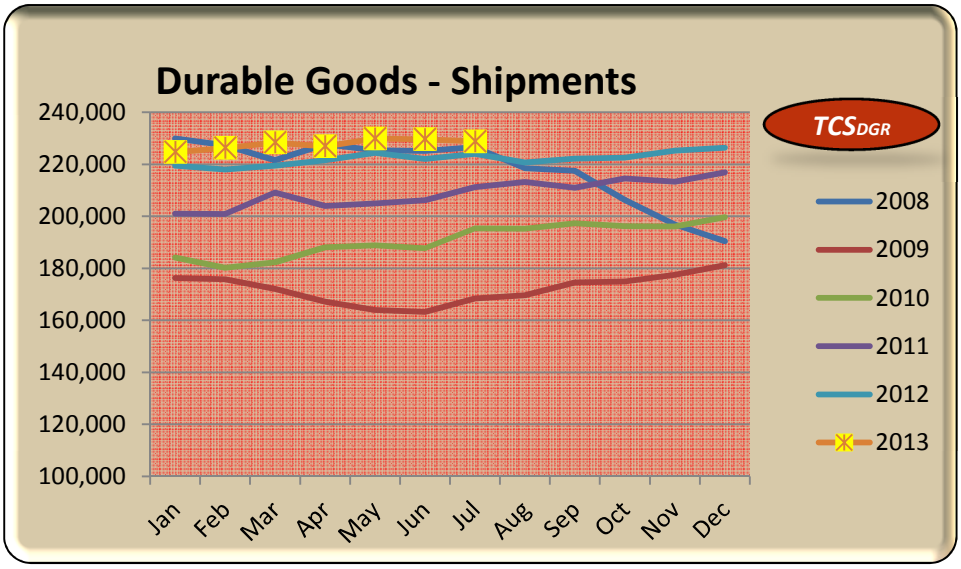


The long term chart for new orders (below) provides added perspective. We have probably not broken out of the plateau that we hit in 2012.

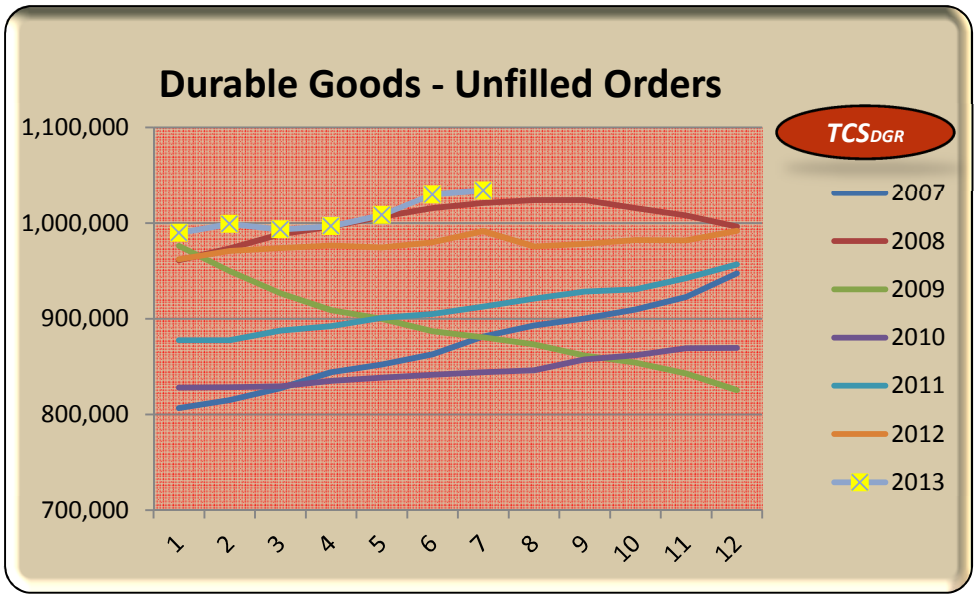
Growth Index for new orders (3mma/12mma = slope of the order curve) improved to 1.058, well above the 1.017 last year. Expect this measure to fade as the effect of the earlier run up in orders ages out of the calculation.



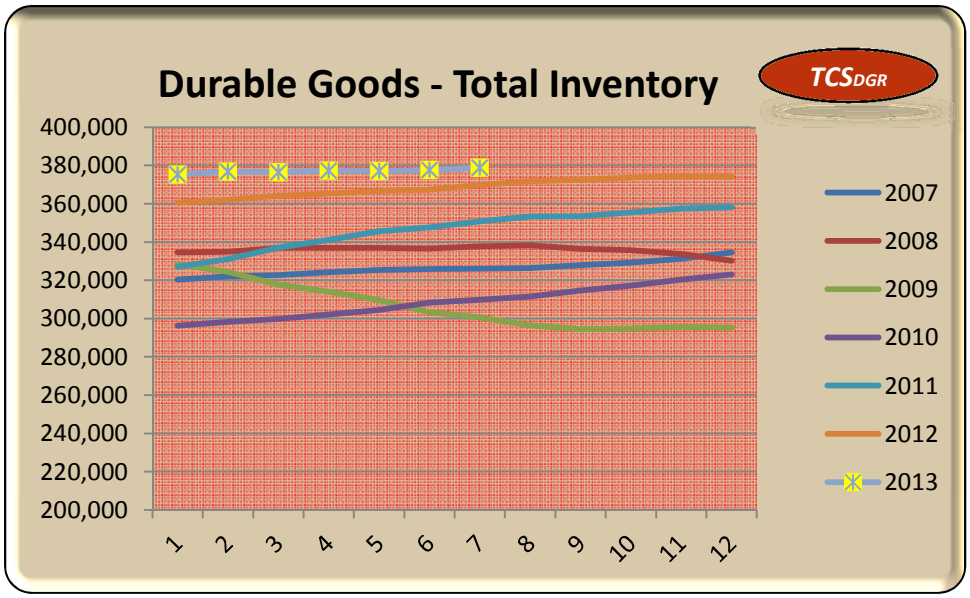
Shipments decreased 0.3% to $228.8 billion. Last month's uptick in durable goods employment continued with an added 22,000 jobs. Current book to bill ratio suggests there will be little further improvement in headcounts.

