

Material Handling Industry of America
Economic Series
May 2013



Material Handling Equipment Manufacturing

History and Forecast

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Material Handling Equipment Manufacturing Introduction



- The Material Handling Equipment Manufacturing (MHEM) series serves as a good proxy for the equipment based market in the Material Handling and Logistics Industry. Material Handling Equipment Manufacturing includes:
 - NAICS 333921 Elevators and Moving Stairways
 - NAICS 333922 Conveyors and Conveying Equipment
 - NAICS 333923 Overhead Traveling Cranes, Hoists, and Monorail Systems
 - NAICS 333924 Industrial Trucks, Tractors, Mobile Straddle Carriers and Stacker Machinery
- Data is collected and reported monthly by the U.S. Bureau of Census according to the North American Industry Classification System (NAICS).



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MHEM Forecast 2013 - 2014

Market Forecast for 2013 – 2014

Material Handling Equipment Manufacturing

As the current US economic expansion shifts from Cap-Ex driven to Consumer-led, we anticipate modest, positive MHEM growth for 2013. Housing, Auto rebounds and expansion in Industrial, Warehouse and Commercial Buildings (over 69% 2014 - 2018) will contribute substantially to improved MHEM growth for 2014 and beyond.

- MHEM New Orders grew 7.2% in 2012.

The outlook for 2013 is for growth of 5.0 to 6.0% and 10.0% or better for 2014; there remains some downside risk in the first half of 2013.

- MHEM Shipments grew 9.8% in 2012.

Shipments will grow about 3.5% in 2013, and 9.1% in 2014.

- MHEM Domestic Demand grew 10.9% in 2012.

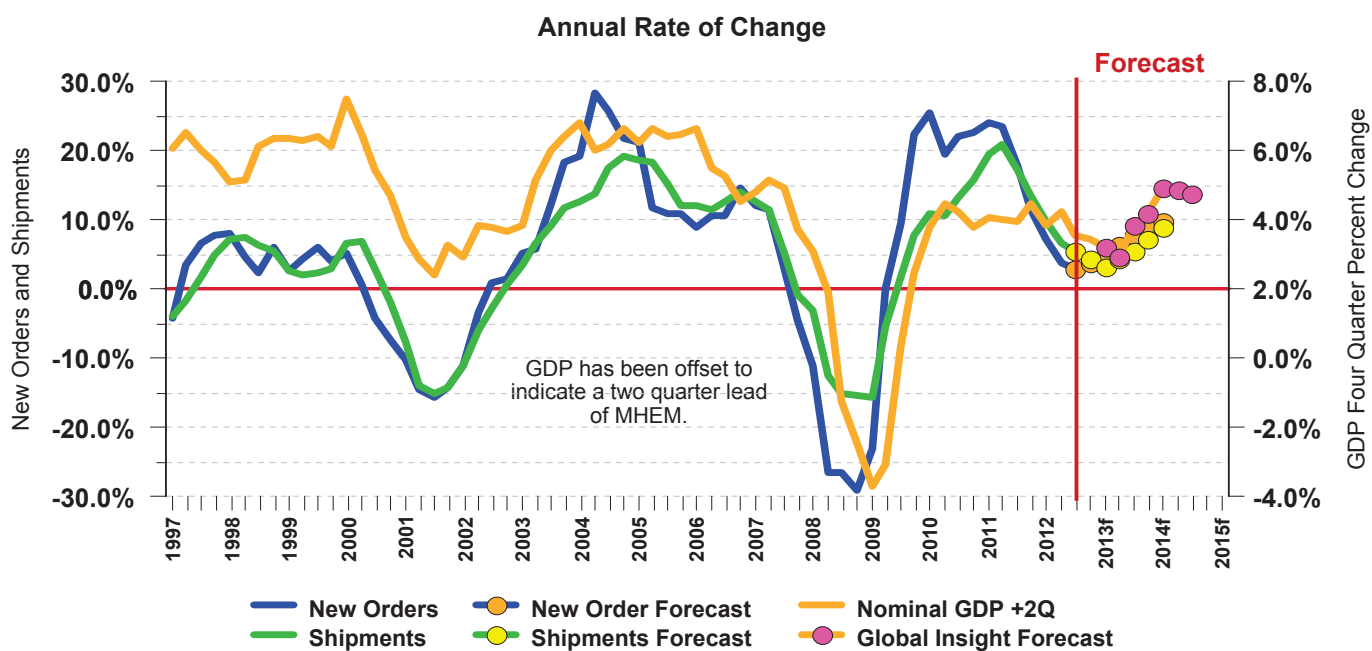
Domestic Demand (Shipments plus Imports less Exports) will mirror Shipment growth in 2013 at 3.4% and just over 9.5% in 2014.

- MHEM Trade growth slowed by more than 50.0% in 2012 reflecting reduced US demand and serious problems in foreign markets. Import growth in 2012 was 17.9%, down from 37.7% in 2011. Export growth was 11.2% in 2012, down from 26.2% in 2011.

MHEM Imports and Exports are expected to slow dramatically in 2013 and rebound modestly beginning mid-2014.

MHEM Forecast 2013 – 2014 vs. GDP

The outlook for 2013 is for growth of 5.0 to 6.0% and 10.0% or better for 2014. MHEM export growth has ground to a halt, actually negative compared to the first quarter of 2012. The outlook beyond 2014 remains attractive.

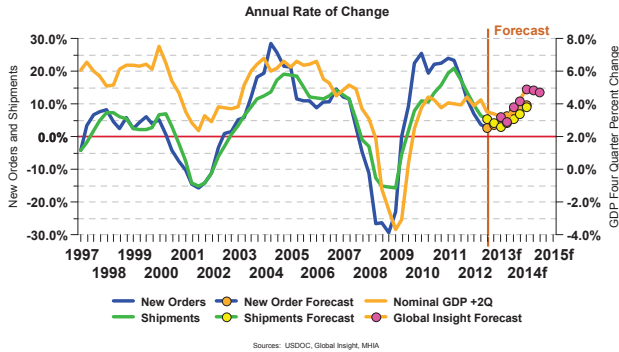


MHEM Forecast 2013 – 2014

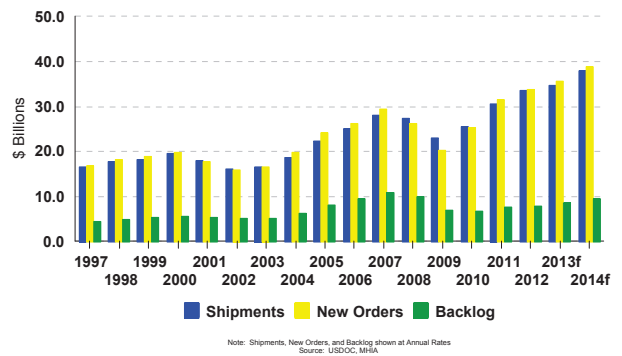


Continued growth is forecasted for 2013 and 2014 for New Orders, Shipments and Domestic Demand with little to no growth expected in Imports or Exports in 2013..

MHEM vs. GDP



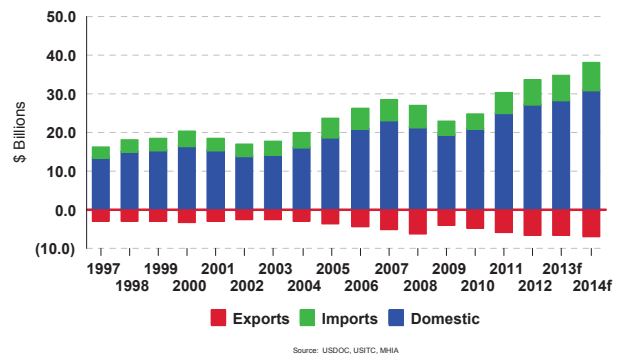
Domestic



Imports and Exports



Domestic Demand



Market Overview

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Market Overview – Q1 2013 vs. Q1 2012

Material Handling Equipment Manufacturing

First quarter 2013 compared to the same quarter a year ago indicates a rapid deceleration in the current expansion cycle. This pace is expected to increase in the third and fourth quarters of 2013.

	<u>Q113/Q112</u>	<u>Market Value</u>
• New Orders	3.2%	\$ 9.0 Billion
• Shipments	4.3%	\$ 8.5 Billion
• Unfilled Orders	1.4%	\$ 8.3 Billion/2.9 Months
• Imports	4.3%	\$ 1.5 Billion
• Exports	-1.6%	\$ 1.5 Billion
• Net Trade		
• Domestic Demand	5.3%	\$ 8.5 Billion

Market Overview – 2012

Material Handling Equipment Manufacturing

Following two years of double digit expansion, 2012 began to decelerate in the third quarter and finished the year at less than half the pace of prior years..

	<u>Annual Growth</u>	<u>Market Value</u>
• New Orders	7.2%	\$33.9 Billion
• Shipments	9.8%	\$33.7 Billion
• Unfilled Orders	2.4%	\$ 7.9 Billion/2.7 Months
• Imports	17.9%	\$ 6.1 Billion
• Exports	11.2%	\$ 6.0 Billion
• Net Trade		\$ - .1 Billion
• Domestic Demand	10.9%	\$33.8 Billion

Market Overview – 2011r Material Handling Equipment Manufacturing



	<u>Annual Growth</u>	<u>Market Value</u>
• New Orders	24.2%	\$31.6 Billion
• Shipments	19.6%	\$30.7 Billion
• Unfilled Orders	13.4%	\$ 7.7 Billion/2.8 Months
• Imports	37.7%	\$ 5.2 Billion
• Exports	26.2%	\$ 5.4 Billion
• Net Trade		\$ - .2 Billion
• Domestic Demand	21.2%	\$30.5 Billion



Market Overview – 2010r Material Handling Equipment Manufacturing



	<u>Annual Growth</u>	<u>Market Value</u>
• New Orders	25.6%	\$25.4 Billion
• Shipments	11.0%	\$25.7 Billion
• Unfilled Orders	- 3.0%	\$ 6.8 Billion/3.1Months
• Imports	10.3%	\$ 3.8 Billion
• Exports	23.3%	\$ 4.3 Billion
• Net Trade		\$ - .5 Billion
• Domestic Demand	9.1%	\$25.1 Billion



