The Durable Goods Report

November 2012

Executive Summary of US Economic Activity



Manufacturing Data Release of 11/2/2012 (September Preliminary)

Employment Data Release of 11/2/2012 (October Preliminary)

Retail Data Release of 10/15/2012 (September Advanced)

Industrial Production Data Release of 10/16/2012 (September 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	218,224	198,693	212,966	
12 month moving average	218,256		204,614	
% Change from Prior Year	6.7%			
Growth Index - Durable New Orders	0.986	0.993	1.052	
Unshipped Orders - Durable	981,010	979,304	937,149	
% Change from Prior Year	4.7%			
Value of Shipments - Durable	224,089	222,397	200,700	
Inventory - Durables	372,891	371,952	353,185	
% Change from Prior Year	5.6%			
Inv to shipments ratio - Durable	1.66	1.67	1.60	
US Economy	Key Measure			
	This period	Last period	Change	
GDP 2012 Q2	15,775.7	15,585.6	1.2%	
Industrial Production	2,565.7	2,559.9	0.2%	
Capacity Utilization %	78.3	78.0	0.2	
Manufacturing %	77.4	77.4	0.0	
Durable Goods %	76.8	76.9	(0.1)	
Primary Metals %	74.2	75.0	(0.7)	
Autos and Parts %	73.0	75.2	(2.2)	
Machinery %	83.4	83.2	0.1	
Durable Goods (\$Mil SA)			0.1	
New orders	218,224	198,693	9.8%	
Shipments	224,089	222,397	0.8%	
Inventory	372,891	371,952	0.3%	
Unshipped Orders	981,010	979,304	0.2%	
Retail ex Food Service (\$Mil SA)	368,787	359,725	2.5%	
Autos and Parts	75,541	73,266	3.1%	
Gasoline	47,176	43,404	8.7%	
Core retail (ex auto, gas)	246,070	243,684	1.0%	
Employment (000's SA)	,	,	2.070	
Civilian employed (Household Survey)	143,384	142,974	410	
% of potential workforce (HS)	58.8%	58.7%	0.1%	
Civilian not employed (HS)	100,599	100,798	-199	
Non-Farm (Establishment Survey)	133,755	133,584	171	
Private (ES)	111,744	111,560	184	
Government (fed, state, local) (ES)	22,011	22,024	-13	
Goods Producing (ES)	18,330	18,309		
Manufacturing (ES)	11,966		21	
		11,953	13	
Construction (ES)	5,539	5,522	17	
Durable Goods Mfg (ES)	7,476	7,471	5	
Housing (000s of Units SA)	272	750		
Total housing starts	872	758	15.0%	
Single family starts	603	543	11.0%	
Single family sales (new)	389	368	5.7%	
Single family for sale (new)	145	141	2.8%	

US Economy – Quick Look:

US GDP

Q3 GDP initial estimate reported as 1.8% SAAR (1.2% QtQ, 4.0% YtY)

Industrial Production

Industrial production excluding industrial supplies increased 0.2% after last month's decline of 1.3%. Industrial capacity utilization increased 0.3% after last month's 1.2% decline. Autos dropped 1.8% after last month's 4.4% decline.

Durable Goods

New orders for durable goods increased 9.8% (-13.1% last month) to \$218.2 billion.

Retail:

Retail sales (ex food service) increased 1.2% to \$368.8 billion. Core retail increased 1% to \$246.1 billion. This is about equal to the inflation implied by the grocery price increases.

Employment:

September employment showed a gain of 171,000 jobs along with an increase in unemployment to 7.9%. Working age population increased by 211,000. Last month's jump in employment of last month was revised downward. Durable goods employment increased 5,000 after two months of declines. See detail in "Employment" section.

Housing:

Single family housing starts increased 11%, single family sales increased 5.7%, inventory of new single family homes increased 2.8%. First time in 4 years that all measures have moved in a positive direction.

Random Thoughts, Stray Data and Rants:

Economy

- Innumeracy (illiteracy about numbers) department: There has been some recent talk about insurance companies as "profit seeking" entities. The implication is that profit drives up prices. What a stunning display of economic ignorance. The way companies engage in profit seeking is to find a way to take business away from someone else. It's done by finding a way to reduce costs. They seek profits by reducing cost and price. If the profit-seeking motive is removed from the equation (as with a non-profit) the pressure to provide better products at lower cost disappears.
- The EU proposes to solve the fiscal mess by integrating all national budgeting processes within the EU. So central planners answer to the failure of central planning is more central planning? OK. Now I've got it. Can you put a continent in therapy?
- The International Monetary Fund has warned that tax rate increases in France risk reducing its economy below Italy and France.
- International Monetary Fund study shows that higher tax rates reduce government revenue. CATO institute study reported the same thing. Both sides of the fiscal/monetary ideological divide are in agreement. Governments in the EU and US will likely ignore them.
- Woodrow Wilson, no hero to conservatives, was the first to recognize and propose lower taxes as a way to increase government revenue.
- Mass layoffs (more than 50 people) spiked upward after the election. More than 300 companies have announced in the first two days.

