

Economic Impacts, Drivers and Outlook for the Scrap Recycling Industry

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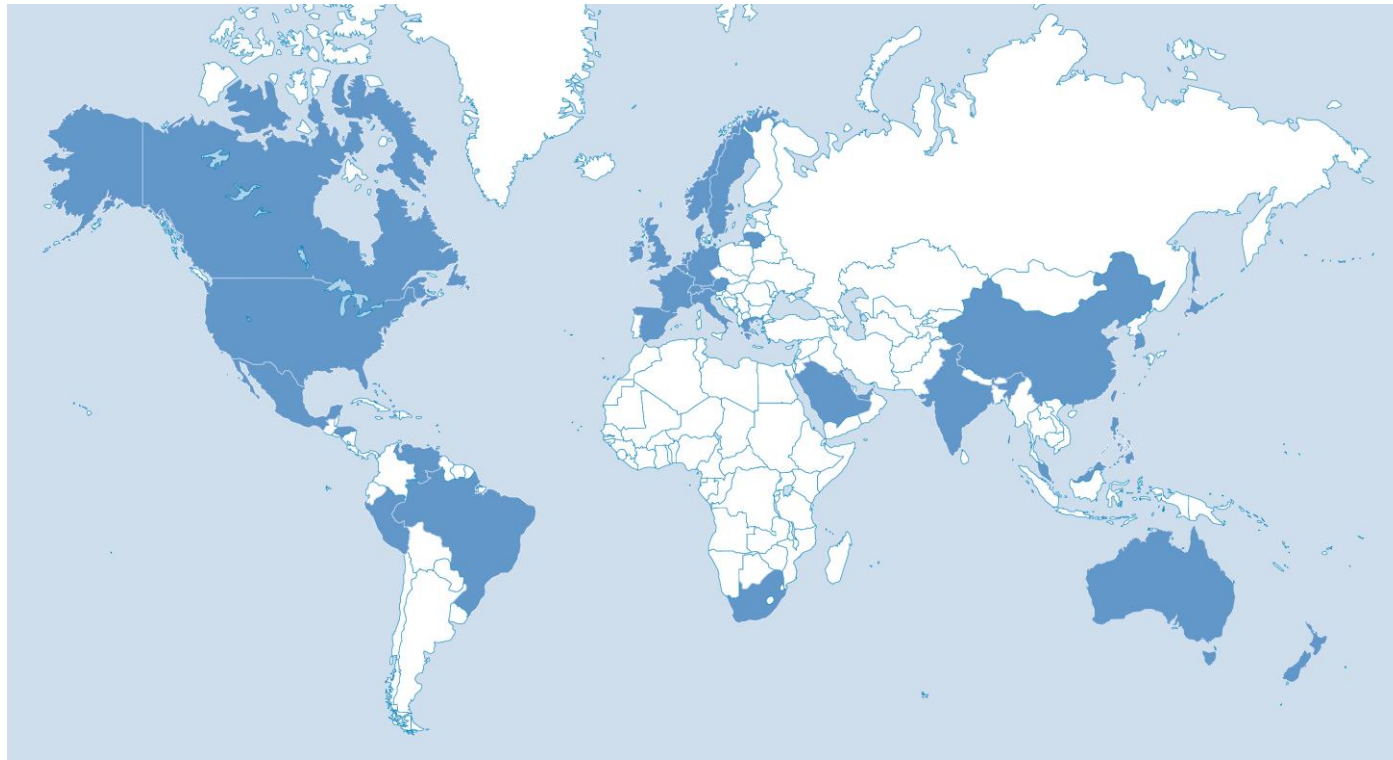


**Institute of
Scrap Recycling
Industries, Inc.**

ISRI: Voice of the Recycling Industry



Institute of
Scrap Recycling
Industries, Inc.