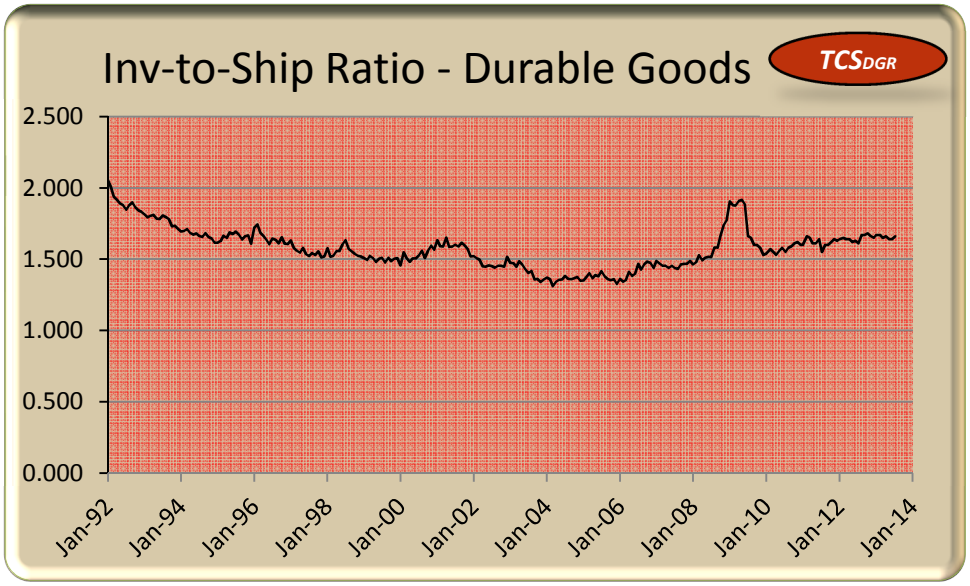


Unfilled Orders increased a modest 0.4% after last month's jump of 2.1% (another record). Long term chart shows the unprecedented nature of current order backlogs.



Inventory: Total inventory increased 0.3% to $378.9 billion. Inventories seem in reasonable control relative to shipments. But the more important issue is the slow drift away from manufacturing velocity signaled in these numbers. This will reduce the competitiveness of US manufacturers in the global marketplace and it is a direct result of the "current wisdom" on best practice. We're losing the battle for velocity. See the extended discussion at www.tcsdb.com/lean-six-sigma

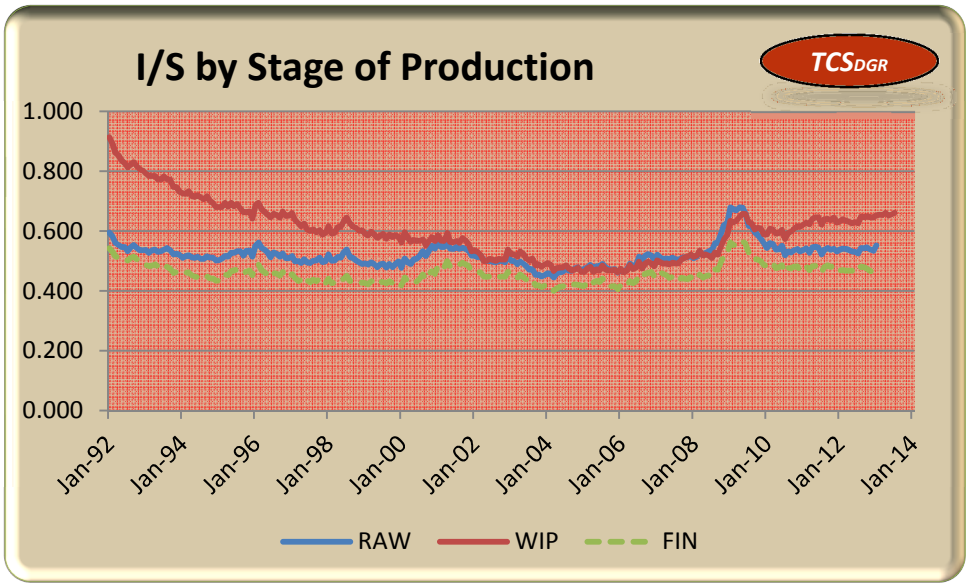




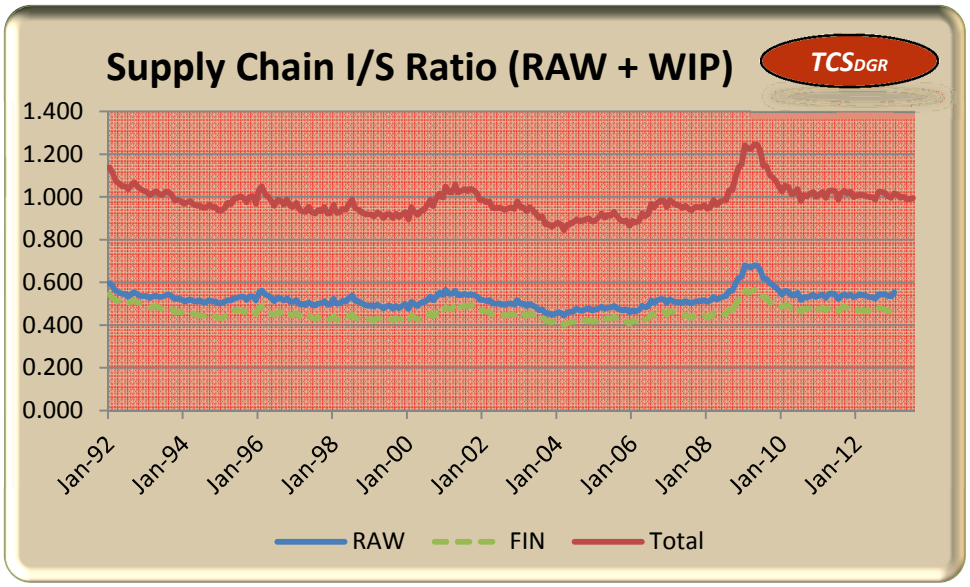
The I/S ratio by stage of production (a DGR exclusive) showed no dramatic signs of change. But note the long term trend. The gradual drift upward is a signal of lowered efficiency somewhere in the process. See the detailed analysis below.

Manufacturing velocity: The chart below suggests a cause of the performance issues. When broken down by stage of production the problem can be localized. The red line shows the WIP (work-in-process) inventory as a ratio to shipments. This is the reciprocal to factory velocity. At a given level of investment, higher velocity directly translates to higher profits plus responsiveness to customers.

From 1992 to 2005 we cut the inventory necessary to ship goods almost in half. But since that time velocity performance has eroded significantly. To learn more about the causes check the website.

