



The Durable Goods Report

December 2009 Data

Source Data: US Census Bureau

Preliminary Data Release of 2/4/2010

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By the Numbers:

Prevel Technology - Durable Goods & Retail Summary			
	Dec-09	Nov-09	Dec-08
New Orders-Durable	169,014	167,412	173,279
12 month moving average	163,944	164,299	204,630
% Change from Prior Year	-19.9%		
Unshipped Orders - Durable	716,692	724,054	800,360
% Change from Prior Year	-10.5%		
Value of Shipments - Durable	181,735	176,772	189,253
12 month moving average	174,698	175,325	207,241
% Change from Prior Year	-15.7%		
Inventory - Durables	302,806	303,298	343,468
% Change from Prior Year	-11.8%		
Retail Sales	315,041	315,789	298,949
12 month moving average	306,679		329,306
% Change from Prior Year	-6.9%		
Inv to shipments ratio - Durable	1.67	1.72	1.81
Growth Index - Durable New Ord	1.026	1.022	0.879
Growth Index - Durable Shipmts	1.019	1.002	0.929
Growth Index - Retail (Dec)	1.022	1.017	0.937
1. Preliminary release data (~5 wks after the end of the period).			
2. Seasonally Adjusted, millions			
3. Prevel Growth Index = 3MMA / 12MMA		John Layden	317-842-6417

Monthly Rate of Change	This period	Last period	Rate-ofChange	Comments
GDP Q4 vs. Q3	14,463.4	14,242.1	1.6%	(5.7% annualized)
Industrial Production	2747.2	2733.7	0.5%	
Capacity Utilization %	72.0	71.5	0.5	
Manufacturing %	68.8	68.8	-	
Durable Goods %	61.8	61.7	0.1	
Autos and Parts %	52.1	52.0	0.1	
Machinery %	59.1	57.6	1.5	
Durable Goods (\$ Mil Seasonally adjusted)				
New orders	169,014	167,412	1.0%	
Shipments	181,735	176,772	2.8%	
Inventory	302,806	303,298	-0.2%	
Unshipped Orders	716,692	724,054	-1.0%	828 bil 9/2008
Total Retail (\$ Mil SA)	315,041	315,789	-0.2%	
Autos and Parts	59,440	59,926	-0.8%	
Gasoline	34,545	34,190	1.0%	
Core retail	221,056	221,673	-0.3%	
Employment (000's SA)				
Non-Farm	129,527	129,547	(20.0)	138 mil 1/2008
Goods Producing	17,846	17,906	(60.0)	
Manufacturing	11,540	11,529	11.0	13.7 mil 1/2008
Durable Goods Mfg	7,005	7,078	(73.0)	8.6 mil 1/2008
Housing (000s of Units SA)				
Single family starts	456	490	-6.9%	
Single family sales (new)	342	370	-7.6%	
Single family for sale (new)	231	235	-1.7%	570 in 8/2006

Summary and Analysis

Overview of the US Economy

Year	Qtr	GDP \$b (SAAR)	Chg from Prior Pd	Chg from Prior Year
2007	4	14,031.2	0.6%	4.9%
2008	1	14,373.9	2.4%	6.4%
2008	2	14,497.8	0.9%	5.5%
2008	3	14,546.7	0.3%	4.3%
2008	4	14,347.3	-1.4%	2.3%
2009	1	14,178.0	-1.2%	-1.4%
2009	2	14,151.2	-0.2%	-2.4%
2009	3	14,242.1	0.6%	-2.1%
2009	4	14,463.4	1.6%	0.8%

US GDP: The GDP grew 1.6% in Q4 (5.7% annualized). Compared to the same quarter in 2008, the GDP was 0.8% higher. Be careful about the numbers. After the inventory restocking is eliminated, growth was likely less than 0.5% (2.2% annualized).

While this is better than a downturn, it still remains well below the 3.5%

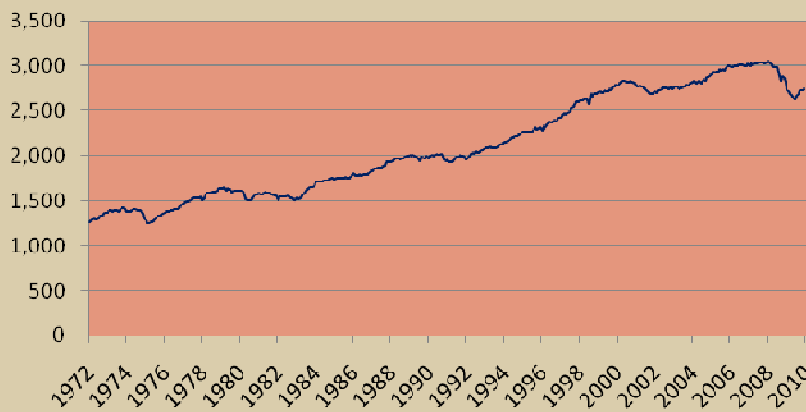
annualized that economists believe is necessary to produce job growth.