<u>Energy</u>: Energy is the biggest single factor affecting the entire US economy.

<u>Durable goods manufacturers are affected at the material cost level and at the market level as consumers divert potential purchases to covering the cost of.</u>

- The election results leave the future of the energy industry muddled, at least for a while. The EPA will regulate supplies. Coal and oil will be the primary targets. The industry will try to circumvent. See the Energy section for more detail.
- After the election the administration took action to block development on 1.6 million acres of federal land..
- Special report on the Alternate Energy Economy is available for download at www.tcsdb.com on the Durable Goods Report page.
- More magical thinking. Petrol from air in the UK.
- http://www.independent.co.uk/news/uk/home-news/exclusive-pioneering-scientists-turn-fresh-air-into-petrol-in-massive-boost-in-fight-against-energy-crisis-8217382.html
- A UK group claims they can make gasoline from air (by removing CO2) and water vapor (break it into hydrogen and oxygen). They only need electricity to drive the process. Looking to raise money to scale it to "commercial quantities." Of course this is impossible because:
 - As they point out the methods are well known. What they don't point out is that the methods require massive energy inputs. Using a lot of energy to make a little energy is a quaint business model.

- The electricity input to this process is mostly derived from hydrocarbon combustion.
- If I could use hydrocarbon energy input to produce hydrocarbon energy with a net positive output, it would have violated the laws of thermodynamics.
- If some magical R&D effort could find a way to actually deliver a net increase in energy from this process the universe would explode.
- Using wind energy is the usual counter argument. But a windmill takes more energy to build than it will ever produce. Same result.
- The three primary laws of thermodynamics are not easily described even by scientists. There is still debate on the details. But this layman's explanation might help a little:
 - o **First law: You can't win** (you can't get more out than you put in)
 - Second law: You can't break even (you always lose some)
 - o Third law: You can't resign from the game (energy is zero sum game)
- BTW: if you could remove CO2 from the air in useful quantities you would eventually kill all plant life, which would kill all animal life, which would then kill us.

Government

- No one in Washington during the election season. Minimal damage being done to the economy.
- Does it seem like the campaign lasted for 27 years?
- Senator Inhofe has exposed the EPAs regulation plans for immediately after the election. The flood of new rules ready for launch is targeted to effectively eliminate coal as an energy source.
- It wasn't until Thursday that we noted a commentary and analysis on Election 2016.
- The fiscal cliff is looming and now that the election is over the question is what deal will come together.
- Why were there no supplies of water, food and gasoline staged at critical locations prior to the storm? The track was well defined about 72 hours in advance, but still the politicians were making up a plan after the fact.
- Mayor Bloomberg rejected the idea of putting the National Guard into the game because he didn't want people with guns in New York. So the looting continues.
- Government agencies are ineffective.
- <u>Climate:</u> Durable goods manufacturers care about this issue because it is a core justification for massive regulation, especially on energy.
- Missed predictions: Contrary to my prediction, Michael Mann (of the climate hockey stick fame) has filed suit. One summary of the complaint is that people mocked a Nobel Prize winner. If there were a law against it, wouldn't the person need to have actually received the Nobel Prize? Nobel committee has responded that no prize has ever been awarded to anyone by that name.
- Hurricane Sandy has given rise to a flurry of claims that it was the result of global warming. Lost in the debate:

- There has been no warming since 1997. Only a forecast of warming from dubious computer models.
- No hurricane has come ashore in the US since 2005, the longest hurricane drought since prior to the Civil War.
- Sandy was not "unprecedented." Bigger hurricanes landed in the area as far back as 1635. Another in 1638. Recently 1944, 1947, 1958. Three in 16 years.
- A list of Sandy "firsts" was published and quickly debunked. Sandy didn't make the top ten in any category.
- FEMA has been exposed as a joke. The military is the only institution capable of handling massive logistics operations. The National Guard should have been deployed.
- Missing irony department: The female TV anchor, battered by the winds and rain of Sandy, complained that two joggers in Battery Park were putting their lives at risk.
- Missing irony department 2: No electricity, food, water or gasoline on Staten Island, but the NY Marathon will go on as planned. Update – cancelled due to a hurricane of protest. Update – the large generators set up for the press cops to cover the marathon sit idle in Central Park.

