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OCTOBER , 2015

SUMMARY

After several years of dramatic changes in markets, they continue to show new patterns. Automotive, the largest single casting market, is projected at 16.9 million unit sales in 2014 and leveling. Rail car construction is booming in an effort to supply tank cars for crude oil transportation. Construction equipment and mining equipment are soft. Agriculture equipment is down sharply. Housing has leveled off and should hold for a while. Natural gas production is still strong and anticipating the relaxation of laws against the export of natural gas. Heavy truck is stable. The U.S. is trending slowly upward.

- In May 2007 unemployment bottomed out at 4.4% before spiking at 9.6% in October 2009. It has trended down to 5.1% in August 2015. The rate is dropping at a glacier pace. The Federal Reserve has announced they will keep stimulus rates in effect until the economy becomes stronger but economists are anticipating and end to the very low stimulus rates.. We expect to see this trend continue to improve slowly with or without the Fed's help. There were 600,000 skilled jobs unfilled because employers could not find qualified people. If those are real job openings, they will be filled eventually either by people moving up or by companies training people for those jobs. Relocation for job opportunities have increased as the housing market has improved allowing them to sell without a loss. As people move up to higher skilled jobs it will be easier for companies to train for jobs that require less skill. Another factor is that 600,000 people who delayed retirement are retiring. It won't be fast, but it is moving in the right direction and should continue.

- Consumers are uncertain. The Conference Board Consumer confidence Index declined in July, 2015 to 91.0 and jumped to 101.5 in August (1985=100). Most of the major confidence indexes were up in August. Employment Trends Index was up 0.5%, Help Wanted OnLine increased by 34,200 positions and the Measure of CEO Confidence was up 1.0 point. However, the Leading Economic Index was down 0.2%. As a reference the CCI bottomed out in late 2008 at 25.

- In the second quarter of 2015, manufacturing sector productivity increased 3.5% following a 1.3% decline in the first quarter, output increased 3.3% and hours worked increased slightly from 40.2 to 40.3. In that same period, manufacturing unit labor costs were 89.5.

- Industrial production in manufacturing was 104.3 in July 2015 compared to a base of 100 in 2007. Capacity utilization was estimated at 78.0% but we believe this is lower than the metal casting industry overall. While sales volumes are reported in total less than the peak in 2007, so much casting capacity was liquidated that metal casters are operating nearer capacity. This is changing as productivity upgrades are being brought on-line.

The U.S. Economic Forecast

Updated: September 9, 2015

ercentage change, seasonally adjusted annual rates (except where noted)

	2015			2016		2014	2015	2016
	II Q *	III Q	IV Q	I Q	II Q	Annual	Annual	Annual
Real GDP	3.7	2.2	2.4	2.4	2.3	2.4	2.5	2.4
Real Consumer Spending	3.1	2.8	2.6	2.5	2.4	2.7	3	2.6
Housing Starts mil. Units	1.16	1.13	1.19	1.23	1.27	1	1.12	1.32
Real Capital Spending	3.2	6	4.8	4.6	3.9	6.2	3.5	4.5
Net Exports Bill	−532.7	−538.5	−552.0	−561.4	−568.2	−442.5	−541.1	−572

Source: The Conference Board

- Foreign Investment in U.S. companies and real estate is good. The U.S. did fall from the world's leading destination for offshore investment from first to third in 2014 (behind China and Hong Kong) but that was due to Verizon's purchase of $130 billion in Vodafone. The U.S. is the only developed economy among the top five recipients of foreign investment. The stability, integrity and ease of doing business in the world's largest economy is the attraction. In metal casting, there are two primary drivers of investment from foreign companies. In very high volume production such as automotive, automation has reduced labor content to such a low level that production benefits from being localized. The second is that as companies from China and India are seeing the need for backup production ability with in the U.S. The U.S. has very competitive energy prices, raw materials are relatively equal globally and the high productivity in the U.S. helps offset lower labor costs offshore.

Automotive/Light Truck

Major casting markets impacted – very high volume iron, aluminum, zinc and magnesium casting. Lead indicators: automobile/light truck sales.