Year	Mo	Ind Prod - Value of Prod	Chg from Prior Pd	Chg from Prior Year
2008	10	2,880.7	1.5%	-4.6%
2008	11	2,854.2	-0.9%	-5.8%
2008	12	2,825.0	-1.0%	-7.0%
2009	1	2,733.6	-3.2%	-10.3%
2009	2	2,723.3	-0.4%	-10.4%
2009	3	2,695.0	-1.0%	-10.6%
2009	4	2,678.5	-0.6%	-10.5%
2009	5	2,640.9	-1.4%	-11.4%
2009	6	2,632.3	-0.3%	-11.7%
2009	7	2,668.2	1.4%	-10.5%
2009	8	2,696.7	1.1%	-7.9%
2009	9	2,724.9	1.0%	-4.0%
2009	10	2,731.4	0.2%	-5.2%
2009	11	2,733.7	0.1%	-4.2%
2009	12	2,747.2	0.5%	-2.8%

Industrial Production increased by 0.5% to \$2.747 trillion in December and now stands 2.8% below last year.

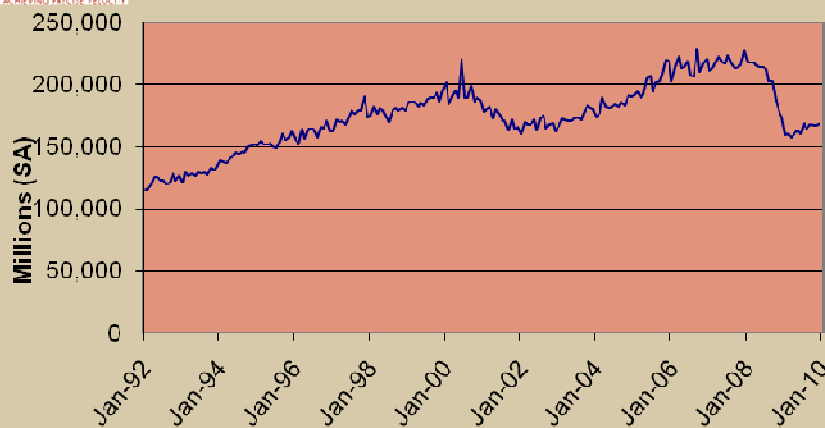
Industrial production has now returned to a level last seen at the bottom of the 2000-2003 manufacturing recession. The modest rate of recovery does not suggest rapid return to “business as usual.”

Industrial Production



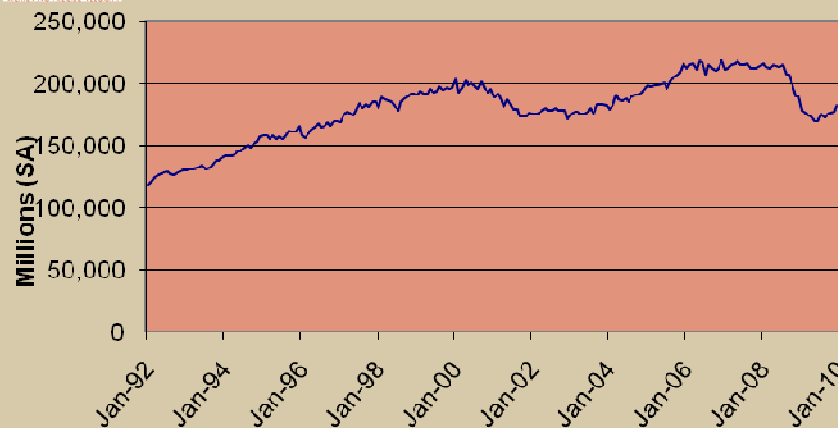
The decline in industrial production over the past year is the steepest and deepest since this measure was first compiled.