1,600+

Member
companies

7,000+

Recycling facilities
worldwide

34

Countries

\$105 Billion Industry

149,000

Direct Employees

472,000

Direct + Indirect

+135,000,000

Tons processed annually

75 million tons ferrous

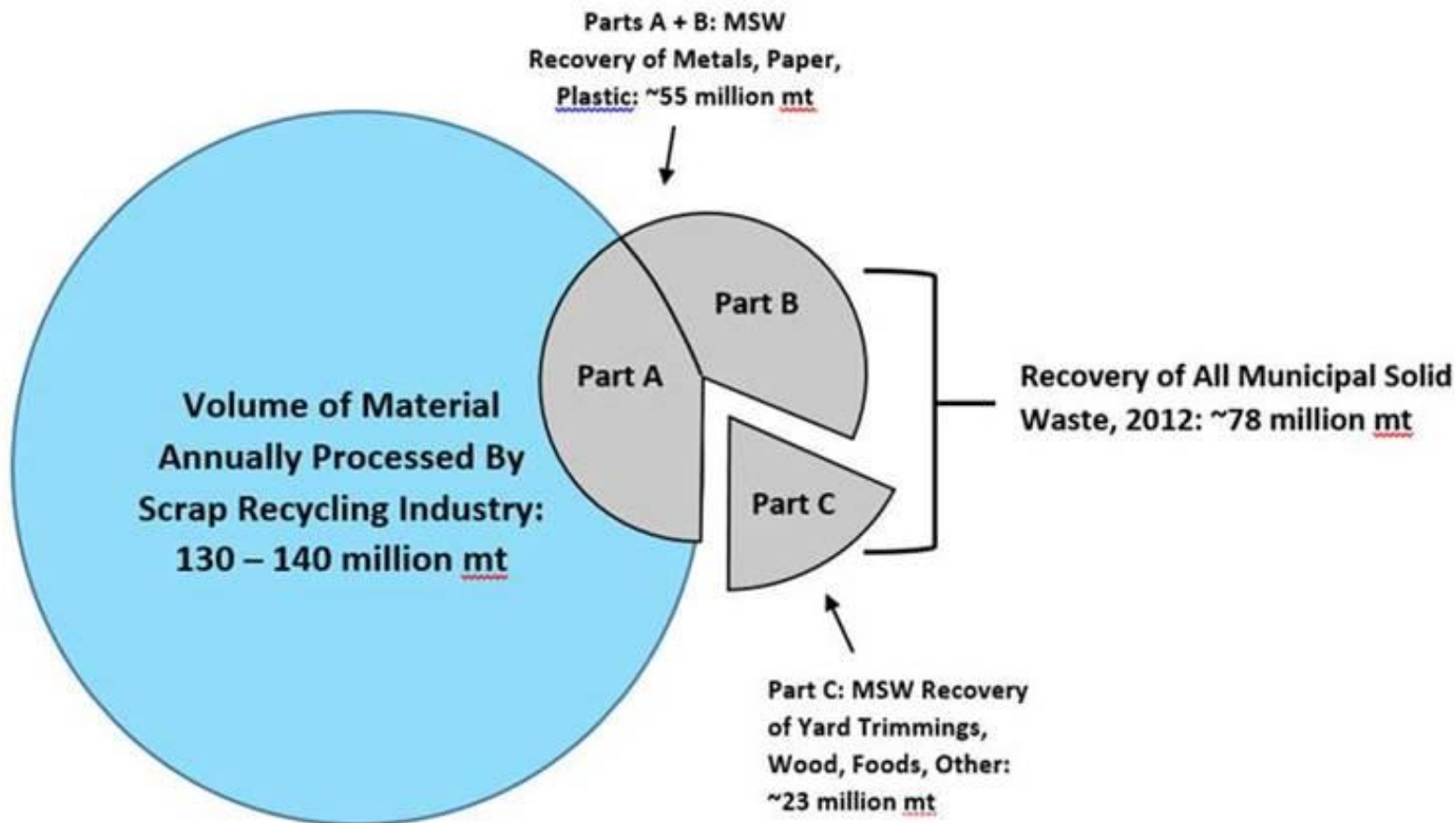
5.4 million tons aluminum

2 million tons copper

46 million tons paper



Recycling Industry Segments



Part of the Global Industry

40

Total exported from U.S.
(million metric tons)