The 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 make this list the phrase only needs to be intentionally misleading, mathematically impossible, or oxymoronic.
 - "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.
 - o "We're all in this together" means "it's not my fault."
 - Sharing (when used by a politician) means they covet your money.
 - o 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.

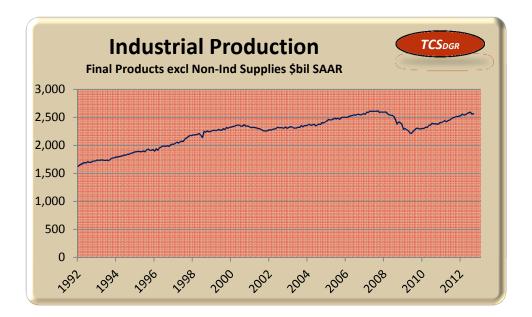
US GDP

GDP initial estimate of growth rate reported at 1.8%. Decline in the growth rate over the past four quarters is troublesome. The only fix to the current fiscal mess is not found in the monetary policy of the fed. Only growth will solve this without a major drop in our standard of living. The proposals under discussion in Washington all include increasing taxes in some form. This will divert money from the productive economy to non-value-added activities. That will reduce the growth rate.

Industrial Production (excluding industrial supplies)

Industrial production grew 0.2% in September after a 1.3% drop in the prior month. The year to year comparison has been stable at 2.6% for the past two months, a major drop in growth rate and probably below the rate of inflation.

Industrial Production - final products \$b SAAR				
Year	Мо	Ind Prod - Value of Prod	Chg from Prior Pd	Chg from Prior Year
2011	1	2,410.4	0.1%	4.6%
2011	2	2,425.1	0.6%	5.2%
2011	3	2,442.0	0.7%	5.0%
2011	4	2,420.8	-0.9%	4.4%
2011	5	2,444.1	1.0%	3.5%
2011	6	2,451.9	0.3%	3.8%
2011	7	2,474.8	0.9%	3.4%
2011	8	2,494.5	0.8%	4.6%
2011	9	2,500.4	0.2%	4.8%
2011	10	2,516.5	0.6%	5.6%
2011	11	2,516.2	0.0%	5.7%
2011	12	2,524.4	0.3%	4.8%
2012	1	2,532.7	0.3%	5.1%
2012	2	2,560.8	1.1%	5.6%
2012	3	2,541.9	-0.7%	4.1%
2012	4	2,553.3	0.4%	5.5%
2012	5	2,570.4	0.7%	5.2%
2012	6	2,582.5	0.5%	5.3%
2012	7	2,594.3	0.5%	4.8%
2012	8	2,559.9	-1.3%	2.6%
2012	9	2,565.7	0.2%	2.6%



Capacity utilization (below) increased 0.3 points. Manufacturing was flat. Primary metals declined. Autos dropped 1.8 after a decline of 4.4 points in the prior month. Inventory to shipments ratio is surging. (see Durable Goods Sector below).