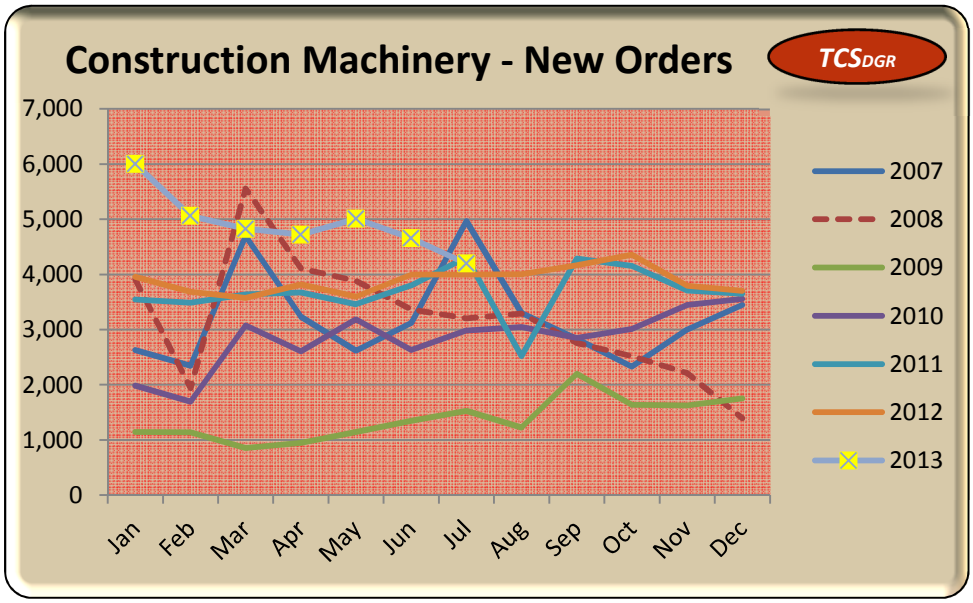


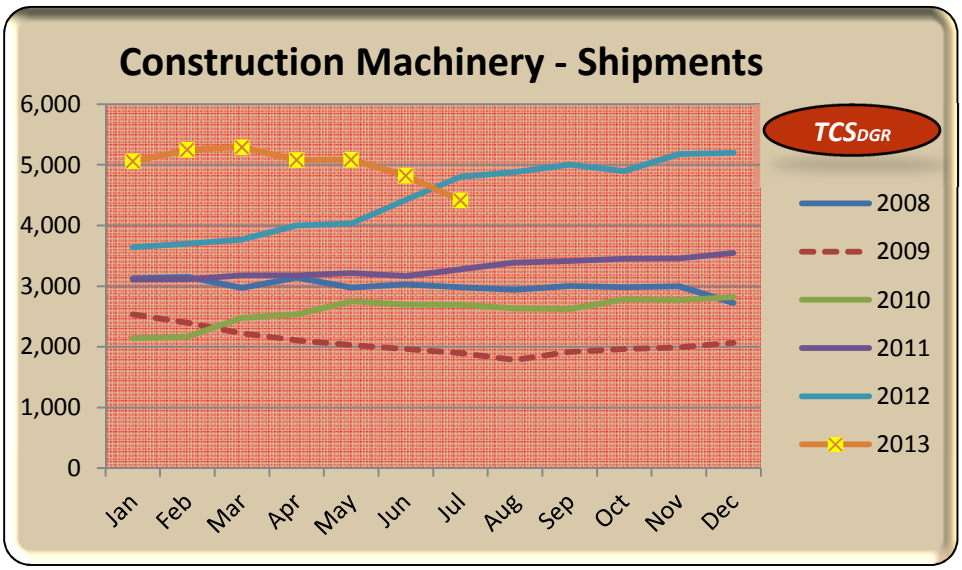
Supply chain velocity: The following chart exposes a different view of the inventory to sale ratio. The raw material (RAW) and finished goods (FIN) inventory are indicators of the flow of goods through the supply chain, independent of the performance inside the factory. In this case we add them together to eliminate cases where a factory gets their vendor to carry the inventory. This chart shows that despite 20 years of talk, we've made no progress in managing supply chains. It took about $ of RAW+FIN to ship $1 20 years ago. It still does.



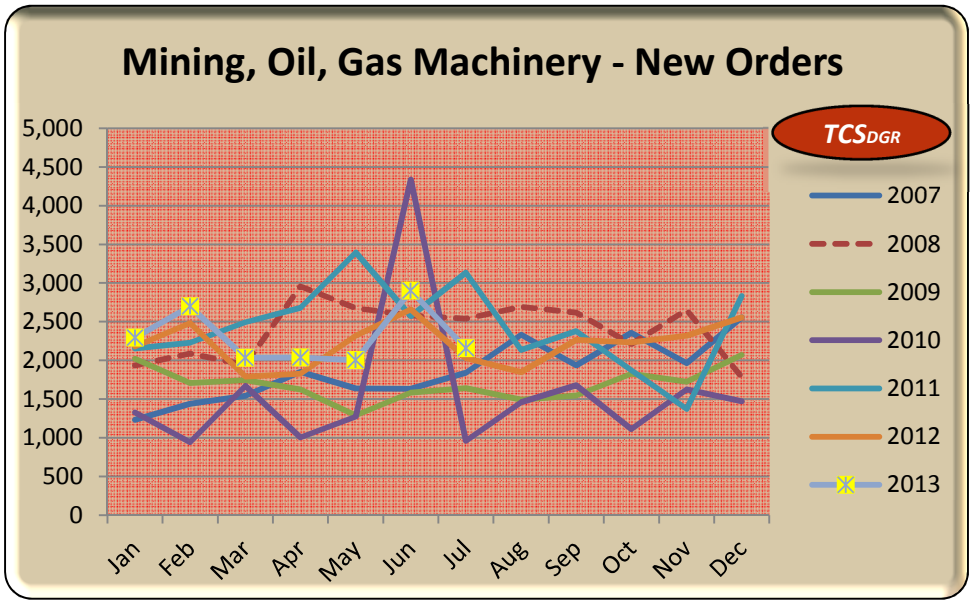
Durable goods sub sectors:

Construction machinery (NAICS 33C) new orders dropped 10%. Last month's shipments were revised downward to a 7% drop. In two months the order rate for construction machinery has gone from 5 billion to 4.2 billion. Shipment value has been adjusted downward and now shows the same pattern. Book to Bill ratio has dropped to 0.95. (long term average 1.01) suggesting further pressure on production rates and employment. Unfilled orders dropped to $9.7 billion, down from $17 billion a year ago. The response to this pattern will result is rapid response from the companies in this category. The leaders are adept at adjusting in a cyclical business. Not an optimistic picture in this sub segment.