Durable Goods New Orders



Durable goods new orders: The increase in new orders of almost 1% was good news. But November results were revised from a small increase to a negative 0.4%. The net effect suggests slow growth in durable goods, as can be seen from the chart.

Durable Goods Value of Shipments

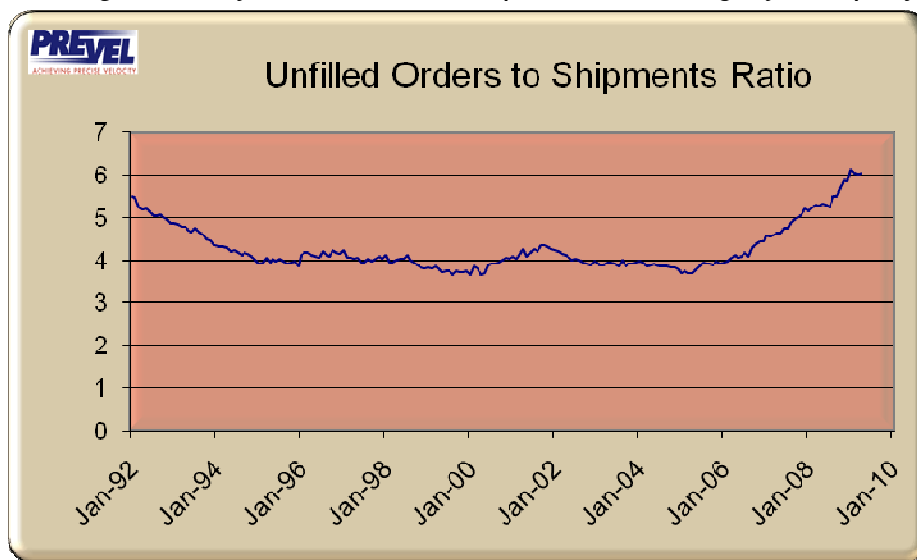


Durable goods shipments: There is a more important problem in durable goods. Shipments surged by almost 3% during the period, compared to the 1% order increase. Orders are reported at \$169 billion with shipments at \$182 billion. The excess of shipments over orders has grown from \$6.7 to \$12.7 billion

over the past three months. The first reaction was to look for a comparative draw down

of inventory since retailers went into the Christmas season with unusually low inventory levels. It wasn't there. The surge in shipments drew down the order backlog instead. This is a signal of a pending pull back (read layoffs). The "surprising" increase in first time unemployment claims in the first week of February may be a sign of this correction. It may be possible that manufacturers see something in the economy that isn't yet visible in the numbers. The safer bet is for a pull back.

Of particular interest for durable goods manufacturers is the deterioration of factory velocity. The ratio of unfilled orders to shipments is an indication of order velocity and average delivery time. It takes a special kind of agility to rapidly reduce throughput, but



keep delivery performance in line. Average delivery time across all durable goods climbed from 4 months to 6 months in a relatively short time. The slow-reaction problem of the 2000 downturn was avoided. But the average lead time deterioration shows that it was done by

brute force rather than by elegant use of information technology. This issue will haunt any recovery when it finally gains momentum.

A few sub-segments showed balanced improvement in orders. Construction machinery, mining-oil-gas machinery, and metalworking machinery showed continued, if modest, improvement. None of these sectors suffered from the problem of excess production over orders. CAT has actually cancelled planned shutdowns at one engine plant. They have warned suppliers of a pending ramp up in March rather than May. An anecdotal report from a broker of used machine tools indicated sales in the past 60 days were the highest in three years.

Employment: The much-watched unemployment rate report showed a modest improvement, from 10.0% to 9.7%. But the underlying numbers don't support any cause for optimism. As always we go to the actual measurements rather than the percentages.

Total non-farm employment declined in January by 20,000 (seasonally adjusted) to 128.5 million. The peak employment in January 2008 was above 138 million. Employment in durable goods manufacturing declined by 73,000 (December was off 85,000). Current employment is 7 million, down from a peak of 8.6 million in January 2008. The claims of a moderating job loss picture are hard to support from durable goods with 1% of the workforce being lost every month. More likely it is evidence of the pull back discussed above. Durable goods employment is most important to the economy because each durable goods job leverages another 8 or more jobs in the supplier base and service sector of the economy. This compares to 5 jobs in non-durable and 3 jobs in services. Without a robust durable goods economy the rest of the economy will eventually wither. The idea that we will shift to a “post-industrial” economy is a myth. There is no such thing, only failed industrial economies.