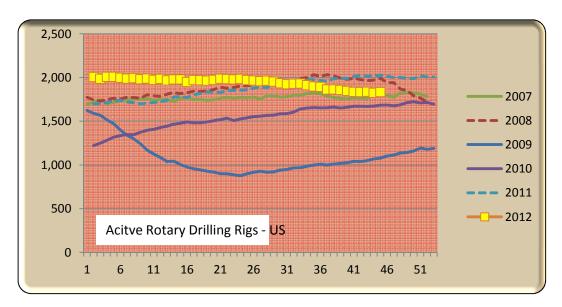
	Capacity Utilization %						
		I I		Б 11	Primary		Mach-
Year	Month	Ind Prod	Mfg	Durable	Metals	Auto	inery
2010	1	70.8	78.0	76.6	75.8	81.9	63.6
2010	2	71.3	77.6	77.1	78.1	82.3	63.4
2010	3	71.9	77.3	77.7	79.7	81.9	64.2
2010	4	72.4	76.5	78.4	79.5	82.3	65.5
2010	5	73.7	76.1	78.1	81.0	82.9	66.5
2010	6	73.9	75.7	78.2	81.3	82.5	67.7
2010	7	74.5	75.0	78.1	84.7	82.0	67.6
2010	8	74.8	74.0	77.8	82.9	84.7	69.1
2010	9	75.2	71.5	78.0	83.9	83.3	69.5
2010	10	74.9	71.1	77.9	84.6	85.6	69.7
2010	11	75.2	69.6	78.5	84.8	84.8	70.0
2010	12	76.0	67.4	78.6	83.6	84.2	68.6
2011	1	76.1	65.6	78.4	82.8	85.8	68.7
2011	2	75.9	65.7	78.3	82.3	84.8	69.9
2011	3	76.5	64.6	78.1	82.1	84.7	70.2
2011	4	76.1	64.3	77.1	79.9	85.5	68.5
2011	5	76.3	63.7	76.7	78.0	85.2	68.8
2011	6	76.3	63.6	76.6	75.9	83.9	68.5
2011	7	77.0	64.6	75.5	75.0	79.0	68.0
2011	8	77.1	65.4	74.3	77.6	80.6	68.4
2011	9	77.2	66.1	71.7	78.8	81.3	68.5
2011	10	77.6	66.2	69.8	78.7	79.0	67.6
2011	11	77.7	67.0	67.9	80.6	75.2	70.2
2011	12	78.3	67.3	65.8	80.6	72.5	69.8
2012	1	78.7	78.0	77.0	77.5	74.6	83.9
2012	2	79.0	78.6	77.9	78.1	75.0	85.0
2012	3	78.4	77.9	77.5	75.3	75.5	85.8
2012	4	79.0	78.4	78.3	76.9	77.5	85.9
2012	5	78.9	77.9	77.7	75.4	76.6	85.3
2012	6	78.8	78.1	78.1	73.8	77.8	87.1
2012	7	79.2	78.3	78.3	75.1	79.6	84.0
2012	8	78.0	77.4	76.9	75.0	75.2	83.2
2012	9	78.3	77.4	76.8	74.2	73.0	83.4

The large drop in the auto industry signals the end of the channel stuffing that has been going on for months. Despite relatively healthy dealer sales, production levels were higher. This is an old trick to make the manufacturer's financial statements look good at the end of a quarter. But it's a one-time trick. You can claim that 2+2=5 for a while. But you must accept that 2+2=3 for an equal time.

Energy:

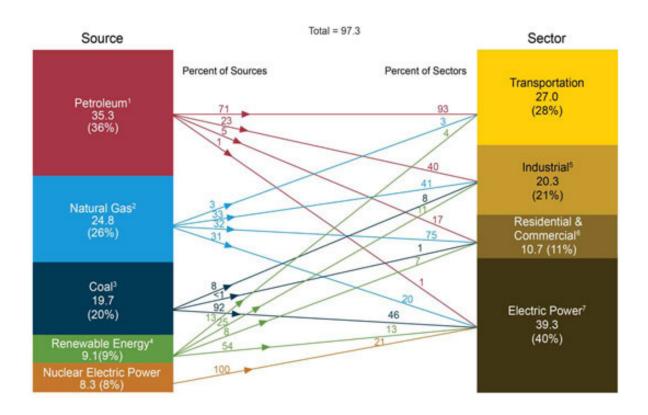
October saw a further gradual drop in active rotary rigs in the US. Signs of a slowing global economy are visible in oil inventory increases.

Arctic drilling activity is getting off to an early start due to colder weather. As an indicator the Arctic Ocean ice extent doubled in October, rapidly recovering from the extreme low seen after a major summer storm broke up the ice pack and reduced the area to below normal. The election results will offer no relief to the permitting process logiam. But at least the existing permits should have a good season.



Slowing economic demand in EU and China will prevent a major run-up in the price of oil. The increasing availability of natural gas will also keep prices low. While these factors will offer some relief to the economy it will not encourage added drilling activity. A better solution would be high growth and high production.

The following chart is the 2011 update of the source-and-use energy flows for the US economy. A special report on the Alternate Energy Economy is available for download at www.tcsdb.com. It's on the Durable Goods Report page. Free to current subscribers. It describes the net energy yield from various energy sources.



The chart below tells the story of energy concentration of various fuel sources, measured in energy per unit weight (mega-joules per kilogram) and 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 fighting gravity. Hydrogen has the highest energy concentration per unit weight by far compared to any other "liquid" source. But it's energy per unit volume (mega-joules per liter) is terrible. To keep the weight down they are willing to go to technical extremes to condense the hydrogen to a liquid.

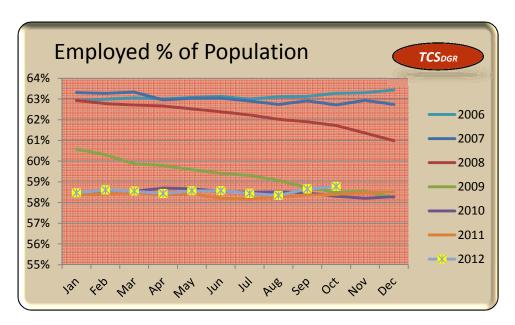
On the other hand, coal is the most concentrated per unit of volume, so it is efficient to transport it by rail.