\$21B

Value of U.S. materials
exported

160

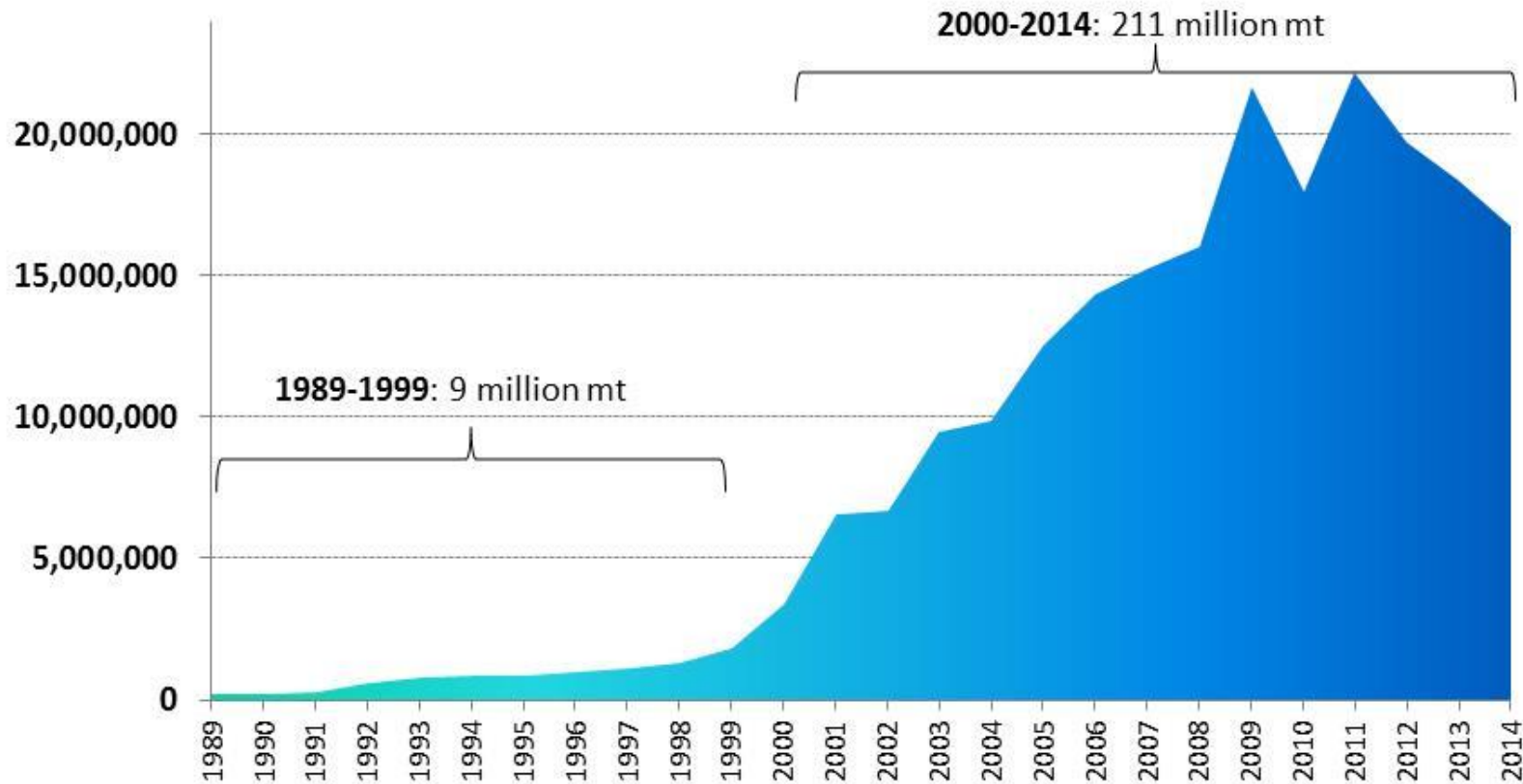
Destination countries to which
recyclables were sold

