April 11, 2014

Inv. Nos. 701-TA-417 and 731-TA-953, 957-959, 961 and 962
(2nd Review)

PUBLIC VERSION

BPI information removed from pages 3, 12-13, 21, 35-40, 42-44, 46-48, the Exhibit List, and from Exhibit 18; APO information removed from pages 1, 4, 6-8, 12, 17, 19-21, 23-28, 30, 34, 38, 41, 45

VIA EDIS

The Honorable Lisa R. Barton
Acting Secretary
U.S. International Trade Commission
500 E Street, S.W.
Washington, DC 20436

Re:  Carbon and Certain Alloy Steel Wire Rod from Brazil, Indonesia, Mexico, Moldova, Trinidad and Tobago and Ukraine: Yenakiieve Prehearing Brief

Dear Secretary Barton:

On behalf of Public Joint Stock Company Yenakiieve Iran and Steel Works ("Yenakiieve"), enclosed is the public version of Yenakiieve's prehearing brief for the above-referenced review.

Pursuant to 19 C.F.R. § 201.6, Yenakiieve respectfully requests confidential treatment for its confidential business information, which has been removed from brackets on pages 3, 12-13, 21, 35-40, 42-44, 46-48, the Exhibit List, and from Exhibit 18 of the enclosed brief. The bracketed information includes confidential business proprietary information pertaining to, among other topics, Yenakiieve's operations, production, and sales as well as other information of commercial value. Such information is not available to the public, and its disclosure to the public likely will have the effect of either impairing the Commission's ability to obtain such information as is necessary to perform its statutory functions or causing substantial harm to Yenakiieve's competitive position. Accordingly, it is the type of information normally treated as confidential business information pursuant to 19 C.F.R. § 201.6(a).

Included in this submission is the certification required by 19 C.F.R. 201.6(b)(3)(iii) and 207.3(a). Service has been effectuated as required by 19 C.F.R. 201.16 and 207.3(b).
The Honorable Lisa R. Barton
April 11, 2014
Page 2

Please contact the undersigned if there are any questions concerning this matter.

Respectfully submitted,

HOGAN LOVELLS US LLP

By: /s/ Craig Lewis
   Craig Lewis
   Jonathan T. Stoe
   Wesley V. Carrington

Counsel to Public Joint Stock Company “Yenakiieve Iron And Steel Works”
CERTIFICATION

CITY OF WASHINGTON  )  )  SS:
DISTRICT OF COLUMBIA  )

I, Jonathan T. Stoel, having been duly sworn on this 11th day of April, 2014, do hereby swear in accordance with the International Trade Commission's regulations, 19 C.F.R. § 201.6(b)(3)(iii), that information substantially identical to the information for which we are requesting proprietary treatment in the attached submission is not available to the public.

In accordance with the International Trade Commission's regulations, 19 C.F.R. § 207.3(a), I further certify that the information contained in the attached submission is accurate and complete to the best of my knowledge.

[Signature]
Jonathan T. Stoel
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555 13th Street, N.W.
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Sworn and subscribed before me this 11th Day of April, 2014, in the District of Columbia.

[Signature]
Janice M. Rosnick
Notary Public

My commission expires 2/28/2015
PUBLIC
CERTIFICATE OF SERVICE

Carbon and Certain Alloy Steel Wire Rod from Brazil, Indonesia, Mexico, Moldova, Trinidad and Tobago and Ukraine (Inv. Nos. 701-TA-417 and 731-TA-953, 957-959, 961 and 962 (2ND Review))

I, Wesley V. Carrington, hereby certify that on April 11, 2014, a copy of the foregoing submission was served by hand delivery on the following parties:

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Hogan Lovells US LLP
PUBLIC VERSION

BEFORE THE
UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

CARBON AND CERTAIN ALLOY STEEL
WIRE ROD FROM BRAZIL, INDONESIA,
MEXICO, MOLDOVA, TRINIDAD AND
TOBAGO, AND UKRAINE

Case Nos. 701-TA-417 and 731-TA-
953, 957-959, 961, and 962 (2nd
Review)

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Business Proprietary Information
removed from pages 3, 12-13, 21,
35-40, 42-44, 46-48, the Exhibit List,
and Exhibit 18

APO information removed from
pages 1, 4, 6-8, 12, 17, 19-21, 23-28,
30, 34, 38, 41, 45

Prehearing Brief of the
Respondent Public Joint Stock Company
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April 11, 2014
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I. INTRODUCTION

The following prehearing brief is submitted on behalf of Public Joint Stock Company “Yenakiieve Iron and Steel Works” (“Yenakiieve”), a Ukrainian producer of subject carbon and alloy steel wire rod (“wire rod” or “subject merchandise”).

The record before the Commission supports a negative determination with respect to imports from Ukraine. First, Ukrainian imports should not be cumulated with imports from the other subject countries. Ukrainian imports have been essentially absent from the U.S. market since the original investigation (when the Ukrainian industry was substantially different), and the entire Ukrainian industry (comprised of Yenakiieve and ArcelorMittal Kriviy Rih) is disinterested and/or unable to return to the U.S. market in the foreseeable future, meaning there will be no discernible adverse impact due to Ukrainian imports if the orders were revoked. This fact distinguishes Ukraine from Brazil and Mexico, which have been and continue to be sources
of substantial quantities of wire rod in the U.S. market, including specialty and other non-subject wire rod products. In addition, Yenakiieve’s full participation in this sunset review distinguishes the Ukrainian industry from the industries of Indonesia, Moldova, and Trinidad and Tobago – these industries have elected not to commit to the Commission’s sunset review process and related requests for information.

Second, circumstances in the Ukrainian iron and steel industry generally, and with respect to wire rod production in particular, have changed dramatically since the Commission’s original investigation period nearly fifteen years ago. The process of privatization had not even commenced in Ukraine in 1999 and was barely launched in 2001, the last year of the investigation period. From a system with Soviet-era vestiges driven by non-commercial state objectives such as production targets and full employment has emerged a modern, western-oriented Ukrainian wire rod industry focused on efficiency and profits. The sales and pricing behavior observed by the Commission in the 1999 to 2001 investigation period do not reflect the market realities of today.

Third, the only Ukrainian wire rod producer of relevance to this review is Yenakiieve. The other, much larger, Ukrainian producer, ArcelorMittal Kriviyy Rih, is a member of the ArcelorMittal Group of companies. As the Commission observed in the last sunset review (and which has not changed), it is extremely unlikely that ArcelorMittal Kriviyy Rih will export subject merchandise to the United States in competition with its substantial North American-based production assets. Doing so makes no economic sense and would be contrary to well-established and well-documented ArcelorMittal policy of using regional production assets to serve regional markets. There are no other wire rod producers of significance in Ukraine – and Yenakiieve is the only one with the capability to export wire rod to the United States.
Fourth, Yenakiieve has neither the capacity nor the economic incentive to export significant quantities of subject wire rod to the United States in the event of revocation. Yenakiieve recently reduced its capacity substantially by decommissioning [ ] tons of inefficient capacity at one of its mills. Over the last three years, Yenakiieve has operated its remaining mill at [ ] – with capacity utilization rates over the last three years ranging from [ ] percent. Even if one unrealistically assumed that Yenakiieve would operate at 100% capacity utilization, utilizing all of the capacity for subject merchandise, and would ship every last ton of that material to the United States, the total quantity would be in the range of [ ] tons – an amount equivalent to barely over [ ] percent of U.S. apparent consumption.

But, of course, there is no conceivable chance that Yenakiieve would ship all of this material to the United States in the event the order were revoked as there is simply no economic incentive to do so. Yenakiieve’s foreign producer questionnaire documents that the company is first, and foremost, focused on supplying the Ukrainian home market (where the company has firmly-established supply commitments) and regional markets. As further demonstrated in its questionnaire response, Yenakiieve has successfully developed regional markets, particularly in [ ] where the company has a logistical advantage. The company’s high capacity utilization rates and growth in sales to these areas are a reflection of its successful positioning as a regional supplier. Recent actions by the European Union to further reduce trade barriers to Ukrainian industrial products, including steel, demonstrate that the [ ].
The prospect of continued profitable sales to established regional markets, including the European Union, contrasts with the serious economic and logistical hurdles Yenakiieve would inevitably face if it were to attempt to re-enter the U.S. market after a decade of inactivity. The longer lead times and high logistical costs Yenakiieve faces in shipping to the United States are sufficient to eliminate any profits Yenakiieve might seek to obtain on sales of commodity products, such as industrial quality wire rod. Thus, for Yenakiieve to have any realistic prospect of making profitable sales to the U.S. market, the company would have to concentrate on smaller volume specialty products. As a profit-seeking member of the Metinvest Group, Yenakiieve will not make unprofitable sales.

In addition, Yenakiieve, and the Metinvest Group, have no established sales presence in the U.S. market. To reestablish sales in the U.S. market would require a significant investment of time and resources, including establishing sales offices and/or agents in the United States, being certified by U.S. customers, and engaging in trial production and testing to satisfy those new customers’ requirements. There would need to be more of an economic incentive than currently exists for this to happen, and Yenakiieve has no plans to do so.

Lastly, the U.S. industry is not vulnerable to injury by reason of imports of Ukraine. As the Commission staff has documented, over the last fifteen years the U.S. industry has significantly restructured and consolidated. The domestic industry today is profitable, has its internal transfers and sales to related parties, and is able to raise the prices charged to its customers. Moreover, imports always have and continue today to play a necessary role in the U.S. market. Revocation of the antidumping order with respect to imports from Ukraine would not disturb the historical balance between U.S. producers and imports (unlike, for example, the recent explosion in imports of wire rod from China).
II. DOMESTIC LIKE PRODUCT AND INDUSTRY

During the first sunset review completed in 2008, the Commission found a single like product consisting of all wire rod, including grade 1080 tire cord and grade 1080 bead wire rod that is excluded from the scope of the antidumping and countervailing duty orders. 1/ Yenakiieve does not disagree with this definition of like product.

During the same review, the Commission found that the domestic industry encompasses all U.S. producers of wire rod, including ArcelorMittal USA, a related party affiliated with subject producers in Canada (which was then under order), Mexico, and Trinidad & Tobago, and Gerdau Ameristeel, which is affiliated with Brazilian manufacturer Gerdau Aços Brasil. In determining whether to exclude related parties, the Commission has traditionally considered whether the related party benefits from its own or its affiliate’s activities in the import or export of subject merchandise. 2/ By this standard, Yenakiieve does not see a basis to exclude ArcelorMittal or Gerdau from the domestic industry.

That having been said, we note that ArcelorMittal’s affiliation with Ukraine’s largest producer, ArcelorMittal Kriviy Rih, points to an extremely important condition of competition that must be taken into account in properly evaluating the likelihood of significant exports of Ukrainian wire rod in the event of revocation. As more fully discussed and documented below, ArcelorMittal globally pursues a regional supply policy. During the 2008 review, ArcelorMittal explained with respect to the U.S. market for wire rod that:

1/ Carbon and Certain Alloy Steel Wire Rod from Brazil, Canada, Indonesia, Mexico, Moldova, Trinidad & Tobago, and Ukraine, Inv. Nos. 701-TA-417 and 731-TA-953, 954, 957-959, 961, and 962 (First Review), USITC Pub. 4014 (June 2008) at 8 (“First Review Publication”).

2/ See, e.g., id.
Commissioners Pearson and Okun observed in the previous review that “the ArcelorMittal group’s strategy for its subsidiaries and trading group is to serve local markets with local production, and therefore not to serve export markets where it has a producer.” 4/ The same policy has been observed in several other recent sunset reviews involving ArcelorMittal entities. 5/ There is no indication in the record of this review that ArcelorMittal has changed this strategy. Indeed, ArcelorMittal Kriviy Rih states in its foreign producer questionnaire that “[...].” 6/
III. CONDITIONS OF COMPETITION

The Commission has devoted significant time and resources to examining the conditions of competition for wire rod in the United States through numerous investigations and reviews. The Prehearing Report correctly observes that, during 2002-2006, "the U.S. industry underwent extensive restructuring through bankruptcies, corporate consolidations, facilities acquisitions, and new entrants." 7/ The Prehearing Report also describes the industry's successful operational efforts to survive the Great Recession. 8/ Yenakiieve does not herein reprise the Commission's previous analysis, nor repackage all of the useful data collected by the Staff and presented in the Prehearing Report. Yenakiieve does observe, however, that the record evidence adduces three significant facts prevalent in the wire rod industry and market since the Commission's original investigation.

First, U.S. apparent consumption of wire rod has [ ] since the original investigation, but [ ]. U.S. apparent consumption averaged [ ] million tons during the original investigation (1999-2001) and then [ ] to an average of 6.764 million tons during the first sunset review period (2002-2007). 9/

Following a [ ] in consumption in the depths of the recession in 2009, U.S. apparent consumption of wire rod [ ]. 10/ Moreover, as discussed herein, strong U.S. economic recovery

7/ April 2, 2014 Prehearing Staff Report, Carbon and Certain Alloy Steel Wire Rod from Brazil, Indonesia, Mexico, Moldova, Trinidad & Tobago, and Ukraine, Inv. Nos. 701-TA-417 and 731-TA-953, 957-979, 961, and 962 (Review), at III-1 n.1 ("2014 Prehearing Report").

8/ Id., at III-2, Table III-1.

9/ Id., at I-7, Table I-1.

10/ Id., at C-3, Table C-7.
and growth in the vital construction and automotive industries are signaling further significant gains in wire rod consumption.

Second, the [ ] in U.S. apparent consumption has been accompanied by solid profitability on the part of the U.S. industry since the original investigation. The domestic industry has had positive operating profits in 10 of the past 12 years, including every year of the current review period, except 2009, during the heart of the Great Recession. 11/ The Commission should carefully consider that, during the most recent review period, the U.S. domestic industry earned $877 million in operating profit.

Finally, notwithstanding the Commission's orders in this proceeding and in other trade remedy proceedings involving wire rod, imports (but, not Ukrainian imports) have maintained a constant presence in the U.S. market. Even though the domestic industry has claimed that it has adequate available production to supply U.S. market demand, the steady presence of imports evidences that the U.S. industry is not able to fulfill the needs of the industry's customers (not with its reported capacity utilization). Indeed, examining the period from 1999 (the first year of the original investigation) through 2013 demonstrates that imports always played a significant role in the U.S. market, accounting for between a low of [ ] percent (or approximately [ ] tons) in 2009 and a high of 49.7 percent (or 4.0 million tons) in 2004 of U.S. apparent consumption. 12/

IV. IMPORTS FROM UKRAINE SHOULD NOT BE CUMULATED WITH OTHER SUBJECT IMPORTS

In a sunset review, unlike in an original investigation, cumulation is discretionary. The Commission "may" cumulatively assess the volume and effects of subject imports from several

11/ Id. at C-4, Table C-1 and I-8, Table I-1.
12/ Id. at C-3, Table C-1 and I-6, Table I-1.
countries in making its material injury analysis only if certain conditions are met. 13/

Specifically, 19 U.S.C. 1675a(a)(7) states as follows:

For purposes of this subsection, the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry. 14/

For the reasons discussed in detail below, imports from Ukraine are likely to have “no discernible adverse impact” on the domestic industry. In addition, conditions of competition unique to Ukraine warrant separate consideration of imports from Ukraine.

We respectfully urge the Commission to consider imports from Ukraine separately from other subject countries, in part due to the substantial and dramatic changes in Ukraine since the original investigation. Circumstances in the Ukrainian iron and steel industry generally, and with respect to wire rod production in particular, have changed significantly since the Commission’s original investigation period nearly fifteen years ago. The process of privatization had not even commenced in Ukraine in 1999 and was barely launched in 2001, the last year of the investigation period. Therefore, the Ukraine steel industry at that time still had yet to undergo the substantial transition from Soviet-style state-ownership to private ownership. Neither Yenakiieve nor ArcelorMittal Kriviy Rih were under their current management during the original investigation period and had yet to be placed under the ownership of western-oriented steel groups that would manage their operations on a sophisticated, efficient, and profit-oriented basis. At the time of the original investigation, the Ukrainian steel industry was still a

14/ 19 U.S.C. § 1675a(a)(7).
system with Soviet-era vestiges driven by non-commercial state objectives such as production targets and full employment, and the modern, western-oriented Ukrainian wire rod industry focused on efficiency and profits had not yet emerged. Yet, despite the importance of these changes, the Commission did not have an opportunity to fully consider them because no Ukrainian producer participated in the Commission’s first review through filing briefs or testifying at the Commission’s hearing. 15/ Yenakiieve’s participation in this review offers the Commission an opportunity to fully consider all of the important changes that have occurred in the Ukrainian steel industry since the original investigation, as well as the substantial current differences in competition that warrant separate consideration.

For this reason, and for all of the reasons further described below, the Commission should consider imports from Ukraine separately and decumulate from the other subject countries.

