REPORT: BIR AMSTERDAM

BACK FROM THE BRINK

INTERNATIONAL SCRAP MARKETS HAVE SURVIVED THE DARKEST DAYS OF THE MARKET STORM AND NOW ARE TAKING TENTATIVE STEPS TOWARD RECOVERY, ACCORDING TO SPEAKERS AT BIR'S FALL MEETING IN AMSTERDAM.

BY ROBERT J. GARINO AND KENT KISER

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In fall 2008, scrap markets were freefalling into the deep, dark economic hole dug by the global credit crisis. Many recyclers suddenly found themselves sitting on tons of high-priced scrap inventory with virtually no outlets for the material. They also faced unscrupulous trading practices in their export deals, as some international buyers shirked their contractual obligations or played games, leveraging the downturn to their advantage. This period was "the most challenging and stressful time for our industry in modern times," said **Bob Stein** of Alter Trading Corp. (St. Louis) at the fall 2009 meeting of the Bureau of International Recycling (Brussels), held in Amsterdam in late October.

After weathering more than a year of oppressive market conditions, Stein and other international scrap executives at the BIR meeting finally found cause for optimism for 2010 and beyond. "We've probably seen the worst of what the world has to give us, and we can proudly look back and say that we've made it," he said, adding that the industry is "on a far better course" than it was charting at BIR's fall 2008 meeting in Düsseldorf, Germany. In Stein's view, the industry's climb out of the abyss proves it is "resilient and capable of responding to whatever adversarial circumstances come our way."

Far from returning to business as usual, however, global scrap markets are taking their next steps with twice-shy caution. More international scrap trades now feature "increased scrutiny and due diligence by scrap sellers and buyers," with many scrap traders now demanding "more financial performance guarantees," Stein said. In short, the recent market trials have created a new scrap world, according to speakers at the BIR fall meeting: one that is beginning to gain momentum even as it continues to face hefty challenges.

ROUGH WATERS FOR SHIPPING LINES

After growing an average of 10 percent a year for the past two decades, the global container shipping industry fell "off a precipice" in 2009, with container trade volumes declining 20 percent compared with 2008, said guest speaker **Peter Hall** of APL (UK) (London) at the Paper Division meeting. Shipping lines have incurred billions in losses and have resorted to raising capital to strengthen their balance sheets or simply to stay afloat, he said. Adding to their financial woes, bunker oil prices—which bottomed out in December 2008—have risen 83 percent since the first quarter of 2009.

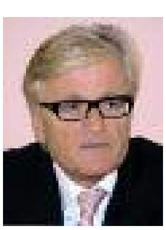

Peter Hall

Most carriers have responded to the declining demand by taking capacity out of the market, scrapping older ships and idling about 10 percent of their fleets, the equivalent of 500 container ships, Hall said. As an example, he noted that his company idled 25 percent of its Asia-Europe capacity and 20 percent of its transPacific capacity. Unless demand improves soon, he said, vessel overcapacity could last until 2014, even if carriers cancel or delay their previous orders for new ships. Continued low freight rates will result in shipping line failures, degradation of service, and decreased investment in assets, technology, equipment, and people, Hall said. As a result, scrap shippers could have fewer choices in the container-shipping market, "which is bad news."

More optimistically, Hall asserted that "there will be recovery—of that there is no doubt—it's just a question of when and how quickly it will come." The world ultimately will need more shipping services to meet Asia's growing consumption habits, he added.

STEEL AND FERROUS SCRAP SEEK SOLID FOOTING

Though several major industrialized countries technically are out of recession, the signs of economic recovery so far seem to be based on restocking of inventories rather than new demand, said Ferrous Division President **Christian Rubach** of Interseroh Hansa Recycling (Dortmund, Germany). He maintained that a "split world economy of two speeds" is emerging, with strong growth in most of the BRIC nations and slow growth in Western economies. As evidence of this trend, Rubach noted that top international banks are bullish on most Asian steel company stocks. In addition, the Baltic Dry Index—an indicator of the international shipping market—has gained 400 percent in recent months, though it is still 60 percent under early 2008 levels, he observed.