Market Overview – 2009r Material Handling Equipment Manufacturing



	<u>Annual Growth</u>	<u>Market Value</u>
• New Orders	- 22.9%	\$20.3 Billion
• Shipments	- 15.6%	\$23.1 Billion
• Unfilled Orders	- 28.8%	\$ 7.0 Billion/3.4Months
• Imports	- 40.3%	\$ 3.4 Billion
• Exports	- 38.8%	\$ 3.5 Billion
• Net Trade		\$ - .1 Billion
• Domestic Demand	- 15.9%	\$23.0 Billion



Market Overview – 2008r Material Handling Equipment Manufacturing



	<u>Annual Growth</u>	<u>Market Value</u>
• New Orders	- 11.1%	\$26.3 Billion
• Shipments	- 3.0%	\$27.4 Billion
• Unfilled Orders	- 14.4%	\$ 9.9 Billion/4.6 Months
• Imports	+ 5.8%	\$ 5.7 Billion
• Exports	+19.1%	\$ 5.7 Billion
• Net Trade	-94.2%	\$ 0.0 Billion (.036)
• Domestic Demand	- 5.0%	\$27.4 Billion



Economic Cycles

Economic Cycles Industrial Sectors



- Charting aggregate data is useful for a market overview; it is also very useful to view data on a rate of change basis to better illustrate cyclical activity.
- For comparison purposes, the next chart was prepared by the Manufacturing Alliance – MAPI which illustrates the phases of a model business cycle and indicates the position within the cycle for twenty eight different industrial sectors based on the year-over-year change in the three month moving average of new orders. For details, visit <http://www.mapi.net>.
- Astute business developers position their companies and channel partners to cultivate customers in industry segments that are in the “accelerating growth” phase of the business cycle. Ultimately, it is the customer base that determines business cycle position for a company.
- We have included a chart for MHEM that shows both the year-over-year change in the three month moving average and in the twelve month moving total of new orders for comparison to the MAPI model business cycle. MHI analyses employ the year-over-year rate of change on the twelve month moving total.

While continuing to expand on an annual rate of change basis, Material Handling Equipment Manufacturing remains in the “decelerating growth” phase as it has now for several quarters.



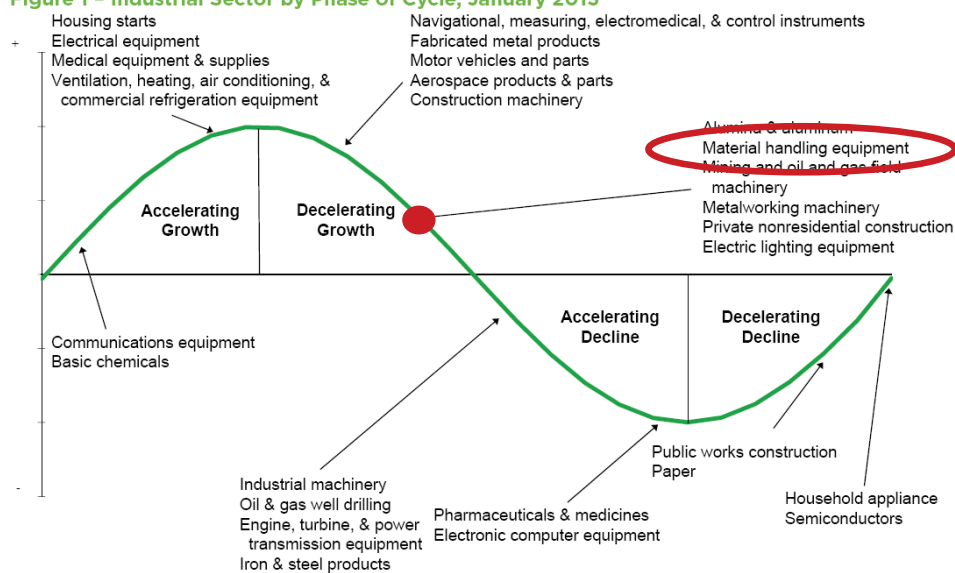
MAPI Industrial Outlook – April, 2013

Current Business Cycle for Major Industrial Sectors



Manufacturers Alliance – MAPI Industrial Sector by Phase of Cycle

Figure 1 – Industrial Sector by Phase of Cycle, January 2013



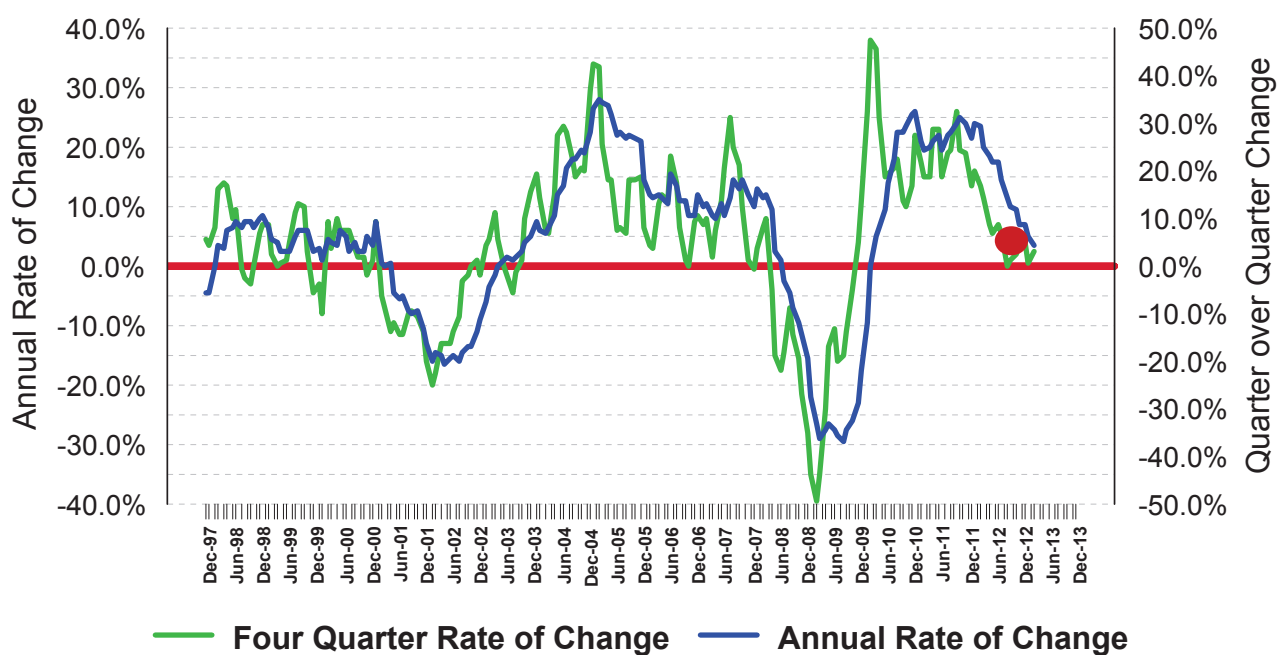
Source(s): MAPI



MHEM New Orders Annual Rate of Change vs. Four Quarter Rate of Change

Four quarter change is calculated by comparing the current quarter to the same quarter one year prior.
This short term measurement anticipates the change to expect in the annual rate of change.

Material Handling Equipment Manufacturing



Economic Cycles Material Handling Equipment Manufacturing

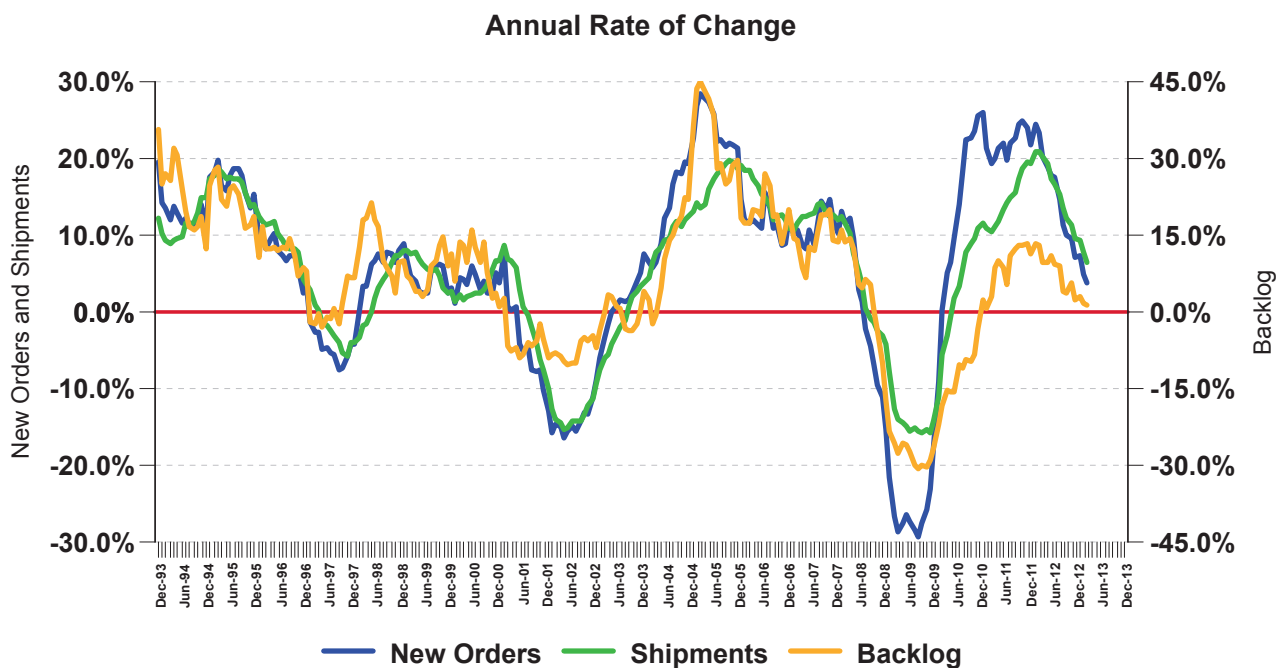


- The next charts reveal the annual rate of change for domestic new orders, shipments, backlog, imports, exports and net trade balance illustrating the position of these components of MHEM in the current economic cycle.
- The data in these charts represent year-over-year change in the twelve month moving total (in most cases) for the business activity indicated.
- It is important to note that value *above Zero* indicates *growth* (increasing at an increasing or decreasing rate) while any value *less than Zero* indicates *contraction* (decreasing at an increasing or decreasing rate).