- *The U.S. is the largest exporter of scrap commodities in the world.*
- *With between 30% to 40% of scrap processed in US destined for export each year, the health of the US recycling industry is directly tied to the health of the global economy.*
- *Explosive Chinese growth was the main driver of commodity and scrap demand and the so-called “commodities super-cycle.” But the recent slowdown in China’s economy has had similarly outsized impacts.*

Main Driver of Globalization: China

Volume of Total U.S. Scrap Exports to Mainland China, 1989 - 2014 (metric tons)

Sources: US Census Bureau/US International Trade Commission



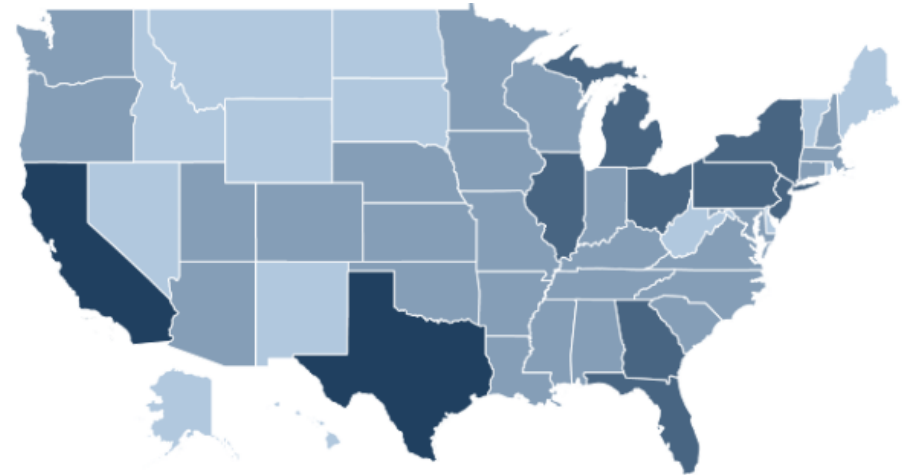
Scrap Recycling Jobs Study

- In 2015, the Institute of Scrap Recycling Industries (ISRI), Inc. retained the independent economic consulting firm of John Dunham and Associates to perform an economic impact analysis to document the size and scope of the scrap recycling industry in the United States and document its significant contribution to the U.S. economy, in terms of employment, tax generation and overall economic benefit.
- The study found that the people and firms that purchase, process and broker old materials to be manufactured into new products in America provide 471,587 adults with good jobs in the United States and generate more than \$105.81 billion annually in economic activity.
- The study also found that the scrap recycling industry generates about \$4.39 billion in state and local revenues annually and another \$6.76 billion in federal taxes are paid annually by the industry and its employees.

	Direct	Supplier	Induced	Total
Jobs	149,010	171,350	151,227	471,587
Wages	\$11,496,501,800	\$11,344,450,100	\$7,950,256,600	\$30,791,208,500
Economic Impact	\$45,644,002,300	\$35,727,836,800	\$24,442,618,900	\$105,814,458,000

DC-MD-VA Scrap Recycling Impacts

- In the DC-MD-VA area, the Dunham Study found that 4,708 jobs are being supported by the manufacturing and brokerage operations of the scrap recycling industry.
- In addition to this, 10,095 jobs are indirectly supported by the scrap recycling industry through suppliers and the indirect impact of the industry's expenditures.
- All of this activity generates \$3.2 billion in economic benefits.
- All told, the scrap recycling industry across DC-MD-VA generates more than \$173 million in tax revenues for the federal government and nearly \$90 million in state and local revenues.



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Nation State Congressional District State House District State Senate District

- EXECUTIVE SUMMARY OF 2015 U.S. SCRAP RECYCLING INDUSTRY STUDY
- NATIONAL EMPLOYMENT/ECONOMIC IMPACT HIGHLIGHTS
- NATIONAL EXPORT IMPACT HIGHLIGHTS
- READ HOW SCRAP EXPORTS BENEFIT THE U.S. ECONOMY
- READ HOW SCRAP RECYCLING PROTECTS THE ENVIRONMENT/SAVES ENERGY
- READ HOW SCRAP RECYCLING SUPPORTS AND CREATES JOBS

view

But The Scrap Industry Faces A Growing List of Challenges Today, Including...