Christian Rubach

On the Western economic front, most expect the EU steel market to be "stuck in slow motion for the time being," with steel-consuming industries such as automotive and construction growing minimally if at all in 2010, Rubach said. In light of the overall market weakness, crude steel production in the 27 EU countries declined 41 percent, to 84.2 million mt, in the first eight months of 2009 compared with the same period in 2008, said **Markus Barg** of TSR Recycling (Bottrop, Germany). According to Deutsche Bank Research, Rubach added, it will take 10 years for the EU steel industry to return to its 2007-2008 production levels. In the same vein, the EU's share of global crude steel production could slip from 16 percent to 8 percent by 2020, while Asia's share could increase from 56 percent to 80 percent, Barg noted. In his view, a big worry is that overcapacity in global steel production could prompt China to increase its steel exports to Europe "on a big scale."

On the scrap front, EU steelmakers cut their consumption of ferrous scrap about 40 percent, to roughly 45 million mt, in the first eight months of 2009, Barg said. EU ferrous scrap exports slipped about 20 percent, to 6.5 million mt, in the first half of 2009. Turkey remained the largest buyer of EU ferrous scrap, though its purchases declined nearly 3 million mt, or 39 percent, in the first half of the year. With some previously important international scrap markets nearly disappearing, "our industry is running out of sales options," Barg said. On the scrap import side, EU steelmakers decreased their purchases almost 41 percent, to 1.4 million mt, he noted. Russia was still the largest exporter of ferrous scrap to the EU, shipping 355,000 mt in the first half of 2009, a decrease of about 55 percent, he said. In sum, Barg said the circumstances in the EU steelmaking and ferrous scrap markets are "far from being good," and a "fundamental recovery is not in sight."

Giving a U.S. report with an eye on international trends, **Blake Kelley** of Sims Group Global Trade Corp. (New York) noted that recent increases in global steel production—especially by China—could skew the market. "Many people believe producers have increased output by too much too soon," with the result that "it appears supply now exceeds demand," he said. The problem is that steel demand "does not seem to be developing much beyond the amount required to restock. There does not appear to be additional demand related to true economic expansion." This concern about demand has a ripple effect on the ferrous scrap market, he explained, with steelmakers becoming "extra careful" as they seek to "minimize the quantity of scrap in inventory, in transit, and on order."


Blake Kelley

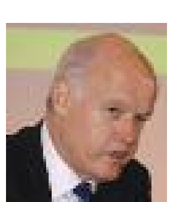
The excess idle steelmaking capacity around the world is an ongoing concern. Despite some consolidation in the steel market, "steel prices are unlikely to increase to sustainable levels anytime soon," Kelley said. Similarly, scrap prices most likely will continue easing downward until supply and demand—whether actual or perceived—again balance. Overall, the lower volume of business is making it "very difficult for scrap processors and steel producers to effectively amortize their costs."

Turning to the Russian market, **Andrey Moiseenko** of MAIR (Moscow) reported that by May, domestic steelmakers had worked down their scrap stocks from about four months of consumption in January to the "normal" level of 45 days of consumption. This helped establish stable market conditions in subsequent months, with domestic prices reaching $260 a ton, delivered, by midsummer. Russian scrap supplies increased slowly, reaching 2 million mt in September, about 30 percent less than a year ago, Moiseenko said. He expects scrap collections and deliveries to reach their peak in October and scrap prices to decline in November. He termed Russian exports of ferrous scrap as "quite stable at a very low level."


Andrey Moiseenko

Ukraine's situation largely mirrors the Russian market, Moiseenko said, with one difference: Ukrainian steel mills started to recover in March rather than May because they didn't have to work down winter stocks of scrap, as Russian mills did.

Have recyclers passed the worst of the economic crisis? Yes, said guest speaker **Thomas Ludwig** of Klöckner & Co. (Duisburg, Germany), a distributor of ferrous and nonferrous metals, but recovery will take time. Looking at GDP forecasts for European countries, Ludwig said it could take four or five years to return to 2008 lev-


Thomas Ludwig

TIRES LOOK BEYOND ENERGY RECOVERY

Europe has increased the recovery rate of end-of-life tires from 38 percent in 1994 to 91 percent in 2007, noted Tires Committee Chair **Barend ten Bruggencate** of Kennis Centrum (Leiden, Netherlands). Of the 3.4 million mt of scrap tires Europe generated in 2007, 39 percent went into material recycling markets; 32 percent were consumed for energy recovery; 11 percent were retreaded; 4 percent were reused; 5 percent were exported; and 9 percent were landfilled, he said, citing statistics from the European Tyre & Rubber Manufacturers' Association (Brussels).