There is much discussion that the unemployment rate change was politically manipulated. I don't find this argument very convincing. While possible, the annual “adjustments” are a regular event as better data arrive. I've always found the people at the Census Bureau and Bureau of Labor Statistics to be very professional. But there are some measurement errors in the process they use to get the information public on a monthly schedule. Those errors are corrected periodically causing occasional upsets.

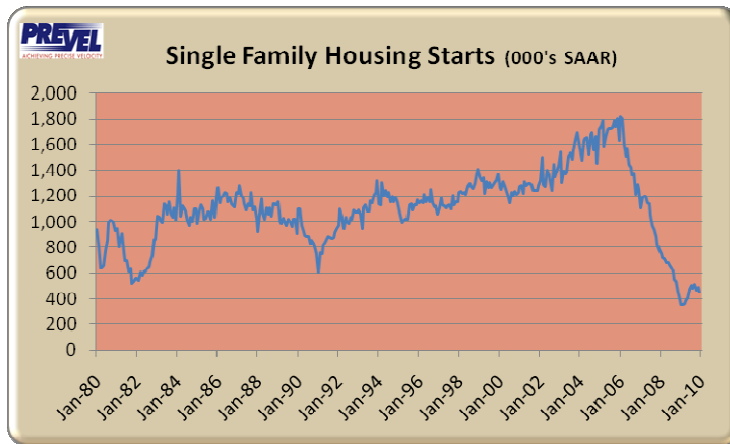
We've reported before on inaccuracies in the unemployment number caused by the small sample of major employers. This approach is fast, but misses the major component of small employers. By contrast the total employment number is based on the household survey and is a much more representative sample. You can usually trust this number.

Further clouding the unemployment number is the question of exactly what you're trying to measure. This often leads to accusations of bias, but the fact is that BLS openly publishes all the breakdowns. If you want to compile a different version, go for it.

Other measures suggest that the employment picture is not improving. The real-time tracking of payroll tax deposits indicates continued declines in employment through January.

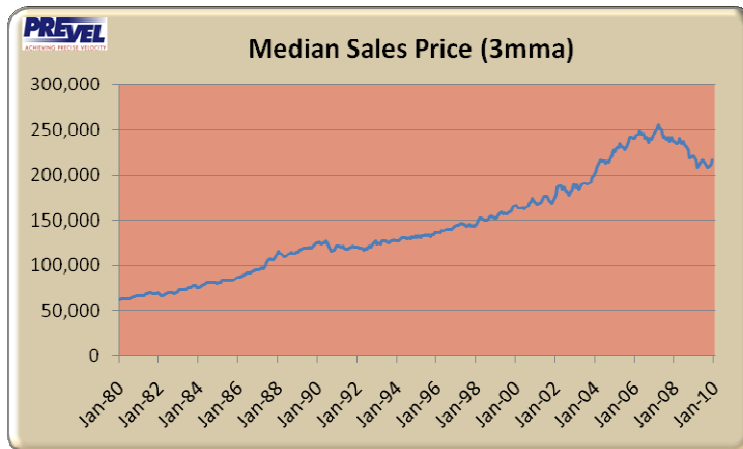
Unemployment of longer than 6 months increased to 6.3 million, the highest ever recorded. The ranks of the discouraged workers (not included in the unemployment rate) continue to grow as work is harder to find.

The only positive employment indicator is the upturn in hiring of temporary help. This has been a leading indicator in past recessions, and may indicate that we are at least near the bottom.



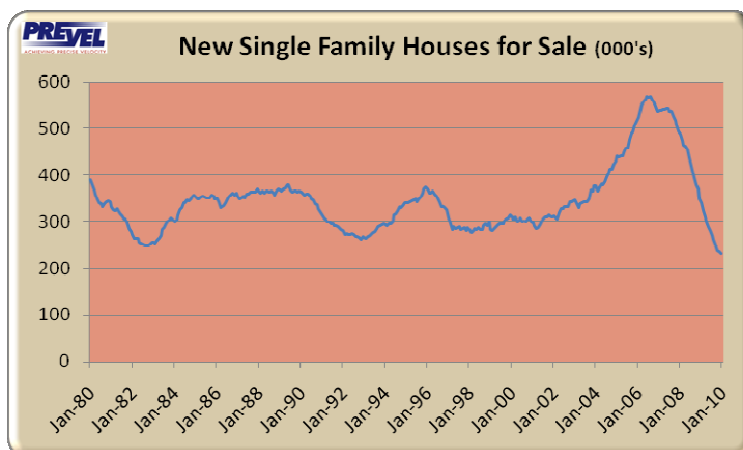
The housing industry reported a drop in single family sales and starts for December. The unsold inventory also dropped to 231,000 units – an unusually low number. There was some premature celebration when it was announced that the single family housing starts had matched December 2008. No celebration was in order. Someone seems to

have forgotten how really bad December 2008 was.