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- Falling Commodity Prices
- Uneven U.S. Manufacturing Growth
- Weaker Overseas Growth & Scrap Demand

ISRI Index: Jan 2008 - Sep 2015

(Jan 1998 = 100)



Comparison of 1-Year Scrap Price Performance



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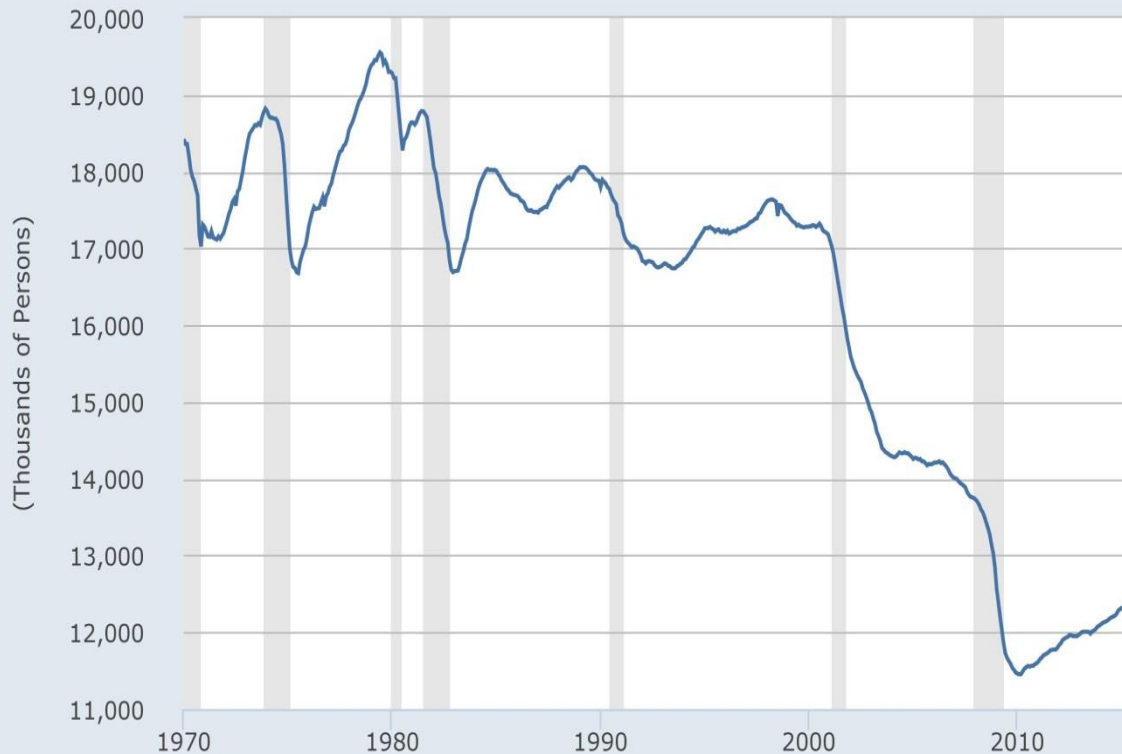
	Oct-14	Oct-15 (p)	% CHG
Ferrous (\$/gt)			
Composite No. 1 HMS	342.5	152.5	-55%
Nonferrous (cents/lb.)			
Refiners No. 2 copper	275.57	210	-24%
Old Cast and Sheet Avg.	72.9	51	-30%
Recovered Paper (\$/st)			
OCC (11)	103.33	100.83	-2%
Plastic (cents/lb.)			
HDPE Bottles Natural Bales from Curbside, (FOB U.S. East Coast)	53-54	25-28	-50%

Sources: Scrap Price Bulletin, AMM, Paper Stock Report, PetroChemWire.