A. Imports from Ukraine are Likely to Have No Discernible Adverse Impact

The governing statute prohibits the Commission from cumulatively assessing subject imports if they are likely to have “no discernible adverse impact.” 16/ In examining whether there is likely to be no discernible impact on the domestic industry, the Commission typically considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. 17/ More specifically, the Commission has found that subject imports from a foreign country are likely to have no discernible adverse impact on the domestic industry in the following circumstances, 

15/ First Review Publication at 5.
among others: (1) the volume of imports from that country is low during the period of review; (2) the producers in that country have limited excess capacity; and (3) the producers in the foreign country focus on the domestic market or a particular non-U.S. market and do not plan to export to the United States. 18/

The above conditions evidencing the likely absence of discernible impact are present with respect to subject imports from Ukraine. First, there have been zero Ukraine imports during the period of review, with the last imports occurring in 2005. 19/ Furthermore, Ukraine's reported 2005 imports amounted to only a minimal amount (738 tons), and there were no shipments in the previous two years, 2003 and 2004. 20/

Second, there is only limited available capacity in Ukraine for exports to the United States. As noted above, Yenakiieve is the only Ukrainian producer relevant to the Commission's analysis, because the only other Ukrainian producer of wire rod, ArcelorMittal Kriviy Rih, is not expected to export subject merchandise to the United States in violation of ArcelorMittal's regional supply policy and because of ArcelorMittal's interest in avoiding injury to its substantial U.S. manufacturing facilities. As demonstrated in its foreign producer's questionnaire response,
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Yenakiieve is operating at a high capacity utilization rate. Yenakiieve’s capacity utilization rates for 2011, 2012, and 2013 were [ ] percent, [ ] percent, and [ ] percent, respectively. 21/ With these high capacity utilization rates, Yenakiieve has limited ability to ship additional product to new export markets.

Even if one unrealistically assumed that Yenakiieve would operate at 100% capacity utilization, utilizing all of this capacity for subject merchandise (as opposed to steel concrete reinforcing bar and other nonsubject products), and that Yenakiieve would ship every last ton of that material to the United States, the maximum quantity that could be sold is in the range of [ ] tons – an amount equivalent to barely over [ ] percent of U.S. apparent consumption. 22/ Such a small amount could not have a discernible adverse impact on the domestic industry of some 5.3 million tons. 23/

However, there is also no conceivable chance that Yenakiieve would ship all of this material to the United States in the event the orders were revoked as there is simply no economic incentive to do so. Yenakiieve’s foreign producer questionnaire documents that the company is first, and foremost, focused on supplying the Ukrainian home market (where the company has firmly-established supply commitments) and regional markets. Ukrainian producers have [ ] short tons in 2008 to [ ] short tons in 2013. 24/ As further demonstrated in its questionnaire response, Yenakiieve has successfully developed regional markets, particularly in [ ] where the company has a logistical

21/ Yenakiieve Foreign Producers’/Exporters’ Questionnaire Response at II-12 (“Yenakiieve Questionnaire Response”).
22/ Id. at II-12; 2014 Prehearing Report at I-7, Table I-1.
23/ 2014 Prehearing Report at I-7, Table I-1.
24/ Id. at IV-64, Table IV-29.
advantage. According to Global Trade Atlas data regarding Ukraine's exports by destination, Europe, the Middle East, and Africa accounted for more than two-thirds of Ukraine's total exports in 2013. 25/ Yenakiieve's high capacity utilization rates and growth in sales to these areas are a reflection of its successful positioning as a regional supplier. Recent actions by the European Union to further reduce trade barriers to Ukrainian industrial products, including steel, demonstrate that the [ ]

] 26/

The prospect of continued profitable sales to established regional markets and the European Union contrasts with the serious economic and logistical hurdles Yenakiieve would inevitably face if it were to attempt to re-enter the U.S. market after a decade of inactivity. Even if prices proved at some point to be higher in the United States than in other established export markets, the longer lead times and high logistical costs Yenakiieve faces in shipping to the United States are sufficient to eliminate any profits Yenakiieve might seek to obtain on sales of commodity products, such as industrial quality wire rod. Thus, for Yenakiieve to have any realistic prospect of making profitable sales to the U.S. market, the company would have to concentrate on smaller volume specialty products. As a profit-seeking member of the Metinvest Group, Yenakiieve will not make unprofitable sales.

Finally, there is no basis to conclude that whatever limited quantities of subject merchandise might enter the United States following revocation would be at prices that would depress or suppress U.S. market prices. First, the volumes of such imports are likely to be too small to cause an impact on the U.S. market, regardless of the pricing level. Second, there is no

25/ Id. at IV-70, Table IV-31.
26/ See, e.g., Press Release, “MEPs cut customs duties on imports from Ukraine”, Committee on International Trade, Plenary Sessions (Apr. 3, 2014), attached as Exhibit 1; see also Section VI.A.3 below.
basis to conclude that Yenakiieve would undercut prices in the U.S. market. Pricing comparison
data from the original investigation cannot reasonably be relied upon for this purpose due to the
changes in conditions of competition in Ukraine’s wire rod industry, and there aren’t any
meaningful comparisons for pricing purposes with the very small volumes of Ukrainian imports
after the investigation. Available pricing data suggests that U.S. shipments would not be
financially attractive to Ukrainian producers.

For the foregoing reasons, Yenakiieve respectfully submits that the Commission should
determine that imports from Ukraine would likely have no discernible adverse impact on the
domestic industry in the event of revocation.

B. Imports from Ukraine Compete Under Different Conditions of Competition

Even if the Commission finds that subject imports from Ukraine are not likely to have no
discernible adverse impact, the Commission should nevertheless exercise its discretion not to
cumulate imports from Ukraine with other imports subject to review. The practice of most
Commissioners in sunset reviews has been to refrain from cumulating subject imports where the
imports at issue compete under different conditions of competition. 27/

Here, the record evidence shows that imports from Ukraine compete under different
conditions of competition from other subject imports such that a cumulative analysis is
inappropriate.

27/ See, e.g., First Review Publication at 17; Nucor Corp. v. United States, 601 F. 3d 1291,
1296-97 (Fed. Cir. 2010) (finding that the Commission reasonably considered the differing
conditions of competition in determining whether to cumulate subject imports from different
countries). Commissioner Pinkert applies a slightly different approach of cumulating “unless
there is a condition or propensity -- not merely a trend -- that is likely to persist for a reasonably
foreseeable time and that significantly limits competition such that cumulation is not warranted.”
See, e.g., First Review Publication at 17 n.100. Applying this standard, imports from Ukraine
also should not be cumulated with imports from the other subject countries.
1. The Ukrainian Industry is Fundamentally Different from the Industry That Existed in the Original Investigation Period and is Focused on Domestic and Regional Markets

As noted, we respectfully urge the Commission to consider imports from Ukraine separately from other subject countries, in part due to the substantial and dramatic changes in Ukraine since the original investigation. Circumstances in the Ukrainian iron and steel industry generally, and with respect to wire rod production in particular, have changed significantly since the Commission’s original investigation period nearly fifteen years ago. The process of privatization had not even commenced in Ukraine in 1999 and was barely launched in 2001, the last year of the investigation period. Therefore, the Ukraine steel industry at that time still had yet to undergo the substantial transition from Soviet-style state-ownership to private ownership. Neither Yenakiieve nor ArcelorMittal Kriviy Rih were under their current management during the original investigation period and had yet to be placed under the ownership of western-oriented steel groups that would manage their operations on a sophisticated, efficient, and profit-oriented basis. At the time of the original investigation, the Ukrainian steel industry was still a system with Soviet-era vestiges driven by non-commercial state objectives such as production targets and full employment, and the modern, western-oriented Ukrainian wire rod industry focused on efficiency and profits had not yet emerged. Yet, despite the importance of these changes, the Commission did not have an opportunity to fully consider them because no Ukrainian producer participated in the Commission’s first review through filing briefs or testifying at the Commission’s hearing. 28/ Yenakiieve’s participation in this review offers the opportunity to fully consider all of the important changes that have occurred in the Ukrainian

28/ First Review Publication at 5.
steel industry since the original investigation, as well as the substantial current differences in competition that warrant separate consideration.

Equally importantly, and as further discussed below, the Ukrainian industry differs significantly from other subject imports under review with respect to its non-participation in the U.S. market and its active participation in this review. These are precisely the types of circumstances that warrant the Commission’s exercise of discretion not to cumulate.

2. **Mexico and Brazil Have Been Steadily Shipping Significant Quantities of Wire Rod Products to the U.S. Market and Thus Should be Decumulated from Ukraine**

The Commission should exercise its discretion to decumulate Ukraine imports from Mexican and Brazilian imports. Producers in Mexico and Brazil have continued to show interest in steadily shipping significant quantities of wire rod products to the United States, whereas Ukraine has not. The Commission has exercised its discretion in prior sunset reviews to decumulate when countries’ imports had different historical import volume patterns. 29/

Ukraine has not shipped any volumes to the United States since 2005. 30/ Furthermore, Ukraine’s reported 2005 imports amounted to only 738 tons, and there were no shipments in the previous two years, 2003 and 2004. 31/ This stands in marked contrast with Mexico, which has

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29/ See *Cut-to-length Carbon Quality Steel Plate from India, Indonesia, Italy, Japan, and Korea*, Inv. Nos. 701-TA-388-391 and 731-TA-817-821 (Second Review), USITC Pub. No. 4296 (Dec. 2011), at 21 (noting how the Italian industry shipped the least amount of subject product during the original investigations); *Hot-Rolled Flat-Rolled Carbon-Quality Steel Products from Brazil, Japan, and Russia*, Inv. Nos. 701-TA-384 and 731-TA-806-808 (Second Review), USITC Pub. No. 4273 (June 2011), at 14-15 (comparing the historical volume and consistency of imports of several subject countries for cumulation purposes).

30/ 2014 Prehearing Report at I-8, Table I-1, and C-5, Table I-1.

31/ Id. at C-5, Table I-1.
shipped significant volumes of wire rod to the United States [ ] since the orders were imposed in 2002. 32/

The pattern of Ukraine’s shipments to the United States is therefore quite distinct from that of Mexico’s shipments. Mexico has shipped not only measurable quantities of subject wire rod [ ] since the orders were imposed, it has also shipped 4.75-5.00mm smaller diameter wire rod, which in 2012 the U.S. Department of Commerce determined to be covered by the antidumping order pursuant to the “minor alterations” circumvention provisions. 33/

Although the Department found “under respectful protest”, and only to comply with an order from the U.S. Court of International Trade, that the 4.75-5.00mm wire rod Mexico was shipping to the United States does not constitute circumvention, the shipments nevertheless demonstrate that Mexican producers are still interested in and capable of shipping significant quantities of wire rod to the U.S. market. 34/ Whereas Ukrainian producers have shown very little interest and almost no activity in shipping to the United States for the last ten years, Mexican producers are still shipping both — (1) actual subject merchandise in [ ] since the orders have been in place, and (2) 4.75-5.00mm wire rod that Commerce alleged to be within the scope of the orders. 35/

72/ Id. at I-8, Table I-1, and C-5, Table I-1.
33/ Id. at I-23.
34/ Id. at I-24.
35/ We note that [ ]
Additionally, the Commission has examined product composition in its cumulation determinations. Specifically, the Commission has considered whether a subject country ships different types of products than are being shipped by the other subject country or countries. 36/

Mexico therefore contrasts significantly with the industry in Ukraine, which has not shipped any wire rod products (subject or non-subject) for over a decade, and should be considered separately by the Commission.

Second, and similar to Mexico, Brazil continues to ship regularly to the U.S. market through non-subject shipments of 1080 tire cord or tire bead. 37/ Brazil appears to be the only subject country to ship the 1080 tire cord/tire bead product to the United States, and it ships in significant quantities: Brazil shipped more than 100,000 tons to the U.S. market in four out of the six years of the review period, and never shipped less than 71,759 tons to the United States. 38/

Finally, as with Mexico above, imports from Brazil should also be considered separately due to the differences in product composition with Ukraine.

3. Ukraine is Actively Participating in This Sunset Review, Thereby Supporting the Decumulation of its Imports from Indonesia, Moldova, and Trinidad & Tobago

The Commission should exercise its discretion to decumulate Ukraine imports from those of Indonesia, Moldova, and Trinidad & Tobago. In previous reviews, Commissioners have

36/ See Cut-to-length Carbon Quality Steel Plate from India, Indonesia, Italy, Japan, and Korea, Inv. Nos. 701-TA-388-391 and 731-TA-817-821 (Second Review), USITC Pub. No. 4296, at 22 (Dec, 2011) (noting how, in its conditions of competition analysis related to cumulation, imports from Japan consisted of a very diverse mix of products, none of which were shipped to the United States by other subject countries); Helical Spring Lock Washers from China and Taiwan, Inv. Nos. 731-TA-624 and 625 (Third Review), USITC Pub. No. 4277 (Nov. 2011), at 9 (comparing product mix from two different countries during the original investigation and first review period, and determining that the likely product mix for each country would be different if the orders were revoked).


38/ Id. at IV-2, IV-8, Table IV-2.
cumulated countries’ imports where the record regarding those countries was incomplete and the respondents did not participate in the review. 39/ Only two producers of subject wire rod in these countries even responded to the Commission’s questionnaire in these reviews, and those producers – PT Ispat Indo in Indonesia and ArcelorMittal Point Lisas in Trinidad & Tobago – have not entered appearances, nor is there any indication that these companies will be filing briefs or otherwise participating in the Commission’s hearing. In contrast, the Commission has substantial and complete questionnaire data for the Ukraine industry, including active participation in the sunset review proceeding by Yenakiieve.

First, the Commission’s questionnaire data reporting on the industries and market conditions in Indonesia and Moldova is very limited. PT Ispat Indo, the sole reporting Indonesian producer/exporter, accounted for only [ ] of total wire rod rolling capacity in Indonesia in 2013, according to [ ] firm-by-firm capacity data. 40/ Indonesia has at least three other significant wire rod producers: (1) Gunung Garada (1 estimated tons); (2) Hanil Jaya Metalworks (1 estimated tons); and (3) PT Krakatau Steel (1 estimated tons). 41/ None of these other producers responded to the Commission’s foreign producers’ questionnaire. These non-responses make the Commission’s questionnaire data more limited and unreliable, such that the Commission does not have the data needed to reach basic conclusions about the Indonesian industry’s production trends, capacity trends, and export data.

39/ See Carbon and Alloy Seamless Standard, Line, and Pressure Pipe from Japan and Romania, Inv. No. 731-TA-847 (Second Review), USITC Pub. 4262, at 15 n.135 (Sept. 2011) (noting how Commissioner Aranoff evaluated subject imports from Japan and Romania on a cumulated basis because no respondent was participating in the proceeding, the record lacked updated information on several important findings, and the Commission was unable to gather updated information due to respondents’ lack of participation).

41/ Id. at IV-27.
In essence, the Commission must resort to secondary, unverifiable trade publications. Further, the absence of questionnaire responses means that the [ ] of the Indonesian industry is not available to respond to the Commission's inquiries and follow-up clarification requests.

The Commission also has no questionnaire data from which to assess the industry in Moldova. Further, the Commission only has incomplete [ ] data for Moldova, as [ ] and [ ] 42/

Second, although ArcelorMittal Point Lisas in Trinidad & Tobago has provided a foreign producers' questionnaire response, there is no indication that ArcelorMittal Point Lisas will be filing briefs or otherwise participating in the Commission's hearing. Further, without ArcelorMittal Point Lisas' participation, it is unclear if the Commission will even be able to ascertain whether ArcelorMittal Point Lisas [ ] 43/

Unlike the Commission's predicament with respect to the Indonesian, Moldovan, and Trinidad & Tobago industries, the Commission may rely on Yenakiieve and, to a lesser extent, ArcelorMittal Kriviyi, to provide detailed data and other information pertaining to the Ukrainian industry and its operations. According to the Prehearing Report, ArcelorMittal Kriviyi and Yenakiieve have provided questionnaire data “theoretically yielding full coverage of Ukrainian

42/ Id. at IV-48, Table IV-21.
43/ Id. at I-42, Table I-11. ArcelorMittal Point Lisas, in contrast to producers in Ukraine, also [ ] ArcelorMittal Point Lisas Limited Foreign Producers'/Exporters' Questionnaire at II-11.
production during 2013”. Moreover, Yenakiieve is prepared to address the Commission’s information and data requests in this proceeding and has undertaken the following steps: (1) entered an appearance in the proceeding; (2) asked its counsel to obtain access to the Commission’s confidential record under the administrative protective order; (3) provided Commission Staff with supplemental information; (4) plans to submit briefs and written responses to questions from the Commission; and (5) plans to testify at the Commission’s hearing. Accordingly, in stark contrast with the lack of data or involvement from the Indonesian, Moldovan, and Trinidad & Tobago industries, the Ukraine industry has provided complete questionnaire data and is actively participating in the review. The Commission should therefore decumulate imports from Ukraine from those of Indonesia, Moldova, or Trinidad & Tobago.