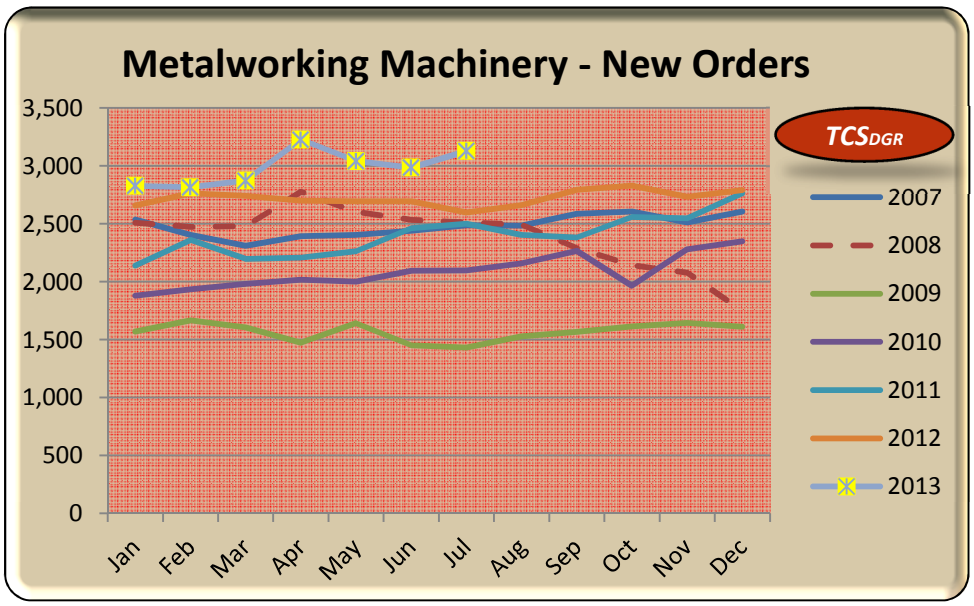




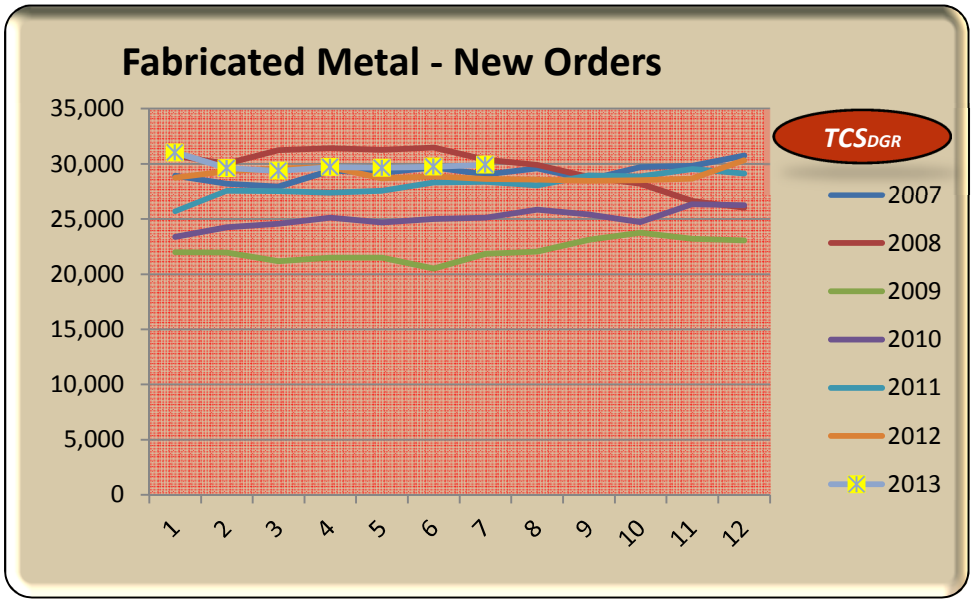
Mining, oil and gas machinery (NAICS 33D) new orders dropped 26% to $2.6 billion after last month's 44% surge. Same pattern has been repeated for three years. Book to bill ratio dropped to o.99. (long term average = 1.03).



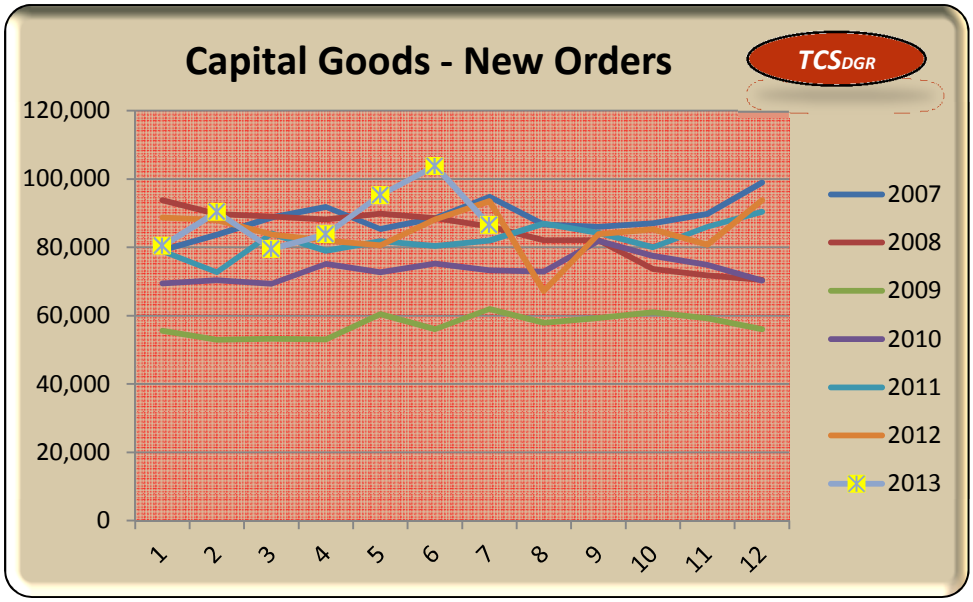
Metalworking machinery (NAICS 33I) new orders increased 4.8% to $3.1 billion. The absolute value remained flat from the initial reports last month. The apparent growth was as a result of a downward revision to last month's data. Remains 20% above last year. Book to bill ratio remained at 1.05 (long term average = 1.00). This is very strong performance and suggests continued interest in automation and upgrade of current production assets.



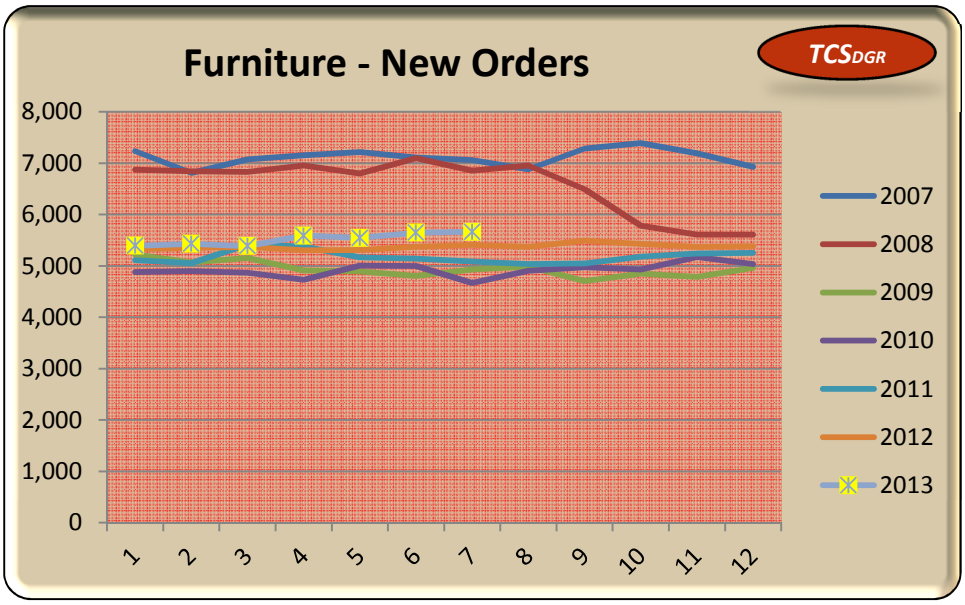
Fabricated metal (NAICS 32S) new orders increased 0.6% to $30 billion, 4.5% above last year. Book to bill ratio increased to 1.03 (long term average = 1.00).