Scrap Industry Health Still Connected to U.S. Manufacturing Sector

FRED

— All Employees: Manufacturing



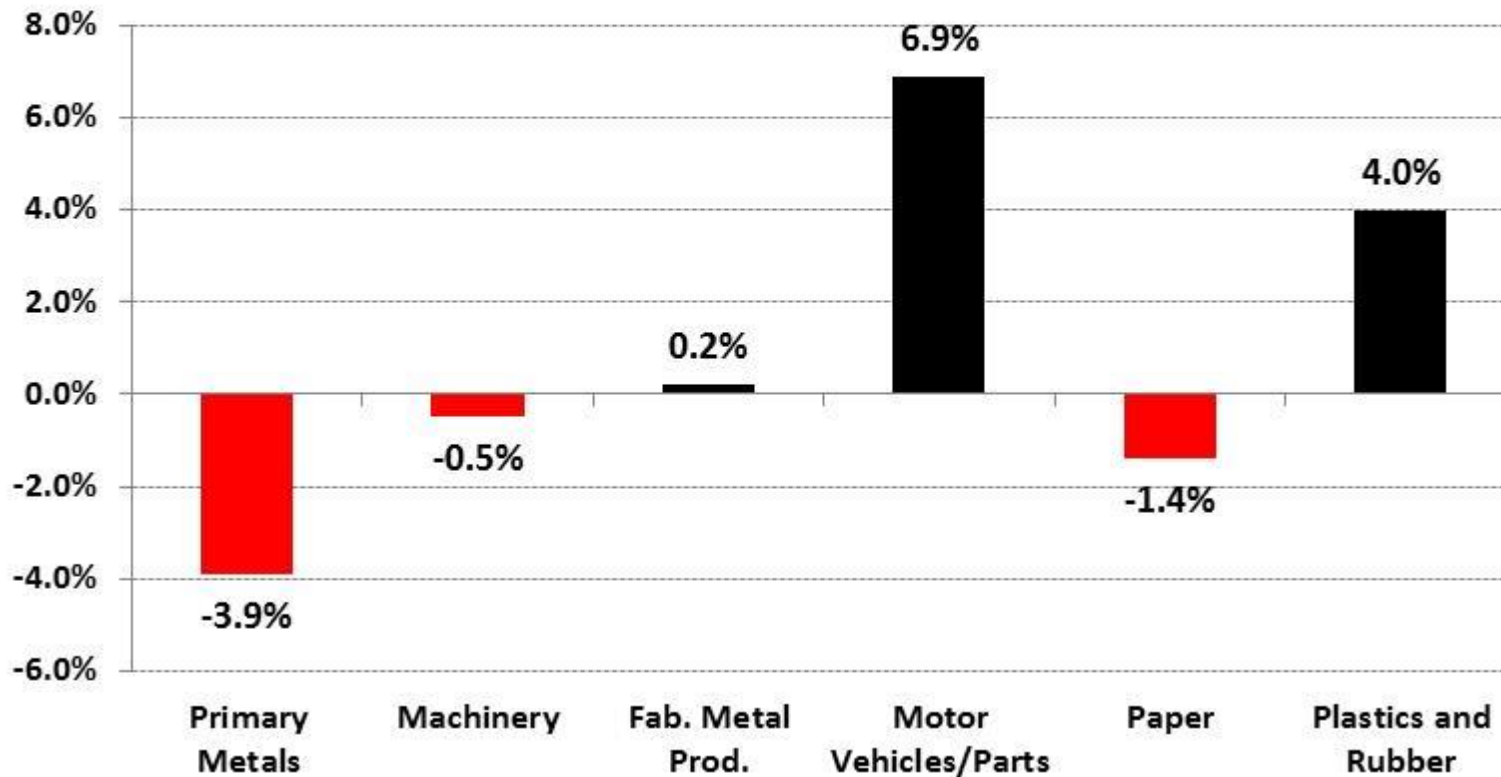
Source: US. Bureau of Labor Statistics

Shaded areas indicate US recessions - 2015 research.stlouisfed.org

The longer-term trend on manufacturing jobs in the U.S., which is closely related to the health of the scrap industry, is not great. In 1979, manufacturers employed about 19.5 million people. Today? About 12.3 million. Mfg. jobs are up by not quite a million jobs from the depths following the great recession but are still off by some 7.2 million jobs since the late 70's, with unmistakable results not just for the national economy but for local communities as well.