Economic Cycles Material Handling Equipment Manufacturing

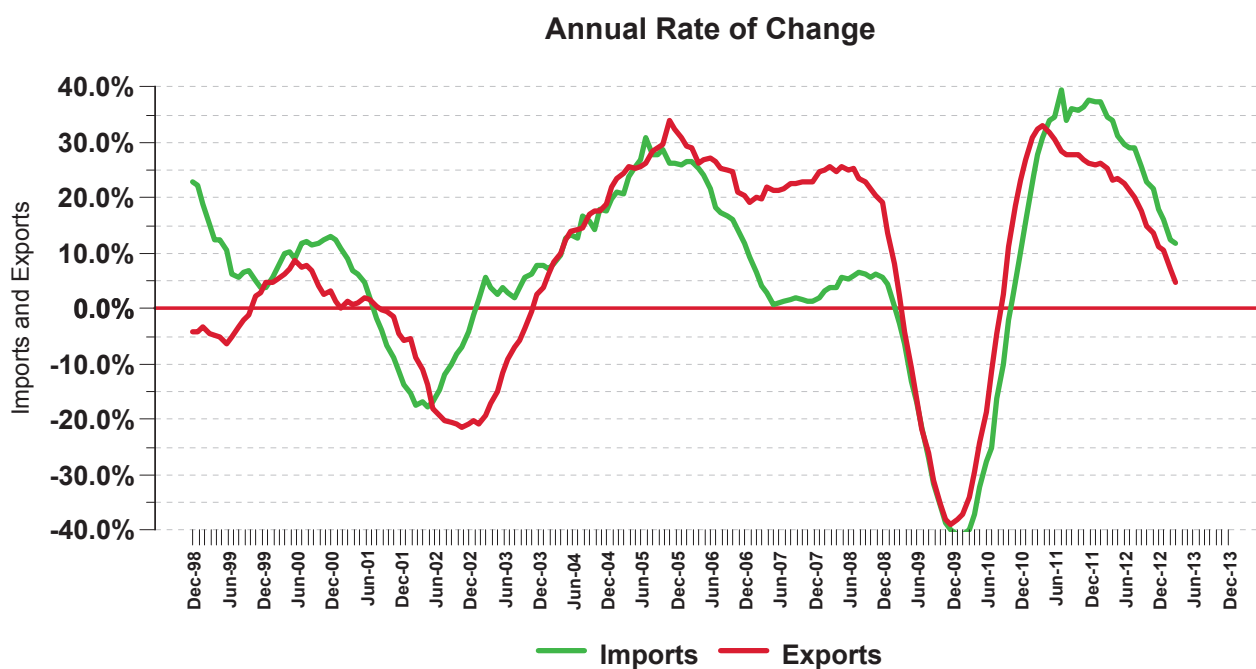
MHEM established a trough for this business cycle in the third quarter of 2009, demonstrated robust growth in 2010, maintained position in 2011 and decelerated through 2012. Deceleration continues in the first quarter of 2013.



Source: USDOC

Economic Cycles – Imports and Exports Material Handling Equipment Manufacturing

Imports and Exports have been in decelerating growth for some months indicating stalling markets, both domestic and abroad.



Source: USITC

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Leading Indicators

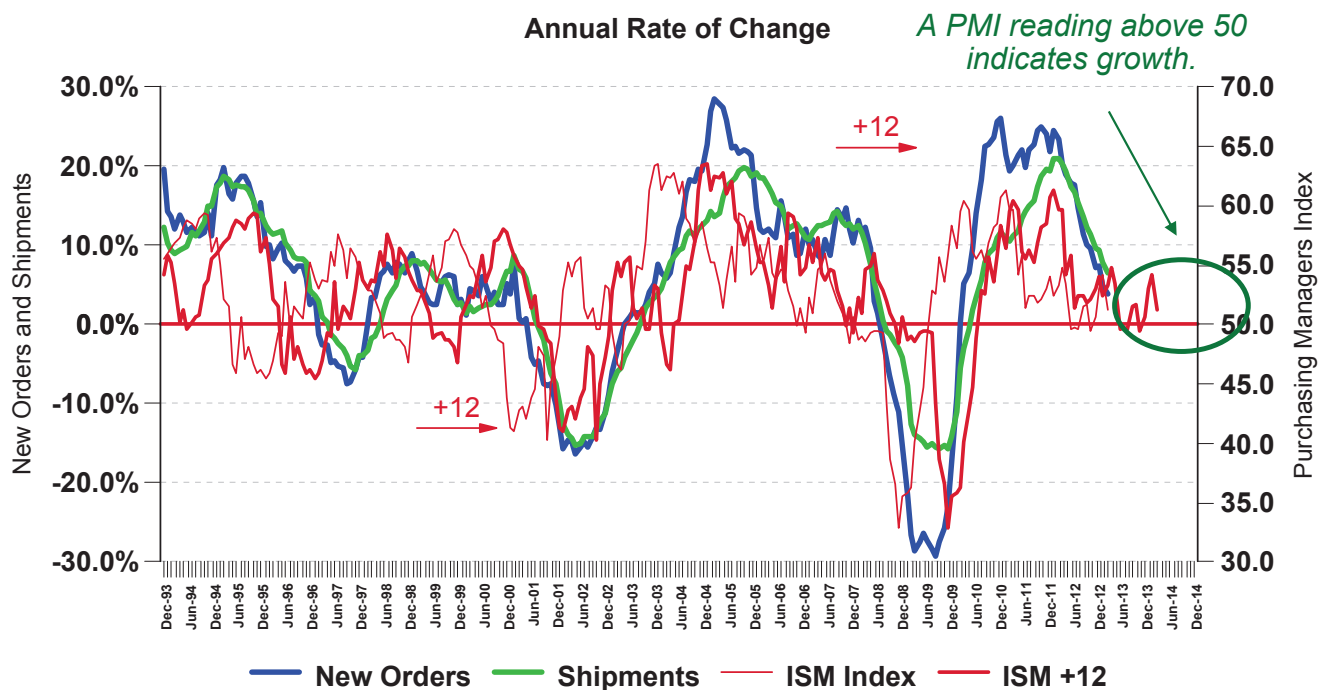
Leading Indicators for Material Handling Equipment Manufacturing

In economics, leading indicators are key economic variables that economists use to predict a new phase of the business cycle. A leading indicator is one that changes before the economy or one of its elements changes.

- Several economic time series tend to anticipate the cyclicalities of the Material Handling Equipment Manufacturing time series. We have found that these indicators lead MHEM by 12 to 21 months:
 - The Institute for Supply Management **PMI Index**, a barometer of Industrial Buyer Sentiment, leads MHEM by **12 Months**.
 - The FRB **Industrial Production** Index, an indicator of Industrial Activity and its companion series, **Capacity Utilization**, lead MHEM by **9 to 12 Months**.
 - The Index of **Consumer Sentiment**, which reflects Consumer Confidence, leads MHEM by **12 Months**.
 - **Housing Starts**, the most significant indicator of Residential Investment, historically led MHEM by **21 Months** until this business cycle. For the remainder of this cycle, it is likely to be coincidental at best. The influence of housing began its return in 2012 and will continue as housing rebounds.
- Therefore, some 12 to 21 Months after these series “peak” or “trough” in their cycle, MHEM very likely will do the same. This is illustrated in the next set of charts.

MHEM vs. Selected Leading Indicators Buyer Sentiment - Purchasing Managers Index

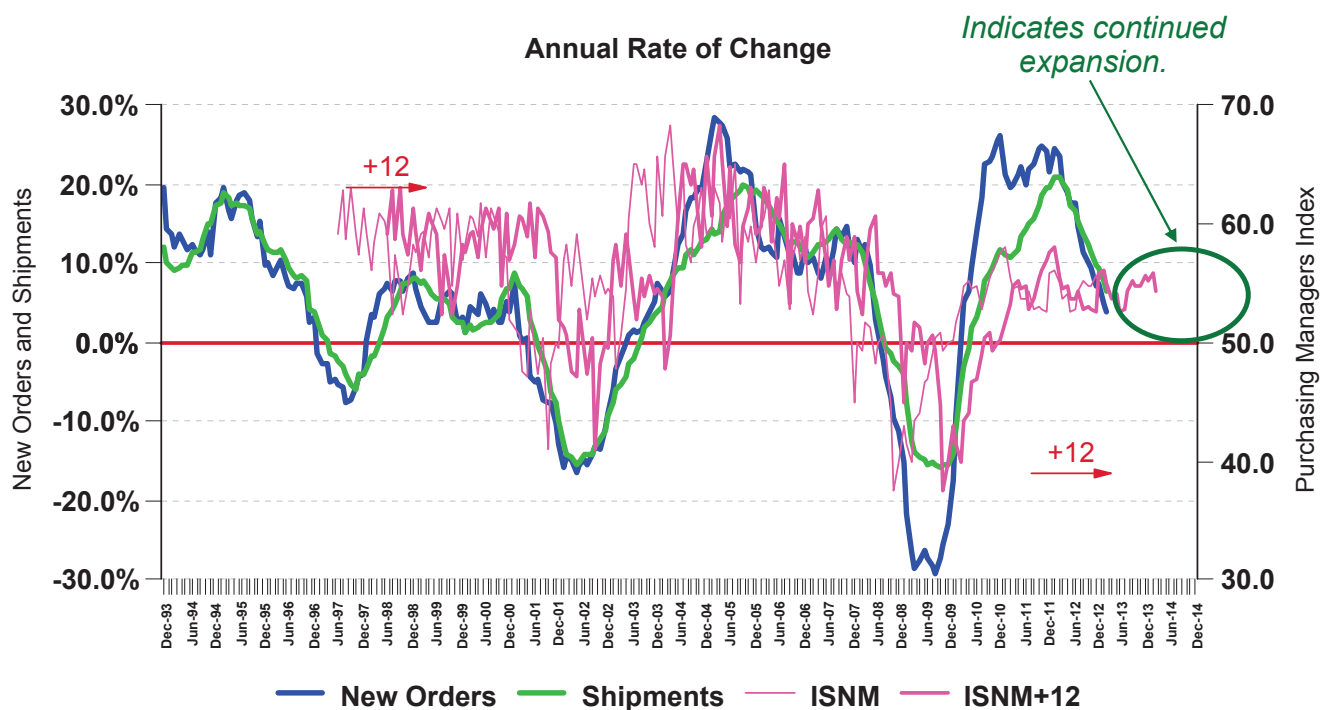
The Institute of Supply Management (ISM) produces the PMI (Purchasing Managers Index), a monthly sentiment index reflecting attitudes about future manufacturing purchasing activity. The PMI is an important indicator to watch simply because Purchasing Managers write purchase orders or place them on hold.