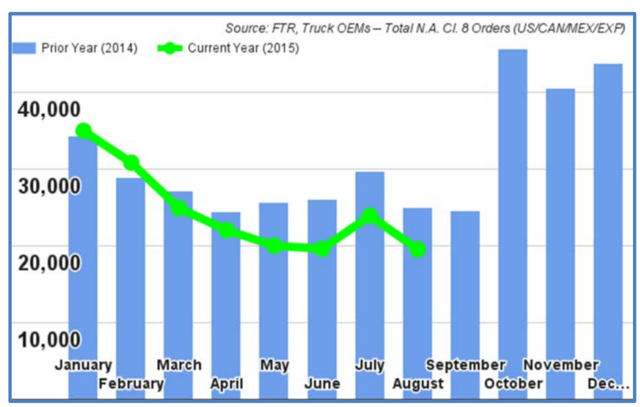
There is good news and bad news. U.S. auto production is nearing all-time highs based on strong domestic demand and increased exports. The bad news is that the U.S. imported a record $138 billion in light vehicle parts last year. That equals $12,135 of imported content for every American vehicle built. In 2008, it was $10,536 per vehicle. The two largest suppliers are Mexico with 34% ($47 billion) and China at 13% ($18 billion). Auto makers built 11.37 million light vehicles in the U.S. in 2014 nearing the 1999 record of 12.59 million. Other good news is that exports of American made light vehicles topped 2 million for the first time. The metal casting industry is less likely to be impacted by imports of light vehicle parts. Parts most likely to be imported are electrical connections, air bags and fuel injectors. Transmissions, engines and seats are more likely to be made in the U.S. The light vehicle market has increasingly globalized. It is now common for tier one suppliers to have manufacturing plants in other countries.

Wages are lower for American workers at auto suppliers than at car manufacturers with wage levels at both trending down. Wages at parts makers dropped 23% in 2014 from the preceding decade to $19.91. The drop at auto makers was 22% over the same period to $27.83. While unions are still a very visible presence in the light vehicle manufacturing, they have lost clout. The advent of non-union suppliers and imported parts limits their ability to negotiate for higher wages.

Auto production in August, 2015 dropped by 6.4% after an unusually high gain of 10.6% in July. The July increase were due to shorter plant shutdowns which boosted production in July at the expense of August production. Light vehicle sales are trending to top 17 million in 2015 at level not seen since 2001.

There is a definite trend to smaller vehicles. NADCA believes the trend of converting iron castings to aluminum castings has peaked. New aluminum castings will be in structural parts now being stamped and will require very sophisticated die casting techniques. More parts will be converted to aluminum but they will be stampings (body panels) and extrusions. The capacity issues in die casting that occurred when light vehicle production returned have been relieved. All the major car companies are aggressively expanding captive die casting and a couple Tier 1 suppliers are building new plants. Excess die casting capacity is very near, if not already here.

High volume iron foundries are also busy. There isn't as much work as prior to the recession but so much capacity was liquidated during the recession that the survivors are fairly busy. However, several iron casting suppliers to the automotive industry are implementing major capital investments. Brembo, Bergamo Italy has announced an 80,000 net ton per year iron foundry for Homer, Michigan near their machining facility.



CLASS 8 TRUCK

Major casting markets impacted – high volume steel and iron. Lead indicators: UPS/FedEx delivery volumes, truck freight volumes. If volume is up, carriers buy trucks.

After heavy truck production increasing in 2013 and 2014 it has softened in 2015. Production is on pace to replace aging vehicles. None of the forecasts anticipate heavy growth.

Housing and Infrastructure

Major casting markets impacted – brass/bronze, iron and aluminum. Lead indicators: Housing starts & building permits.

Castings in the housing market include cast iron pipe, plumbing fixtures, appliances, HVAC and hardware. United States total housing permits were at a seasonally adjusted annual rate of 1,186 units in July, 2015. This is a 13% increase from the same period in the prior year. The industry is optimistic but no one expects the overheated times to return.