Change in U.S. Industrial Production by Selected Sectors, Aug 2014 - Aug 2015 (%)

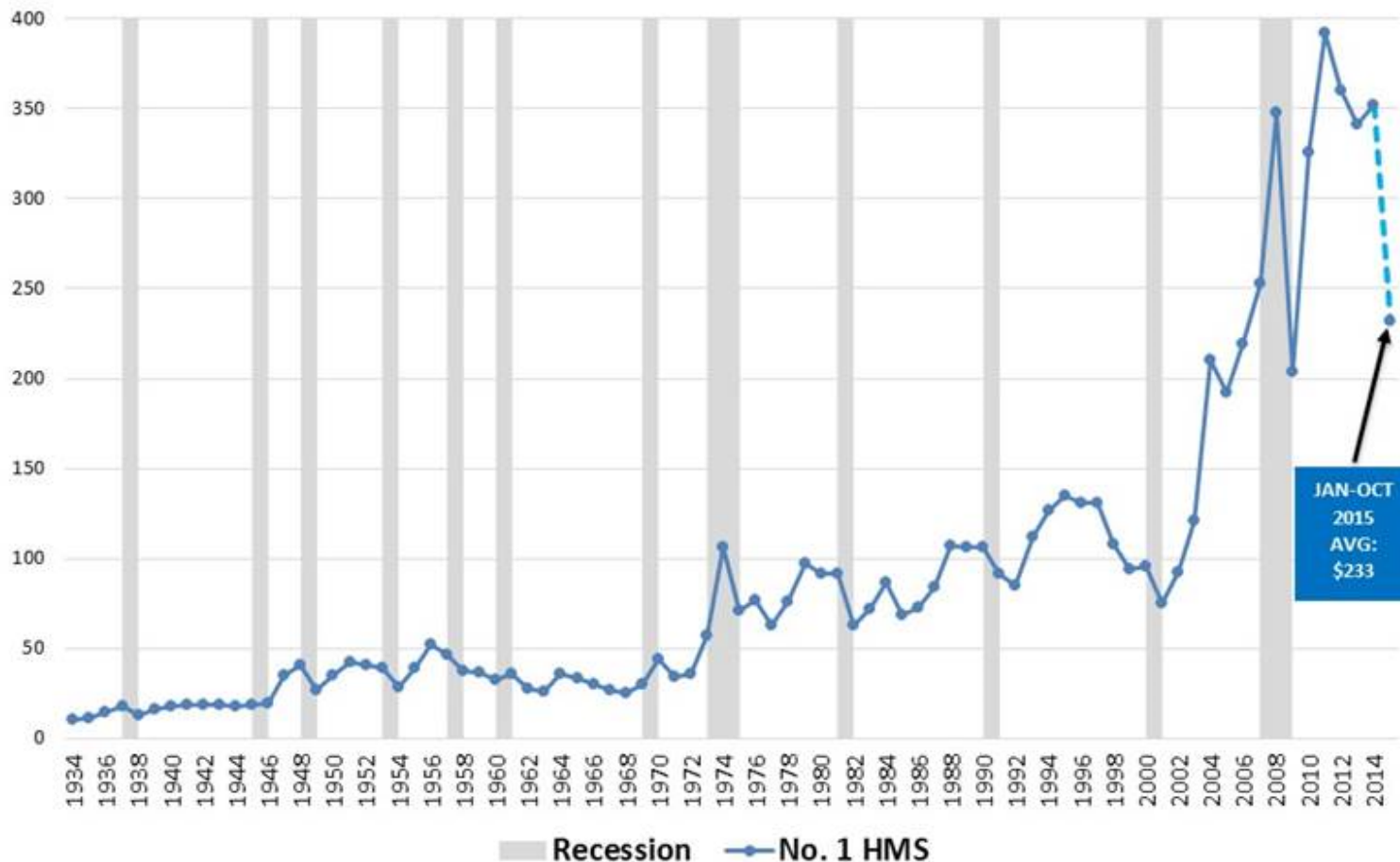
Source: Federal Reserve



Scrap Prices Still Linked to U.S. Mfg. and Economic Growth

Average Annual Composite No. 1 HMS Prices and U.S. Recessions, 1934-2015(p)