Prices firmed for the fourth consecutive month, with at least three of the problem cities (LA, Las Vegas, San Francisco) showing improvement. The rising trend line of prices has now returned to the period before the housing bubble, at least for the moment.

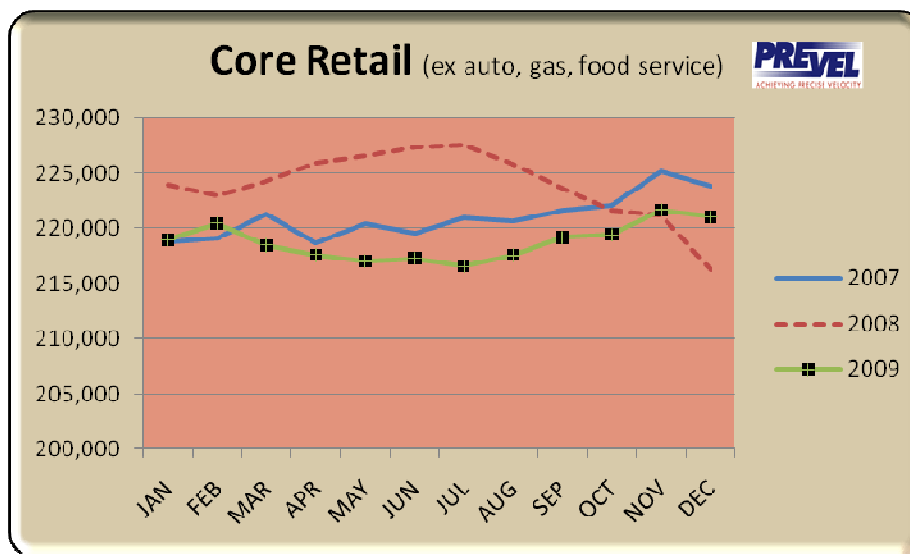
Lending activity seems to be reasonable, with attractive rates and funds available. But



the lending standards are more stringent than they were during the boom years. Reports from two regional banks suggest the problem is a lack of applications, not a lack of funds.

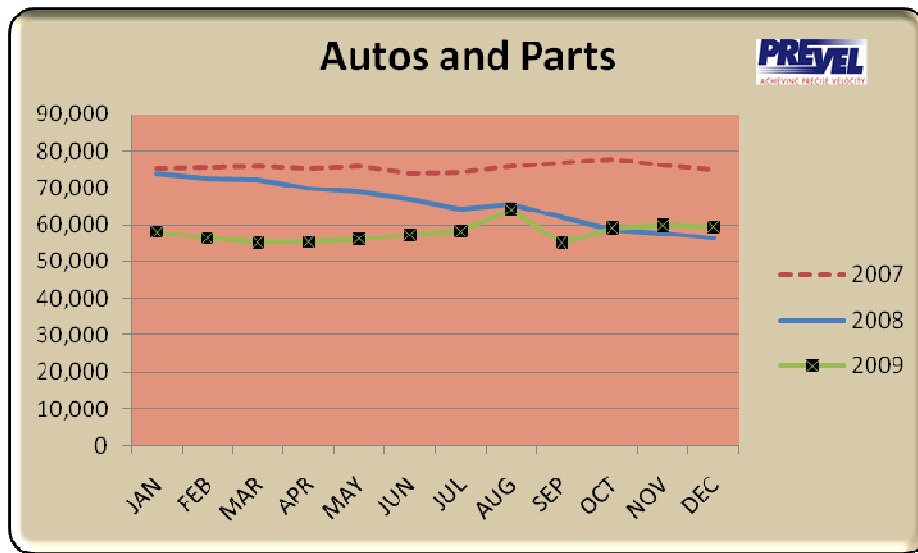
The mystery of household formations remains. The household estimate for December 2009 came in at 1.1 million above December 2008. New construction added about 0.6 million housing units during the year, and the inventory of new unsold units declined by 0.12 million. That leaves about 400,000 households unaccounted for. Vacancies remained fairly stable. The new census will probably clear things up in about a year. We'll be watching the adjustments in these numbers closely in coming months. Something doesn't add up.

