North American Forging Shipment Forecast 2014 - 2018

(Using FIA bookings information through December 2013)
Best leading indicator combination for impression die bookings used to project 2014

- Consumer sentiment combined with the custom blended scrap metal prices (68% ferrous, 32% nonferrous)
  - Consumer sentiment, 9 month lead to bookings,
  - Consumer sentiment sensitivity, 0.58
  - Custom blended scrap price, 6 month lead to bookings
  - Custom blended scrap price, sensitivity 0.48
  - Combined equation explains 80% of the bookings movement

Impression Die Bookings Forecast
- 1st half 2014, up 5.0% y/y
- 2nd half 2014, up 6.5% y/y

Using Consumer Sentiment
- 2013Q2 - 2013Q3, up 7% y/y
- 2013Q4 - 2014Q1, up 8% y/y

Using Blended Scrap Prices
- 2013Q3 - 2013Q4, up 2% y/y
- 2014Q1 - 2014Q2, up 4% y/y
North American open die shipment projections are revised only slightly compared to the October 2013 forecast. A small turnaround during 2014 is still expected.
Negative forces behind a forecast revision

- Spending on capital equipment is still growing, but slowly.
- IHS expects economic growth to improve in 2014, but still remain below 3.0%.
- In the near term, most of the energy drilling is for oil. However, over the long term both oil and gas drilling should be remain strong. Investment in the energy sector remains bullish.
- Slower growth in Asia has stepped up import penetration into the US. Europe is improving, but very slowly.
- Confusion from Washington is stifling growth.
North American Rolled Rings Tonnage Shipments

Tonnage to rebound slightly during 2014, but much stronger growth is anticipated during 2015 and 2016.

Rolled Rings Sales, Tons

- Tons (Left)
- Growth Rates (Right)

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Forging Industry Bottom Line

• **Bookings: Short-Term Outlook**
  - Based on FIA 2013Q4 data the big year-over-year declines for bookings are over.
  - First half 2014 growth to be up only 2-4% from first half 2013.
  - Second half growth to improve 4-7% from a year ago provided equipment production and investment increases at a faster pace.

• **Shipments: Next Year’s Outlook**
  - The stage has already been set for a turnaround in shipments. Don’t look for a strong one, only 3-5%. But one supported by slowly growing business confidence and investment with fasten gains in equipment orders and production.
  - The second half of the year should see larger year over years growth than the first half as manufacturing ramps up toward a faster paced 2014. Higher machinery exports will also drive forging shipments.

• **Shipments: 2015 Outlook**
  - Forging shipments have the potential to increase near 10% as equipment end-market production and demand picks up most. A stronger economy and investment in equipment will be a dominate factor.
  - With the tremendous order pipeline aerospace will need to see a double digit increase in output. Airbus will also start production in the US.
  - A turnaround is anticipated in the oil and gas drilling industry, but it will be gradual and over the longer-term.
North American Economic Outlook

Economic fundamentals continue to improve
The US economy poised to accelerate in 2014

- Consumers will increase discretionary spending in response to solid gains in employment, income, and asset values.

- Homebuilding will surge until 2016, when it catches up with demand.

- Business investment will accelerate, led by equipment spending.

- The January forecast incorporates the Bipartisan Budget Act of 2013, which provides relief from the sequester through fiscal 2015.

- Interest rates will rise significantly over the next four years as monetary accommodation is withdrawn.

- The North American energy boom will continue to create jobs, investment, and a competitive advantage in manufacturing.
The unemployment rate will hit 6.0% in early 2015.
US real GDP and industrial production growth will strengthen in 2014 and 2015.
Government spending on Social Security and healthcare will rise as the population ages.

(Percent of GDP)

- Social Security
- Medicare
- State & local medical
An acceleration in the global economy

- Global economic growth will strengthen in 2014, thanks to better performances in North America and Western Europe.

- Western Europe will gradually recover, with northern countries leading and southern countries with heavy debt burdens lagging.

- Asia (excluding Japan) and sub-Saharan Africa will achieve the fastest growth.

- China’s growth has stabilized; real estate markets still pose downside risks.

- Emerging markets that depend on external finance are vulnerable to the Federal Reserve’s withdrawal of extreme monetary accommodation.

- Geopolitics and policy mistakes are the main sources of risk.
Real export and import gains are picking up

(Year-over-year percent change, 2009 dollars)

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The dollar’s real exchange value will stay competitive

(Real trade-weighted dollar index, 2009 = 1.00)
Bottom line for the US economy

• Real GDP growth is projected to pick up in 2014 and 2015, led by strengthening private-sector investment.

• Homebuilding will rise through 2016 as supply catches up with demand.

• Consumer spending will be supported by gains in employment, personal income, and household wealth.

• Net exports will support economic growth after 2015.

• Interest rates will rise through 2017 as monetary accommodation is withdrawn.