Source: USDOC, ISM

MHEM vs. Selected Leading Indicators Buyer Sentiment – Non-Manufacturing Sectors

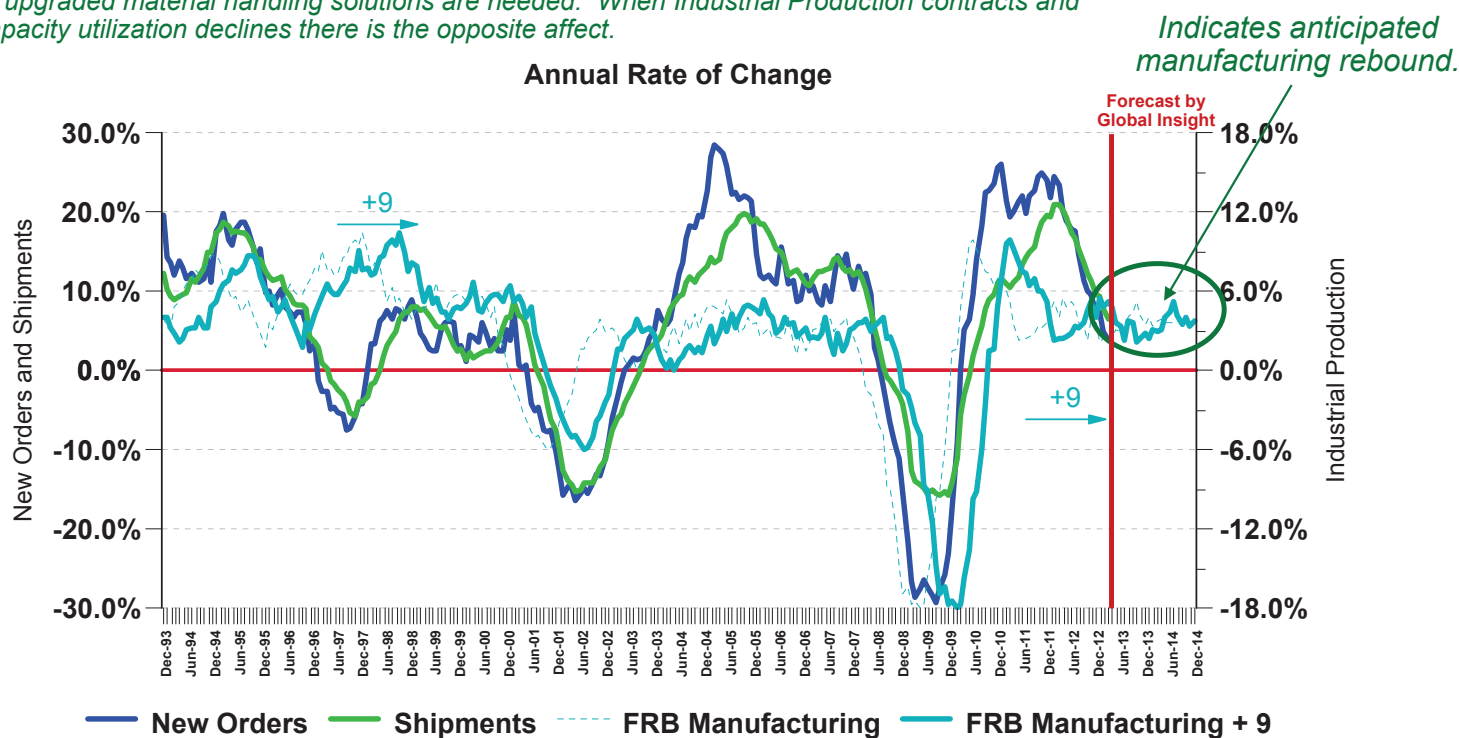
The Institute of Supply Management (ISM) also produces a monthly sentiment index reflecting attitudes about future non-manufacturing purchasing activity. The ISNM is an another important indicator to watch offering a perspective beyond manufacturing.



Source: USDOC, ISM

MHEM vs. Selected Leading Indicators Industrial Activity

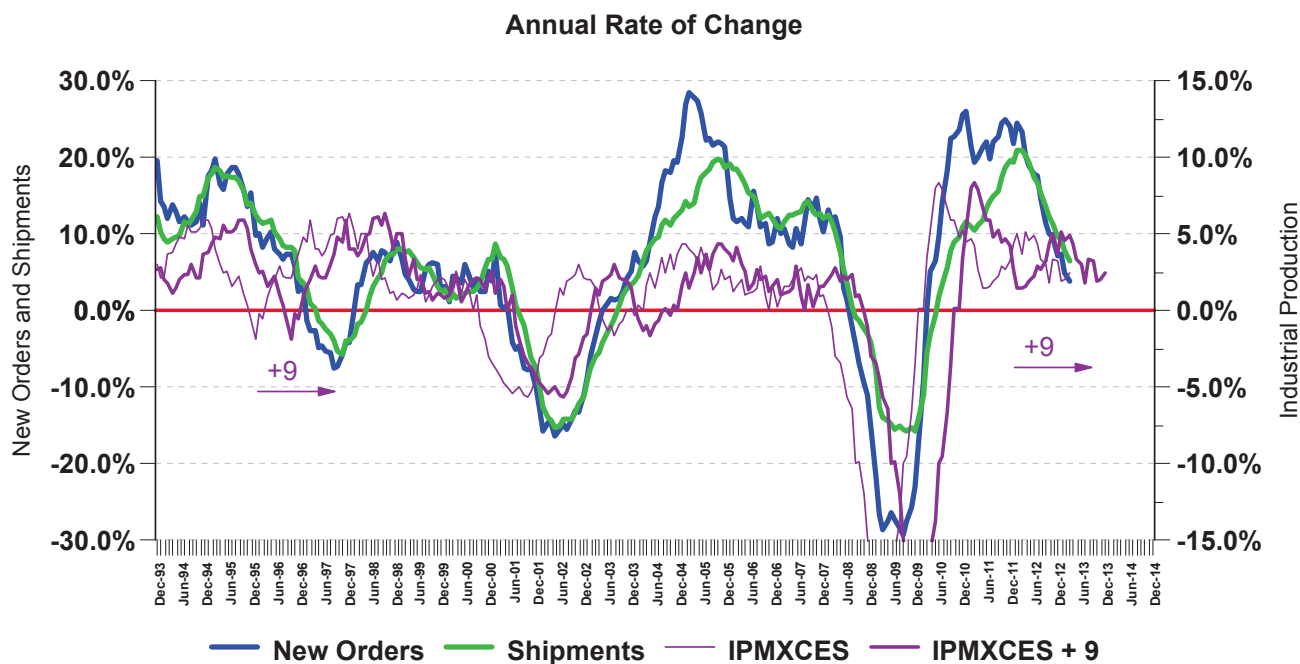
Industrial Production drives much of our industry's activity generating demand for new plant and equipment as it expands. In those new or expanding plants, warehouses and distribution centers, new or upgraded material handling solutions are needed. When Industrial Production contracts and capacity utilization declines there is the opposite affect.



Source: USDOC, FRB

MHEM vs. Selected Leading Indicators Industrial Activity (Manufacturing Excluding Hi-Tech)

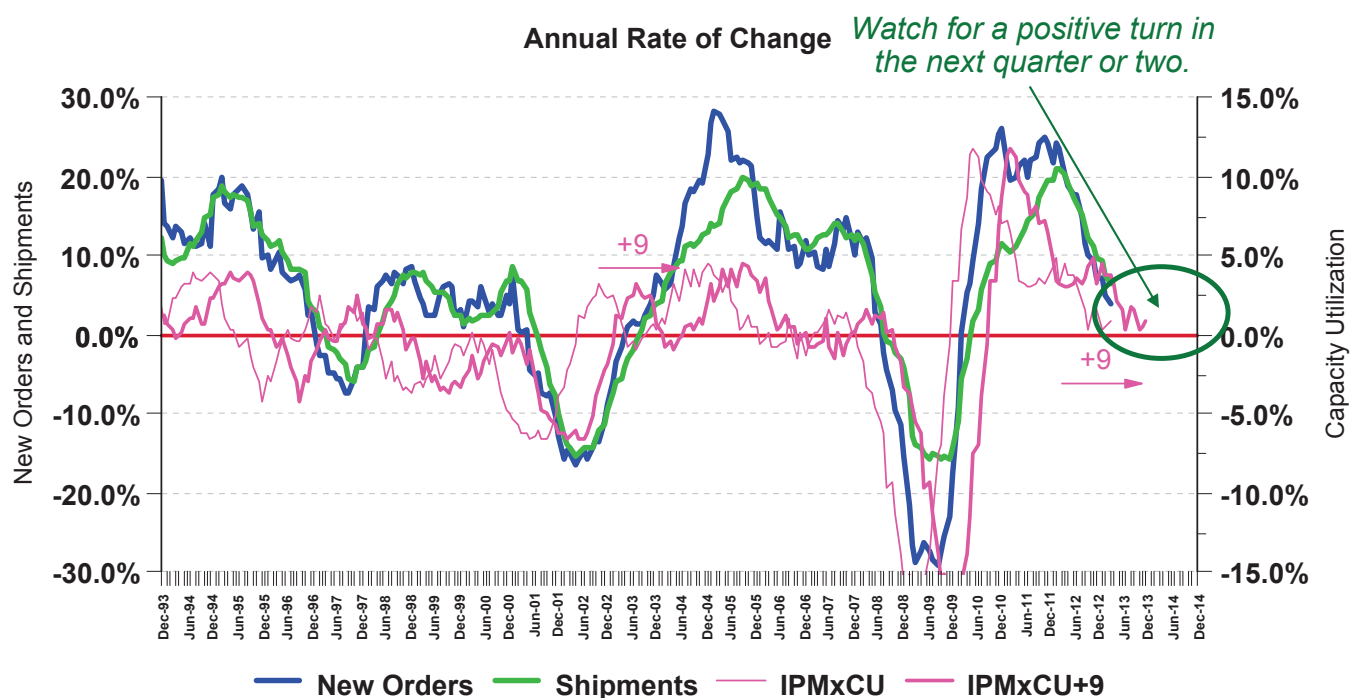
It is important to monitor industrial activity independent of high-tech segments (computers, electronics and semiconductors) due to their volatility and tendency to mask or over-state traditional manufacturing activity.