V. THE U.S. INDUSTRY IS NOT VULNERABLE TO INJURY

The U.S. industry today is both healthy and competitive. The industry has earned solid operating profits since the original investigation, has repeatedly raised prices, and has made substantial investments in new facilities and capacity. Moreover, both the domestic industry and its customers anticipate that the U.S. wire rod market will continue to improve for the foreseeable future, with demand increasing principally due to greatly increased U.S. construction activity and automobile production. Finally, Chinese imports have claimed an increasingly large share of the U.S. market over the past two years. The U.S. domestic industry has filed trade remedy proceedings with respect to these imports, and the Commission unanimously made an

44/ 2014 Prehearing Report at IV-62. Although the Commission cites to [ ] data indicating that two other facilities in Ukraine have wire rod capacity, [ ] See id. Public Version Proprietary Information Deleted from Brackets
affirmative preliminary determination, with the Chinese industry electing not to participate in the proceeding.

In the context of determining "whether revocation ... would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time," the Commission is required to consider "whether the industry is vulnerable to material injury" if the orders are revoked. 45/ The Statement of Administrative Action provides that in assessing the U.S. industry's vulnerability to injury, if an order is revoked, the Commission:

Considers, in addition to imports, other factors that may be contributing to overall injury. Whether these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports. 46/

For the reasons that follow, the evidence before the Commission for this review period demonstrates that the domestic industry is not vulnerable to material injury from subject imports, and particularly from the very limited quantities of available imports from Ukraine.

A. The Domestic Industry's Lengthy Period of Strong Profitability Belies Any Contention that it is Vulnerable

The Commission's record presents a domestic industry that has been profitable since the Commission's affirmative final injury finding in 2002. The domestic industry has had positive operating profits in 10 of the past 12 years, including every year of the current review period except 2009, the heart of the Great Recession. 47/ In fact, the domestic industry reaped more than $1.455 billion in operating profit over the 2002-2013 period, including approximately $877


47/ 2014 Prehearing Report at C-4, Table C-1 and I-8, Table I-1.
million in operating profit during the current review period. 48/ This solid profitability occurred even as the U.S. economy endured the 2007-2009 Great Recession – a period during which overall U.S. output and investment declined by 7.2 and 33.5 percent, respectively 49/ – and U.S. wire rod imports from China increased dramatically over the 2011-13 period.

Additionally, and of significance to the Commission’s examination of the domestic industry in this review, the domestic industry’s capacity utilization during this lengthy period of profitability ranged from a low of 53.6 percent in 2009 (the height of the Great Recession) to 84.6 percent in 2002. 50/ The substantial record before the Commission thus indicates that the domestic industry’s maximum operating capacity today is at most 85 percent of reported capacity. Moreover, the data reported by the domestic industry demonstrates that the industry’s capacity utilization is not a factor in its financial performance. Whereas the domestic industry’s operating income swung from a combined [ ] during the investigation period to the combined operating income of approximately $877 million noted above during the current review period, 51/ the domestic industry’s capacity utilization actually [ ] from [ ] percent during the investigation period to 69.7 percent during the current review period. 52/

48/ Id.
50/ 2014 Prehearing Report at C-4, Table C-1 and I-8, Table I-1. One factor causing capacity utilization not to be a meaningful measure of the domestic industry’s performance may be the way in which the domestic producers answered the Commission’s questionnaire. The production and capacity data reported by [ ], for example, do not appear to be a reliable measure of their actual performance during the current review period.
51/ Id.
52/ Id. at C-4, Table C-1 and I-7, Table I-1.
One key factor in the transformation and profitability of the domestic industry since the original investigation appears to be its significant relationships with downstream consumers of wire rod. These relationships have enabled the domestic industry to ship \[ \] amounts of their wire rod to related firms and to consume wire rod internally. The data assembled by the Commission Staff demonstrate that \[ \] percent of the domestic industry’s total shipments by volume, and \[ \] percent of its shipments by value, were accounted for by internal consumption and transfers to related firms in the current review period. 53/ These percentages compare with only \[ \] percent by volume and \[ \] percent by value, respectively, during the original investigation. 54/ The domestic industry’s \[ \] ability to rely on internal transfers and related party sales, which are made in the absence of competition, helps to insulate the domestic industry from price competition.

The domestic industry’s strong profitability stands out even further when the performance of \[ \] is removed from the equation. \[ \] amassed $\[ \] million in confirmed \[ \] during the 2002-2013 period, including nearly $\[ \] million in \[ \] during the current review period. 55/ The exclusion of \[ \] from the industry’s aggregate performance thus would lead to even more robust financial performance for the domestic industry, amounting to more than $\[ \] million in operating income during the current review period alone.

Analysis of the domestic industry without \[ \] is meaningful to the Commission in this sunset review for at least two reasons. First, \[ \] has been

53/ Id. at III-21, Table III-11.
54/ Investigation Final Staff Report (confidential) at II-7, Table III-3.
55/ 2014 Prehearing Report at Table III-13; First Review Final Staff Report (confidential) at Table III-13.
the conspicuous laggard of the domestic industry both during the original investigation when subject imports were present in the U.S. market and subsequently when they have largely been absent. Second, the Commission must consider the relationship between the company’s anemic performance and its decision to import more than [ ] tons of wire rod during the current review period, including approximately [ ] tons of subject imports from Mexico. 56/ In fact, [ ] increased its imports of wire rod in 2010 by approximately [ ] tons even as it [ ], reducing production to only [ ] tons. 57/ These facts alone should be enough for the Commission to find that the domestic industry is not vulnerable to subject imports.

B. The Domestic Industry’s Significant, Recent Investments in New Facilities and Capacity Demonstrate that the Industry Itself is Bullish on its Prospects

The domestic industry’s improved productivity and significant, recent investments in new facilities and capacity evidence that the industry is not vulnerable to subject imports. On the contrary, the productivity of the U.S. industry is today at even higher levels – 858.4 short tons per 1000 hours in 2013 – than the industry experienced prior to the Great Recession (786 and 855.4 short tons per 1000 hours in 2007 and 2008, respectively). 58/ Moreover, the domestic industry has made very large capital expenditures during the current review period, amounting to a total of $450 million, and more than $778 million in capital expenditures during the 2002-2013 period. 59/

57/ Id.
58/ Id. at C-4, Table C-7 and I-8, Table I-1.
59/ Id.
The actions of specific U.S. producers confirm that these investments are a sign of optimism about the U.S. market and their future. Confidential information reported to the Commission includes:

- [60/]
- [61/]
- [62/]

One of the most compelling indications of the domestic industry's optimism about the U.S. wire rod industry can be seen in the public statement of Nucor that it:

{P}lans to spend approximately $290 million for projects at our Tennessee, Nebraska and South Carolina bar mills that should expand Nucor's special bar quality ("SBQ") and wire rod capacity by one million tons. The projects, which we expect to be completed between the end of 2013 and the first half of 2014, will allow us to produce engineered bar for the most demanding applications while maintaining our market share in commodity bar products by shifting production to our other bar mills. 63/

More recently, in February 2014, American Metal Market reported that Nucor's new Darlington, SC mill has begun shipments of wire rod. 64/

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60/ U.S. Producers' Questionnaire Response at II-2; 2014 Prehearing Report at III-7.
62/ U.S. Producers' Questionnaire Response at II-5d.
63/ Nucor Corporation 2012 Form 10-K at 1, attached as Exhibit 3.
64/ "Nucor's new rod mill begins shipments," American Metal Market (Oct. 9, 2013), attached as Exhibit 4.
C. The Domestic Industry is Imposing Significant and Frequent Price Increases

The American Wire Producers Association ("AWPA") has reported to the Commission that during 2013 and continuing into 2014 the domestic industry has imposed numerous and significant price increases on all of their wire rod products. The AWPA reports that "U.S. mills since March 2013 have raised rod prices between $120 and $138 per short ton." 65/ These price increases reflect the strength of the domestic industry and its lack of vulnerability.

D. U.S. Demand Conditions are Improving and Belie Any Vulnerability on the Part of the Domestic Industry

Wire rod is used as an intermediate product to support a number of downstream industries, including principally the construction, automotive, energy, and agricultural sectors of the economy. 66/ Consistent with the increasing strength of the U.S. economy and of U.S. production in these key sectors, the Commission’s Prehearing Report observes that "a plurality of firms expect demand [for wire rod] to increase over the next two years. The majority of firms reported that they anticipate demand for wire rod to increase slowly, particularly in automotive markets and construction." 67/ Importantly, purchasers controlled by the domestic industry are themselves reporting an [ ] in current and future demand for wire rod. The purchasers’ questionnaires (responses to Questions II-2 and III-10) for [ ] understate the recovery in demand, but nevertheless admit that [ ].

65/ American Wire Producers Association Post-Conference Brief, Carbon and Certain Alloy Steel Wire Rod from the People’s Republic of China, Inv. No. 701-TA-512 (Feb. 27, 2014), at 2-4 & Ex. 1, attached as Exhibit 5.


67/ 2014 Prehearing Report at II-21, Table II-3.
PUBLIC VERSION

• [ ] reporting that [ ];

• [ ] stating that [ ]; and

• [ ] indicating that demand will [ ] due to [ ], 68/.

The findings in the Commission’s Prehearing Report likewise are consistent with broader developments in the U.S. economy and the sectors most relevant to wire rod demand. For example, an IBISWorld report on the current and future condition of the Steel Framing industry found as follows:

The Steel Framing industry is expected to enter a period of sustained growth over the next five years. This recovery will correspond with a long- awaited resurgence in U.S. construction. Anticipated long-term improvements in investment in the transportation and institutional construction markets will also support demand for structural steel erection. As a result, the industry is forecast to record strong revenue growth at an annualized rate of 3.0% ... in the next five years to 2018.

Continuing the strong growth in 2013, industry revenue is forecast to jump another 3.7% in 2014 to $14.6 billion as demand from downstream construction markets experience more robust growth. Private nonresidential construction, including commercial and office building construction, is expected to jump 5.9% in 2014 and grow at an annualized rate of 5.8% over the next five years. 69/

Likewise, the spring 2014 Construction: Industry Forecasts by Oxford Economics concludes that U.S. construction increased by 2.9 percent in 2013, and forecasts that U.S. construction will

68/ [ ] U.S. Purchasers’ Questionnaire Response at III-6;
[ ] U.S. Purchasers’ Questionnaire Response at III-10;
[ ] U.S. Purchasers’ Questionnaire Response at III-10.

69/ “Steel Framing in the US,” IBISWorld Industry Report (Dec. 2013) at 9, attached as Exhibit 6. The Steel Framing industry “comprises contractors that install steel and precast concrete to produce structural elements, building exteriors and elevator fronts. The industry also includes the installation of other steel products (e.g. setting rods, bars, rebar, mesh and cages) to reinforce poured-in-place concrete, cooling towers and metal storage tanks.”). Id. at 2.
grown even more robustly, at 5.8 and 6.1 percent, respectively, in 2014 and 2015. Oxford Economics observes that “2013 was the strongest year for the US construction sector since 2007,” and anticipates that “US growth accelerates as impact of fiscal austerity fade and strong competitiveness drive investment.” Finally, the 2014 Construction Industry Forecast published by Wells Fargo Equipment Finance summarizes the U.S. construction industry’s prospects as follows:

Construction contractors and equipment distributors are optimistic that local non-residential construction activity will improve in 2014 compared to the prior year. The Optimism Quotient (OQ) – this survey’s primary benchmark for measuring construction industry executive sentiment – is at a historic high of 124, up 18 points from 106 is 2013 and up from the survey low of 42 in 2009.

Another key industry for domestic producers, U.S. auto production, is likewise enjoying a resurgence since the Great Recession. In addition to the confidential data reported to the Commission, publicly available sources have documented that auto production in the United States has rebounded strongly and is forecast to continue to grow at a brisk pace. U.S. auto sales bottomed out in 2009 at 10.4 million vehicles sold, but rocketed back to 15.6 million vehicles sold in 2013. U.S. vehicle production rose from 5.8 million in 2009 to 8.7 million in 2011 and is projected to continue rising to roughly 11 million by 2016. This rebound has

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70/ “2014 Construction Industry Forecast”, Oxford Economics (Spring 2014) at 1, attached as Exhibit 7.

71/ Id. at 8, 12.


73/ Jerry Hirsch, “Auto Industry has soared since 2010, leading economic recovery”, LA Times (Jan. 3, 2014), attached as Exhibit 9. See also additional articles regarding the auto industry recovery in Exhibit 9.

enhanced the operations of the domestic wire rod industry and portends well for the foreseeable future.

E. The Imminent Loss of a Major Nonsubject Import Supplier Will Create a Supply Shortage

The U.S. wire rod industry has never been able to satisfy the entirety of U.S. market demand, and imports have always played a needed role in supplementing supply. Indeed, examining the period from 1999 (the first year of the original investigation) through 2013 demonstrates that U.S. imports have accounted for between a low of [ ] percent (or approximately [ ] tons) in 2009 and a high of 49.7 percent (or 4.0 million tons) in 2004 of U.S. apparent consumption. 75/

In 2012 and 2013, imports from China played an increasingly significant role in the U.S. marketplace. In fact, according to data assembled in the Commission’s recent preliminary investigation, Chinese imports increased from 144 short tons (i.e., virtually nothing) in 2011 to more than 618,000 short tons in 2013. 76/ Chinese imports accounted for more than 36.2 percent of all U.S. wire rod imports in 2013, and for approximately 12 percent of U.S. apparent consumption of wire rod. 77/

In March 2014, the Commission unanimously reached an affirmative preliminary determination that there is a reasonable indication that the domestic wire rod industry is materially injured by reason of imports from China. 78/ The Commission’s finding is consistent with the confidential statements of U.S. domestic producers in this review. The Chinese wire rod industry elected not to participate in the Commission’s preliminary investigation, and today

75/ 2014 Prehearing Report at C-3, Table C-1 and 1-6, Table 1-1.
76/ 2014 ITC China Prelim. at IV-4, Table IV-2.
77/ Id. at C-3, Table C-3.
78/ Id. at 1. Commissioner Aranoff did not participate in the investigation.
"There are no more Chinese wire rod offers to the U.S. That game is over." 79/ In fact, according to American Metal Market, "since the end of January, sources indicated that wire rod offers from China have dried up due to the pending trade case, effectively forcing buyers to find new markets." 80/ Although the domestic industry undoubtedly has gained from the exclusion of Chinese imports from the marketplace, imports from other sources also are benefitting and increasing their market penetration. 81/

The Commission has in several past sunset reviews considered the role of non-subject imports as an important economic factor in its analysis. This approach is consistent with the U.S. Court of International Trade’s instructions that although a Bratsk analysis is not required in sunset reviews:

... this holding should not be read to provide the Commission license to unilaterally disregard data related to non-subject imports during a recent sunset review, if it finds such imports are a “relevant economic factor{1}” to its determination. For instance, the Commission may be presented with data on non-subject imports that entered the market at some point prior to the sunset review, whether during the period of review, while the discipline of the order was in place, or during the period of investigation, before the order was imposed. To the extent that such data is a “relevant economic factor” to the ITC’s sunset review determination it may not be ignored.

This requirement to consider relevant economic factors is an essential portion of the sunset review statute. 82/

The significant presence of Chinese imports in the U.S. market – and the significant barrier to their entry now in place – is an important economic factor for the Commission to

80/ “Wire rod import prices rise, China offers shrink”, American Metal Market (Apr. 2, 2014) (emphasis added), attached as Exhibit 12.
81/ Id.
examine in this review. The Commission’s decision to authorize the U.S. Department of Commerce’s antidumping and countervailing duty investigations to proceed presents an important opportunity for the foreseeable future to the U.S. industry, as well as potentially for other import sources. These facts further support Yenakiieve’s view that the domestic industry is not vulnerable to imports from Ukraine in the foreseeable future if the antidumping order is revoked.

VI. REVOCATION AS TO UKRAINE IS NOT LIKELY TO LEAD TO CONTINUATION OR RECURRENCE OF MATERIAL INJURY

The governing statute requires the Commission to determine whether revocation of the orders would be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time. In making this determination, the Commission must consider the likely (1) volume, (2) price effects, and (3) impact of imports of the subject merchandise on the domestic industry if the orders are revoked. 83/ Yenakiieve demonstrates below that all three considerations strongly support a finding that material injury from Ukrainian wire rod imports is not likely to continue or recur within a reasonably foreseeable time if the order is revoked.

A. Any Future Volume of Imports from Ukraine is Likely to be Small

In evaluating the likely volume of subject imports if the orders are revoked, the Commission must consider whether the likely volume of subject imports would be significant, either in absolute terms or relative to production or consumption in the United States. This in turn requires the Commission to evaluate all relevant economic factors, including any likely increase in production capacity or existing unused capacity in the exporting country, existing or likely inventories of subject merchandise, the existence of trade barriers to the importation of

83/ 19 U.S.C. § 1675a(a)(1).
subject merchandise into countries other than the United States, and the potential for product-shifting. 84/

If the orders were revoked, imports from Ukraine would likely be insignificant in the reasonably foreseeable future due to: (1) lack of available production capacity; (2) strong home and regional markets; and (3) lack of developed sales structures and relationships in the United States.