For autos and trucks the ideal is pretty much where we are (gasoline and diesel). If you were going to design an energy source for transportation it would look like this.

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 what a really bad idea an electric vehicle is.

	M-J/Kg	M-J/L		
Coal, anthracite	32	72		
Diesel	46	37		
Body fat metabolism	38	35		
Gasoline	46	34		
100LL Avgas	44	32		
Gasahol e85	33	26		
Carb Metabolism	17	26		
Ethanol	30	24		
Battery, Lithium-ion	0.72	2.20		
Battery, NiCd	0.14	1.08		
Battery, NiMH (auto)	0.25	0.50		
Battery, Lead Acid	0.14	0.36		
Methane	56	0.04		
Hydrogen	143	0.01		
M-J/Kg = mega-Joule per kilogram				
M-J/L = mega-Joule pe				

Employment:



The employed % of the non-institutional population increased to 58.8% in October from 58.7% in the prior month. Unemployment rate increased to 7.9%. As we commented last month, the big September increase simply didn't happen. Payroll processor ADP has adjusted their September job growth number down by half and taken almost 400,000 out of the full year 2012 numbers.

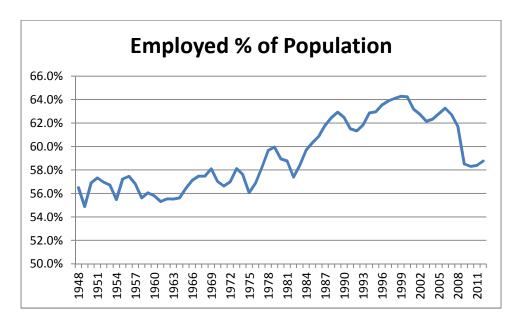
Overall the proportion employed has remained stagnant for over 40 months at 58.5% +/-0.3%.

The employer survey showed 171,000 new jobs created against a working age population increase of 211,000. Similar to last month the internals were troubling. The three primary sectors showed the following:

- Private Goods producing: +21,000 (-13,000 last month)
- Private Service providing: +163,000 (+114,000 last month)
- Public Government: -13,000 (+10,000 last month)

The economy cannot continue to grow the service sector while the goods producing sector is stagnant. The US is an industrial economy and depends on manufactured goods as a transportable store of wealth.

Employment is still in the tank. Until this measure shows improvement the recovery will not be meaningful. In the first two days after the election over 300 companies announced major (over 50) layoffs. Not a positive signal for next month.



October Employed % since 1948



Durable goods employment increased 13,000 in October after a decline of 14,000 in September.

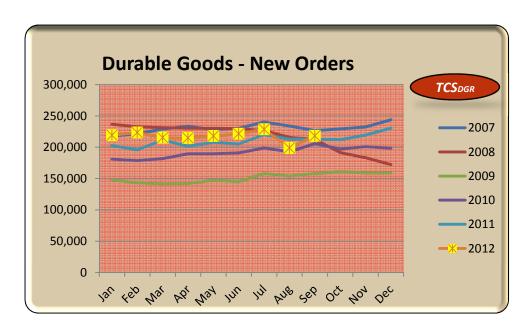
Sector Detail

The Durable Goods Sector:

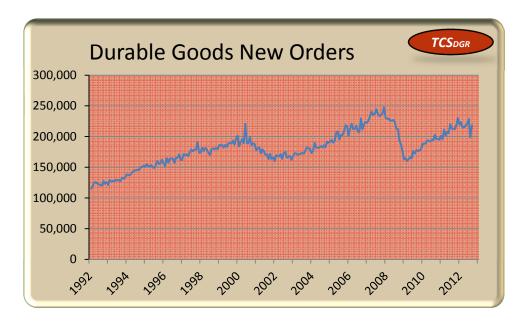
New Orders: Durable new orders increased 9.8% to \$218 billion after a drop of 13.1% in September. Over the two months we're down \$10 billion or just under 5%.

The new order growth index dropped further into contraction territory at 0.986. Last year's comparable number was 1.044. Inventory to shipments ratio remained high at 1.66.