Source: USDOC, FRB

MHEM vs. Selected Leading Indicators Industrial Activity (Capacity Utilization, Manufacturing Excluding Hi-Tech)

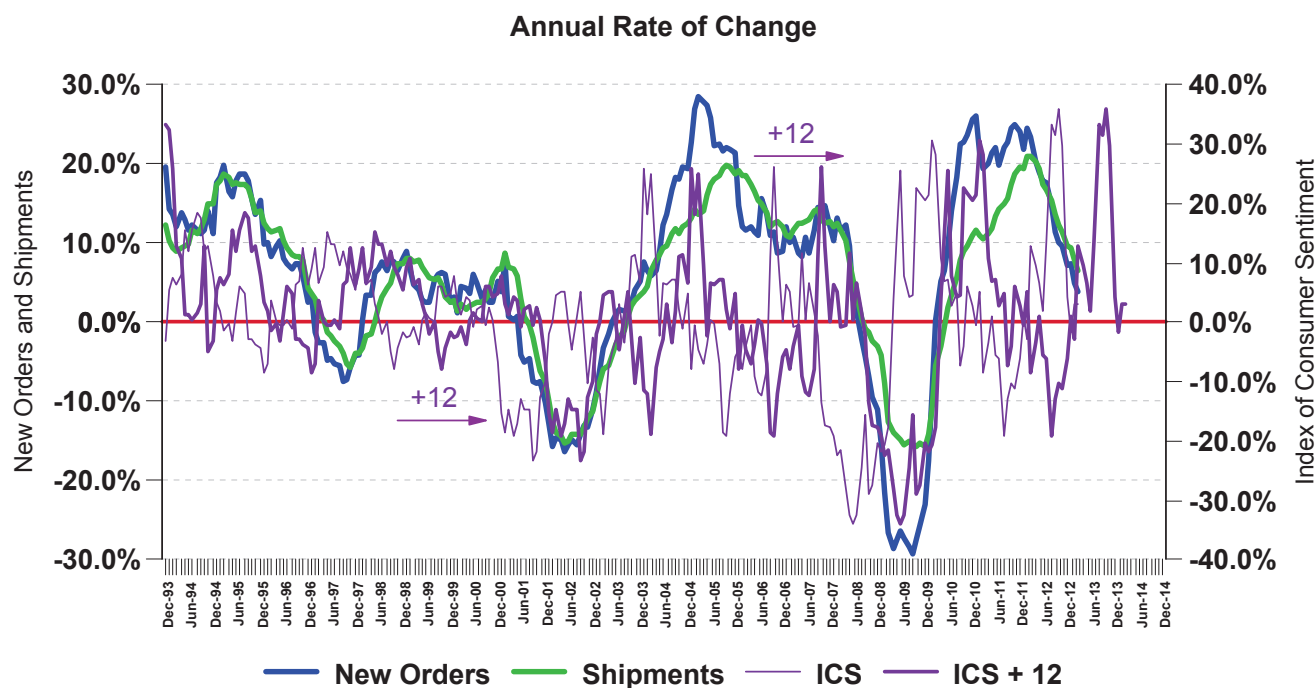
As Capacity Utilization increases at higher rates of change, it indicates mounting pressure to perform at higher output levels and the need for more efficient throughput solutions. In turn, this drives demand for material handling and logistics products. Reductions in Capacity Utilization have the opposite affect.



Source: USDOC, FRB

MHEM vs. Selected Leading Indicators Consumer Sentiment – University of Michigan

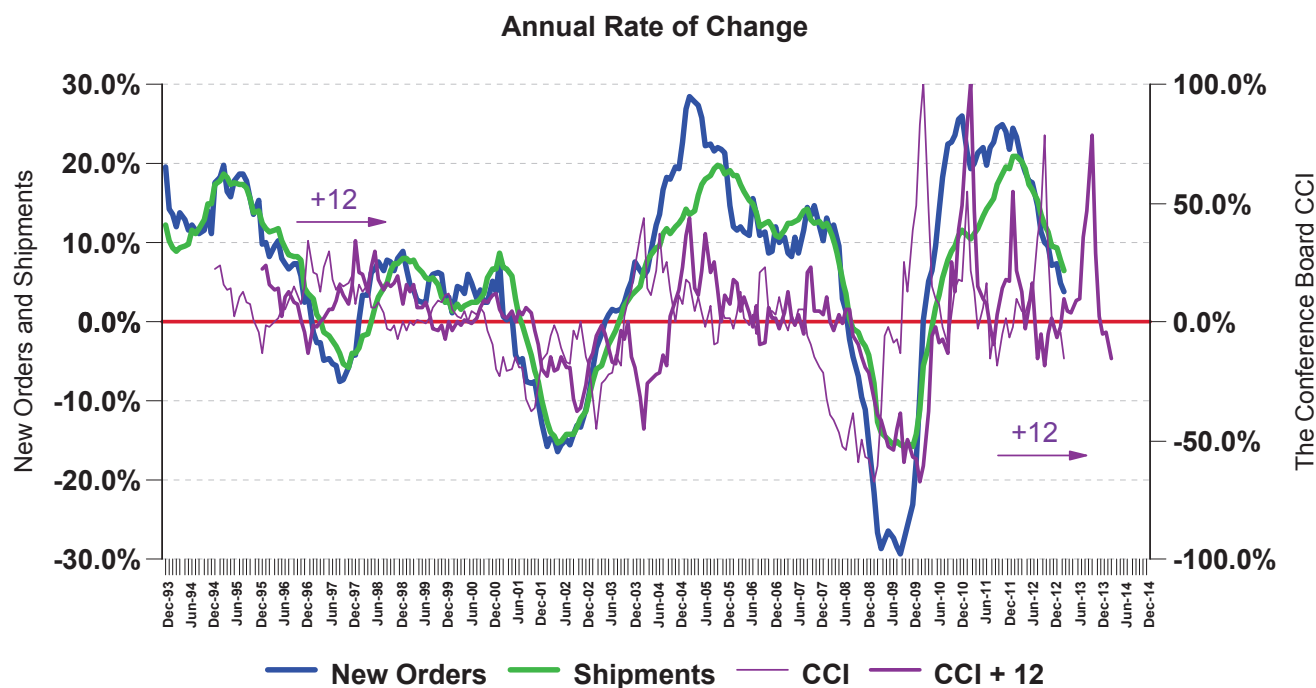
Consumption represents almost 70% of GDP, our economic engine. How Consumers feel greatly influences spending and saving behavior. Purchases of Consumer Durables (automobiles, home appliances, etc) and Residential Investment (new or existing homes) vary directly with Consumer Sentiment.



Source: USDOC, University of Michigan

MHEM vs. Selected Leading Indicators Consumer Confidence – Conference Board

Like Consumer Sentiment, Consumer Confidence influences buying and saving behavior. Improving Confidence promises continued or increasing Consumer Durables and Residential Investment which eventually translates into increases in manufacturing, industrial production, etc.



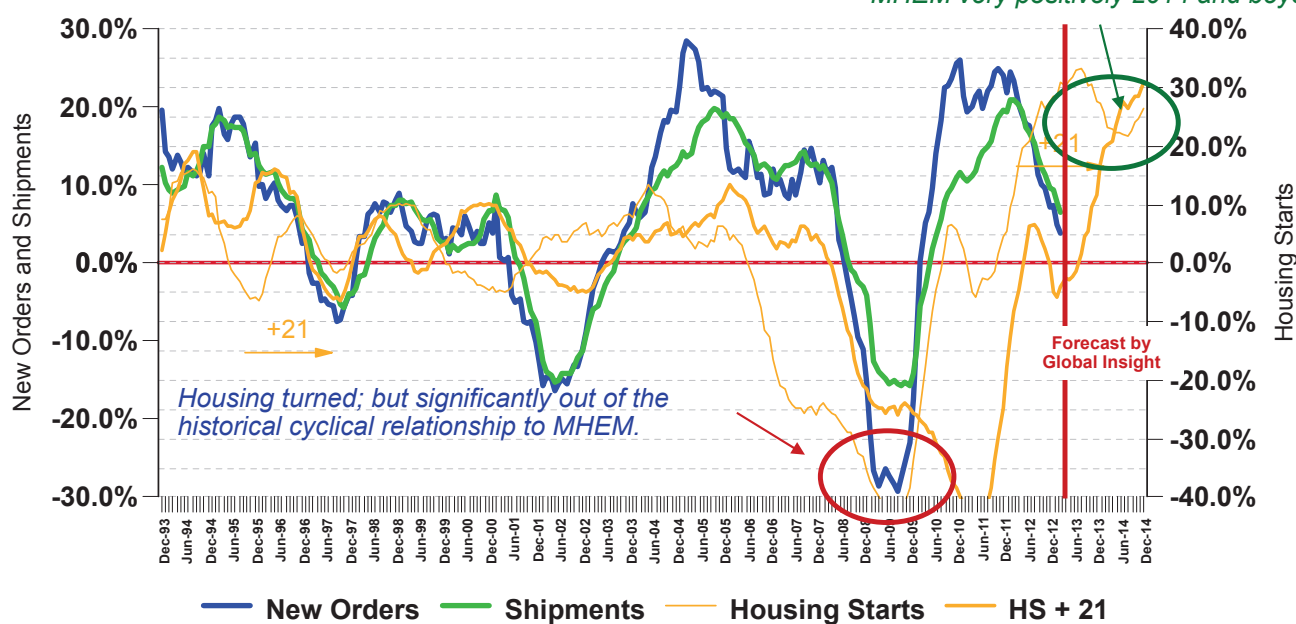
Source: USDOC, The Conference Board

MHEM vs. Selected Leading Indicators Residential Investment

Housing Starts is an indicator of Residential Investment. The change in Housing Starts signals changes to expect in consumer durables, materials, non-residential construction, etc. This indicator reliably led manufacturing activity throughout all phases of the business cycle until the last cycle. A correction in housing is in process and will continue beyond 2014.

Annual Rate of Change

A housing rebound is in play which will impact MHEM very positively 2014 and beyond.