Barend ten Bruggencate

Guest speaker **Catherine Clauzade** of Aliapur (Lyon, France) reviewed France's producer responsibility requirements regarding end-of-life tires. French tire manufacturers founded and jointly finance Aliapur to collect and process the country's scrap tires. Aliapur collected about 300,000 mt of scrap tires in 2008, and about 38.4 percent of the tires ended up being consumed for energy recovery, she noted. Aliapur is conducting various research projects to increase the use of reclaimed rubber in secondary applications, including as a drainage aggregate in road construction and a substitute for coke in foundries. The company also developed a patented equestrian surface made of a bottom layer of resin-bound rubber granulate covered in a layer of loose granules, Clauzade said. Though scrap tires are still considered waste under EU regulations, Aliapur hopes its work ultimately will help redefine them as secondary commodities.


Catherine Clauzade

In another guest presentation, **Wilma Dierkes** of the University of Twente (Enschede, Netherlands) discussed the results of research on devulcanizing reclaimed rubber using microwaves, ultrasound, and other methods. When chemically devulvanizing rubber, various factors affect the results, including time, temperature (a lower temperature yields less polymer degradation and higher devulcanization), shearing forces, and crosslink distribution (the longer the crosslinks, the easier they are to break), she said. "Our next goal is to have 50-percent recycled material back into the original products by chemical devulcanization," Dierkes said.


Wilma Dierkes

els. "All economies are in bad shape," he noted. As evidence of the bad-but-improving trend, he pointed out that European industrial production bottomed out in April, down 22 percent year-on-year, but by July it had improved to just 17 percent down from the previous year. Similarly, steel consumption by major EU steel-using sectors—such as construction, automotive, and white goods—was projected to be down 18 percent in 2009 compared with 2008, but the construction and machinery sectors were expected to show improvement in the fourth quarter compared with the third quarter, Ludwig said. Offering other figures, he reported that real steel consumption in the EU could end 2009 down 23 percent year-on-year, while prices for flat and long steel products appeared to be bottoming out at mid-2005 levels.

Ludwig maintained that the market's destocking phase is over, which could lead to growth in apparent and real steel consumption going forward. That said, there are several "high risks" in the market, including the chance that real steel demand could remain at such a low level that it would not be enough to revive the industry. Also, the steel industry has too much capacity, "which means we have a big problem to balance production and demand," Ludwig said. "If mills do not manage this in the right and proper way, then we will get extremely high volatility in our business."

Ludwig disagreed with others' assertion that China will disrupt the global market by exporting significant tonnages of steel. In his view, buyers have no cost advantage in importing Chinese steel because China is not a low-cost producer. Also, he noted, the Chinese government—which controls most of the country's steel operations—prefers to import raw materials, manufacture products out of the steel, then export the finished products.

Instead of offering a market report on India, **Ikbal Nathani** of the Nathani Group of Cos. (Mumbai) reviewed various restrictions the Indian government has proposed on scrap imports in recent years. One rule has sought to categorize ferrous and nonferrous scrap as hazardous waste and has proposed that only actual scrap consumers, not traders, can import scrap. "India imports nearly 3 million mt of ferrous scrap, 1.5 million mt of nonferrous scrap, and 2 million mt of paper—all of this would go out of the hands of the traders to the actual users," Nathani said. BIR, ISRI, and the new Metal Recycling Association of India (Mumbai) have worked to amend such proposed restrictions, with some success. They succeeded, for instance, in persuading the government to allow Indian traders to import scrap if they follow a prescribed protocol. These rules have come about "due to certain bad eggs importing hazardous waste as scrap," Nathani said. "We're trying to educate the government that all [scrap importers] are not bad and that ferrous scrap and nonferrous scrap are not hazardous."

NONFERROUS PRICES SHOW SOME LIFE

BIR's nonferrous meeting offered a more upbeat tone than the ferrous meeting thanks to the better performance of base metals in 2009. Prices for nonferrous metals from aluminum to zinc appreciated "vastly" throughout the year, driven by emerging economies and their respective governments, which provided financial stimuli to promote economic growth through infrastructure projects and other strategic developmental plans, said Nonferrous Division President **Bob Stein** of Alter Trading. Other growth factors and considerations for the recycling industry included the positive effect of the restocking of finished products, an improving global auto industry, a rejuvenated construction industry, and improvement on the employment front, he noted. Though the near-term outlook "seems to be one of very guarded optimism in our industry," the overall market trends bode well for a "sustainable improvement in our businesses," Stein said.