Capital goods (NAICS TCG) dropped 17% to $86.5 billion. Book to bill ratio pulled back to 1.06 (long term average = 1.01). Now 7.4% below last year.

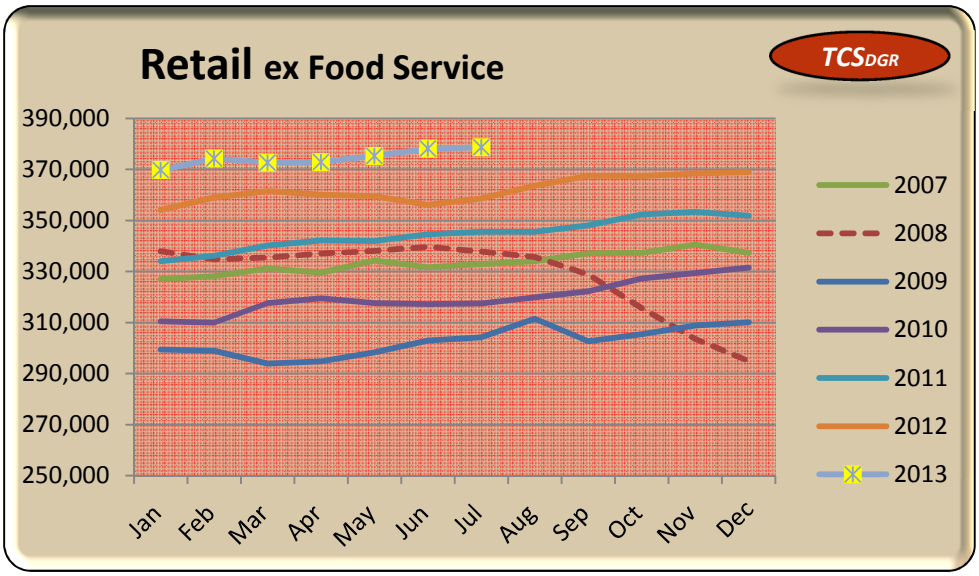


Furniture: (NAICS 37S) New orders increased 0.3% to $5.7 billion. The book to bill ratio is neutral at 1.04. Orders 4.7% above last year.

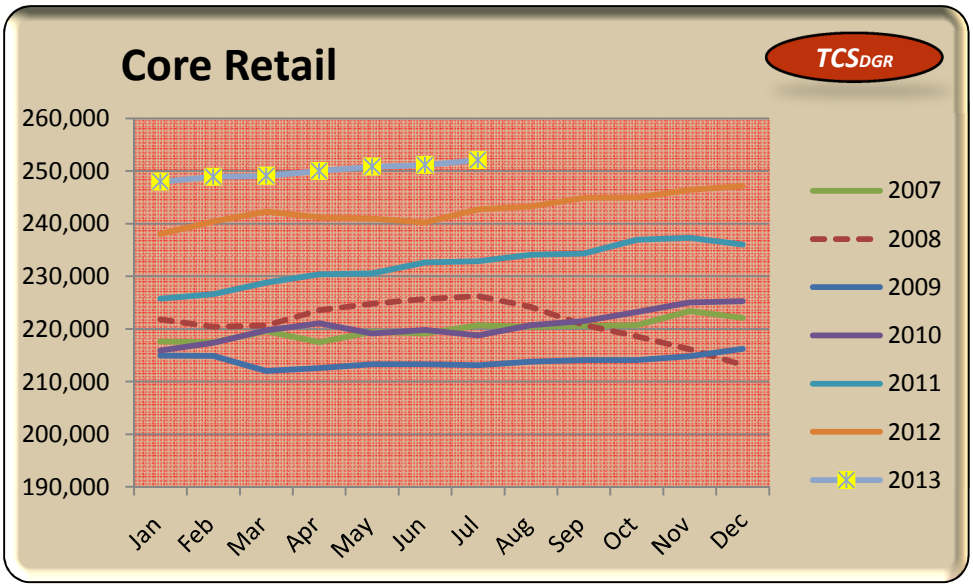


Retail Data (Advanced Release for July)

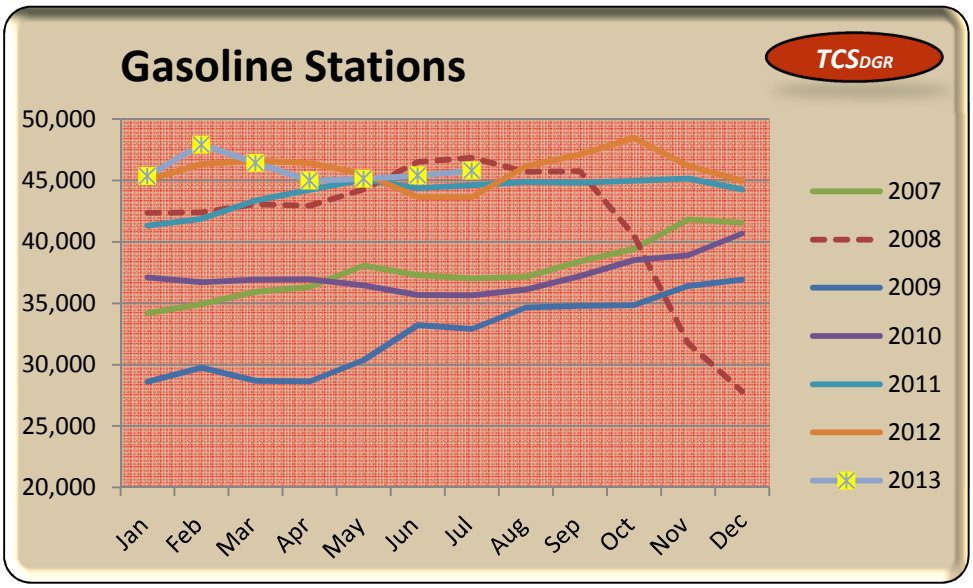
Retail Sales (excluding food service) increased 0.1% to $378.7 billion. Current sales are 5.6% above prior year. Retail will be unable to continue this positive performance given the employment pattern. Increases in consumer debt for the past two months underline the likely outcome.