Core Retail (excludes food service, autos, gasoline) finished above December 2008 and almost matched December 2007. This sector has remained remarkably stable despite the dramatic swings in autos and gasoline prices that have been distorting the total retail numbers. Our measure of "Core Retail" excludes these volatile sectors in an attempt to avoid the obvious distortions. With so little movement in this measure, we've done something we rarely do – expanded the left hand scale. This makes the small



movements more visible, but greatly distorts the real effect. Apologies in advance, but it does allow us to see the modest growth in core retail starting in July. It also highlights the slight dip in December that seems to be a regular pattern. This is most likely due to

the breakdown of the seasonal adjustment factors used by Census. Statistical adjustments routinely fail in periods of volatility. Of course it is also possible that consumers have learned to take advantage of the November sales events now common at the launch of the season.



Auto industry sales are no longer the major drag on retail that we saw last year. Inventories are in good shape and the category may be poised for steady growth.

Health Care Legislation: Nothing much has changed on the health care front since last month. There is some movement to craft a bi-partisan bill now that the Senate super-majority has been eliminated with the election of Scott Brown in Massachusetts. For the time being there will be no important restructuring of employee health insurance expense for manufacturers. Sad to say this deadlock might be the better outcome. There is plenty that needs to be done, but no evidence of support for addressing the core problems. Rep Paul Ryan (R-WI) is getting much attention from both parties for his proposals to fix the entire economic mess in Washington. His plans include a fix for Social Security and Medicare. None of the proposals seem imminent based on the current rhetoric.

Cap and Trade and the Environment: The Climategate scandal has now resulted in the complete collapse of the climate change cabal. Billions of phony transactions in the EU cap and trade system have been exposed. The evidence is now flooding in that the scientific support framework for the UN claims were made up from whole cloth. The credibility of all of climate science has been damaged, and possibly all of science.

India has withdrawn from the UN-IPCC and formed an independent climate organization. There are calls in India for the resignation of the head of the IPCC, Ragendra Pachauri, himself and Indian. An Indian news magazine published the first and most complete expose to date on the false claims of the UN IPCC report of 2007 (AR4 report)

Not only did the various source data agencies (CRU, NASA, NOAA) manipulate temperature data, but they also failed to use any peer-reviewed science to support the claims of imminent threat. More than a dozen claims of the UN-IPCC report of 2007 have been shown to trace back to political position papers written by the World Wildlife

Fund or Greenpeace. In some cases the references were indirect – they made reference to non-scientific article by legitimate scientists that made reference to the WWF publications (a sort of science-laundering scheme). In one case it was an unpublished dissertation by two students.

As of now there is no longer any evidence (as in zero or none) of anthropogenic global warming. There never has been. There is a mounting body of evidence to the contrary. The only model that accurately predicted the recent cooling is the one based on solar activity. The short summary of CO2 science: CO2 is not dangerous, not a pollutant, required for healthy plant growth, and beneficial in higher quantities. It has no impact on temperature.

It is still possible that there will be criminal charges arising from the use of the UN's pseudo-science to obtain tax money for continued research. But the best bet is that it will just quietly fade away.

The US print and electronic media have studiously ignored most of the flood of developments on the subject. If you want to follow the story in any detail it requires searching the major print outlets in the UK or some in Canada. Check the Times of London, Telegraph (UK) or even the left wing Guardian (where its conflicted reporters have financial investments in green technology).

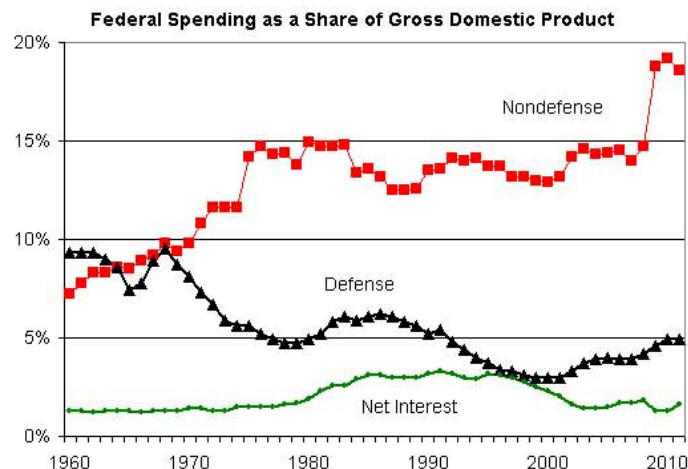
Two Democratic Congressional committee chairs have introduced legislation to block the EPAs attempt to regulate CO2. A number of sympathetic senators from both parties announced support. The original EPA justification relied on the peer-reviewed status of the UN-IPCC report. Since the exposure of the peer-reviewed claims as false, there is no longer a scientific foundation for the proposed regulations as required by law. This will not soften the blow from new regulations on mercury, SO2 and NOx. So even if the CO2 blocking is successful, expect higher energy costs.