Source: USDOC, Global Insight

Economic Commentary & Forecasts

Executive Summary

- The US economy faces a major headwind in the form of the federal spending sequester. IHS predicts that these spending cuts will reduce annualized real GDP growth from 2.5% in the first quarter to 1.4% in the second quarter.
- Nevertheless, the underlying fundamentals of the private economy remain solid, and growth can be expected to accelerate in the second half of the year, reaching a 3% pace by year-end.
- So far (through April), the sequester has had little measurable impact on employment. The average monthly gain in payroll jobs over the past three months has been just over 200,000, roughly the same pace as the prior three months. Hours worked and job counts in the public sector could be affected in the coming months, however.
- IHS predicts that the Federal Reserve will maintain its bond-buying program through the end of this year and into 2014. Nevertheless, in its recent policy statement the Fed gave itself greater leeway to do more or less, as developments in the economy dictate.

Economic Forecast – IHS Global Insight

Capital Spending, Corporate Profits, Industrial Production, Utilization

MHEM purchases include both capital goods (Non-residential Fixed Investment) and discretionary MRO items. Both depend on Corporate Profits for funding.

MHEM purchases are influenced greatly by two extreme scenarios: 1) heightened levels of Industrial Production activity and by Factory Operating Rates (Utilization) that approach the high 70s and low 80s indicating increasing pressure on in-place capacity in an expansion and 2) the pressure that is created in Industrial Production as the economy shifts from a recession into recovery mode (filling supply chain pipelines, re-establishing inventories, and responding to pent up demand).

While there are many economic elements to study, the four highlighted below are of the greatest interest when forecasting MHEM demand.

U.S. Economy	History					05/13 Forecast				
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gross Domestic Product (Real)	(0.3)	(3.1)	2.4	1.8	2.2	1.8	2.8	3.2	2.9	2.9
Total Consumption	(0.6)	(1.9)	1.8	2.5	1.9	2.1	2.5	2.5	2.6	2.7
Nonresidential Fixed Investment	(0.8)	(18.1)	0.7	8.6	8.0	4.8	6.8	6.7	6.0	5.2
Residential Fixed Investment	(23.9)	(22.4)	(3.7)	(1.4)	12.1	14.9	18.3	20.9	4.8	(2.0)
Exports	6.1	(9.1)	11.1	6.7	3.4	2.0	5.0	5.6	6.6	6.7
Imports	(2.7)	(13.5)	12.5	4.8	2.4	1.9	5.5	4.2	3.5	3.1
Federal Government	7.2	6.1	4.5	(2.8)	(2.2)	(5.5)	0.7	(1.6)	(1.4)	(0.7)
State & Local Government	(0.0)	2.2	(1.8)	(3.4)	(1.4)	(1.0)	0.0	0.7	0.7	0.7
GDP Deflator	2.2	0.9	1.3	2.1	1.8	1.5	1.9	1.5	1.6	1.5
Consumer Prices	3.8	(0.3)	1.6	3.1	2.1	1.4	1.6	1.7	1.9	1.8
Industrial Production (%change)	(3.4)	(11.3)	5.7	3.4	3.6	3.1	3.2	3.3	2.8	2.9
Factory Operating Rate	74.5	65.7	71.3	74.0	75.8	76.8	77.9	78.4	78.1	77.7
Light Vehicle Sales (Million units)	13.19	10.40	11.55	12.73	14.43	15.26	15.66	16.20	16.60	16.60
Housing Starts (Million units)	0.90	0.55	0.59	0.61	0.78	0.99	1.23	1.57	1.62	1.60
Unemployment Rate (%)	5.8	9.3	9.6	8.9	8.1	7.6	7.2	6.6	6.1	5.8
Federal Surplus (Unified, FY, bil. \$)	(454.8)	(1,415.7)	(1,294.2)	(1,296.8)	(1,089.2)	(790.1)	(681.7)	(579.6)	(541.6)	(624.2)
Federal Funds Rate (%)	1.93	0.16	0.18	0.10	0.14	0.15	0.16	0.19	1.64	3.57
10-Year Treasury Note Yield (%)	3.67	3.26	3.21	2.79	1.80	1.89	2.50	2.93	3.64	4.16
After-Tax Profits (Billions of \$)	1,050.9	1,171.1	1,443.0	1,475.1	1,712.9	1,652.5	1,823.8	1,780.4	1,720.2	1,681.2
After-Tax Profits (Percent change)	(18.7)	11.4	23.2	2.2	16.1	(3.5)	10.4	(2.4)	(3.4)	(2.3)

Note: Annual percentage change unless otherwise indicated.

Economic Forecast – Global Insight

Capital Spending, Corporate Profits, Industrial Production, Utilization

Forecasts show solid growth in both Residential and in Nonresidential Investment.

*Capacity Utilization eases
Not reaching 80%.*

U.S. Economy	History		05/13 Forecast				
	2011	2012	2013	2014	2015	2016	2017
Gross Domestic Product (Real)	1.8	2.2	1.8	2.9	2.2	2.9	2.9
Total Consumption	2.5	1.9	2.1	2.5	2.5	2.6	2.7
Nonresidential Fixed Investment	8.6	8.0	4.8	6.8	6.7	6.0	5.2
Residential Fixed Investment	(1.4)	12.1	14.9	18.3	20.9	4.9	(2.0)
Exports	6.7	3.4	2.0	5.8	5.8	6.6	6.7
Imports	4.8	2.4	1.9	5.5	4.2	3.5	3.1
Federal Government	(2.8)	(2.2)	(5.5)	0.7	(1.6)	(1.4)	(0.7)
State & Local Government	(3.4)	(1.4)	(1.0)	0.0	0.7	0.7	0.7
GDP Deflator	2.1	1.8	1.5	1.9	1.5	1.6	1.5
Consumer Prices	3.1	2.1	1.4	1.6	1.7	1.9	1.8
Industrial Production (%change)	3.4	3.6	3.1	3.2	3.3	2.8	2.9
Factory Operating Rate	74.0	75.8	76.8	77.9	78.4	78.1	77.7
Light Vehicle Sales (Million units)	12.73	14.43	15.28	15.66	16.20	16.68	16.60
Housing Starts (Million units)	0.61	0.78	0.99	1.23	1.57	1.62	1.60
Unemployment Rate (%)	8.9	8.1	7.6	7.2	6.6	6.1	5.8
Federal Surplus (Unified, FY, bil. \$)	(1,296.8)	(1,089.2)	(790.1)	(681.7)	(575.6)	(541.6)	(624.2)
Federal Funds Rate (%)	0.10	0.14	0.15	0.16	0.19	1.64	3.57
10-Year Treasury Note Yield (%)	2.79	1.80	1.89	2.50	2.93	3.64	4.16
After-Tax Profits (Billions of \$)	1,475.1	1,712.9	1,652.5	1,823.8	1,780.4	1,720.2	1,681.2
After-Tax Profits (Percent change)	2.2	16.1	(3.5)	10.4	(2.4)	(3.4)	(2.3)

*Profit Declines
warrant caution.*

*Autos, Housing, Employment ...
strengthening Consumer*

Economic Forecast – Global Insight

Capital Spending by Major Segment

Improvement in key elements of Non-residential Fixed Investment (IT, Industrial Equipment and Transportation) is expected to continue through 2017. Structures (construction) will be off in 2013 and then will begin to expand at a healthy pace in 2014.

U.S. Economy	History					05/13 Forecast				
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Nonresidential Fixed Investment	(0.8)	(18.1)	0.7	8.6	8.0	4.8	6.8	6.7	6.0	5.2
Equipment & Software	(4.3)	(16.4)	8.9	11.0	6.9	5.6	7.7	7.1	5.3	4.4
Information Processing Equipment	2.1	(4.1)	4.6	5.0	3.8	6.4	8.7	7.8	6.8	6.2
Computers & Peripherals	7.9	(5.8)	3.1	12.3	3.7	11.2	17.6	13.7	12.6	12.4
Communications Equipment	(5.1)	(9.9)	12.6	(5.8)	4.9	6.8	10.3	10.4	10.6	7.1
Industrial Equipment	(3.9)	(21.2)	(1.2)	13.3	7.1	5.0	10.4	7.9	4.6	2.6
Transportation equipment	(23.2)	(51.6)	73.1	31.1	17.1	1.7	5.9	4.5	(0.2)	(1.4)
Aircraft	(3.2)	(26.5)	6.8	(2.7)	27.6	3.1	6.1	5.2	5.7	4.6
Other Equipment	(3.5)	(18.2)	3.0	12.5	6.6	8.0	4.1	6.7	7.1	6.5
Structures	6.4	(21.1)	(15.6)	2.7	10.8	2.7	4.8	5.9	7.5	7.1
Commercial & Health Care	(3.7)	(30.7)	(25.0)	(2.3)	7.8	4.2	12.3	25.1	21.0	10.0
Manufacturing	24.8	4.6	(27.6)	0.4	17.4	4.6	4.7	0.8	9.6	7.7
Power & Communication	9.1	0.7	(16.1)	(9.1)	21.9	(1.4)	(5.1)	(1.0)	(3.6)	6.7
Mining & Petroleum	8.4	(34.8)	16.9	22.6	5.7	6.3	3.0	(6.9)	(2.5)	4.1
Other	12.6	(18.3)	(26.7)	(6.7)	7.4	(3.1)	10.4	12.7	8.9	5.4

Note: Annual percentage change unless otherwise indicated.