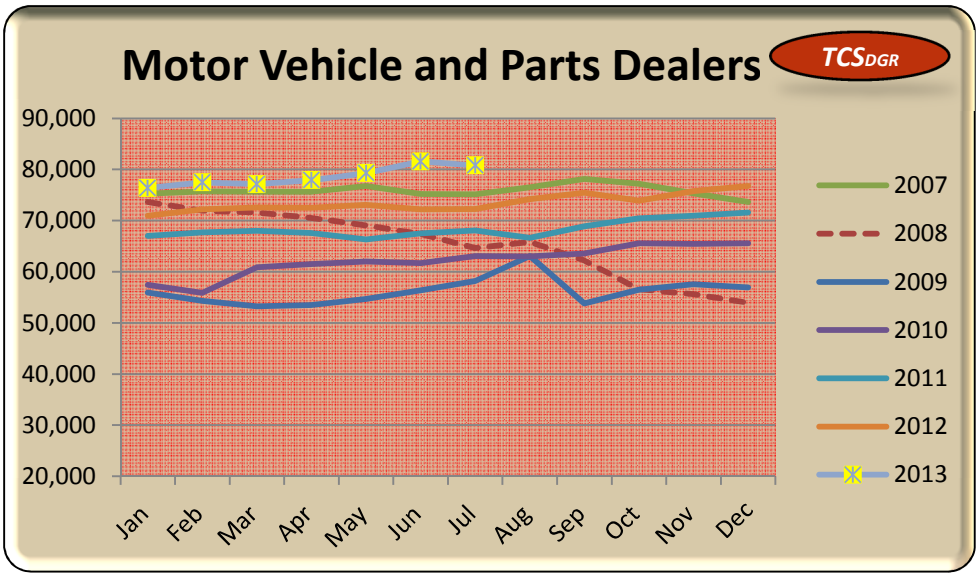
Core retail (excludes food service, gasoline, autos and parts) increased 0.4% to $252.1 billion. Current sales are 3.9% above prior year. About 2.5% to 3% of this number can be attributed to inflation. Not a strong performance and likely to weaken over the next 12 months.



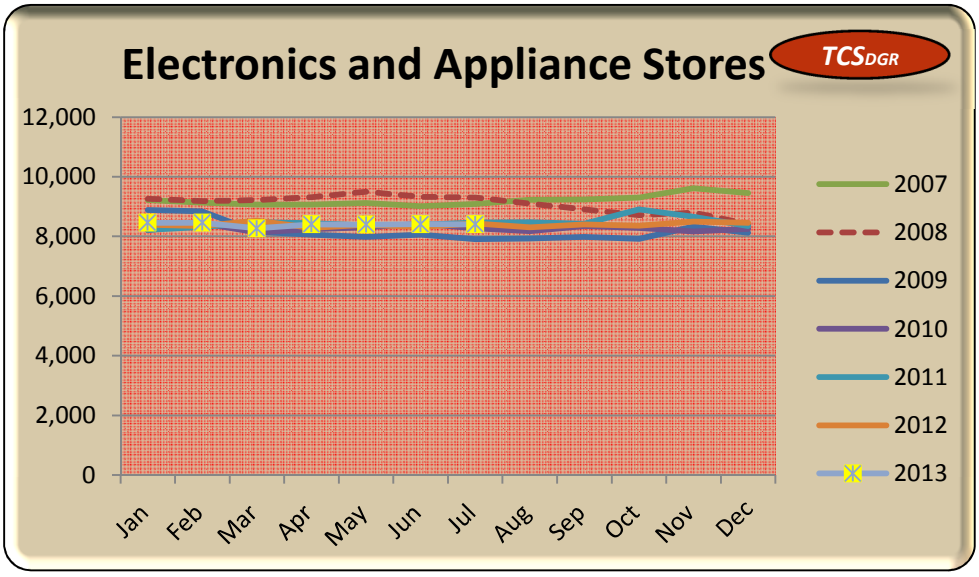
Gasoline sales decreased 0.9% to $45.8 billion. Current sales are 4.9% above prior year. Gasoline sales revenue is approximately equal to the pre-recession highs. Since gas prices have doubled and MPG is about the same, miles driven must have dropped about in half. This suggests that people tend toward a fixed budget for gas and adjust driving to stay in budget. The actual increases in gasoline sales are a drag on other retail activity.



Auto sales decreased 1.0% to $80.8 billion. Current sales are 11.9% above prior year. After running at a record pace through the first half of the year it looks like autos may take a breather. Current employment and consumer debt positions would reinforce that premise.

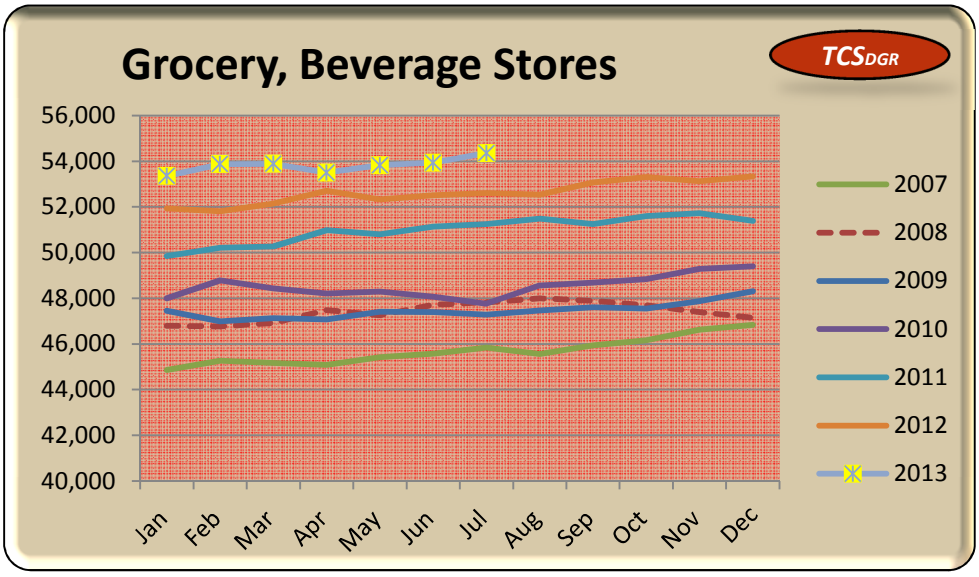


Electronics and Appliance Stores sales decreased 0.1% to $8.4 billion. Current sales are 0.4% below prior year. Slowly weakening sales through this year may be related to the lack of a major new product introduction.



Grocery and Beverage stores sales decreased 0.8% to $54.4 billion. Grocery sales are 3.3% above prior year. This is still the best indicator of inflation. Since shopping habits change slowly in this category, growth should match population. The balance is

an indicator of inflation. What can't be quantified from these aggregate numbers is any trend to shift to lower price alternatives.