But even the complete collapse of the scientific foundation of the argument on CO2 cannot stop the push within the US government. NOAA has announced that they will form a new climate change bureaucracy as a companion to the National Weather Service and the National Sea Service. The formal announcement was delayed by the unusual snow and cold in Washington. Their prototype web site presents data on sea ice extent in the Arctic ending in 2007, a recent low point. They avoid publication of the 2008 and 2009 data showing a recovery to normal levels. This isn't irony, but satire.

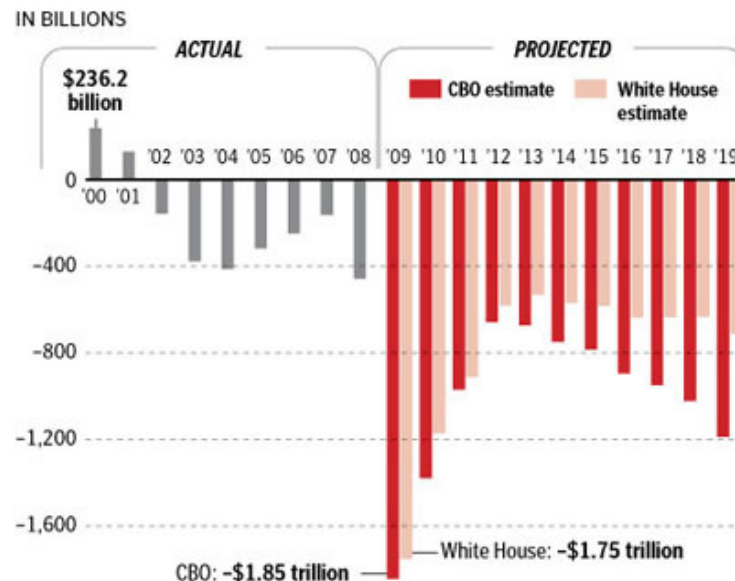
The best approach for manufacturers remains the most practical. A green initiative is effective if it improves efficiency and reduces cost. No other justification should be entertained. Ideas based on vague benefits to mankind with no evidence should be viewed with extreme skepticism. In the 200+ years since Malthus predicted the collapse

of civilization through overpopulation, there have been 26 major apocalypse predictions. All have been shown to be false.

Federal Spending: The reason for the huge projected deficits in the Federal US budget is not hard to detect. The increase in non-defense spending has moved from 15% of GDP to 20% of GDP in the blink of an eye. There is a broad and growing public awareness of the source of the problem. But at the moment there are few who have a real plan to begin to unwind the growing commitment to spending in Washington. It is the source of their control.



Federal Deficit Projection

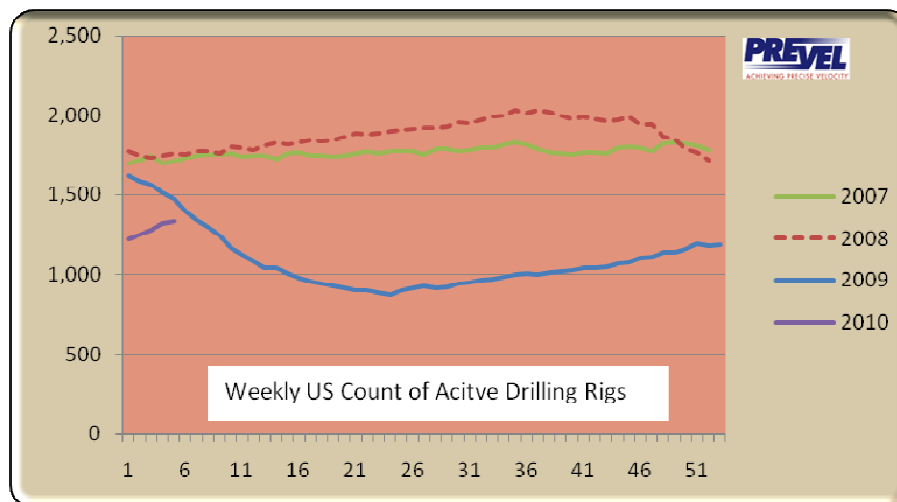


The most important concern for manufacturers is the impact that government deficits have on the competition for credit resulting in higher borrowing cost and lower availability. The risk of inflation seems lower, but should still be monitored carefully. In