New Privately Owned Housing Units Authorized					
Year-to-Date	Total	1 unit	2 units	3 and 4	5 units
July 2014	612.9	381.0	9.1	8.2	214.7
July 2015	692.1	408.5	8.9	9.5	265.2
Percent Change	13%	7%	-2%	17%	24%
Source: The United States Census Bureau					

Housing contributes to the GDP in two basic ways. These are private residential investment (buying a home) and consumption spending on housing services (maintaining a home). Buying homes historically accounts for 5% of GDP and housing services were 12% to 13%.

Municipal casting manufacturers are not predicting a strong market but are seeing increases in some sections of the country. Don't' look for anything exciting.

The bulk of infrastructure spending follows new housing. As housing developments are opened, water lines, gas lines, sewer lines and septic lines go hand-in-hand. This market closely tracks new housing starts. There was some hope from the planned infrastructure spending designed to stimulate the economy. However, cash strapped municipalities chose to spend the stimulus funds on projects with more visibility. There are some replacement needs that can't be met otherwise. The older cities in the Northeast have water and sewer lines that have been in place for over 100 years. In some cases, replacement has been forestalled by the use of new innovative methods of repairing the lines in place. In ground infrastructure piping has an estimated life of 100 years. This indicates a 1% replacement rate. A cautionary note: plastic pipe is much less expensive to purchase and install. Now that there is some history to plastic pipe usage, the life may meet or exceed ductile iron pipe.

PUMPS AND VALVES

Major casting markets impacted – low to medium volume iron, carbon steel and alloy steel. Lead indicators: general economy. Pumps and valves are used in many industries and have a large replacement volume. The general economy may be about the best.

Pumps and valves are softer than previously due to the slowdown in energy exploration.. A lot of the demand is driven by equipment needed in fracking and anything related to natural gas. The drilling slowed as prices dropped very low. The U.S. has been exporting natural gas in small quantities to Mexico for some time – about 3% of U.S. production. Revisions to laws in Mexico now allow private generation of electricity and exports are expected to increase to 5% of production. Also, new laws in the U.S. now allow the export of liquid natural gas to Mexico. If gas prices in the U.S. hold steady, look for this to be extended to other countries. The good news is it will re-stimulate exploration. The bad news is that gas prices will increase.

AGRICULTURE

Major casting markets impacted – low to medium volume iron. Lead indicators: grain prices. If grain is up, farmers buy equipment.

Agriculture tends to follow grain prices. When prices are higher, farmers have capital available for investment in equipment. Grain prices are down and purchases of agricultural equipment have dropped.

Ethanol production has stabilized and is showing signs of decreasing. States are now meeting their requirements for ethanol use in gasoline and gasoline consumption is dropping.

Any budget tightening that includes cuts to farm subsidies will hurt equipment sales.

John Deere is the bell-weather of this market and they are having a down year. Farmers bought far more equipment than they needed during the last upturn which began in 2007. Tax incentives to farmers to buy equipment have expired.

CONSTRUCTION MACHINERY

Major casting markets impacted – low to medium volume iron. Lead indicators: Housing starts, building permits, industrial construction levels, infrastructure spending.

Construction machinery rebounded strongly in 2010 and was projected to continue to increase in 2011 and 2012. However, a downturn in mining is impacting the industry and production levels have dropped dramatically as OEM's adjust inventory. Foundries are reporting Caterpillar orders are off as much as 40%. The industry is variously reported as being between $30 billion and $47 billion in sales in the United States. Owners are reported as "sweating" the equipment they have and delaying purchases.

MINING

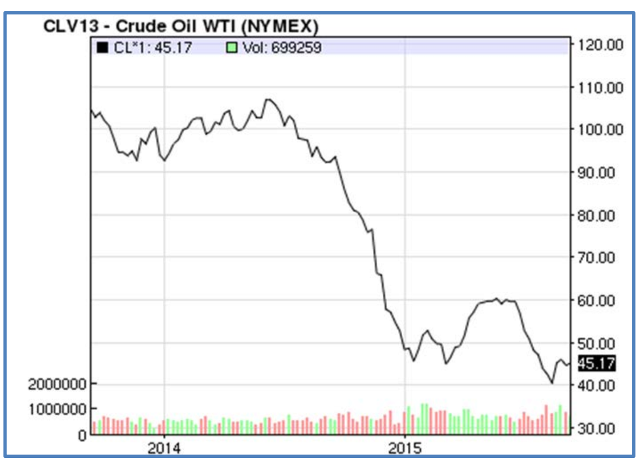
Major casting markets impacted – low to medium volume iron, steel and alloy irons. Lead indicators: mineral prices, iron ore mining levels.