Bob Stein

Offering a whirlwind summary of global nonferrous markets, **Dhawal Shah** of Metco Marketing (Mumbai, India) expressed doubts about both China's local demand and its export performance, calling the nonferrous market in South China "rather somber." Trade volumes in the U.S. nonferrous sector were down about 50 percent from the highs of 2008, he said, maintaining that the U.S. government's stimulus packages "have [had] very little effect on actual business conditions." In the EU, scrap supplies generally remained tight through the third quarter, with available material moving "rather easily," especially within Europe. The Indian government's "show" of import regulations continued to disrupt the Indian market, while South Africa faced soaring energy prices, a stagnant housing market, and potentially "serious" job losses in the mining and manufacturing sector, Shah said. Russia, in contrast, continued to "look more promising than any of its peers," with both the aluminum and copper sectors in


Dhawal Shah

scrap "buying mode," he noted.

After acknowledging the "horrendous end" of 2008 and "really bad beginning" of 2009, guest speaker **Michael Widmer** of Bank of America Securities—Merrill Lynch Research (London) discussed the major influences on metal prices in 2009, specifically citing the weak U.S. dollar, strong Asian growth, and diversification out of the dollar into other currencies. Manufacturers are still "cautious" after suffering through the recent downturn, with most recent market movement little more than spot demand or restocking, with real demand "still relatively subdued," he said. Boosted by ongoing growth in the Chinese economy, however, the new year could bring "a relatively healthy rebound in GDP growth," supported by higher shipments, real end-user demand, and an inventory rebound, Widmer stated. Many governments likely will extend their stimulus programs into 2010, which will lend further support to the metal markets, he said, projecting a possible copper price average of $7,000 a mt (roughly $3.18 a pound) in the new year.


Michael Widmer

Taking a look at the EU aluminum market, guest speaker **Günter Kirchner** of the Organization of European Aluminum Refiners and Remelters (Düsseldorf, Germany) noted that Europe has virtually no natural bauxite resources, so it relies heavily on aluminum scrap resources. Until 2002, the EU was a net importer of aluminum scrap, but its scrap import/export balance has favored exports since then, rising from about 104,000 mt in 2002 to almost 845,000 mt of exported metal in 2008, he reported. China has been a major buyer of EU aluminum scrap, in part because melting scrap requires less energy than making aluminum from virgin ore. In other words, Kirchner said, China's importing of scrap is really an act of "importing energy." International competition for scrap has challenged EU operators, and the trend raises a "big danger" of increasing protectionism "at all levels in the world," he said. To remain viable in the future, EU aluminum melters must improve their competitiveness in terms of higher productivity, lower energy consumption, and other measures, he maintained.


Günter Kirchner

Though generally upbeat about the longer term for the aluminum industry, Kirchner was less sanguine concerning the current market, stating that he was "not so sure the bad times are really over."

STAINLESS HOPES FOR A 2010 REVIVAL

Global stainless steel production figures for 2008 were "downgraded significantly" to 26.4 million mt, and conditions looked similarly harsh for 2009, noted **Michael Wright** of ELG Haniel Metals (Sheffield, England), chair of the Stainless Steel & Special Alloys Committee. Though projections expected stainless output to end 2009 at 24.1 million mt, down 21 percent year on year, Wright questioned that figure and personally placed the number closer to 23.5 million mt. He offered a more optimistic forecast for 2010, however, asserting that stainless production could reach 27.2 million mt, which would mark an almost 13-percent improvement over 2009.


Michael Wright

The current picture was equally grim regarding global availability of stainless scrap, with supplies expected to decline from 7.5 million mt in 2008 to 6.8 million mt in 2009, Wright said. Going forward, expectations are that nickel units contained in the scrap will grow from 556,000 mt in 2009 to more than 650,000 mt in 2010 to meet the higher production forecast, he said.

Examining the U.S. market, **Barry Hunter** of Hunter Alloys (Boonton, N.J.) addressed what he termed "the lack of scrap availability caused by the recession." As evidence, he reviewed scrap exports to China and that country's buying patterns relative to nickel prices on the LME as well as the supply impact of destocking by U.S. mills in 2008 and 2009. By the third quarter of 2009, Hunter noted, domestic mills again became hungry for 18/8 and 316 scrap, only to find that the material was "now long gone to China." Consequently, processors aggressively competed for the limited scrap supplies, driving prices above the intrinsic value of the material. Scrap prices rose almost 45 percent over the normally slow summer months, while LME tags increased "only" 22 percent, despite the ongoing strike at Vale Inco in Sudbury, Ontario, he reported.