either case there will soon be a move by the Fed to reduce the money supply in an orderly fashion, and that will generate some combination of the above problems. One signal to watch is the Federal Reserve auctions. If the Chinese and other buyers of treasuries cut back purchases or begin to sell the securities, it will be a signal of the beginning of the hangover.

The encroachment of the Federal government into every phase of American life prompted one of the funniest commercials of the Super Bowl. Audi launched a clever satire on the “Green Police” while they touted their turbo diesel model. This vehicle won a green award (40+ mpg with no expensive hybrid tricks) and shows that there are some engineers who remember the laws of thermodynamics. If you want more efficiency, raise the temperature of combustion. There is no second choice.

Energy Production:



The Baker-Hughes count of active rotary rigs continues to recover from the 2009 decline. While the economy does not yet warrant significant increases in production, the current global price of oil plus signs that the worst of the recession is behind us have

combined to encourage drillers to get back in the game.

Another blow to the “Peak Oil” enthusiasts surfaced recently. The peak oil theory states that we have a fixed amount of oil, we’re using it up, and the imminent decline in production will cause prices to soar.

A paper published on the subject of volcanic activity on the Pacific Rim included an unremarkable fact only incidental to the main purpose of the report. The volcanic CO₂ emissions contain the C12 isotope (organic in origin). The paper proposes that the source of this CO₂ is from the plankton in the oceans which die, settle to the bottom of the ocean, are carried into the mantle of the Earth via subduction, and are subsequently emitted as CO₂ in volcanic eruptions several hundred miles inland from the subduction zone. Couple this with the demonstrated ability of the rock layer of the mantle to convert these materials into hydrocarbons at temperatures above 700 degrees and we

have an explanation for the origin of deep oil that cannot be explained by traditional organic decay theory.

The real revisionism of this observation is that oil is being continuously created in the mantle. We should have gotten that message when the discharge samples of the “black smoker” hydrothermal vents on the mid-Atlantic ridge turned out to be hydrocarbons. Another hint was the surge in mega-field discoveries over the past decade.

The peak-oil theory emanates from a profound misunderstanding of economic behavior, not the scarcity of the commodity. We’re not running out of oil. Only the willingness to drill for it.

Most optimistically the discoveries of new natural gas reserves presents an opportunity that even the green lobby has difficulty countering. Clean and now abundant, natural gas is the best possible energy source for both stationary and mobile energy supply. But it requires more drilling to get prices low enough to compete with coal.

About Prevel and The Durable Goods Report

Prevel Consulting supports manufacturing transitions to High Velocity Manufacturing. Prevel Technology delivers software applications and custom solutions in support of data driven decisions, real-time operations and rapid response business metrics, all key components of High Velocity Manufacturing.

The goal of the Prevel DGR 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 the current state. The analysis of historical patterns provides a necessary framework for understanding plausible scenarios. Since a high percentage of durable goods go through retail, this analysis offers a leading indicator of future durable goods activity.

Prevel uses source data from the US Census Bureau, Bureau of Labor Statistics, 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, available 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.

A similar analysis is available for many industry sub-sectors. Contact Prevel for details about this subscription based service.

Technical Note: The “Prevel 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 Managing Partner of Prevel Technology, a management and technology consulting firm serving manufacturing, distribution, and their supporting technologies. Prevel has developed a suite of extremely high-performance real-time applications systems in support of their client industries.

Prior to launching Prevel, Layden’s career included 22 years’ in manufacturing and another 18 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 in 1997. 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 advisory services of Prevel retain the practical, no-nonsense approach familiar to world class operating executives. His operating roles included plant manager, director of business planning, and VP of Supply Chain Management in the delivery of appliances to Sears.

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, Ball State University, and others. He can be reached at jlayden@preveltech.com or 317-842-6417.



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