Economic Forecast – Global Insight

Capital Spending by Major Segment



*Continued expansion in
Equipment and Software is expected through 2017.
Industrial Equipment returns to robust growth in
2014 and 2015.*

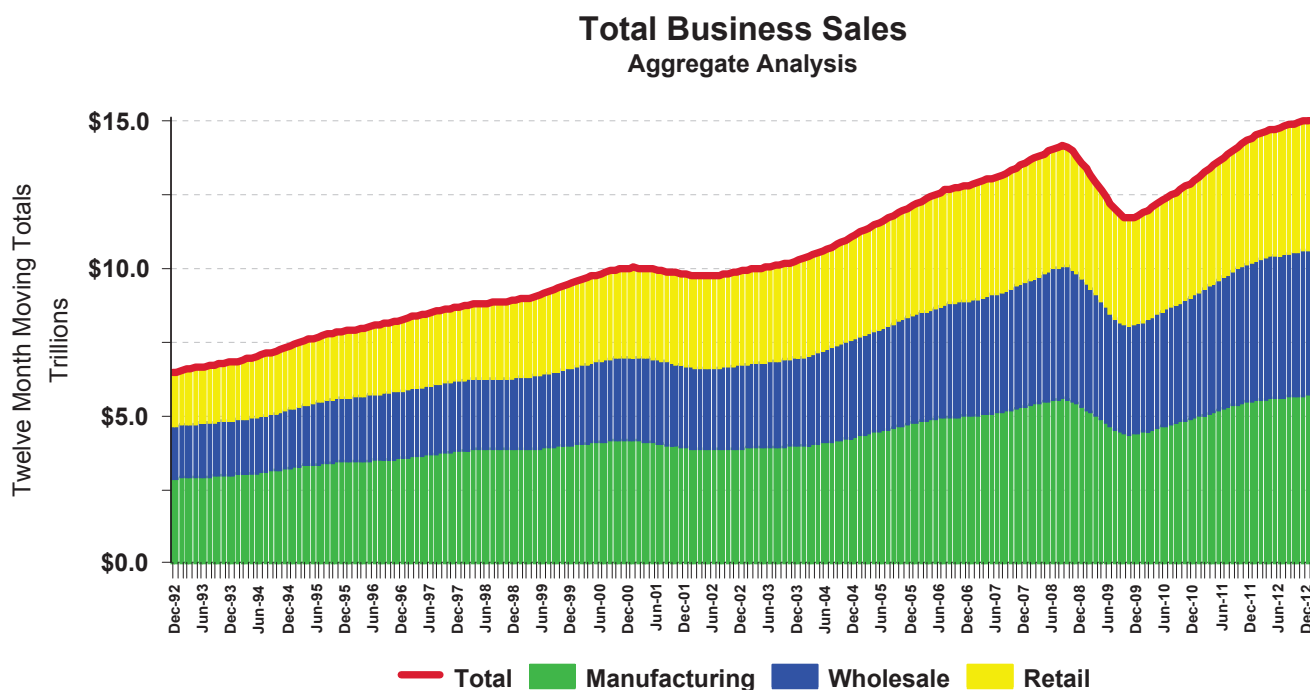
U.S. Economy	History		05/13 Forecast				
	2011	2012	2013	2014	2015	2016	2017
Nonresidential Fixed Investment	8.6	8.0	4.8	6.8	6.7	6.0	5.2
Equipment & Software	11.0	6.9	5.6	7.7	7.1	5.3	4.4
Information Processing Equipment	5.0	3.8	6.4	8.7	7.8	6.8	6.2
Computers & Peripherals	12.3	3.7	11.2	17.6	13.7	12.8	12.4
Communications Equipment	(5.8)	4.9	6.8	10.3	10.4	10.6	7.1
Industrial Equipment	13.3	7.1	5.0	10.4	7.9	4.8	2.6
Transportation equipment	31.1	17.1	1.7	5.9	4.5	(0.2)	(1.4)
Aircraft	(2.7)	27.6	3.1	6.1	5.2	5.7	4.6
Other Equipment	12.5	6.6	8.0	4.1	6.7	7.1	6.5
Structures	2.7	10.8	2.7	4.8	5.9	7.5	7.1
Commercial & Health Care	(2.3)	7.8	4.2	12.3	25.1	21.0	10.0
Manufacturing	0.4	17.4	4.6	4.7	0.8	9.6	7.7
Power & Communication	(9.1)	21.9	(1.4)	(5.1)	(1.0)	(3.6)	6.7
Mining & Petroleum	22.6	5.7	6.3	3.0	(6.9)	(2.5)	4.1
Other	(6.7)	7.4	(3.1)	10.4	12.7	8.9	5.4

*A strong expansion in Commercial and Health Care
Structures after 2013. Manufacturing resurges in 2016.*

Total Business Sales Aggregate Analysis



Manufacturing, Retail and Wholesale Demand troughed in Q3 2009 and has continued to expand; but at a slower pace in 2012.

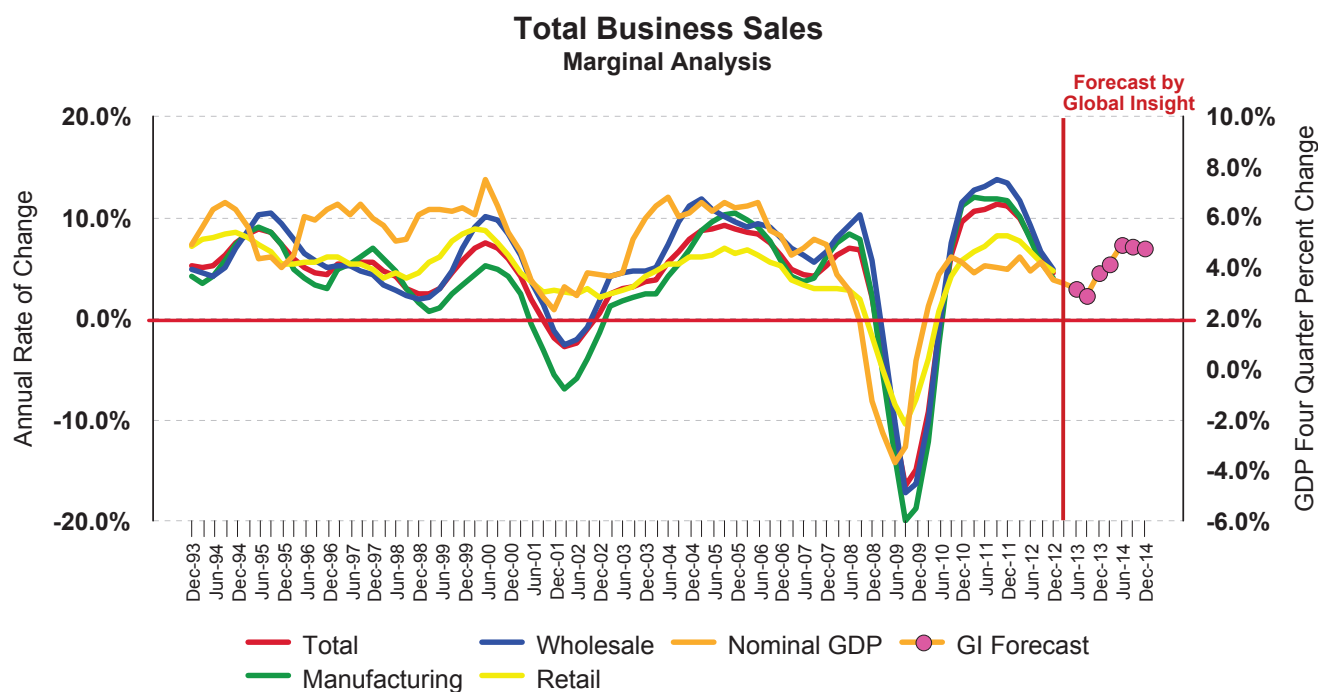


Source: Census MTIS Report



Total Business Sales Marginal Analysis

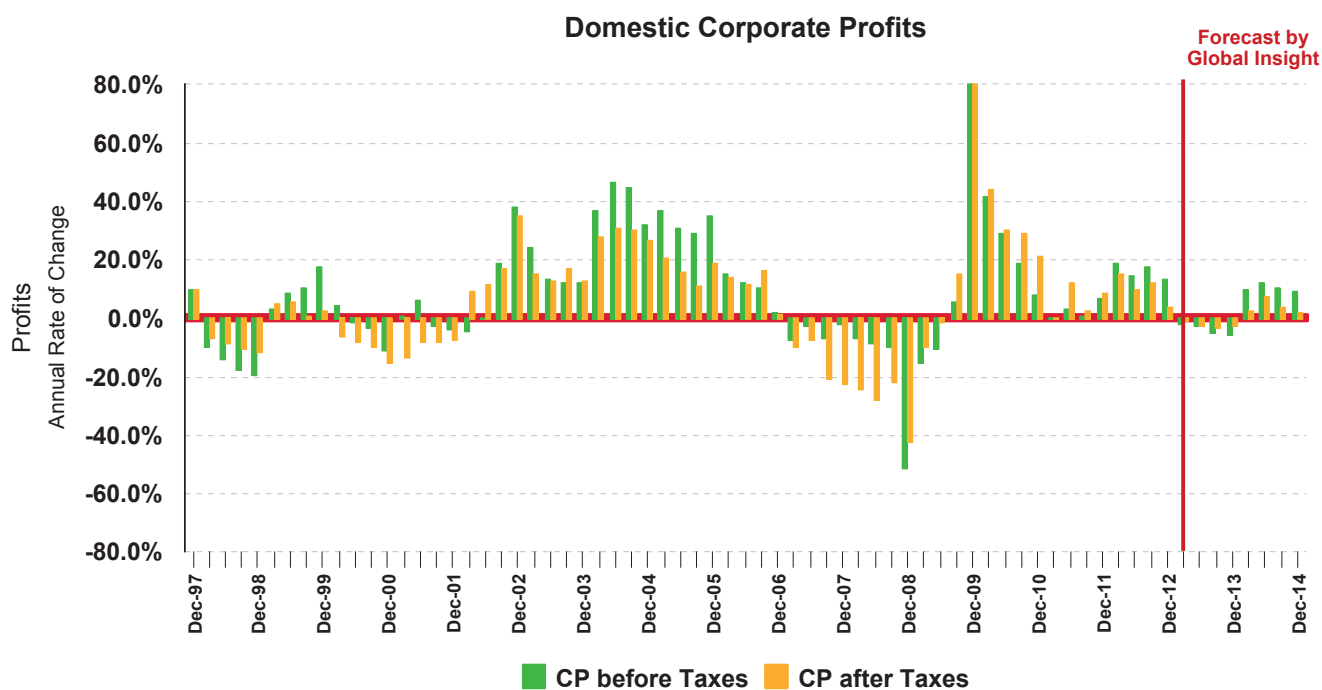
Sales and Nominal GDP growth troughed in Q3 2009, peaked in 2011 and declined through 2012. 2013 will slow modestly with an uptick in growth expected for 2014.



Source: Census MTIS Report, Global Insight, MHIA

Corporate Profits Before and After Taxes

Corporate Profits, which lead Investment by four quarters, will contract in 2013 modestly and rebound in 2014.