1. The Commission Should Disregard ArcelorMittal Kriviy Rih’s Production Capacity

The Commission should disregard ArcelorMittal Kriviy Rih’s production capacity in assessing likely future exports to the United States because the ArcelorMittal Group’s well-documented regional supply policy makes U.S. imports from ArcelorMittal Kriviy Rih highly unlikely.

ArcelorMittal’s regionally-focused marketing policy is well known to the Commission and has been the focus of investigation and analysis in numerous recent Title VII proceedings including the recent sunset reviews of hot-rolled steel 85/ and corrosion-resistant steel. 86/ The Commission also encountered this policy in the last sunset review of the wire rod orders. When asked in the previous review how Arcelor Mittal makes decisions regarding domestic production versus importation of wire rod from related firms (such as Kriviy Rih in Ukraine), Arcelor Mittal affirmed that:

84/ 19 U.S.C. § 1675a(a)(2).
Arcelor Mittal also stated that decisions concerning wire rod sales and importation are

Arcelor Mittal’s established marketing policy means that — (1) ArcelorMittal is likely to
continue to supply the U.S. market with U.S. or other regionally-produced wire rod, and (2)
imports from non-regional sources, such as ArcelorMittal Kriviy Rih in Ukraine, are extremely
unlikely.

Accordingly, any realistic assessment of the level of available capacity for the Ukraine
wire rod industry should take these facts into account and should therefore be based on
Yenakiieve’s production and capacity levels alone. ArcelorMittal’s corporate policy and the
existence of an affiliated producer in the United States (and Canada and Trinidad & Tobago) will
serve to deter ArcelorMittal from exporting subject merchandise from Ukraine to the United
States.

2. **Yenakiieve Lacks Available Capacity and Has No Plans to Expand Capacity**

Because (as detailed above) any realistic assessment of the level of available capacity and
production should be based on Yenakiieve alone, we have prepared the following data tables

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87/ First Review Final Staff Report (confidential version) at IV-36.
88/ Id. at IV-37.
(which correspond to the Commission’s Tables IV-28 and IV-29 in the Prehearing Report) that only include the data pertaining to Yenakiieve in the current period of review:

**Revised Table IV-28**

**Wire Rod: Comparison of selected Ukrainian industry data, 2001, 2007, 2013**

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2007</th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>Capacity (short tons)</td>
<td>[</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production</td>
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<tr>
<td>Capacity Utilization (percent)</td>
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<tr>
<td>Exports/shipments (percent)</td>
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<tr>
<td>Inventories/shipments (percent)</td>
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</table>

**Revised Table IV-29**

**Wire Rod: Ukraine’s capacity, production, shipments and inventories 2008-13**

<table>
<thead>
<tr>
<th>Item</th>
<th>2008</th>
<th>2009</th>
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<td>Production</td>
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<td>End-of-period inventories</td>
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<td>Shipments:</td>
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<td>Internal consumption/Transfers</td>
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<tr>
<td>Home market shipments</td>
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<td>Export shipments to:</td>
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<td>United States</td>
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<td>European Union</td>
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<td>Asia</td>
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<td>All other markets</td>
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<td>Total exports</td>
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<tr>
<td>Total shipments</td>
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**Ratios and shares (percent)**

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<th>Item</th>
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<tr>
<td>Capacity utilization</td>
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<td>Inventories/production</td>
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<tr>
<td>Inventories/total shipments</td>
<td>[</td>
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<tr>
<td>Share of total shipments:</td>
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<tr>
<td>Internal consumption/Transfers</td>
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</table>
Ukrainian producers lack the capacity to ship significant quantities of wire rod to the United States upon revocation of the orders. Yenakiieve, the sole potential source of such
imports, is operating at a [ ]. Yenakiieve’s reported capacity utilization rates for 2011, 2012, and 2013 were [ ], respectively. 89/ With these high capacity utilization rates, Yenakiieve has very limited ability to ship additional product to new export markets, such as the United States. The total volume of available capacity has been in the range of only [ ] – a figure that is very small relative to U.S. consumption exceeding 5.3 million tons.

In addition to having limited available production capacity, wire rod production capacity in Ukraine has [ ] to the first period of review. 90/ Since the orders were put in place, and even since the first sunset review, the Ukrainian wire rod industry has consolidated. Yenakiieve explained this net consolidation and reduction in capacity during the second review period in a supplement to its Foreign Producers’ Questionnaire:

[ ]

91/

Accordingly, actual wire rod capacity in Ukraine [ ] during the review period – Yenakiieve removed [ ] tons of capacity itself. This is the case even considering the purported new wire rod capacity in Ukraine during 2011-2013 reported in the Commission’s

89/ Yenakiieve Questionnaire Response at II-12.
90/ First Review Publication at IV-15.
Staff Report — short tons with the opening of Donetsk Electrometallurgical Mill and short tons with the opening of the Euro Finance facility in Byelaya Tserkov. 92/

Finally, producers in Ukraine have plans to increase existing wire rod capacity in the event of revocation of the orders. 93/

Accordingly, the volume of Ukraine imports upon revocation would likely be limited due to the lack of available capacity in Ukraine and an overall in capacity since the last review period.

3. Strong Home Market and Regional Focus of Yenakiieve

In addition to the limited available capacity in which to ship to the United States, producers in Ukraine would be unlikely to ship significant quantities to the United States because of their strong home and regional markets.

a. Home Market

Ukrainian producers have significant (and ) home market shipments, from short tons in 2008 to short tons in 2013 — an of more than percent. As a result, home market sales have from percent to percent of total shipments during the same period. 94/

Further, existing contractual arrangements with customers in Ukraine mean that home markets shipments will continue to be strong, and that shifting significant shipments from its home market to export markets such as the United States is unlikely. Yenakiieve has contractual arrangements with all major wire rod customers in Ukraine, including most of the steel wire

92/ Id. at IV-66. [ ]

93/ See Yenakiieve Questionnaire at II-11; see [ ]

94/ 2014 Prehearing Report at IV-64.
processing industrial sector. These contracts [ ]

\[ \text{Yenakiieve's} \]

important Ukrainian customers include [ ]

\[ \text{The remainder of Yenakiieve's sales in Ukraine are through [ ] 95/} \]

Publicly available data likewise demonstrate that home market shipments are likely to be a stable and growing market for Ukrainian producers over the foreseeable future. Consumption of steel products in Ukraine has experienced strong growth since the economic crisis bottomed out in 2009: consumption of steel products rose 57 percent from 5.3 million tons in 2009 to 8.3 million tons in 2012, and was expected to grow by another 3.5 percent in 2014 after declining in 2013. 96/ The construction industry (the primary consuming industry for wire rod 97/) is also projected to experience strong growth in Ukraine in the reasonably foreseeable future, driving additional home market shipments: projections indicate 6.8 percent growth in 2014, 8.9 percent growth in 2015, and 7.1 percent growth in 2016. 98/

Finally, lower logistical costs make home market shipments attractive to Ukrainian wire rod producers. 99/ Inland logistical costs to the Black Sea ports for global exports are much

95/ See Yenakiieve Questionnaire at II-10 and III-8 (explaining how Yenakiieve has [ ]).


99/ See Yenakiieve Questionnaire at II-8 (explaining how there are [ ]).
higher than delivering to the Azov Sea port for regional exports. Yenakiieve estimates that
delivery to the Black Sea ports adds roughly US$[ ] per metric ton.

b. Non-U.S. export markets

Consistent with the fundamental changes over the past fifteen years in the Ukrainian wire
clad industry, Ukrainian wire clad producers have been developing and cultivating important non-
U.S. export markets—markets that would continue to drive Yenakiieve’s sales in the event of
revocation of the orders. These existing markets make significant exports to the United States
(which would be a new export market) unlikely. In particular, Ukrainian producers have
established strong export markets and orientation toward regional markets in Europe and the
Middle East/Africa. According to Global Trade Atlas data regarding Ukraine’s exports by
destination, Europe, the Middle East, and Africa accounted for nearly two-thirds of its
exports. 100/

(1) European Export Market

In particular, European regional markets are especially important to Ukrainian steel
producers and represent a stable and growing export market.

Ukrainian producers have established customer relationships in Europe, and European
shipments are attractive due to favorable logistical costs. Yenakiieve has sales offices/agents in
[ ].

Shipments to Europe can be made through the Azov Sea port, a cost and logistical advantage
over shipping through Black Sea ports, which Yenakiieve estimates adds roughly US$[ ] per
metric ton in cost. Prices for wire clad in the Europe [ ]

100/ 2014 Prehearing Report at IV-70, Table IV-31.
When logistical costs are included, shipments to Europe become even more favorable than those to the United States, even though European prices were [102]. Further, projected imported wire rod prices in Europe for 2014 are nearly equal to those in the United States. [103]

European demand for wire rod is also expected to rise in the reasonably foreseeable future. [104] projects wire rod consumption to [105] by around [106] percent between 2013 and 2017. There has been a “brightening outlook” for the EU manufacturing sector and a “sustained rise in EU industrial confidence indicator” since May 2013. [107] EU apparent consumption of steel is forecast to grow by 3.2 percent in 2014 and 2.9 percent in 2015, with steel-using sectors “gaining traction again following their disappointing performance in the past two years”. [108] In contrast to the previous six years of contraction, construction investment in the EU is expected to return to growth in 2014 and 2015. Importantly, total steel imports in 2013 are estimated to have risen by 9.5 percent, and the “expected further recovery of the EU steel market will trigger a stronger rise in imports in 2015.”

101/ 2014 Prehearing Report at IV-85, Table IV-38. EU prices, however, [101].

102/ Id.

103/ “Long Steel Products: One Year Forecast”, Steel Insight (Jan. 2014), attached as Exhibit 14. Projected import prices for wire rod in 2014 for Europe are only $10/tonne below those in the United States, on a “cif Southern European port” basis for Europe and on a “cif major port” basis in the United States. Id.

104/ 2014 Prehearing Report at IV-76.


106/ Id.

107/ Id.

108/ Id.
The recent political turmoil in Ukraine has resulted in ever-deepening ties to Europe, including new access for Ukraine’s products to European markets — while [ ]

Even prior to the recent political events, Ukraine had negotiated a deep and comprehensive free trade area (DCFTA) with the EU in 2011 and signed an Association Agreement in 2012. 109/ The DCFTA is expected to result in export increases to the EU by 6.3 percent. 110/ Under the DCFTA, all export duties will be eliminated except for three percent of products (mainly certain agricultural products). 111/ Further, the DCFTA will allow Ukrainian companies to participate on equal terms for EU public works, and supply and services tenders, providing additional export opportunities for products such as wire rod. 112/ Ukrainian wire rod shipments are also no longer subject to EU quotas, in contrast to the previous sunset review period. 113/

Last week, in response to the political crisis, the European Parliament backed a proposal eliminating roughly 98 percent of customs duties that Ukrainian exporters pay on iron, steel, farm producer and machinery. 114/ The EU Rapporteur stated that “{t}he European Parliament has supported an EU path for Ukraine for many years. This is our first chance to demonstrate our support in practical terms, to help Ukraine during its current economic crisis . . . as Putin


110/ “Selling to the EU Under the DCFTA”, CTA Economic and Export Analysts Ltd (2013), attached as Exhibit 17.

111/ Id.

112/ Id.

113/ See First Review Publication at IV-16.

114/ Press Release, “MEPs cut customs duties on imports from Ukraine”, Committee on International Trade, Plenary Sessions (Apr. 3, 2014), attached as Exhibit 1. The measure still requires the formal approval of the EU Council of Ministers, but the preferences are expected to be applied within several weeks of the bill’s passage.
closes Russian markets for Ukrainian exports, we are opening them.” 115/ Importantly, Ukraine’s deteriorating political relations with Russia will not significantly affect its wire rod sales, as Ukrainian wire rod producers have only limited shipments to Russia and Russia is not an important export market in comparison to Europe. 116/

(2) Middle East/ Africa Export Market

The Middle East and North Africa are also important and established export markets for Ukrainian wire rod producers. Yenakiieve has worked successfully to develop customer relationships in countries such as [ ] 117/ Yenakiieve has sales offices/agents in [ ] Middle Eastern and North African markets (Israel, Nigeria, Jordan, Senegal, Iran, and Iraq) already comprise six of the Ukrainian producers’ top ten export markets according to export data from Global Trade Atlas. 118/ Growing global construction output will continue to ensure export demand for Ukraine’s wire rod. 119/

4. Exporting to the United States Would Require Significant Effort and Expense

As described above, Ukrainian producers have limited relevant available capacity and have strong home markets and non-U.S. export markets that are more attractive than the U.S.

115/ Id.
116/ See, e.g., 2014 Prehearing Report at IV-70, Table IV-31 (Russia was not one of the ten principal Ukrainian export markets appearing in Global Trade Atlas’ 2013 Ukraine export data). The recent antidumping duty investigation in Russia, Belarus, and Kazakhstan on wire rod from Ukraine is therefore not expected to substantially impact Ukrainian wire rod exports. See id. at IV-15.
117/ Yenakiieve Questionnaire at II-12.
118/ 2014 Prehearing Report at IV-70, Table IV-31.
market. However, even if producers in Ukraine desired to begin shipping product to the United States, doing so would require significant time and effort. Producers in Ukraine have not shipped any subject wire rod to the United States since 2005, and no appreciable quantities since 2002. Re-starting commercial shipments of wire rod to the United States would require the following, among other time-consuming steps:

- Developing new customer relationships and/or engaging a third-party trading company to begin sales (note that engaging a trading company would reduce margins significantly for shipments that would already not likely be financially favorable);
- Sending trials to the new customers;
- Testing production on the producer’s equipment; and
- Making contractual arrangements with the new customers.

Yenakiieve estimates that the initial marketing alone would require at least three months, that engaging with customers would require another three to four months, that production and delivery to the port of loading would require another month to month-and-a-half, that shipping and delivery to the customer would require another month-and-a-half to two months, and that processing and testing would require at least another month. In sum, starting shipments to an entirely new export market (the United States) would require almost a year of time and significant expense.

There would also be other hurdles. Wire rod is primarily produced-to-order, and therefore would require more lead time and coordination as opposed to holding it in inventory. The Ukrainian producers would need to be certified: 28 of 33 responding U.S.

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120/ 2014 Prehearing Report at I-8, Table I-1 and C-5, Table I-1.
121/ See id. at II-24. We further note that relevant Ukrainian inventories are [ ], accounting for [ ] of Yenakiieve’s production. See Revised Table IV-29 above.
purchasers to the Commission’s questionnaires require all of the wire rod they purchase to be certified, and the time to qualify a new supplier ranges from 30 to 365 days. 122/ U.S. purchasers would need time to become familiar with Ukrainian producers; the Commission’s staff found that “{U.S.} {p}urchaser responses were sparse except for comparisons between U.S.-Mexico, U.S.-Brazil, and U.S.-nonsubject countries.” 123/ Even more telling, 28 purchasers “don’t know” if Ukrainian wire rod has the ability to meet their quality specifications; zero purchasers reported that Ukrainian wire rod would “always”, “usually”, “sometimes”, or even “rarely or never” meet their specifications. 124/

As the U.S. purchaser quoted at the beginning of this Prehearing Brief concisely summarized when asked what the effect of revocation would be:

[]

125/

5. **Any Possible Export Volumes Would Be Minimal under Yeniakieve Company Projections**

To assist the Commission’s review of the existing order and the likely consequences of removing the order as to Ukraine, Yeniakieve has analyzed from a business perspective its possible, unlikely sales to the U.S. market if the order was revoked. Importantly, these calculations assume favorable pricing (which, as demonstrated below, is questionable at best) and that sufficient available capacity existed (also, as demonstrated above, relevant available 122/ 2014 Prehearing Report at II-28.
123/ Id. at II-30.
124/ Id. at II-37, Table II-10.
125/ Id. at D-21.
capacity is limited). Yenakiieve concluded that, at most, it could ship between [ ] tons of wire rod per quarter, or roughly [ ] tons per year. Such an amount would represent at most roughly [ ] percent of total U.S. consumption (based on 2013 figures). 126/ In sum, even making some very big assumptions (favorable pricing and available capacity), Yenakiieve’s maximum possible exports to the United States would still be miniscule.

As demonstrated above, producers in Ukraine are not likely to ship significant volumes to the United States due to limited relevant available capacity, strong existing home and non-U.S. export markets, and the difficulty, time and expense of starting shipments to the U.S. market. Producers in Ukraine are not likely to ship significant quantities of wire rod, if any at all, to the United States market in the foreseeable future if the orders are revoked. The Commission’s consideration of the likely volume of subject imports strongly supports a finding that revocation of the antidumping order as to Ukraine will not likely lead to continuation or recurrence of material injury in the foreseeable future.