Barry Hunter

U.S. mills had little choice but to support September's fast-rising scrap market so they could fill depleted service center inventories, Hunter said. What's still missing, he added, is the end user.

Stainless scrap remains relatively tight, and "inflated" scrap prices may be a feature as consumers return to the marketplace, Hunter said, though he did not anticipate this happening until "sometime in 2010." Positive signs include "huge"—and nickel/stainless-intensive—energy and environmental projects that "eventually must happen," as well as rising stainless production in China, which SMR Research (Reutte, Austria) expects to increase 10 percent in 2010. China's growing demand could represent an additional need for "about 50,000 mt of extra primary nickel, or some 700,000 mt of stainless steel scrap," Hunter said.

Other market reports echoed Hunter's description of tight scrap availability, with one speaker calling stainless scrap “a rare commodity.”

Commenting on the Russian market, **Ildar Neverov** of Scrap Market (Moscow) said official projections called for stainless scrap exports of about 100,000 mt in 2009, though the actual amount could be significantly higher. In response, the Russian government is considering raising export duties on stainless scrap as much as fivefold, a move that “would kill the export business,” he said.

In a review of the high-temperature alloy and titanium markets, **Philip Rosenberg** of Keywell (Chicago) characterized the aerospace sector in 2009 as “very quiet across the product lines.” Though demand was sluggish for more than six months, scrap supplies did not accumulate but rather went into stainless steel and alloy blends to compensate for tightness in the stainless scrap sector. Thus, with relatively low scrap supply and better production levels expected for 2010, Rosenberg saw “promising” signs for high-temperature alloy scrap pricing as it relates to intrinsic values.

Philip Rosenberg

The titanium sector also was looking “slow,” despite a seasonal pickup in the third quarter, Rosenberg said. He expected the balance of the year to trade “sideways to down for ferrotitanium,” adding that the market should see a return to higher prices and demand in 2010. At the same time, he said, titanium scrap prices would be capped at “around $2.50 a pound” because at that level it would become profitable to restart production of low-grade ferroproducts that has been mothballed for the past 12 to 18 months.

PAPER SEES A SLOW RECOVERY

“The recession has certainly bottomed off,” said Paper Division President **Ranjit Baxi** of J&H Sales International (London), adding that “the green shoots of recovery are now showing

SPANISH PAPERMAKER GLEANS PAPYRUS HONOR

BIR's Paper Division handed out its third Papyrus Award during the Amsterdam meeting, recognizing **Sociedad Anónima Industrias Celulosa Aragonesa**—or **SAICA** (Zaragoza, Spain)—for its "continued progress in not only using increased volumes of recovered fiber but also for promoting a very healthy business partnership with companies in the supply chain," said Paper Division President Ranjit Baxi. SAICA, a family-owned company founded in 1943, is one of the three biggest manufacturers of corrugated paper and corrugated containers in Europe, Baxi said. The company handles 2.3 million mt of scrap paper a year through its 43 recovery centers, with 60 percent of that tonnage coming from its own operations and the remaining 40 percent from outside scrap paper suppliers. SAICA uses that scrap paper to produce 1.8 million mt of paper for corrugated applications at its three mills—two in Spain, one in France. The firm then takes that paper and makes more than 2 billion square meters of corrugated containers at its 34 integrated plants.

In addition to consuming scrap paper, SAICA's "green" activities include using cogeneration to produce steam and power and using anaerobic digesters for water treatment. The company also plans to install a plant to convert its papermaking wastes into energy. The new waste-to-energy facility, which SAICA will install at its mill in El Burgo de Ebro, Spain, will consume 500,000 mt a year of waste from that mill and the company's mill in Zaragoza. The €150 million facility is scheduled to come online in September 2011.

Guillermo Vallés Albar (center), SAICA's materials director, accepts the Papyrus Award on behalf of the company from Ranjit Baxi and BIR President Dominique Maguin of La Compagnie des Matières Premières (Paris).

signs of sprouting." Recovery will be slow, however, extending over the next 12 to 18 months, he said. Rising unemployment—which affects consumption and spending—remains a major threat in most European economies, and lower consumption has translated into lower volumes of recovered paper—"a problem we are all currently facing," Baxi said. Scrap companies also continue to experience difficulties securing bank financing and managing cash flow.