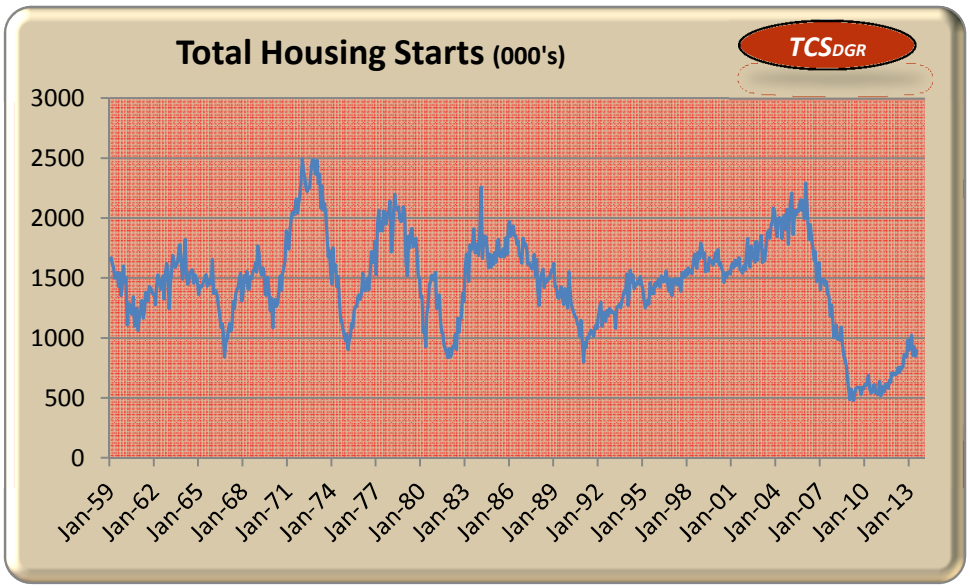


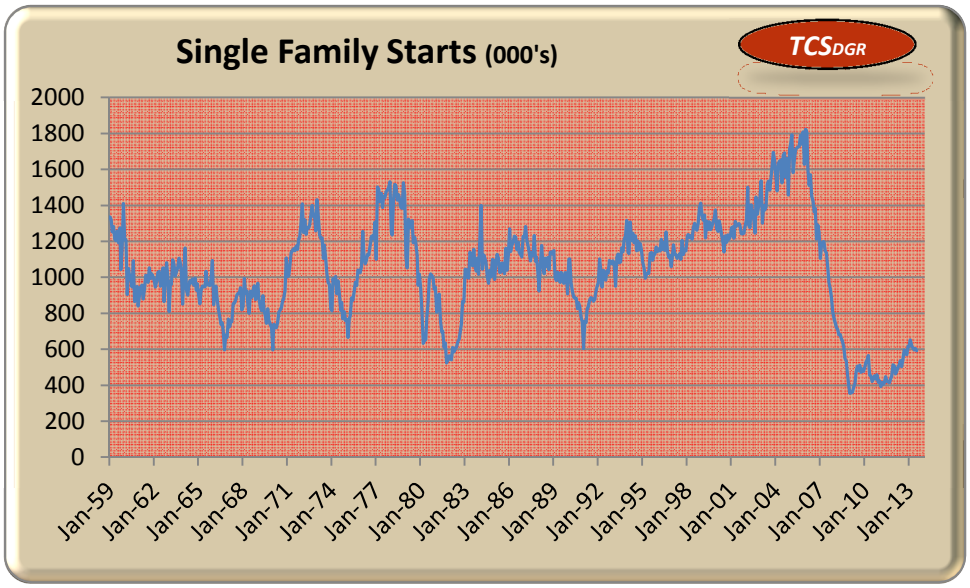
Housing:

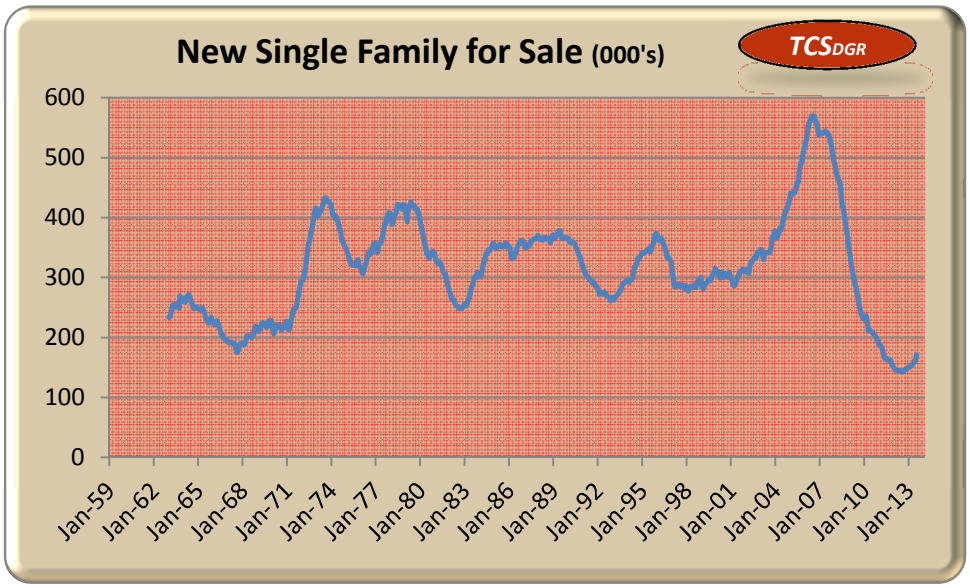
Total housing starts increased 5.9% to 896,000 in July. Single family starts decreased 2.2% to 591,000. Compared to last year total starts are up 20.9% and single family starts are up 17.7%. Sales of new single family decreased 13.4% to 394,000 units. Inventory of new single family homes increased 6.2% to 171,000.

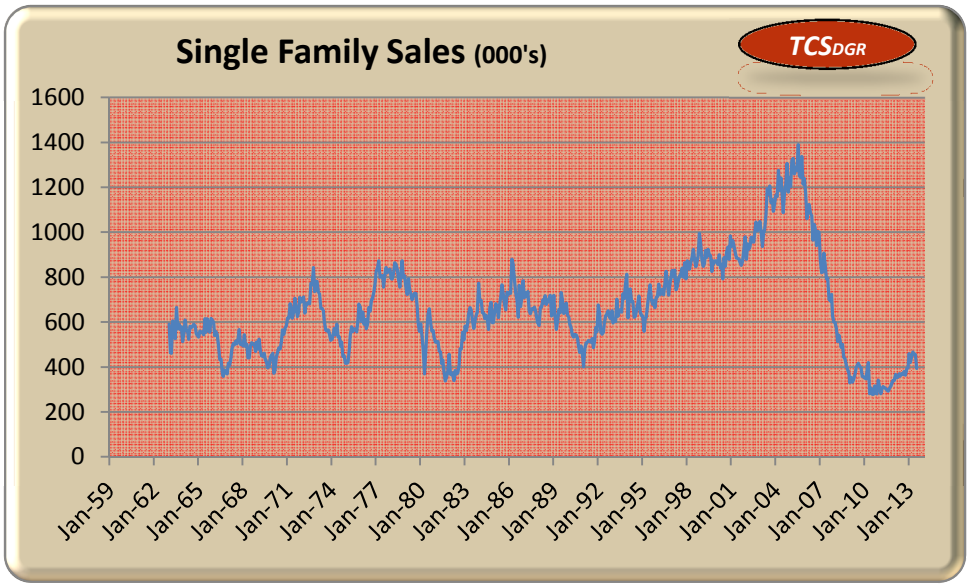
Median sales price (3MMA) dropped 1.8% to $256,933, 12% above last month's record high. These numbers are still being distorted by a localized surge in large home sales in the CA and NV markets.