B. Imports from Ukraine are Not Likely to Cause Adverse Price Effects

There is also no other basis to conclude that whatever limited quantities of subject merchandise from Ukraine might enter the United States following revocation would be at prices that would depress or suppress U.S. market prices.

First, as just discussed, the volumes of such imports from Ukraine in the event of revocation are likely to be too small to impact the U.S. market, regardless of the pricing level. Even if every last ton of available capacity was used by Yenakiieve to export to the United States the total quantity would be in the range of [ ] tons – an amount equivalent to barely more

126/ Id. at 1-7, Table 1-1.
than [ ] percent of U.S. apparent consumption -- hardly enough to sway a market comprised of over 5.3 million tons.

Second, there is no basis in the record of this review to conclude that Yenakiieve (or ArcelorMittal) would undercut prices in the U.S. market. Pricing comparison data from the original investigation -- completed more than 12 years ago -- cannot reasonably be relied upon for this purpose due to the fundamental changes in conditions of competition in Ukraine’s wire rod industry. Moreover, there aren’t any meaningful comparisons for pricing purposes with the very small volumes of Ukrainian imports that occurred after the investigation.

Further, available data suggests that U.S. shipments would not even be financially attractive to producers in Ukraine. Yenakiieve has calculated an “actual” comparison price between its home/regional export market sales and theoretical sales of wire rod to the United States by taking into account transportation and other logistical costs. To make the comparison, Yenakiieve used its own sales prices (annual weighted-average prices per region minus any transportation costs from the Yenakiieve mill, if any), and then included estimated transportation and other logistical costs for theoretical shipments to the United States. Yenakiieve then compared these actual sales prices to [ ].

Yenakiieve found that its “actual” comparison prices for its home market (Ukraine) and principal export markets (EU, Middle East, and Africa) were in fact comparable to or higher than U.S. prices in 2012 and 2013. We provide a chart summarizing the results of Yenakiieve’s price comparisons below. 127/

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127/ See Exhibit 18 for the original [ ] for 2011-2013.
Yenakiieve’s calculated sales data are comparable to its data reported to the Commission. The additions to Yenakiieve’s prices consist of transportation and logistical costs (totaling [1]) required to ship the product to the United States, including: (1) transportation costs from the Ukraine mill to the port; (2) international ocean shipment costs; (3) inland U.S. freight costs; and (4) related lead time and other discounts. Accordingly, the only available information suggests that U.S. shipments would not even be financially attractive to Ukrainian producers.

C. No Likely Adverse Impact on Domestic Industry

As discussed above, the possible volume of subject imports from Ukraine that would occur in the event of revocation is small, and there is no basis to conclude that imports from Yenakiieve would likely be at prices that would (or could) depress or suppress U.S. producer prices. Furthermore, the U.S. industry is not vulnerable to injury from such imports, for the reasons explained herein and in the Prehearing Report. The U.S. industry is in a far stronger position than it was in 1999 or during the last sunset review. The U.S. industry is profitable and has restructured and consolidated under new ownership and management. Several of the leading U.S. producers are members of highly competitive and profitable multinational steel enterprises. In an undeniable vote of confidence in the viability and vitality of the U.S. industry, U.S. producers have invested heavily in new plant and equipment that will only further strengthen their competitiveness.
The fruits of these developments in the U.S. industry are evident in the industry’s performance results reported to the Commission. Notwithstanding the weakening effects on demand of the Great Recession, the well-managed U.S. producers have easily maintained profitability throughout the review period. In the meantime, the U.S. economy is picking up steam in precisely the sectors of greatest relevance to the wire rod industry — construction is booming again, and the U.S. automotive industry’s recovery from the recession is a globally-recognized success story. With Chinese suppliers exiting the U.S. market, domestic producers have opportunities to expand their sales and market share. The minimal volume of imports from Ukraine that might possibly enter the U.S. market in the foreseeable future will not impact these positive developments.

VII. CONCLUSION

The antidumping measure on imports of wire rod from Ukraine is an anachronism that reflects circumstances that no longer exist. Since 1999, the Ukraine industry has transitioned to private ownership. The largest wire rod producer in Ukraine, and the company likely responsible for all of the imports that were made in the original investigation period, is now part of the ArcelorMittal Group and follows a regional supply policy that renders the likelihood of exports from that facility to the United States effectively nil. The Commission cannot reasonably conclude that there would be any significant imports from that source in the foreseeable future if the order was revoked with respect to Ukraine. The only remaining Ukrainian producer, Yenakiieve, has likewise transitioned into private ownership and has downsized its production capacity. Yenakiieve lacks both the capacity and the incentive to today begin shipping significant volumes of subject merchandise to the United States. Nor is there any basis to
conclude that such imports would be at prices that would or could cause harm to the profitable domestic industry.

For these and other reasons discussed herein, the Commission should – (1) consider subject imports from Ukraine separately from other subject imports; and (2) conclude that such imports would not cause the continuance or resumption of material injury to the domestic industry within the foreseeable future if the order is revoked with respect to Ukraine.

Respectfully submitted,

/s/ Craig A. Lewis
Craig A. Lewis
Jonathan T. Stoel
Wesley V. Carrington

*Counsel to Public Joint Stock Company
"Yenaktieve Iron and Steel Works"

April 11, 2014
Exhibit List


3. Nucor Corporation 2012 Form 10-K (excerpt)

4. “Nueor’s new rod mill begins shipments,” American Metal Market (Oct. 9, 2013)


9. Auto industry articles


17. “Selling to the EU Under the DCFTA”, CTA Economic and Export Analysts Ltd (2013)

18. [ ]
EXHIBIT 1
MEPs cut customs duties on imports from Ukraine

Committees Committee on International Trade
Plenary sessions [03-04-2014 - 12:43]

About 98% of the customs duties that Ukrainian iron, steel, farm produce and machinery exporters pay at EU borders will be removed by a proposal backed by European Parliament on Thursday. This unilateral measure will boost Ukraine’s struggling economy by saving its manufacturers and exporters €487 million a year.

"The European Parliament has supported an EU path for Ukraine for many years. This is our first chance to demonstrate our support in practical terms, to help Ukraine during its current economic crisis in the face of dwindling currency reserves and increased pressure from the Kremlin", said rapporteur Pawel Zalewski (EPP, PL).

"As Putin closes Russian markets for Ukrainian exports, we are opening them!" he added. The European Parliament backed his proposal by 531 votes to 88, with 20 abstentions.

Which tariffs will be cut?

This unilateral trade measure, set to apply from May 2014, will remove 94.7% of EU tariffs currently charged on industrial goods imports from Ukraine and reduce them for the remaining handful of industrial goods.

It will also remove EU tariffs on over 80% of Ukraine’s farm produce exports.

However, the EU will restrict the amounts of “sensitive” products, such as cereals, pork, beef, poultry, and processed food, that may be imported tariff free, so as not to harm the interests of EU producers of these products.

A temporary and unilateral measure

This EU trade “preference” measure does not require Ukraine to reciprocate by removing its own customs duties on imports from the EU, but will require it not to raise them.

EU imports from Ukraine will nonetheless have to comply with EU rules on origin labeling and the Ukrainian authorities will have to ensure that third country goods disguised as Ukrainian ones do not enter the EU via Ukraine.

The measure also entitles the EU to reimpose tariffs if imports from Ukraine flood the EU market in volumes that cause, or threaten to cause, serious difficulties to EU producers of the same goods.

It would apply from the date when it is finally approved until 1 November 2014, or until the EU-Ukraine association agreement, including a deep and comprehensive trade deal which foresees bilateral liberalization of trade, enters into force.

Next steps

The measure still requires the formal approval of the EU Council of Ministers. The EU foreign policy chief Catherine Ashton has already announced that the preferences “will start to be applied within a few weeks”.

Procedure: Co-decision, first reading agreement
Press release

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EXHIBIT 2
Accounting for the Great Recession
Why and how did the 2007-09 U.S. recession differ from all others?

February 2011

Lee E. Ohanian

UCLA and Federal Reserve Bank of Minneapolis

ABSTRACT
The 2007-09 U.S. recession was much different from other U.S. recessions since World War II. It was also unlike recent recessions in other advanced economies. Qualitatively, it closely resembles the Great Depression, particularly in its large impact on labor markets. This policy paper describes defining characteristics of the recent recession, analyzes distortions in economic relationships during it and other recessions, and examines two hypotheses for the Great Recession’s severity and length in the United States.

Empirical examination indicates that the decline in economic output and income in the recent U.S. recession (unlike the others mentioned) was due exclusively to severe distortion in labor markets, a key commonality with the Great Depression.

Analysis of potential distortions in economic relationships reveals virtually no deviation in productivity and very little distortion in capital investment during the 2007-09 U.S. recession. By contrast, U.S. labor markets exhibited extremely large distortion; labor income was essentially being taxed at nearly 13 percent.

Two hypotheses for the Great Recession—financial markets dysfunction and poor government policy—are discussed in the context of these diagnostic findings. The paper ultimately concludes that serious questions remain regarding the financial explanation. The policy explanation is more promising, but requires significant further research.
Accounting for the Great Recession

Why and how did the 2007-09 U.S. recession differ from all others?¹

Lee E. Ohanian

February 2011

Introduction
The 2007-09 recession in the United States was, by almost any measure, exceptional. It was markedly different from other post-World War II U.S. recessions; it was also quite unlike near-simultaneous recessions in other advanced economies. Indeed, in a qualitative sense, the U.S. Great Recession resembled the Great Depression far more closely than it did any of the postwar recessions. And similarly, economists have yet to reach consensus on what truly caused the Great Recession. Why was it so severe? Why did it last so long? Why, in particular, did it have such a major impact on labor markets? This economic policy paper describes some of the defining characteristics of the recent U.S. recession and examines two potential explanations for its impact and duration.

A close analysis of the 2007-09 recession reveals that the central commonality between the Great Recession—at least as experienced in the United States—and the Great Depression is not the role of financial panic, as many have claimed, but rather severe distortion in labor markets. The fact that labor market dysfunction, not banking panic, was at the heart of both episodes of chronic high unemployment leads to very different conclusions about policy.

There is little doubt that a panic in financial markets, sparked by a collapse in housing prices and the value of mortgage-backed securities, led to the financial crisis that coincided with the worsening of the recent U.S. recession. But strong questions remain as to whether this dysfunction in the financial system, or poorly designed government policies seeking to ameliorate the recession or perhaps a combination thereof, was responsible for the recession’s depth and duration. Similarly, the role of government policy in the onset and development of the Great Depression, particularly as it affected labor markets, deserves greater attention.

The goal of this paper is to diagnose the recent recession with an eye toward clarifying the factors that caused it to last as long as it did, with such harsh impact, especially on labor markets. The paper begins with a description of the significant differences among recessions just mentioned—particularly by pointing out that in the United States, unlike other countries recently and the United States in other recessions, the decline in economic output and income is due exclusively to a drop in labor input. It then proceeds with a diagnosis of the recession through

¹ This paper is based on: Ohanian, Lee E. 2010. The Economic Crisis from a Neoclassical Perspective. Journal of Economic Perspectives 24 (4), 45-66. The author thanks Doug Clement for assistance in preparing this text.
analysis of factors behind these empirical findings—especially that of lower labor input—using a technique known as business cycle accounting.

The next step is a discussion about whether two potential theories for the recession are consistent with this diagnosis. That is, how well do the financial dysfunction and poor policy hypotheses jibe with the finding of dramatically lower labor input? The paper ultimately concludes that serious questions remain regarding the financial explanation—questions relating to corporate cash positions, small-firm dynamics, contraction in financial intermediation and the duration of economic weakness. It further suggests that the policy explanation, while promising, requires further research, much of which is under way. The views expressed here are those of the author, and not necessarily of others in the Federal Reserve System.

How this recession differed
The 2007-09 U.S. recession differed considerably from earlier post-World War II recessions both in the behavior of key variables like output, consumption, investment and labor as well as in the possible factors that might account for fluctuations observed in these variables. This section will discuss the first: the differences seen in major economic variables in this recession compared with others. The next section will diagnose factors behind the fluctuations.

Table 1 shows the percent changes in U.S. economic variables during the recent recession and during the average postwar recession. (These are calculated on a per capita basis for the “peak-to-trough” span of each recession. Peak values for each variable are normalized to 100.) Clearly, the 2007-09 recession was more severe than the average postwar recession, and this is particularly true for labor hours and consumption. Per capita hours worked declined 8.7 percent during the recent recession compared with a postwar average decline of 3.2 percent. The declines in output (real gross domestic product, GDP), consumption, investment and employment were also much larger in the 2007-09 recession than in prior recessions.

Table 1: 2007-09 Recession versus Postwar Recessions, United States
(Percent Change in per Capita Values)

<table>
<thead>
<tr>
<th></th>
<th>Output</th>
<th>Consumption</th>
<th>Investment</th>
<th>Employment</th>
<th>Hours worked</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-09 recession</td>
<td>-7.2</td>
<td>-5.4</td>
<td>-33.5</td>
<td>-6.7</td>
<td>-8.7</td>
</tr>
<tr>
<td>Average of other postwar recessions</td>
<td>-4.4</td>
<td>-2.1</td>
<td>-17.8</td>
<td>-3.8</td>
<td>-3.2</td>
</tr>
</tbody>
</table>
The recent recession was also much different in the United States than in comparable large, high-income nations such as Canada, France, Germany, Italy, Japan and the United Kingdom, and again the most striking difference is the larger U.S. impact on labor markets as measured by employment levels (hours worked were not available for other countries).

Table 2 compares the 2007-09 recession in the United States and these six other nations, with the average for the six nations in the second row. Again, the decline in per capita employment is much larger in the United States (6.7 percent) than in the other countries (2.0 percent, on average). But despite the much smaller employment decline in the six countries, per capita output fell more there than it did in the United States (8.5 percent versus 7.2 percent), indicating that the nations experienced much different productivity changes during the recession. Given the roughly similar nature of the financial crisis globally, these differences bear scrutiny in efforts to understand the Great Recession. Also notable: Investment fell over twice as much in the United States as in the other nations, 33.5 percent versus 16.4 percent.

### Table 2: 2007-09 Recession in the United States versus Six Other High-Income Countries

(Percent Change in per Capita Values)

<table>
<thead>
<tr>
<th></th>
<th>Output</th>
<th>Consumption</th>
<th>Investment</th>
<th>Employment</th>
<th>Hours worked</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>-7.2</td>
<td>-5.4</td>
<td>-33.5</td>
<td>-6.7</td>
<td>-8.7</td>
</tr>
<tr>
<td>Average of six</td>
<td>-8.5</td>
<td>-4.8</td>
<td>-16.4</td>
<td>-2.0</td>
<td>na</td>
</tr>
<tr>
<td>other countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>-8.6</td>
<td>-4.6</td>
<td>-14.1</td>
<td>-3.3</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>-6.6</td>
<td>-3.4</td>
<td>-12.6</td>
<td>-1.1</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>-7.2</td>
<td>-2.9</td>
<td>-10.2</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>-9.8</td>
<td>-6.6</td>
<td>-19.6</td>
<td>-3.0</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>-8.9</td>
<td>-3.6</td>
<td>-19.0</td>
<td>-1.6</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-9.8</td>
<td>-7.7</td>
<td>-22.9</td>
<td>-2.9</td>
<td></td>
</tr>
</tbody>
</table>

**Diagnosing the differences**

Understanding the factors and mechanisms behind the recent recession requires economic insight into the differences just described. Most particularly, what explains the behavior of labor markets? Why did labor hours and employment levels drop so precipitously in the U.S. Great Recession compared with earlier U.S. recessions and with the parallel recessions elsewhere?

To better understand these differences, this paper uses the perspective of neoclassical (or general equilibrium) business cycle theory, a concept developed by economists Finn Kydland and
Edward Prescott in the early 1980s.\footnote{Kydland, Finn, and Edward C. Prescott. 1980. A Competitive Theory of Fluctuations and the Feasibility and Desirability of Stabilization Policy. Rational Expectations and Economic Policy. University of Chicago Press, 169-98.} The theory is based on a framework of explicit optimization problems faced by an economy’s decision makers—households and firms. Each household seeks to optimize its well-being by making decisions regarding how much to consume, how much to save and how much time to spend working, while each firm maximizes its profits by making decisions regarding how much labor to hire and how much to invest in the firm’s business.

These decisions are made within the context of a specific production function in which inputs of capital (from whatever is saved and invested) and labor (from households who decide to provide it) are combined as efficiently as technology allows to produce economic output. This framework, expressed in a set of equations, is solved mathematically, and the resulting solution gives clues to how the economy functions—or in the periods analyzed here, \textit{malfunctions}.

Kydland and Prescott’s original “real business cycle” model has become considerably more elaborate over the past 30 years, and a particular technique derived from it, business cycle accounting, provides a diagnostic method for parsing the many factors behind economic fluctuations. The accounting procedure is mathematically complex, but it boils down to measuring differences in specific economic variables during normal times versus atypically good and bad times—periods of equilibrium compared with booms and recessions.