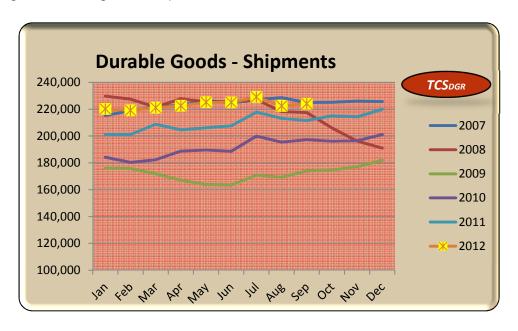
This two month swing is not too unusual, although bigger than usual. The standard deviation for durable new orders is \pm -- 3.5%, and whenever there is a one month change greater than that, there's an 85% chance that the following month will reverse it in part.



The long term chart below provides added perspective.



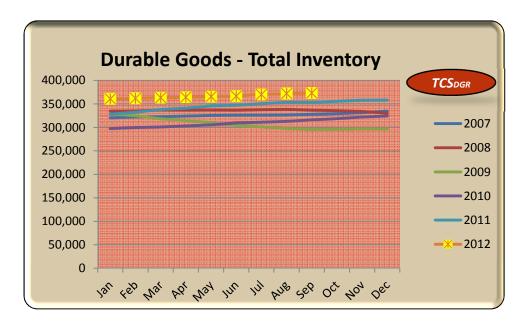
Shipments increased 2.9% to \$222.4 billion. Book to bill ratio returned to neutral at 0.97 (long term average is 0.98).



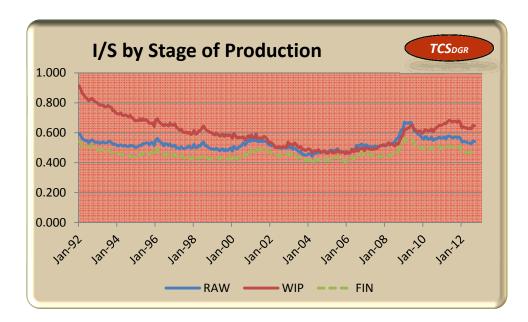
Unfilled Orders increased 0.2% to \$981 billion.

Inventory Total inventory increased by 0.3% to \$373 billion, another record high. The relatively high inventory to shipments ratio at 1.66 will keep pressure to reduce incoming raw materials and supplies. Signs of that are reflected in the drop in capacity utilization in primary metals. A positive note: The ratio has not deteriorated further this month and remains well below the 2009 levels when the drop in shipments was rapid and dramatic.

Durable goods executives have taken improved their methods around rapid response concepts. If you're interested in this subject visit one of the RT3 webinars at www.tcsdb.com

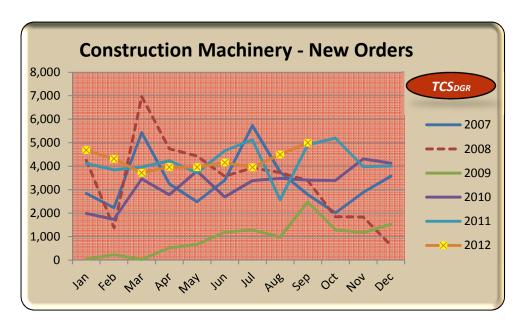




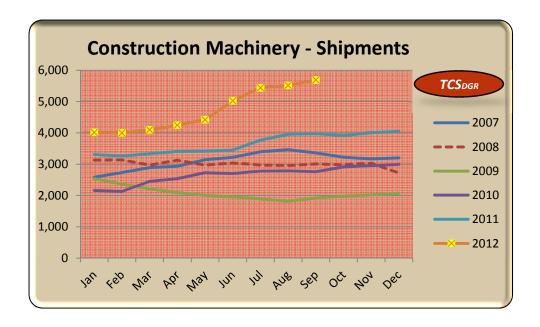


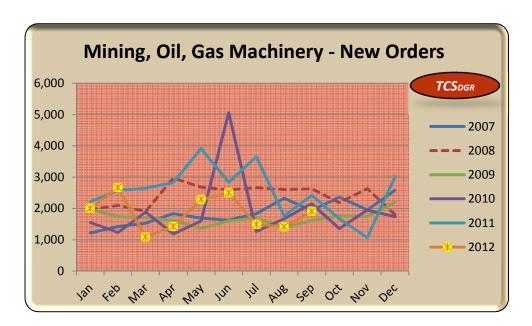
The I/S ratio by stage of production (a DGR exclusive) shows that without growth in shipments we're in for months of poor inventory performance. You can only corral the inbound supply chain over 3 to 6 months.