Coal mining has dropped off and oil sand mining is undergoing technology changes. Mineral mining has dropped as the growth of the economy in China has slowed.

OIL FIELD

Major casting markets impacted – cast steel pipe, carbon steel and alloy steel. Lead indicators: Oil prices. When prices are high, drilling and exploration go up.

Oil prices have stabilized and are down significantly. Higher prices drive increased exploration and production. The biggest impact on U.S. foundries occurs in the Southwest. The substitution of natural gas has impacted the demand for oil based products.



Higher mileage vehicles and less driving are slowing the demand for gas. A very few analysts are predicting oil below $20 barrel.

HVAC

Major casting markets impacted – medium to high volume aluminum. Lead indicators: housing starts, building permits.

The replacement market will continue steady and the growth will follow housing starts. Industrial and commercial will hold with some decline as new commercial construction has slowed. It won't fully rebound until housing rebounds.

ELECTRICAL EQUIPMENT/ELECTRONIC

Major casting markets impacted – medium to high volume brass/bronze and aluminum. Lead indicators: Tough one. These are used in so many markets. General economy may be the best.

This market has rebounded for personal and business computers. Unfortunately, this is not a major market for most metal casters.

HOUSEHOLD APPLIANCES

Major casting markets impacted – medium to high volume aluminum. Lead indicators: housing starts, building permits. Replacement market is relatively stable.

Household appliances will start edging up as new housing starts increase. The replacement market is holding up relatively well with a more limited decline. Green appliances may spur some increased sales.

RAILROAD

Major casting markets impacted – medium volume carbon steel and some iron. Lead indicators: Rail freight volumes.

Car construction has jumped greatly. Coal accounts for over 40% of the freight handled by railroads but that is declining as rail becomes the method of choice for crude oil transportation. Domestic consumption and exports of coal have decreased. With a strong infrastructure in place, it is a faster and less controversial solution to use rail rather than pipelines. The decrease in diesel fuel prices has caused the shift of some short distance intermodal shipments to be made entirely by truck. The backlog of engine orders, however, is so strong that suppliers to the engine manufacturers will be busy for the next two years. Funds for light rail construction, however, are at risk in budget cuts.

This has been a market with a history of strong swings in demand.

AEROSPACE

Major casting markets impacted – investment casting, low volume aluminum. Lead indicators: Military spending and passenger miles.

Aerospace is very strong. Airlines are seeing recovering profits and increased passenger miles. As fuel prices increase, newer and more fuel efficient jets become more attractive. Also, some parts have FAA mandated life cycles that determine replacement cycles. Boeing and Airbus are increasing production but at a very slow, controlled rate. We did see that Boeing is missing some delivery dates due to problems getting offshore components. Since they sell world-wide, their attempt was to get 30% offshore components. Executive aircraft are seeing drops in the 50% plus range. A glut of executive jets on the market will hold new production down. Military aircraft have dropped due to the impacts of sequestration.

WIND ENERGY

Major casting markets impacted – larger iron castings. Lead indicators: Energy costs and green initiatives.

From most perspectives, wind energy is dead. It is not economically viable without a $.02/kWh subsidy. The $12 billion per year production tax credit expired at the end of 2014. However, given the time frame for new capacity approvals and installation, this does not encourage new capacity. Low gas prices have been a mixed blessing for wind energy. Gas powered electric generation competes with wind but also allows for utilities to adjust more economically to variations in wind energy production. Also, the improved efficiency of solar power generation has made solar power more competitive and just as green.Don't expect anything from this market in the foreseeable future.

ABOUT THE FOLK GROUP

The Folk Group is the leading merger and acquisition firm serving the metal casting industry. The Group has sold over 30 foundries, performed going business valuations for more than 40 companies and assisted in several turn-around efforts. Contact us a 1.215.340.9072 or www.folkgroup.com.