The procedure looks at the variables in the economic relationships just described—decisions about consumption or investment; decisions about labor or leisure; and the use of production technologies that combine labor and capital to generate output—during the normal and atypical times and calculates discrepancies between the two. These value differences are usually called “frictions,” “wedges” or, in this paper, “deviations.”\footnote{For a more complete nontechnical explanation of this procedure, see Ohanian, Lee E. 2010. The Economic Crisis from a Neoclassical Perspective. Journal of Economic Perspectives 24 (4), 45-66. For a technical treatment, see Chari, V.V., Patrick J. Kehoe, and Ellen R. McGrattan. 2007. Business Cycle Accounting. Econometrica 75 (3), 781-836.}

The key point is that these deviations are more than just numbers: They represent significant economic dysfunction. In the labor or leisure decision, for example, households normally decide to go to work if the wage being offered is sufficiently high that it compensates them (in terms of what they might buy with that wage) for the sacrifice they must make in using their time to work. Economists say the opportunity cost of working will equal the marginal benefit of working, or more accurately—if with more jargon—the marginal rate of substitution between consumption and leisure will equal the marginal product of labor. Said otherwise, if there are no frictions/wedges/deviations, a firm will offer a worker a wage sufficiently large to convince the worker to work for an hour if that hour’s work will produce output equal in value to the wage.
But what if there is a labor deviation? That means something is amiss, economically. If there is a numerical deviation from the equilibrium labor-or-leisure value, that means that income from labor is being taxed (or subsidized) so that the standard equation is upset: The marginal rate of substitution for households and the marginal product of labor for firms are no longer being equated, and labor markets won't operate normally.

Similarly, there can be productivity deviations when numerical estimates from the two sides of the production function aren't equal (actual output is higher or lower than can be accounted for by the amounts of labor and capital in use, given current technologies). And capital deviations exist when estimates from the allocation decision between consumption and investment aren't working out (capital is being over- or undersupplied relative to the marginal benefit that could be derived from investing in physical capital).

**Applying the diagnostic tool**
Calculating the deviations is, again, a mathematically complicated process. But simply put, it involves feeding actual data into the equations that represent the production function, the labor-leisure decision and the consumption-investment decision, and then subtracting 1 from the ratio of the left- and right-hand sides of each of the three equations. The results are the deviations from equilibrium accounted for by disturbances to productivity, labor and/or capital.

Since an economy is ultimately composed of these elements, pinpointing the source of economic fluctuation is essentially a question of where these various deviations occur during any given business cycle and how big they are. A large, negative productivity deviation, for instance, would mean that actual output is below the level that should be generated by the capital and labor that were actually supplied. A distortion in productivity would then be the locus of the problem.

The current analysis applies business cycle accounting to the recessions previously discussed: previous postwar recessions in the United States, and the 2007-09 recession in the United States and six other high-income countries. Table 3 provides the results of the diagnostic analysis, with the labor, capital and productivity deviations for respective countries and recessions. (The deviations are expressed as percent differences from equilibrium where—in the absence of these deviations—both sides of the three equations would be equal.)
Table 3: Recession Deviations in the United States and Other Nations

<table>
<thead>
<tr>
<th></th>
<th>Labor Deviation</th>
<th>Capital Deviation</th>
<th>Productivity Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Panel A:</strong> United States</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007-09 recession</td>
<td>-12.9</td>
<td>0.3</td>
<td>-0.1</td>
</tr>
<tr>
<td>Average, other postwar recessions</td>
<td>-2.4</td>
<td>1.8</td>
<td>-2.2</td>
</tr>
<tr>
<td><strong>Panel B:</strong> 2007-09 Recession</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>-12.9</td>
<td>0.3</td>
<td>-0.1</td>
</tr>
<tr>
<td>Average, other high-income countries</td>
<td>0.9</td>
<td>0.1</td>
<td>-7.1</td>
</tr>
<tr>
<td>Canada</td>
<td>-0.9</td>
<td>0.7</td>
<td>-7.0</td>
</tr>
<tr>
<td>France</td>
<td>1.7</td>
<td>1.3</td>
<td>-6.1</td>
</tr>
<tr>
<td>Germany</td>
<td>4.8</td>
<td>-1.1</td>
<td>-7.0</td>
</tr>
<tr>
<td>Italy</td>
<td>-0.8</td>
<td>0.3</td>
<td>-7.2</td>
</tr>
<tr>
<td>Japan</td>
<td>2.9</td>
<td>-0.4</td>
<td>-7.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-2.3</td>
<td>0.0</td>
<td>-8.2</td>
</tr>
</tbody>
</table>

_Note:_

The labor deviation is the percent difference between the marginal rate of substitution between consumption and leisure, and the marginal product of labor, when actual data are plugged into that equation.

The capital deviation is the percent difference between the Intertemporal marginal rate of substitution between consumption and the marginal product of capital net of depreciation, when actual data are plugged into that equation.

The productivity deviation is a measure of any factors that change the relationship between measured labor and capital inputs, and measured output. This measure is also known as the “Solow residual.”

The most obvious discovery from this comparison of previous U.S. recessions and the most recent one (see Panel A of Table 3) is that the 2007-09 U.S. recession manifested very little disturbance to productivity processes or capital decisions, but an extremely large distortion to labor supply.

In theory, well-functioning labor markets will equalize the marginal product of labor and the rate at which households are willing to offer their labor rather than enjoy their leisure. During the average postwar U.S. recession, however, there was a -2.4 percent deviation in this theoretical equivalence, meaning that the marginal product exceeded the marginal rate of substitution by an average of 2.4 percent. Essentially, it was as if labor income were being taxed at an additional 2.4 percent rate.
But during the Great Recession, the labor deviation was far greater: -12.9 percent. (For comparison, the next-largest postwar U.S. recession deviation was -4.7 percent during the 1973 recession.) This deviation was also markedly higher than any seen in the six high-income countries, which averaged just 0.9 percent (see Panel B of Table 3). Notably, this was a positive deviation, suggesting a net subsidy rather than a tax on labor income, and it was due to sizable positive deviations in France, Germany and Japan (1.7 percent, 4.8 percent and 2.9 percent, respectively), meaning that employment in those countries was in fact higher than the level consistent with the marginal product of labor.

In contrast, there was remarkably little distortion in capital markets during the 2007-09 recession in the United States. The capital deviation was 0.3 percent. By comparison, the distortions in other postwar U.S. recessions were large: averaging to a 1.8 percent capital deviation. These positive deviations suggest that capital income enjoyed what would be equivalent to a small effective tax cut during those periods, rather than a tax increase that would have depressed economic activity. Indeed, not a single recession analyzed here—in the United States or abroad—shows a large, negative capital distortion; later, this paper will discuss the implications this absence of capital distortion has for the extent to which models with financial system imperfections that affect capital markets can account for the 2007-09 recession.

As for productivity, the 2007-09 U.S. recession displayed virtually no distortion: just -0.1 percent. The production function is the relationship between inputs and output, and so the productivity deviation can be thought of as a measure of any disturbances in that relationship. Disruptions (positive and negative) to technology are part of this, but the productivity deviation will pick up any factors that change the connection between measured labor and capital inputs, and measured output.

So, during the recent recession, the United States experienced very little disruption in the relationship between inputs and outputs. This was an anomaly as recessions go. The postwar U.S. recession average productivity deviation was -2.2 percent, and the productivity deviation in other high-income nations was -7.1 percent in the 2007-09 recession.

The fact that there is essentially no productivity decline suggests that the sources and mechanisms of the 2007-09 U.S. recession differ substantially from earlier postwar recessions in the United States, and also from the parallel recessions of 2007-09 in other high-income economies. Instead, the 2007-09 U.S. recession appears to be almost exclusively related to a factor that affected the labor market substantially, and it did so by changing the relationship between the marginal rate of substitution between leisure and consumption, and the marginal product of labor. (Indeed, in a separate simulation exercise, a labor deviation of this size by itself can account for drops in output, employment and investment that roughly match what actually occurred in the 2007-09 U.S. recession.)
It's notable that while the recent recession in the United States is unique relative to other postwar recessions, both here and in other high-income nations, it is qualitatively very similar to the Great Depression. Throughout the 1930s, per capita hours worked and output remained well below normal levels, indicating a very large labor deviation. Calculated as was done here for recent recessions, the average labor deviation between 1930 and 1939 was about -26 percent, roughly twice as large as the -12.9 percent deviation in the third quarter of 2009.

**Hypotheses of the Great Recession**
This diagnostic information regarding deviations in fundamental economic relationships will help assess two hypotheses about the 2007-09 recession: the financial explanation and the policy explanation. Given the key finding of the diagnosis—substantial disturbance in labor markets resulting in a very large and protracted drop in hours worked—what is the potential of each hypothesis for explaining the behavior of labor markets in a severe recession?

**The financial explanation**
The financial explanation for the Great Recession argues that declining values of asset-backed securities and the near-failure of large financial institutions accelerated the recession through reduced financial intermediation services (that is, mechanisms for borrowing and lending) and associated spikes in interest rate spreads. Gary Gorton and other economists document reduced volumes of commercial paper and repo markets and argue that this decrease in financial liquidity led to broader economic dysfunction, including reduced output and employment.⁴

But documenting the severity of the financial crisis does not establish that it was itself the major factor behind the recession. To make this causal connection, the financial explanation emphasizes that severe downturns such as the Great Depression were associated with financial crises. Proponents also point to theoretical models in which quantitative increases in financial imperfections reduce investment, output, consumption and employment.

This explanation seems intuitively powerful, even obvious, but potential weaknesses lie in its omission of several key issues. These include documenting internal cash positions and declines in lending volumes. As suggested earlier, it also appears to be inconsistent with the diagnostic accounting evidence presented in this paper. Examining these questions further raises a number of significant challenges to the idea that financial distress deepened the recession.

In terms of economic theory, the ways in which capital market flaws affect the economy are largely at odds with the diagnostic findings presented earlier. The financial explanation suggests that capital market imperfections lead to broader economic problems; business cycle accounting

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would measure this effect with the capital deviation, the wedge between the return paid to suppliers of capital and the cost paid by those who use it. But these capital deviations were extremely small in the United States and other high-income countries during the 2007-09 recession, just 0.3 percent and 0.1 percent, respectively.

A theory in which financial distress generates the large labor deviation that was a hallmark of the U.S. recession might reconcile this discrepancy between evidence and explanation. But even with an effective theory linking capital markets and labor deviation, it would remain unclear why the labor distortion of 2007-09 was so much larger (-12.9 percent) in the United States than the capital deviation (0.3) that captures dysfunction in capital markets.

Other challenges to the financial explanation
Other data challenge the idea that financial market imperfections cause severe economic downturns. The idea's proponents often argue that the Great Depression was deep and protracted because of associated banking crises, and many draw parallels to the Great Recession. But several details suggest that banking crises were not, in fact, the major causal factor in the Depression.

Contrary to general perception, for example, the 40 percent decline in the number of U.S. banks between 1929 and 1933 had little impact on actual banking capacity because most of the Depression-era banks that closed were either very small or merged. The share of deposits in banks that closed or suspended operation between 1930 and 1933 was 1.7 percent, 4.3 percent, 2 percent and 11 percent in each respective year.

There is also the question of timing. The Depression was “Great” before any of the monetary contraction or banking crises occurred. Industrial hours worked dropped by 29 percent in the United States before the first big bank crisis in late 1930 and also before the nation’s money stock fell.

These facts about capacity decline and panic dates indicate that the Depression would have been severe even in the absence of banking and financial crises, and suggest that drawing lessons from Depression financial crises to other economic downturns is premature.

Regardless of potential parallels between the Depression and the Great Recession, more recent facts challenge the explanatory strength of the financial hypothesis for the 2007-09 recession in the United States. These facts relate to corporate cash positions, small-firm dynamics, contraction in financial intermediation and the duration of economic weakness.

Discussions of problems in financial markets often ignore internal cash held by corporations, though it is a very good substitute for external financing in the event of financial market disruption. The accompanying figure shows that the corporate sector typically has substantial
cash reserves. The figure shows available funds and gross investment as a fraction of corporate GDP between 1960 and 2009. It indicates that corporations typically have nearly as much internal cash as they invest on plant and equipment. And, notably, cash is high and rising in recent years.

Other evidence suggests that most corporate investment, regardless of economic sector, is financed internally, contrary to the argument that some sectors suffer disproportionately during financial crises. The fact that firms have sufficient cash to finance capital spending stands in sharp contrast with the assumption of models where financial market imperfections are the source of broader economic downturns.

Another assertion made by proponents of the financial explanation is that small firms have much less access to capital markets, and they’re therefore affected much more than large firms during

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crises. Again, evidence suggests that this is inaccurate: Recent research shows virtually no change in the relative sales performance of small versus large firms during the recent recession.\(^6\)

Contraction in financial intermediation (borrowing and lending) is another key point in the financial explanation. But some measures of intermediation did not decline substantially during the 2007-09 recession. Bank credit relative to nominal GDP, for example, rose at the end of 2008 to an all-time high. This ratio declined by early 2010, but bank credit remained at a higher level than any time before 2008.\(^7\) Similarly, data show that household borrowing levels and their composition are virtually unchanged since 2007, again suggesting that the overall volumes of financial intermediation have not declined markedly.

But perhaps the most challenging issue regarding the financial explanation is why economic weakness has continued for so long after the worst of the financial crisis passed in November 2008 or so. Interest rates on relatively risky Baa bonds jumped about 2.5 percentage points, to about 9.5 percent, from mid-September to late October 2008, when financial markets were reacting to news about AIG, Lehman Brothers and related events. But afterward, it dropped by about 3 points to the level that prevailed before the recession. Still, despite these declining interest rates, the number of hours worked in the United States recovered very little, even through mid-2010.

The continuation of the recession long after the worst of the financial crisis raises a difficult puzzle about why employment has not recovered more quickly. Low productivity isn’t the explanation for continued economic weakness in the United States: As documented above, productivity deviation during the recent recession was very small.

None of this evidence should be interpreted as indicating that the financial crisis did not contribute significantly in some way to the 2007-09 recession here or abroad. However, given the mechanisms through which financial market imperfections are argued to impact economic activity in leading theoretical models, the diagnostics and other data presented here reveal a number of difficult questions about the financial explanation. More research is needed on the issues just discussed, and on the productivity and labor deviation differences between the United States and other high-income countries, before the contribution of financial factors to the 2007-09 recession can be accurately evaluated.

\textit{The policy explanation}

If the financial explanation is not entirely convincing, particularly for the failure of employment to recover after the crisis, is there another story that \textit{could} account more fully for the


macroeconomic fluctuations of 2007-09? Many researchers offer a policy explanation—that poorly designed economic policies enacted in response to early stages of the financial crisis significantly contributed to the Great Recession by distorting incentives and increasing uncertainty. The policy explanation suggests that government initiatives such as the 2008 tax rebate, the Troubled Asset Relief Program (TARP), the American Recovery and Reinvestment Act, Cash for Clunkers and U.S. Treasury mortgage modification programs aggravated early weakness in the economy and led to a full-blown recession.

Casey Mulligan, for example, studies the effect of Treasury mortgage modification programs on the employment rate; he finds that eligibility requirements for these programs raised implicit income tax rates on some households to levels exceeding 100 percent.  

John Taylor contends that a broad set of policies substantially contributed to the recession and supports his argument with a number of studies. In one recent article, for instance, he shows that some interest rate spreads, and both U.S. and foreign stock prices, deteriorated much more rapidly at the times of the TARP announcement and President Bush's warning of a possible Great Depression than they did around the Lehman bankruptcy or other major financial events. In another study, he shows that daily sales at Target department stores dropped substantially right after the announcement of TARP on Sept. 19, 2008, but not immediately after the Lehman bankruptcy on Sept. 15. Taylor concludes that government policies contributed significantly to the recession, perhaps because policymaker communication regarding underlying economic strength increased public uncertainty.

Uncertainty, in fact, may be a primary reason why the recession deepened and persisted into 2009, well after the worst of the financial crisis. High uncertainty raises the value of delaying decisions in many economic models, which can depress economic activity. Recent and ongoing research on the impact of uncertainty on economic activity suggests that it can indeed induce recessions; in one forthcoming theoretical article, for example, uncertainty about the accuracy of government pronouncements regarding macroeconomic strength can lead households to reduce the labor hours they supply.

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Conclusion

Whether researchers lean toward the financial explanation, the policy explanation or another hypothesis altogether, it is clear that deeper exploration of labor markets is essential for understanding the Great Recession. The large labor distortion that occurred during the U.S. recession remains unexplained. Why similar distortions didn’t occur during previous postwar U.S. recessions, nor in high-income countries in 2007-09, is not understood.

Other questions are also unresolved. Factors behind large productivity deviations during the recession in other high-income countries must be explored. The relationship between distress in financial markets and the “real” economy—why the recession continued long after financial crisis abated—is unclear.