Sources: Iron Age/USGS, NBER, ISRI



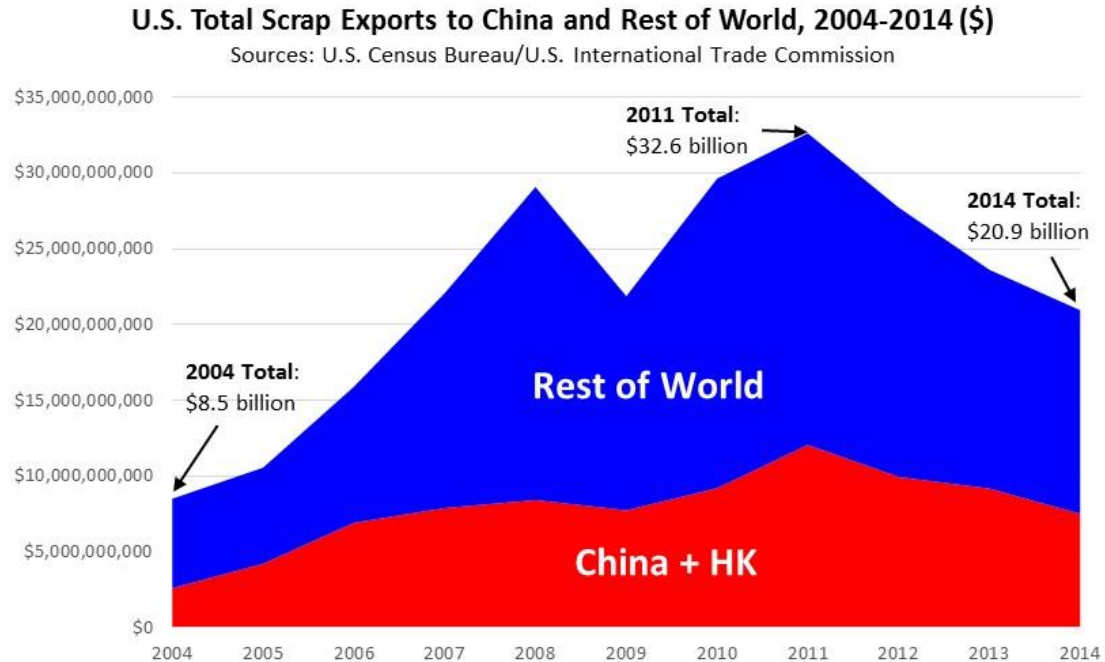
Why Aren't Scrap Market Conditions Better: Domestic Trends

- Falling prices have contributed to heightened competition for available feedstock and diminished supply.
- Uneven manufacturing growth.
- Excess domestic scrap processing capacity.
- Margin compression.
- Logistical challenges across the transportation front.
- Constantly shifting regulatory landscape.



Why Aren't Scrap Market Conditions Better: Global Trends

- Weaker overseas scrap demand generally and from China in particular as primary prices have declined, Chinese generation increases and growth slows.
- Excess global production across a range of commodity markets, e.g. crude oil, iron ore, etc.
- Stronger dollar and rising commodity price volatility.
- Transportation headaches.
- Global deflationary pressure.
- **But scrap industry remains resilient!**



*For the first nine months of 2015, heavier loadings of recovered paper and fiber helped to keep the volume of scrap shipments to China in positive territory, even as the **value** of total YTD U.S. scrap exports to China fell 13% due to the sell-off in commodity prices.*

- Hard to see short-term bullish scenario for commodities at present, with continued impacts on scrap supply and demand expected
- Need for cutbacks in excess global primary commodity capacity and production in order to rebalance commodity markets
- Continued industry consolidation/rationalization expected
- Commodity prices are beyond the recycling industry's control: focus on operational efficiency and quality, new market development and product diversification
- Targeted investment
- Cyclical, evolving industry
- Longer term positive trends
- Education and ISRI: Jason Project, Design for Recycling, etc.

Thank You

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