• Long-term federal fiscal imbalances can be fixed, but the process will be difficult.
Economic reforms shape Mexico’s outlook

• Mexico’s economy is closely linked to the United States through trade, capital flows, and remittances, and will benefit from a pickup in US growth.

• Exports and fixed investment will lead Mexico’s acceleration in 2014-15. Consumer spending growth will strengthen in response to income gains.

• The automotive industry is expanding as vehicles assembled in Mexico continue to gain market share in the United States.

• Constitutional changes will open Mexico’s oil and gas industries to substantial foreign investment and eventually reverse the downward trend in oil production.

• President Peña Nieto’s agenda also includes reforming education and labor markets, increasing competition in communications industries, and broadening the tax base.
The North American economies are on a moderate growth path

- The expansion is continuing at a solid pace, although a slowdown in inventory accumulation will restrain real GDP growth in the first half of 2014.

- Real consumer spending will reach a trend growth rate of about 3%, supported by employment gains and improved household balance sheets.

- Homebuilding will surge until 2016, when it catches up with demand.

- Business fixed investment will accelerate, led by equipment spending.

- Interest rates will rise significantly over the next four years as monetary accommodation is gradually withdrawn.

- The North American energy boom will continue to create jobs, investment, and a competitive advantage in manufacturing.
North American Industry Markets

Industry drivers supporting the forging industry should improve slowly though 2014 and accelerate during 2015 and beyond.
The Latest News in Manufacturing

• Manufacturing output grew by 2.5% during 2013. Growth in 2014 is expected to improve to 3.2%.

• Durable goods orders increased 4.9% during 2013 compared to a year ago. They are expected to continue to increase through 2014.

• The Institute of Supply Management’s purchasing managers’ index (PMI) was as 51.3 for January (the 50 threshold is an indication a manufacturing contraction or expansion). It has been in the upper 50 range during the second half of 2013. January’s softness is mostly viewed as being weather related.

• Consistent growth in manufacturing output during the fall has set the stage for a faster paced 2014.
The Institute for Supply Management’s indexes signal growth in manufacturing and services.

(Index, over 50 indicates expansion)

Source: Institute for Supply Management (ISM)
US industrial equipment orders were up 18% during 2013

Source: Census Bureau
For the past three years North American construction machinery production has been driven by the energy market and exports. Look for it to pick-up again in 2015 and beyond.
Metalworking Machinery Overview

- Includes:
  - Industrial Mold Mfg
  - Machine Tool Mfg (cutting types)
  - Special Die & Tool, Die Set, Jig & Fixture Mfg
  - Cutting & Machine Tool Accessory Mfg
  - Rolling Mill Machinery

- The rebound in metalworking industry activity and pent-up demand has allowed capital spending programs to proceed.

- The motor vehicle industry has become profitable and long-delayed CAPEX programs are moving forward.

- The Boeing and Airbus ramp-up of commercial air transport production should provide additional support.

- Growth in metal working should continue, beyond 2014 as many delayed capital projects finally become realized.
Replacement demand will drive power sector investment

Electric Utilities Have Adequate Generating Capacity
(Percent, electric utility operating rate)

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## US Utility Capacity Additions (Megawatts)

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<th>Year</th>
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<th>Wind</th>
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Tight oil and shale gas projects will provide the support
US - Auto Market Overview
- Signs of a Breakout

- The auto market has been a stellar performer in a lackluster economy.
- Pent – Up demand is driving the auto recovery; and unless the economy deteriorates, sales will remain strong.
- Currently we estimate pent–up demand at 8 mm units
- November at 16.3 mm units was the best month since early 2007.
- Retail not fleet sales continue to drive the market.
- The weak Yen gives the Japanese OEMs more fire power, but we don’t expect an all out price war.
- Incentives are now being used tactically, transactions prices remain strong.
- Auto credit quality is excellent and availability is improving.
- Inventory remains under control.
- The used car and truck market will remain strong.
- Cost pressures are easing and industry profits in North America are good.
- Production will be stronger than sales.
- Reduced estimates of population growth, especially for Gen Y, limits future auto demand.
US defense aircraft orders down 23% during 2013

Source: Census Bureau
North American Aircraft and Parts
Production will need to ramp-up to fill orders
The off highway and capital equipment markets saw weak growth during 2013, but during the fall of 2013 the stage was set for a significant improvement in the equipment markets this year. But not until 2015 and 2016 will these markets hit full stride.

Replacement demand remains the principal driver behind light vehicle sales and higher production, but growing employment and incomes are making the growth sustainable.

The outlook for commercial vehicle market is positive as replacement demand continues and freight activity expands.

Energy markets offer strong long-term, opportunities, but near-term potential is limited.

Non defense aircraft and parts production was a disappointment in 2013. But with its long pipeline of orders, production will need to ramp-up substantially.

Despite manufacturers near term caution about Cap Ex, the machinery & equipment view over the next three years still looks very promising.
Thank you!

*Please continue to participate in FIA’s Annual Orders & Shipments (O&S) Survey. Your input is needed for the continued success of the forecasting project.*