Fortunately, much promising research is under way.\(^ {11}\)

- examinations of labor market distortions in earlier economic crises
- efforts to connect hypothetical financial events to labor deviations
- research linking use of corporate debt and labor markets
- analysis of how implicit labor income taxes can suppress employment levels
- study of productivity fluctuation due to resource misallocation from financial imperfections.

Clearly, much work remains to be done. Furthering this research will be essential not only to economists, but also to policymakers and other decision makers who will, inevitably, again confront the challenge of macroeconomic crisis.

Lopez, José. 2010. Labor and Consumption Inequality, and Business Cycle Fluctuations. Unpublished paper, UCLA.  
EXHIBIT 3
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K
☑ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2012

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission File number 1-4119

NUCOR CORPORATION
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

13-1860817
(I.R.S. Employer Identification No.)

1915 Rexford Road, Charlotte, North Carolina
(Address of principal executive offices)

28211
(Zip Code)

Registrant’s telephone number, including area code: (704) 366-7000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class
Common stock, par value $0.40 per share

Securities registered pursuant to Section 12(g) of the Act:

Name of each exchange on which registered
New York Stock Exchange

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant’s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

Aggregate market value of common stock held by non-affiliates was approximately $11.96 billion based upon the closing sales price of the registrant’s common stock on the last business day of our most recently completed second fiscal quarter, June 29, 2012.

317,678,664 shares of common stock were outstanding at February 22, 2013.

Documents incorporated by reference include: Portions of the registrant’s 2012 Annual Report (Parts I, II and IV), and portions of the registrant’s Proxy Statement for its 2013 Annual Meeting of Stockholders (Part III) to be filed within 120 days after the registrant’s fiscal year end.
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Nucor Corporation

## Table of Contents

### PART I

<table>
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<tr>
<th>Item</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business</td>
<td>1</td>
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PART I

Item 1. Business

Overview

Nucor Corporation and its affiliates ("Nucor" or the "Company") manufacture steel and steel products. The Company also produces direct reduced iron ("DRI") for use in the Company’s steel mills. Through The David J. Joseph Company and its affiliates ("DJJ"), which the Company acquired in 2008, the Company also processes ferrous and nonferrous metals and brokers ferrous and nonferrous metals, pig iron, hot briquetted iron ("HBI") and DRI. Most of the Company’s operating facilities and customers are located in North America, but increasingly, Nucor is doing business outside of North America as well. The Company’s operations include several international trading companies that buy and sell steel and steel products manufactured by the Company and others.

Nucor is North America’s largest recycler, using scrap steel as the primary raw material in producing steel and steel products. In 2012, we recycled approximately 19.2 million tons of scrap steel.

General Development of our Business in Recent Years

Nucor has employed a multi-pronged growth strategy in recent years that allows for the ability to capitalize on a variety of growth opportunities as they arise. The five prongs of that growth strategy are: (1) optimizing and continually improving our existing operations, (2) executing on our raw materials strategy, (3) growing through developing greenfield projects that capitalize on new technologies and unique marketplace opportunities, (4) acquiring other companies that will strengthen Nucor’s position as North America’s most diversified producer of steel and steel products and (5) growing internationally with an emphasis on leveraging strategic partnerships and new technologies.

Optimizing our existing operations primarily has involved spending a significant portion of our capital expenditures each year on projects that enhance productivity and improve costs as well as allow us to produce more value-added and typically higher margin products at our existing facilities. The heat treat line at our Hertford County, North Carolina mill became operational in 2010, which has allowed Nucor to grow its presence in higher margin products where greater strength and abrasion resistance is required. The heat treat line allows us to improve the product mix allocation between our two plate mills and four sheet mills to improve margins at those facilities. Also at the Hertford County mill, we commissioned a vacuum tank degasser in 2012, and we expect to begin operating a new normalizing line in 2013. Early in 2012, Nucor announced plans to spend approximately $290 million for projects at our Tennessee, Nebraska and South Carolina bar mills that should expand Nucor’s special bar quality ("SBQ") and wire rod capacity by one million tons. The projects, which we expect to be completed between the end of 2013 and the first half of 2014, will allow us to produce engineered bar for the most demanding applications while maintaining our market share in commodity bar products by shifting production to our other bar mills. Other planned value-added projects at existing operations include the vacuum tank degasser that began operating at our Hickman, Arkansas mill in late 2012 and the modernization of casting, hot rolling and downstream operations that will allow us to produce wider and lighter gauge hot-rolled and cold-rolled steel products at our Berkeley, South Carolina mill beginning in early 2014.

Executing on our raw materials strategy involves putting the pieces into place to meet our goal of controlling between six and seven million tons of annual capacity in high quality scrap substitutes. Our 2,500,000 metric tons-per-year DRI facility in St. James Parish, Louisiana is scheduled to start-up in mid-2013. Between our existing DRI plant in Trinidad, which we expanded in 2011 to increase the annual capacity from 1,800,000 to 2,000,000 metric tons, and our new facility in Louisiana, we will be approximately two-thirds of the way towards that goal.

The DRI-making process requires significant volumes of natural gas. To provide the new DRI plant in Louisiana with a sustainable advantage from lower natural gas costs, Nucor entered into a long-term, onshore natural gas working interest drilling program in U.S.-based proven reserves with Encana Oil & Gas (USA) Inc.
EXHIBIT 4
Nucor's new rod mill begins shipments

Oct 09, 2013 | 04:27 PM | Samuel Frizell

NEW YORK — Nucor Corp. has begun shipments from its wire rod mill in Darlington, S.C., as it concludes commissioning the new facility, a company spokeswoman told AMM.

The new mill, part of the company's Darlington bar mill, has an annual capacity of 300,000 tons in a range of sizes.

"Nucor is concluding the commissioning of its newly constructed wire rod mill at the Nucor Steel-South Carolina bar mill in Darlington. The new mill is capable of producing wire rod down to 5.5 mm (7/32 inch) and bar-in-coil up to 2 inches. Wire rod production from the plant will focus on the full complement of low-, medium- and high-carbon products," the spokeswoman said via e-mail.

Nucor plans to move up the product mix and produce wire rod for prestressed concrete (PC) strand by early 2014, AMM understands.

The Charlotte, N.C.-based steelmaker confirmed that customers have begun receiving wire rod from the mill. One rod buyer said he had some material in his yard that he was getting ready to test.

"So as far as we're concerned, this is going to improve the quality of what they sell us," a second wire rod buyer said.

Nucor said in 2012 that the mill would have a four-stand pre-finishing block, an eight-stand rod block and a four-stand sizing block, in addition to thermo-mechanical rolling capability and a 100-meter-long Stelmore deck (amm.com, April 11, 2012).

Darlington is less than 100 miles from ArcelorMittal SA's Georgetown, S.C., mill, which also produces wire as small as 7/32 inch.

Market sources speculated that the extra capacity brought online at Nucor's new wire rod mill could have a softening effect on prices as the two mills, Georgetown and Darlington, compete in the market.

Due to weak demand, Georgetown has been running two shifts instead of three for months and laid off 30 employees in the fourth quarter of 2012 (amm.com, March 19).

"It's going to make the market even more competitive for the mills, and it's going to drive prices down," the first wire rod buyer said.

A third wire rod buyer said it may be some time before Nucor can compete with Georgetown on high-carbon wire rod, however. "I wouldn't write Georgetown's obituary just yet," he said. "I think around the edges they're going to hurt them, but initially Nucor's entry over the next six months may have more of an effect on Gerdau" Long Steel North America's mill in Jacksonville, Fla., which produces low-carbon wire rod.

Nucor's new mill is part of a $290-million investment in special bar quality (SBQ) and wire rod capacity the company announced in January 2012 in Darlington, Memphis, Tenn., and Norfolk, Neb. (amm.com, Jan.)
EXHIBIT 5
February 27, 2014

FILED ELECTRONICALLY (VIA EDIS)  

The Honorable Lisa R. Barton 
Acting Secretary 
U.S. INTERNATIONAL TRADE COMMISSION 
500 E Street, S.W., Room 112-A 
Washington, D.C. 20436

Public Version

USITC Inv. Nos. 701-TA-512 and 731-TA-1248 (Preliminary)
Number of Pages: 95

Confidential Business Information Has Been Deleted from Exhibit 2 of This Postconference Brief.

Confidential Version May Be Released under APO.

Re: Carbon and Certain Alloy Steel Wire Rod from the People’s Republic of China: Postconference Brief

Dear Madam Secretary:

On behalf of the American Wire Producers Association ("AWPA"), we respectfully submit the public version of a Postconference Brief, pursuant to 19 C.F.R. §§ 201.8(d) and 207.3(c). The confidential version of this Postconference Brief was filed with the U.S. International Trade Commission on February 26, 2014.

Confidential business information has been deleted from Exhibit 2 of this Postconference Brief. Pursuant to 19 C.F.R. §§ 201.6(c) and 207.3(c), we have marked this exhibit in which proprietary information has been deleted with "PUBLIC VERSION." This deleted proprietary information concerns or relates to the actual experiences of individual AWPA member companies.
American manufacturers of steel wire and wire products are entrepreneurial and committed to maintaining their competitive market position despite heavy import pressure in their product sectors. They pride themselves on their high productivity and constant reinvestment in the latest technology and equipment, keeping the American wire industry one of the most globally competitive segments of the steel industry. They are equally proud of the thousands of good-paying jobs that they provide to hard-working Americans in hundreds of communities throughout the United States.

AWPA members purchase the vast majority of subject merchandise — carbon and certain alloy steel wire rod — that is sold in the U.S. market. While they source their wire rod requirements primarily from domestic mills, it is imperative for their continued viability that they have access to wire rod on a global basis. Since the only use for wire rod is to make wire, the ability of AWPA companies and other American wire producers — as well as their downstream customers — to remain competitive is essential for the long-term health and prosperity of the U.S. rod industry.

II. THE DOMESTIC WIRE ROD INDUSTRY IS IMPOSING SIGNIFICANT AND FREQUENT PRICE INCREASES

During 2013 and continuing into 2014, the domestic producers of steel wire rod have imposed numerous and significant price increases on all of their wire rod products. Altogether, U.S. mills since March 2013 have raised rod prices between $120 and $138 per short ton.¹

¹ See Exhibit 1.
During this period, ArcelorMittal announced price increases which total $125 per short ton.\(^2\) The price of its wire rod products increased by $40 per ton for April 2013 shipments, a further $30 per ton each for November and December 2013 shipments, and $25 per ton for January 2014 shipments.

Gerdau Long Steel North America has also raised its prices continuously during the past year and into 2014.\(^3\) It increased prices for wire rod products from its mills in Beaumont, Texas, and Jacksonville, Florida, by $35 per short ton, effective with April 2013 shipments. The price increase for cold heading quality and welding quality wire rod was $43 per ton. In November 2013, Gerdau increased the price of all wire rod products by $30 per ton, and it again increased its price by $30 per ton for new orders placed on or after December 11, 2013. In January 2014, Gerdau announced yet another price increase — this time for $25 per ton starting with February 2014 shipments. Gerdau’s total price increases have amounted to $120 per ton.\(^4\)

Keystone Steel & Wire, which is also a significant producer of downstream wire and wire products, has increased its rod prices by a combined sum of $133 per short ton.\(^5\) It imposed an initial price increase of $35 per ton for April 2013 shipments, followed by an increase of

\(^2\) See Exhibit 1.A. (ArcelorMittal Price Increases).

\(^3\) See Exhibit 1.B. (Gerdau Price Increases).

\(^4\) During the staff conference, the witness from Gerdau testified regarding its currently idled plant in Perth Amboy, New Jersey. *Transcript of Conference in the Matter of Carbon and Certain Alloy Steel Wire Rod from China, Investigation Nos. 701-TA-512 and 731-TA-1248 (Preliminary)* (February 21, 2014) (hereinafter “Transcript”) at 8. However, the melt shop at Perth Amboy has been shut down since 2007 and the rolling mill has been idle since 2009. *Id.* at 41. These events clearly had nothing to do with rod imports from China.

\(^5\) See Exhibit 1.C. (Keystone Price Increases).
$15 per ton in July 2013, effective with August 2013 shipments. Like other domestic rod producers, Keystone raised rod prices again in November and December 2013 — by $30 per ton each time. In January 2014, Keystone announced a further price increase of $23 per ton for all of its wire rod products, and this increase went into effect on February 1, 2014.

Nucor has issued at least 14 separate price increases for wire rod products made by its mills in Kingman, Arizona; Wallingford, Connecticut; and Norfolk, Nebraska. Further, in November 2013, Nucor started to ship wire rod from its new plant in Darlington, South Carolina, and it has already announced two price increases for this mill — first $25 per short ton in December 2013 and then $23 per short ton in January 2014. Nucor Steel Kingman raised prices by $40 per short ton in March 2013, by $20 per ton in October 2103, by $30 per ton in November 2013, by $25 per ton in December 2013, and by $23 per ton in January 2014. Thus, since March of last year, Nucor Steel Kingman has increased the price for its wire rod products by a total of $138 per short ton. Nucor Steel Connecticut and Nucor’s Norfolk (Nebraska) Divisions made lock-step price increases in March, October, November, and December 2013, as well as January 2014.

Cascade Steel Rolling Mills, the only wire rod producer on the West Coast, and Evraz Rocky Mountain, located in Pueblo, Colorado, also raised their rod prices during this period, but AWPA members report that these mills generally announce their price increases by telephone.

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See Exhibit 1.D. (Nucor Price Increases).
EXHIBIT 1: DOMESTIC ROD PRICE INCREASES

B. GERDAU'S PRICE INCREASES

BEFORE THE U.S. INTERNATIONAL TRADE COMMISSION

IN THE MATTER OF THE ANTIDUMPING AND COUNTERVAILING DUTY INVESTIGATIONS
OF CARBON AND CERTAIN ALLOY STEEL WIRE ROD FROM CHINA
INV. NOS. 701-TA-512 AND 731-TA-1248 (PRELIMINARY)

POSTCONFERENCE BRIEF
ON BEHALF OF
AMERICAN WIRE PRODUCERS ASSOCIATION

FEBRUARY 27, 2014
March 13, 2013

Dear Valued Customer:

Gerdaux Long Steel North America will be raising the prices of all Wire Rod products from its Beaumont, Texas and Jacksonville, Florida steel mills.

This increase will be effective with shipments on April 1, 2013 and will be in the amount of $35/net ton ($1.75/cwt) for all grades and qualities, except CHQ and Welding grades, which will be $43/net ton (2.15/cwt).

If you have any questions, please contact your Gerdaux Long Steel North America Sales Representative or myself at 952-855-4127.

We appreciate your continued support and look forward to satisfying your future steel requirements.

Respectfully,

Edward P. Goettl
Manager Wire Rod Sales
November 1, 2013

Dear Valued Customer:

Effective with new orders placed November 4, 2013, Gerdau Long Steel North America is increasing the price of all Wire Rod Products by 1.50/cwt ($30 per net ton). All confirmed orders as of close of business on Friday November 1, 2013 will be price protected if shipped by November 30, 2013.

If you have any questions, please contact your Gerdau Long Steel North America Sales Representative or myself at 952-855-4127.

We appreciate your continued support and look forward to satisfying your future steel requirements.

Respectfully,

[Signature]

Edward P. Goetti
Manager Wire Rod Sales
December 11, 2013

Dear Valued Customer:

Effective with new orders placed December 11, 2013, Gerdau Long Steel North America is increasing the price of all Wire Rod Products by 1.50/cwt ($30 per net ton). All confirmed orders as of close of business on Tuesday, December 10, 2013 will be price protected if shipped by December 31, 2013.

If you have any questions, please contact your Gerdau Long Steel North America Sales Representative or myself at 952-855-4127.

We appreciate your continued support and look forward to satisfying your future steel requirements.

Respectfully,

Edward P. Goettl
Manager Wire Rod Sales
January 17, 2014

Dear Valued Customer:

Effective with shipments February 1, 2014, Gerdau Long Steel North America is increasing the price of all Wire Rod Products by 1.25/cwt ($25 per net ton).

If you have any questions, please contact your Gerdau Long Steel North America Sales Representative or myself at 952-855-4127.

We appreciate your continued support and look forward to satisfying your future steel requirements.

Respectfully,

[Signature]

Edward P. Goettl
Manager Wire Rod Sales
**EXHIBIT 1: DOMESTIC ROD PRICE INCREASES**

**C. KEYSTONE’S PRICE INCREASES**
March 14, 2013

To Our Valued Customers:

Effective with shipments as of April 1, 2013, Keystone Steel & Wire will increase all wire rod prices by $1.75 per cwt. ($35 per ton).

We thank you for your continued support and look forward to supplying your wire rod requirements in the future. Should you have any questions please contact your sales representative or our office.