The good news, Baxi said, is the vibrant pickup of Asian economies. The Chinese and Indian economies, for example, are expected to grow 9 percent and 6.5 percent, respectively, in 2010, he reported. Demand from such emerging markets will continue to increase over the coming decade, and those markets—which account for more than 75 percent of the world's population and 70 percent of its land mass—will "continue to grow in importance because of their size and enormity," he said.

Despite the difficult market conditions in 2009, China continued to increase its imports of scrap paper, Baxi said. In 2008, China imported about 24 million mt of recovered fiber. In the first eight months of 2009, China imported 18.6 million mt, which would yield a projected annual total of 27.9 million mt. That total would represent 15 percent year-on-year growth in 2009—virtually double the growth rate of the previous year, he noted. Guest speaker **Trilochen Singh** of RKS International Sales (Haren, Germany) predicted that China would increase its scrap imports to 37 million mt by 2012, while India would boost its imports to 20 million mt by 2020 as its mills upgrade their papermaking technology.

Trilochen Singh

On the downside, Baxi noted, scrap shippers face two major challenges when exporting fiber to Asia: first, tighter inspection controls and quality restrictions in certain countries, such as India and Indonesia; second, steadily increasing costs in the financial and shipping areas. Banks have increased their charges "quite heavily" in the past six months, Baxi said, and vessel space is getting tighter due to increasing export volumes.

Speakers reporting on European market conditions pointed to several common factors, including lower generation of scrap paper, thus lower collection volumes—10 percent to 15 percent down from the previous year. Lower demand from European mills has prompted scrap operators to turn increasingly to export consumers, primarily in Asia. Illustrating this trend, **Francisco Donoso** of Reciclajes Dolaf (Madrid) reported that Spain exported 600,000 mt of recovered fiber in the first half of 2009 and imported only 400,000 mt, marking its first time as a net exporter of scrap paper. "Spain has become the country with probably the highest potential growth in export volumes of recovered paper in Europe," he stated.

With European collections down and exports up, some mills on the continent have found it difficult to source fiber. Going forward, "the growth rate in China and the [exchange] rate between the euro and the U.S. dollar will be very important in the near future," said **Jean-Luc Petithuguenin** of PAPREC (La Courneuve, France). **Merja Helander** of Paperinkerays (Helsinki, Finland), president of the European Recovered Paper Association (Brussels), wondered how much Europe can grow beyond its current paper recycling rate of about 67 percent. "It can't go up forever," she said.

Offering a big-picture view of the paper recycling market, **Bill Moore** of Moore & Associates (Atlanta) noted that global recovered fiber collections in 2008 totaled about 209.4 million mt, with the North America, Western Europe, and China/Far East regions each accounting for roughly 25 percent of the total. On the consumption side, however, the picture is more lopsided, with the China/Far East region consuming 40 percent of the total tonnage, followed by Western Europe at 22 percent and North America at 16 percent. As a consumer, "China came from nowhere in 1990 to being currently the big player," Moore said. "It's really a total Chinese story." The United States was the biggest supplier of scrap paper to China in 2008, claiming a 42-percent market share, with Western Europe at 33 percent and Japan at 15 percent, he noted. By grade, China is a huge consumer of OCC and mixed paper, but it buys only a "very small" tonnage of high grades, usually to produce white-top board.

Bill Moore

To explain the dynamics of the recent market meltdown, Moore looked back at previous market slumps, noting that they shared two common conditions: overheated market prices and a downturn in world economies. The 2008 market definitely had those features, he noted, and the credit crisis made the magnitude of the correction bigger than expected. The current downturn differs from previous slumps in several ways, however, Moore said. The generation and supply of scrap paper are "way down," and overall recovery rates are much higher, which means "there's just less new paper to get," he explained. Also, the supply of several key grades—such as newsprint and printing/writing paper—has been steadily trending downward and will continue to decline, he noted. Given these tighter supply conditions, "it won't take much pickup in demand for prices to rebound," Moore said.