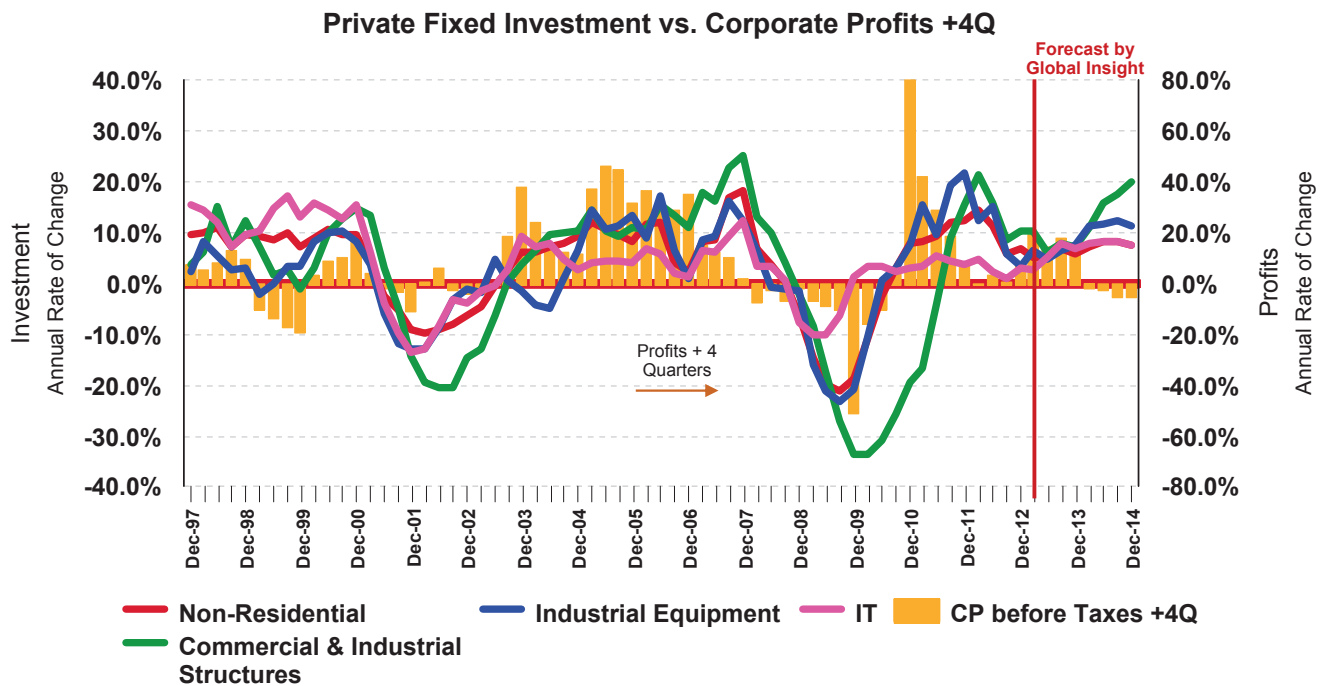


Source: BEA, Global Insight

Corporate Profits vs. Private Fixed Investment



Corporate Profits supported a surge of Investment growth for Equipment and Software beginning in 2010. Commercial & Industrial Structures outpace Equipment and Software beginning Q4 2013.

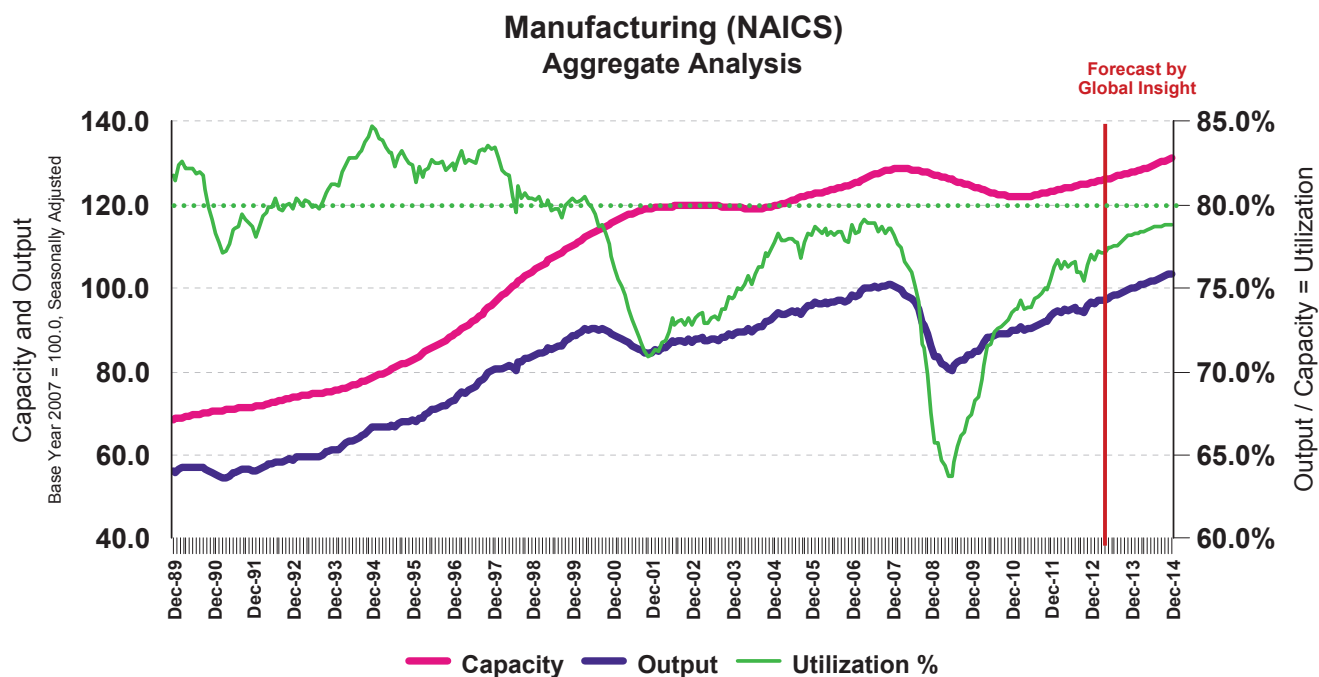


Source: BEA, Global Insight



US Industrial Production Manufacturing – Aggregate Indices

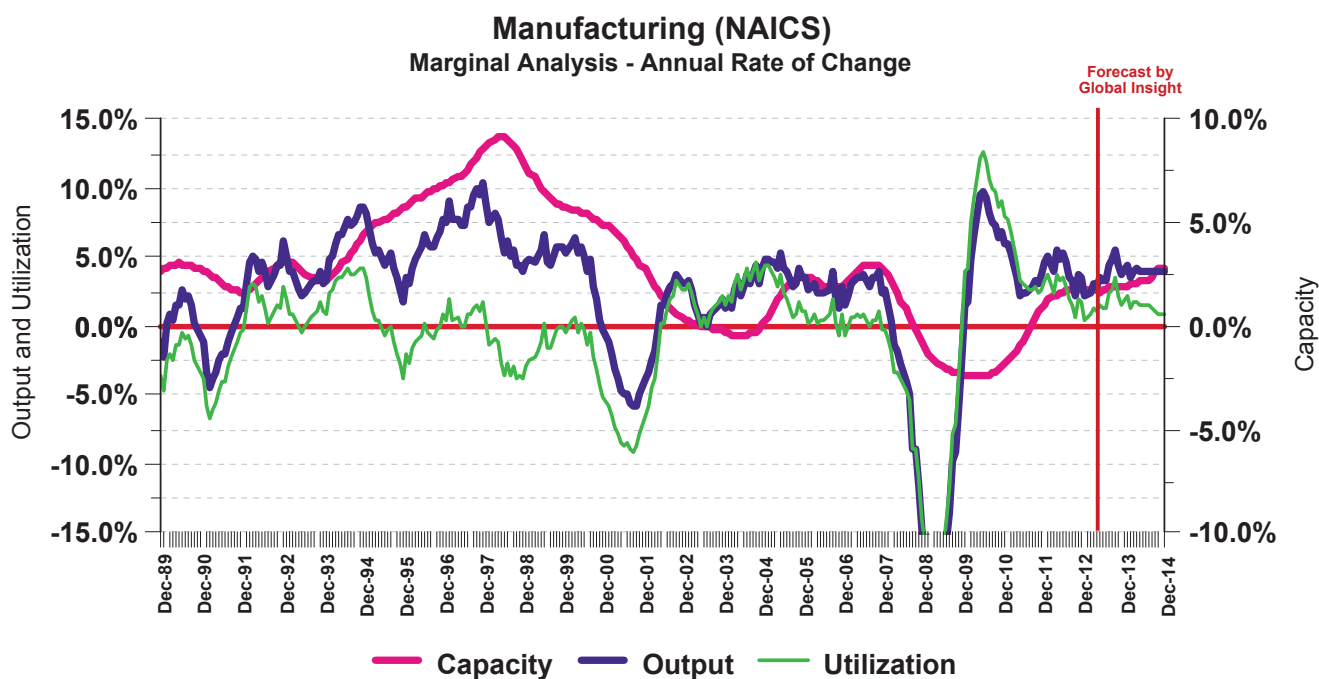
Historically, significant expansion activity takes place as Utilization approaches 80.0%. However, utilization is not expected to reach 80.0% through 2014.



Source: Federal Reserve Board
77.6% IP '06

US Industrial Production Manufacturing – Annual Rate of Change

The combination of Capacity reductions and improved Output yielded rapid gains in Capacity Utilization beginning late 2009. Additions to Capacity began in 2011 and will return to the pre-recession pace late in 2014.



Source: Federal Reserve Board
77.6% IP '06

Information Resources



- **Material Handling Markets**
 - Material Handling Industry of America www.mhia.org
 - MHIA Business Planning Community www.mhia.org/planning
 - Industrial Truck Association www.indtrk.org
 - Conveyor Equipment Manufacturers Association www.cemanet.org

- **US Government Data**
 - US Bureau of Census www.census.gov
 - US Bureau of Economic Analysis www.bea.gov
 - US Department of Labor www.dol.gov
 - US Federal Reserve Board www.federalreserve.gov

- **Economics**
 - Manufacturers Alliance - MAPI www.mapi.net
 - National Association for Business Economics www.nabe.com
 - Global Insight www.globalinsight.com



Updates and Feedback



Users are encouraged to visit the MHIA Business Planning Community at <http://www.mhi.org> for a variety of planning inputs, including quarterly updates to the MHEM Forecast.

Hal Vandiver, President - F. Hal Vandiver and Associates, Inc., serves as Executive Consultant to MHI and produces the MHEM Forecast each quarter. Hal can be contacted at 501.297.2215 or via email at hvandiver@gmail.com or hvandiver@mhi.org.