Durable goods sub sectors:



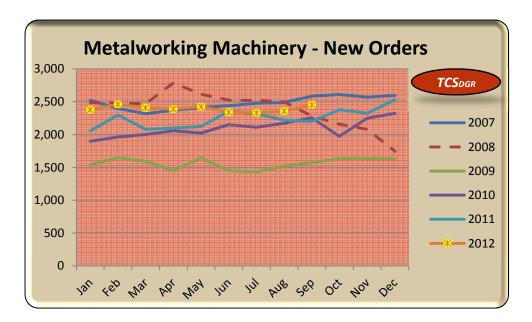
Construction machinery new orders increased by 11% to \$5 billion, a second month of excellent performance. But it remains tempered by the news that shipments were much higher at \$5.7 billion. Book to Bill ratio is badly upside down at 0.88 (long term average 1.01). Cat announced last week that they would be cutting production plans for the second time in 6 months.



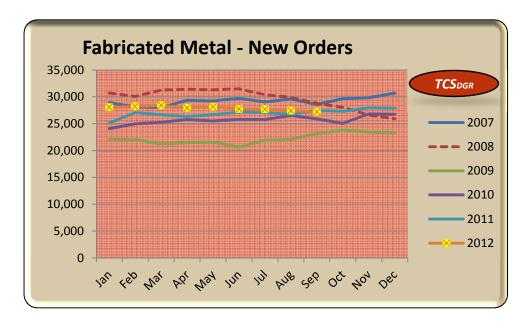


Mining, oil and gas machinery new orders increased 13% to \$1.9 billion. This followed two months of large drops. Book to bill ratio improved to 0.90 but remained upside down. (long term average = 1.03).

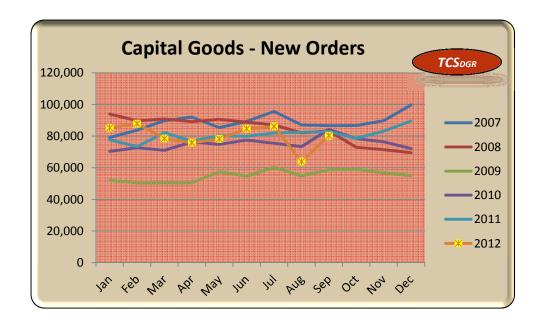
Metalworking machinery new orders increased 3.6% to \$2.5 billion. Book to bill ratio held at a solid 1.05 (long term average = 1.00). Industry pattern remains solid. Orders remain strong despite the expiration of government investment incentives. Automation investments remain attractive, driven largely by the anticipation of higher labor costs due to health care and regulation. A smaller effect is the drive for more energy efficiency. Newer machinery offers only small energy improvements.



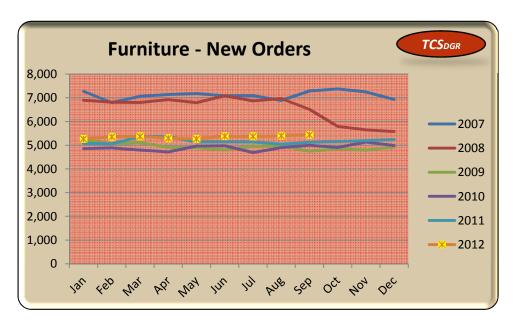
Fabricated metal new orders decreased 0.7% to \$28.4 billion. Book to bill ratio remained steady at 1.03 (long term average = 1.00).



Capital goods increased by a dramatic 26% to \$80.2 billion. Book to bill ratio improved to neutral at 1.02. (long term average = 1.01). Last month's drop included a major one-time decline in aircraft. The net of the two months is still a significant decline.

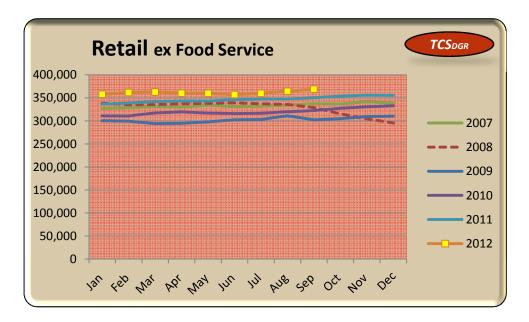


Furniture: New orders increased 0.8% to \$5.4 billion. The book to bill ratio remained steady at 1.01. Growth index remained at 1.017 (slow growth).



Retail Data (Advanced Release)

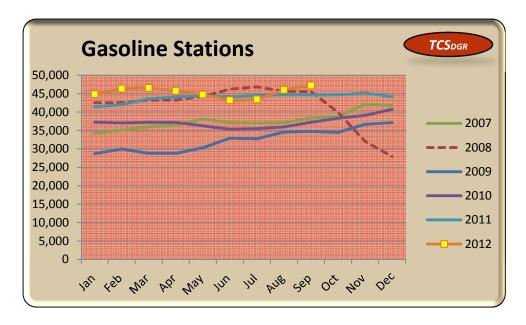
Retail Sales (excluding food service) increased 1.2% to \$368.8 billion in September, another record. Gas price inflation accounted for almost all of the increase.