OPPORTUNITIES AND CHALLENGES FOR PLASTICS

Plastics recycling is a "sunrise industry" with "many new developments" on the horizon, said Plastics Committee Chairman **Surendra Borad** of Gemini Corp. (Antwerp, Belgium). On the plus side, he noted that the United States and Europe will have large deficits in plastic polymers, and recycled plastics can help fill the gap. "There will be a substantial increase in the trade of recyclables," he said. Equally positive, the dynamics of sea freight have changed dramatically, with rates collapsing for many routes. Borad also played up plastics recycling's green credentials, noting that the EU could achieve 7 percent of its greenhouse gas reduction target by recycling or recovering plastics that are currently landfilled.

Surendra Borad

On a more worrisome note, Borad bemoaned the "virtual suspension" of scrap imports into India's Kandla special economic zone, noting that the government is prohibiting plastics scrap from clearing customs. "India is a very unpredictable country when it comes to the interpretation of import rules," he said. A big part of the problem is that the Indian government continues to view scrap as a waste rather than a commodity. It also has not granted import licenses to any new party for the past 10 years, he said, except for one recent firm that is importing electronic scrap.

Touching on other markets, **Jacques Musa** of Veolia Propreté France Recycling (La Plaine Saint-Denis, France) noted that scrap plastic exports to China cooled in October, with Chinese buyers reportedly oversupplied due to heavy ordering in previous months and plant closures during the country's early-October holiday. The majority of plastic recyclers in France are operating at 60 percent capacity, Musa said, adding that the volume of recovered plastics in Europe is down about 30 percent from 2008. **Peter Daalder** of Daly Plastics (Zutphen, Netherlands) noted the additional concern that incinerators in the Netherlands and Germany are competing more strongly for scrap plastics to burn for energy, removing some material from the recycling stream. Going forward, he predicted that prices would remain lower than in previous months.

In a guest presentation, **Pieter Kuiper** of Auto Recycling Netherlands (Amsterdam) said European car recyclers must increase the recovery of automotive plastics if they are to achieve the EU goal of recycling 95 percent of the weight of each end-of-life vehicle by 2015. To reach that level, recyclers must use advanced post-shredder technology, he said, and they cannot rely on energy recovery because only 10 percent of recovered ELV materials can be burned under the EU law.

ARN already has recycled 18,000 tons of PP and PE plastic bumpers, 1,300 tons of grilles, 2,200 tons of hubcaps, and 20,000 tons of PU foam through dismantling activities, Kuiper said. The firm will recover additional material from both light and heavy shredder fluff streams at a specially built facility in Tiel that will feature post-shredder sorting technology. The Netherlands generates 180,000 mt a year of shredder fluff, which contains an estimated 36,000 mt of recoverable plastics, he said.

Recovering more plastics is becoming more critical as oil reserves peak and the amount of plastics in cars continues to grow. Cars now contain an average of 352 pounds of high-quality plastics, but that total will increase to 440 pounds by 2015, Kuiper reported. "This is really a huge reserve of high-quality plastics that will be available for recycling by that time," he said.

Another guest speaker—**Ed Flohr,** a consultant based in Sneek, Netherlands—asserted that flexibility is a "core competence" for plastics recyclers, enabling them to deal with the manifold challenges in their niche. Plastics recyclers must deal with multiple types of materials, numerous combinations of materials, "endless" uses of plastics, and extremely volatile prices and demand. "The uncertainty in this business is bigger than in many other businesses, and that's where flexibility comes in," he said.

Flohr also pointed out challenges such as ever-growing import/export rules, increasing safety requirements, and limitations on the use of recycled materials in some new products. "In today's society," he asserted, "we simply do not accept risk whatsoever. This will not go away and will only become more important."

Ed Flohr

In the face of such challenges, larger recycling companies have certain advantages over smaller operators, he said. Larger firms can handle legal and regulatory problems by spending money to lobby on the issues or hiring specialists to handle the issues for them. Larger companies also have the resources to expand and claim greater market share. "Companies are trying to control the whole chain and all the surrounding forces, and the bigger they are, the more that's possible," Flohr said. Market inefficiencies create opportunities for smaller operators, however, who can take advantage of isolated geographical markets, special recyclable materials, new sources, new customers, and niches that open up in "a market in flux," Flohr said. "It's just a matter of finding and filling the niches that come into being."

He foresees further professionalization of the industry and more companies pursuing plastics recycling. "The intensity of competition in this business will grow," he said. **S**

Robert J. Garino is director of commodities for ISRI. Kent Kiser is publisher and editor-in-chief of Scrap.