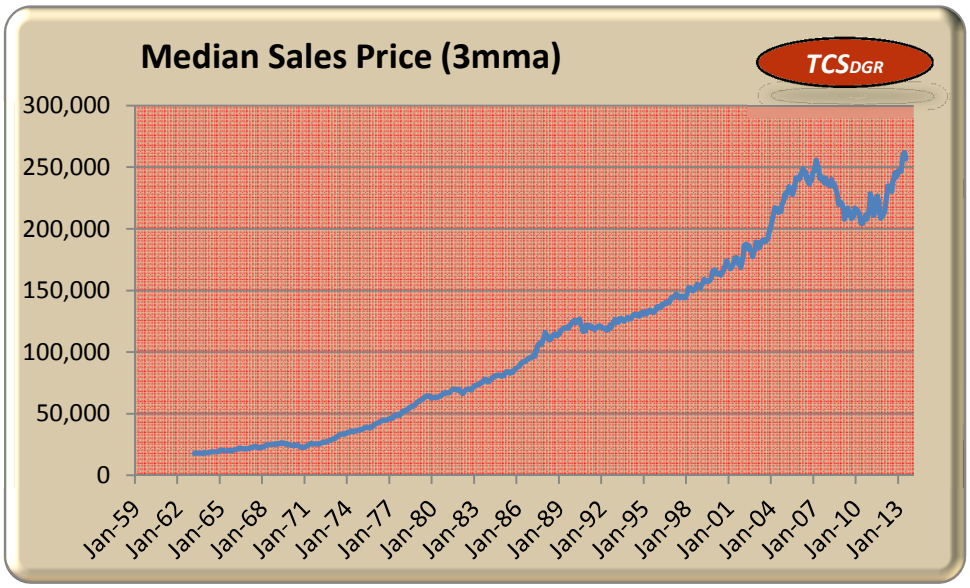
The long-term charts for the housing market emphasize the reality of how deep the housing recession was. While there has been some positive news over the past 12 months the industry is still far from healthy. GE in Bloomington, IN just announced a layoff of 200 due to the 30% drop in sales of side-by-side refrigerators since 2010. Young adults are not forming households or are living in apartments.











About Time Compression Strategies and the Durable Goods Report

TCS provides information technology and business process support to high performance organizations. Our focus is on manufacturing and telecom. Through our business partners we support health care, energy, retail and other rapid-response business sectors.

The goal of the Durable Goods Report is to offer context for the published monthly statistics on durable goods manufacturing in the US. The analysis is historical in nature, and includes no forecasts beyond what may be obvious from current conditions. The analysis of historic patterns provides a necessary framework for understanding plausible scenarios. Since a high percentage of durable goods go through retail, this sector serves as a leading indicator of future durable goods activity.

The Durable Goods Report uses source data from the US Census Bureau, Bureau of Labor Statistics, Energy Information Administration, and the Federal Reserve. Rig count data source is the Baker Hughes Corp. For data sourced from the US government, the "preliminary" publication is used wherever possible. The preliminary release occurs about 5 weeks after the end of the period. An earlier publication (advanced release) is available about 3 weeks after the end of the period, but is often subject to substantial revisions, and is not considered adequately detailed or reliable for growth trend analysis (except for retail). Wherever the advanced release is used it is noted. Tracking reports are available for several durable goods sub sub-sectors. Contact TCS for details about this subscription based service.

Technical Note: The "TCS Growth Index" is measured as the ratio of the 3 month moving average divided by the 12 month moving average. This removes some of the natural noise in the industry data, but also results in a slight response lag. An index value greater than 1.000 is a sign of recent growth.

About the Author:

John Layden serves as CEO of Time Compression Strategies Corp (TCS), an information technology and process improvement company serving manufacturing, distribution, and related infrastructure companies.

Prior to launching TCS, Layden's career included 22 years' in manufacturing and another 20 years in enterprise software. Most recently he has served as VP of Supply Chain Management for SAP and VP of Supply Chain Market Development for Frontstep, Inc. He served as President of Pritsker Corporation, an early innovator in discrete event simulation and advanced planning and scheduling fields. He negotiated the Pritsker acquisition by Frontstep. He was a founder and CEO of Automated

Technology Associates, Inc., a leader in the development of real-time quality control systems and factory management applications.

Layden has authored over 40 articles and papers on both the theory and practice of manufacturing and supply chain operations. He was described by one editor as a "founding father" of the advanced planning and scheduling (APS) industry. He also authored the supply chain chapter in Maynard's Industrial Engineers Handbook. He speaks worldwide on the subject of world class operating strategies. He has been the keynote speaker at numerous conferences including the Automation Hall of Fame Awards.

As a software company CEO, Layden delivered to market the first real-time advanced planning and scheduling system; the first real-time SPC system; and the first real-time, fourth-normal-form database system. He is the originator of the Return on Capacity analysis method for supply chain pricing, profitability and delivery performance.

As a key partner to Motorola, Layden developed the quality control concepts that became the Six Sigma Initiative. He introduced the same concepts to GE and the Cadillac Division of General Motors. These initiatives contributed to the Malcom Baldrige awards won by Motorola and Cadillac, and to the highly publicized Six Sigma program at GE. He introduced the Six Sigma concepts to software development and delivered the only application software release to meet these exacting quality standards. Layden holds three patents and is the only American to hold a Japanese patent in quality control.

Prior to his tenure in manufacturing software, Layden spent 20 years as an engineer, operating executive and board member with three Fortune 200 manufacturing companies. The TCS advisory services retain the practical, no-nonsense approach familiar to world class operating executives. His operating roles in manufacturing included plant manager, director of business planning, and VP of Supply Chain Management.

Layden currently serves on 3 boards, and advises several high-tech startup companies.

Mr. Layden holds a BS degree from Purdue University in Electrical Engineering and an MBA from the University of Wisconsin-Milwaukee (Executive Program). He is active with the Purdue University President's Council, and has served as a guest lecturer in the MBA programs of Villanova University, Columbia University, New York University, Indiana University, Ball State University, and others.

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