Core retail (excludes food service, gasoline, autos and parts) increased 1%was to \$246 billion.

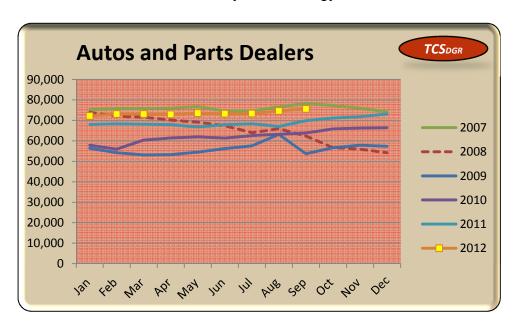


Gasoline sales increased 2.5% to \$47.2 billion. Gallons per day dropped 4.2%

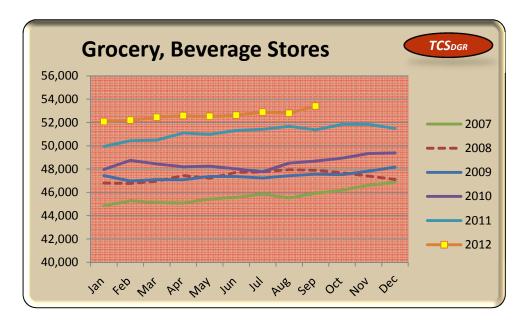


Auto sales increased 1.3% to \$74.2 billion. But the capacity utilization numbers (see Industrial Production above) show a general cutback at the auto factories. A drop in utilization rate from 79.6% to 73.0% in two months is dramatic. This is the type of shock that sometimes triggers a supply chain spasm lasting several years.

Some auto industry analysts were hopeful that a Romney win could reverse the direction by taking immediate action to reduce energy costs. The reverse is likely to happen. One short term spike will come from hurricane Sandy. The storm destroyed 200,000 cars that will be replaced by insurance companies. But this is a one-time hit that doesn't increase total wealth the way lower energy costs would.



Grocery and Beverage stores sales increased 1.2% to \$53.4 billion. This is a rough measure of retail inflation since it tends to track with population.



Housing:

There is finally some glimmer of hope in the housing sector. Median home prices improved substantially. And the inventory is at an all-time low. But sales and starts are improving very slowly from the dramatic bottom of the past few years.

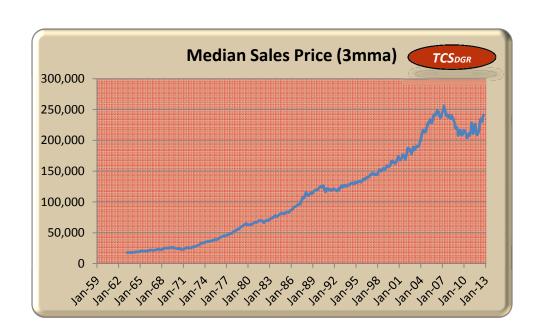
Single family starts increased 11% to 603,000, a second month of substantial gains. New single family sales increased 5.7% to 389,000 units. Inventory of unsold new single family homes increased slightly to 145,000, the first significant increase since 2009.

The portion of the market carried by single family housing remains around 70%, down from 85%. A single family home has almost 3 times the impact on the economy as a typical multi-family unit. But the demographic shifts suggest a more permanent change. The downsizing by baby boomers plus the delay of first-home purchase by the young combine to keep the single family home share low.

Median sales price (3MMA) increased to 241,200, returning to levels not seen since December of 2007. Now stands 14% above the prior year value.







About Time Compression Strategies and the Durable Goods Report

TCS provides business consulting and information technology support to high performance organizations. Our focus is on manufacturing and telecom. Through our business partners we support health care, energy 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 historical 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 reliable for growth trend analysis. 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), a management consulting and information technology company serving manufacturing, distribution, and their supporting technologies. He also serves as Chairman of Temporal Dynamics, Inc. (TDI), the developer of the patented Ancelus high performance database. TCS has developed a suite of high-performance real-time applications systems in support of their client industries.

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 one of the "founding fathers" 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 modeling process for analysis and improvement of supply chain 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.

Time Compression Strategies Corp

www.tcsdb.com

www.ancelus.com

317-842-6417

jlayden@tcsdb.com