Sincerely,

[Todd S. Mowbray Signature]

Todd S. Mowbray
July 15, 2013

To Our Valued Customers:

Effective with shipments as of August 1, 2013, Keystone Steel & Wire will increase all wire rod prices by $.75 per cwt. ($15 per ton).

We thank you for your continued support and look forward to supplying your wire rod requirements in the future. Should you have any questions please contact your sales representative or our office.

Sincerely,

Todd S. Mowbray
November 7, 2013

To Our Valued Customers:

Effective with shipments as of December 2, 2013, Keystone Steel & Wire will increase all wire rod prices by $1.50 per cwt. ($30 per ton).

We thank you for your continued support and look forward to supplying your wire rod requirements in the future. Should you have any questions please contact your sales representative or our office.

Sincerely,

Todd S. Mowbray
December 10, 2013

To Our Valued Customers:

Effective with shipments as of December 30, 2013, Keystone Steel & Wire will increase all wire rod prices by $1.50 per cwt. ($30 per ton).

We thank you for your continued support and look forward to supplying your wire rod requirements in the future. Should you have any questions please contact your sales representative or our office.

Sincerely,

Todd S. Mowbray
January 16, 2014

To Our Valued Customers:

Effective with shipments as of February 1, 2014, Keystone Steel & Wire will increase all wire rod prices by $1.15 per cwt. ($23 per ton).

We thank you for your continued support and look forward to supplying your wire rod requirements in the future. Should you have any questions please contact your sales representative or our office.

Sincerely,

Todd S. Mowbray
EXHIBIT 1: DOMESTIC ROD PRICE INCREASES

D. NUCOR'S PRICE INCREASES
March 11, 2013

Dear Valued Customers:

Effective with shipments on April 1, 2013 NUCOR - Kingman is increasing our transaction price on Wire Rod Products by $40.00/ton ($2.00/cwt).

If any questions should arise, please contact your NUCOR - Kingman sales representative at 1-800-778-0022 or Kingman.Sales@nucor.com.

As always, we thank you for your business and look forward to supplying your future requirements.

Sincerely,

Don Barney
Sales Manager
October 21, 2013

Dear Valued Customer:

Effective immediately with new orders, we are increasing our transaction price on Wire Rod Products by $1.00/cwt. or $20.00 per ton.

All confirmed orders, as of the close of business on October 21, 2013 will be price protected if shipped no later than Friday November 15, 2013.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-778-0022.

Nucor Steel – Kingman thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

[Signature]

Don Barney
Sales Manager
November 11, 2013

Dear Valued Customer:

Effective with shipments December 1, 2013, Nucor Kingman will increase the transaction price on all Wire Rod Products by $1.50cwt or $30/ton.

This announcement will serve as a Revision to our earlier Wire Rod increase dated October 21, 2013.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-778-0022.

Nucor Steel – Kingman thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

[Signature]

Don Barney
Sales Manager
December 12, 2013

Dear Valued Customer:

Effective with shipments January 1, 2014, Nucor Kingman will increase the transaction price on all Wire Rod Products by $1.25/cwt or $25/ton.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-778-0022.

Nucor Steel – Kingman thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

[Signature]

Don Barney
Sales Manager
January 15, 2014

Dear Valued Customer:

Effective with shipments February 1, 2014, Nucor - Kingman will increase the transaction price on all Wire Rod Products by $1.15cwt or $23/ton.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-778-0022.

Nucor Steel - Kingman thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

[Signature]

Don Barney
Sales Manager
March 11, 2013

Dear Valued Customers:

Effective with shipments on April 1, 2013 NUCOR - Connecticut is increasing our transaction price on Wire Rod Products by $40.00/ton ($2.00/cwt).

If any questions should arise, please contact your NUCOR - Connecticut sales representative at 1-800-221-0323.

As always, we thank you for your business and look forward to supplying your future requirements.

Sincerely,

David Perez
Sales Manager
Nucor Steel CT
October 21, 2013

Dear Valued Customer:

Effective immediately with new orders, we are increasing our transaction price on Wire Rod Products by $1.00/cwt. or $20.00 per ton.

All confirmed orders, as of the close of business on October 21, 2013 will be price protected if shipped no later than Friday November 15, 2013.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-221-0323.

Nucor Steel – CT thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

David Perez
Sales Manager
Nucor Steel CT
November 11, 2013

Dear Valued Customer:

Effective with shipments December 1, 2013, Nucor CT will increase the transaction price on all Wire Rod Products by $1.50cwt or $30/ton.

This announcement will serve as a Revision to our earlier Wire Rod increase dated October 21, 2013.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-221-0323.

Nucor Steel -- CT thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

David Perez
Sales Manager
Nucor Steel CT
December 12, 2013

Dear Valued Customer:

Effective with shipments January 1, 2014, Nucor CT will increase the transaction price on all Wire Rod Products by $1.25 cwt or $25/ton.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-221-0323.

Nucor Steel – CT thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

David Perez
Sales Manager
Nucor Steel CT
January 15, 2014

Dear Valued Customer:

Effective with shipments February 1, 2014, Nucor Steel-Connecticut will increase the transaction price on all Wire Rod Products by $1.15cwt or $23/ton.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-221-0323.

Nucor Steel-Connecticut thanks you for your business and appreciates your continued support.

Sincerely,

David Perez
Sales Manager
Nucor Steel-Ct
October 21, 2013

Dear Valued Customer:

Effective immediately with new orders, we are increasing our transaction price on Wire Rod Products by $1.00/cwt or $20.00/ton.

All confirmed orders, as of the close of business on October 21, 2013 will be price protected if shipped no later than Friday November 15, 2013.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-228-8173.

Nucor Steel – NE thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

[Signature]

Nucor Steel – NE Sales Manager
November 11, 2013

Dear Valued Customer:

Effective with shipments December 1, 2013, Nucor CT will increase the transaction price on all Wire Rod Products by $1.50cwt or $30/ton.

This announcement will serve as a Revision to our earlier Wire Rod increase dated October 21, 2013.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-228-8173.

Nucor Steel – NE thanks you for your business and appreciates your continued support and cooperation.

Rob Colton
Nucor Steel – Nebraska Sales Manager
December 12, 2013

Dear Valued Customer:

Effective with shipments January 1, 2014, Nucor - NE will increase the transaction price on all Wire Rod Products by $1.25cwt or $25/ton.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-228-8173.

Nucor Steel – NE thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

Rob Colton
Sales Manager
Nucor Steel - NE
January 15, 2014

Dear Valued Customer:

Effective with shipments February 1, 2014, Nucor - NE will increase the transaction price on all Wire Rod Products by $1.15cwt or $23/ton.

As always we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions please contact your District Sales Manager or the mill direct at 1-800-228-8173.

Nucor Steel – NE thanks you for your business and appreciates your continued support and cooperation.

Rob Colton  
Nucor Steel – Nebraska Sales Manager
December 12, 2013

Dear Valued Customer:

Effective with shipments January 1, 2014, Nucor – South Carolina will increase the transaction price on all Wire Rod Products by $1.25/cwt or $25/ton.

As always, we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions, please contact your District Sales Manager or the mill direct at 1-800-999-7461.

Nucor Steel – South Carolina thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

Ronnie L. Johnson
Sales & Shipping Manager
Nucor – South Carolina
January 15, 2014

Dear Valued Customer:

Effective with shipments February 1, 2014, Nucor - SC will increase the transaction price on all Wire Rod Products by $1.15/cwt or $23/ton.

As always, we will continue to monitor the marketplace and respond accordingly in order to assure you of receiving a competitively priced product.

If you have any questions, please contact your District Sales Manager or the mill direct at 1-800-999-7461.

Nucor Steel – SC thanks you for your business and appreciates your continued support and cooperation.

Sincerely,

Ronnie L. Johnson
Sales & Shipping Manager
Nucor – South Carolina
Structural integrity: Despite slow growth, demand is forecast to rise as investment returns.

IBISWorld Industry Report 23812
Steel Framing in the US

December 2013

Remy Coughlin

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# About this Industry

## Industry Definition
This industry comprises contractors that install steel and precast concrete to produce structural elements, building exteriors and elevator fronts. The industry also includes the installation of other steel products (e.g., setting rods, bars, rebar, mesh and cages) to reinforce poured-in-place concrete, cooling towers and metal storage tanks. The structural steel erection work performed includes new work, additions, alterations, reconstruction, maintenance and repairs.

## Main Activities
The primary activities of this industry are

- Erecting metal and structural steel on buildings and structures
- Erecting prestressed or precast concrete to produce structural elements
- Erecting metal building exteriors
- Erecting metal elevator fronts
- Structural erection on metal rods, bars, rebar, mesh and cages to reinforce poured-in-place concrete
- Erecting cooling towers
- Erecting metal storage tanks for nonliquids (e.g., grain silos)
- Erecting metal storage tanks for liquids other than water
- Erecting structural steel trusses or joists
- Welding work on construction projects (e.g., MIG and TIG welding)

The major products and services in this industry are

- Additions and alterations to existing structures
- Maintenance and repair work and new residential building construction
- New nonbuilding construction (e.g., bridges)
- New nonresidential building construction

## Similar Industries

<table>
<thead>
<tr>
<th>Industry Code</th>
<th>Industry Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>23611b</td>
<td>Apartment &amp; Condominium Construction in the US</td>
</tr>
<tr>
<td>23331</td>
<td>Industrial Building Construction in the US</td>
</tr>
<tr>
<td>23412</td>
<td>Bridge &amp; Tunnel Construction in the US</td>
</tr>
<tr>
<td>23493</td>
<td>Heavy Industrial Facilities Construction in the US</td>
</tr>
</tbody>
</table>

This industry comprises general contractors responsible for the construction of new multifamily residential units.

This industry comprises contractors primarily responsible for constructing (e.g., new work, additions, alterations, maintenance and repairs) industrial and manufacturing buildings.

This industry comprises firms primarily engaged in constructing bridges, viaducts, elevated highways and tunnels.

This industry comprises firms that primarily construct, alter, add to, repair and maintain industrial buildings (except warehouses).
About this Industry

Additional Resources

For additional information on this Industry

www.enr.construction.com
Engineering News-Record
www.ironworkers.org
International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers
www.aesaa.net
Steel Erectors Association of America
www.aisc.org
The American Institute of Steel Construction
# Industry at a Glance

## Steel Framing in 2013

<table>
<thead>
<tr>
<th>Key Statistics</th>
<th>Revenue</th>
<th>Annual Growth 08-13</th>
<th>Annual Growth 13-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snapshot</td>
<td>$14.1bn</td>
<td>0.4%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Profit</td>
<td>$423.8m</td>
<td>$2.8bn</td>
<td>3,710</td>
</tr>
</tbody>
</table>

### Revenue vs. employment growth

#### Value of private nonresidential construction

<table>
<thead>
<tr>
<th>Year</th>
<th>$ Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>250</td>
</tr>
<tr>
<td>07</td>
<td>300</td>
</tr>
<tr>
<td>09</td>
<td>350</td>
</tr>
<tr>
<td>11</td>
<td>400</td>
</tr>
<tr>
<td>13</td>
<td>450</td>
</tr>
<tr>
<td>15</td>
<td>500</td>
</tr>
<tr>
<td>17</td>
<td>550</td>
</tr>
<tr>
<td>19</td>
<td>600</td>
</tr>
</tbody>
</table>

### Products and services segmentation (2013)

- **8%**: Maintenance and repair work and new residential building construction
- **12%**: New nonbuilding construction (e.g., bridges)
- **17%**: Additions and alterations to existing structures
- **63%**: New nonresidential building construction

### Industry Structure

<table>
<thead>
<tr>
<th>Life Cycle Stage</th>
<th>Regulation Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mature</td>
<td>Heavy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue Volatility</th>
<th>Technology Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Medium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital Intensity</th>
<th>Barriers to Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Medium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry Assistance</th>
<th>Industry Globalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Low</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration Level</th>
<th>Competition Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>
Industry Performance

Executive Summary | Key External Drivers | Current Performance

Industry Outlook | Life Cycle Stage

Structural steel erection is an important component in the construction of a range of buildings and infrastructure, including building structures, building exteriors, metal storage tanks and concrete reinforcement. Operators in the Steel Framing industry provide services to nearly every construction market. Industry firms compete against general construction contractors, such as Turner Corporation and Fluor, which employ skilled tradespeople, but are often subcontracted by these larger companies. The market for steel erection services only includes work that can be contracted out as a distinct component of construction.

Over recent years, a recession-induced drop in demand for the industry’s services intensified the competition for new work contracts. Investment in nonresidential construction plummeted 21.1% in 2009 and further in 2010. As competition intensified, industry operators increasingly competed for projects on the basis of price. While operators lowered prices to win work, they also had to implement cost-cutting measures such as decreasing the number of workers on hand. As a result, total employment fell at an annualized rate of 9.0% to 52,511 workers. In the five years to 2013, industry revenue is estimated to increase at a slow average annual rate of 0.4% to $14.1 billion, which is higher largely because of more recent growth. Despite 6.5% growth in 2012 and an additional 5.0% increase expected in 2013, the industry has yet to make significant strides forward.

Over the next five years, general economic improvement, a resurgence in the downstream nonresidential building construction markets and continued investment in infrastructure construction markets such as bridges, tunnels and highways will support industry growth. Competitive pressures are expected to continue over the short term, but improved demand conditions will allow profit margins to rebound. An increase in profit margins will lead more firms to enter the industry, causing the number of enterprises to rise at an average annual rate of 2.6% to 4,211 through 2018. Over the five years to 2018, industry revenue is forecast to increase at an annualized rate of 3.0% to $16.4 billion.

Key External Drivers

Value of private nonresidential construction
Demand for industry services is heavily dependent on investment in the nonresidential building markets, including the commercial, institutional and industrial sectors. Demand also arises from nonbuilding infrastructure markets concerned mainly with the construction of heavy industrial structures (e.g. blast furnaces and grain silos). The value of private nonresidential construction is expected to increase in 2014, presenting a potential opportunity to the industry.

Demand from heavy infrastructure construction
Infrastructure in the United States includes mass transportation, drainage, airports and utilities among others. As infrastructure ages, it requires repair and replacement. Most infrastructure projects require steel and concrete because of its durability. As infrastructure gets older, demand for industry services increases. Demand from heavy infrastructure construction is expected to increase in 2014.
Industry Performance

Key External Drivers continued

**Government consumption and investment**
Demand for industry services is dependent on government investment in municipal building construction, including educational, correctional, and government office facilities, as well as bridges, water projects and schools. Government consumption and investment is expected to increase in 2014.

**Government funding for highways**
Construction of federally funded highways provides increased demand for industry services. Highways are largely composed of steel beams, rebar, concrete and other products provided by the industry. As demand for new highways increases and demand for maintenance and repairs on existing highways increases, the industry will benefit. Government funding for highways is expected to increase in 2014.

**Yield on 10-year Treasury note**
This industry is sensitive to changes in long-term interest rates on investments in large-scale infrastructure and private commercial building projects. Higher interest rates can have a substantially negative effect on the industry. As the cost of borrowing increases, construction activity and demand for framing services becomes limited. The yield on 10-year Treasury notes and interest rates on the whole are expected to increase over 2014, presenting a potential threat to the industry.
Industry Performance

Current Performance

The demand for structural steel erection services swelled in the mid-2000s, driven by the upswing of investment in key nonresidential building and infrastructure markets. Since then, the economic recession and the subsequent slump of investment into the commercial and industrial building markets have significantly hampered the industry's performance. As a result, revenue for the Steel Framing industry is expected to slowly increase at an annualized rate of about 0.4% during the five years to 2013. Though the depth of the downturn has prevented the industry from reaching prerecession levels, rebounding demand in 2013 is expected to help revenue grow about 5.0% to reach $14.1 billion.

The nonresidential building market, which is the source of 66.6% of annual industry revenue, recorded accelerated growth through the mid-2000s as the buoyant US economy encouraged investment into commercial buildings (e.g., offices and retail stores) and industrial capacity, notably warehousing and distribution centers. The recession quickly reversed this upward trend and caused the value of private nonresidential construction to fall at an annualized rate of 5.7% during the five years to 2013.

Demand falls with recession

Demand for structural steel erection services deteriorated in the downstream building markets from 2008 to 2010, reflecting the impact of the severe economic recession. The slump in property investment resulted in the value of commercial building construction declining 37.3% in 2009 and 27.0% in 2010. Office construction activity dropped more than 25.0% per year during this time as projects were canceled or postponed. As unemployment rose and businesses closed, the oversupply of office space created high vacancy rates and low demand for new construction.

Meanwhile, low consumer spending resulted in decreased demand for new retail, restaurant and hotel construction.

When industry contractors noticed their backlogs of work shrinking, they began scaling back their workforce and operations to survive the downturn. As a result, industry employment fell 18.0% in 2009 and 21.3% in 2010 as contractors tightened their belts and let go of employees in reaction to diminished demand for industry services. Although employment has risen slightly through 2013, it remains below prerecession levels. In the five years to 2013, industry employment is expected to decrease at an average annual rate of 6.0% to 52,511.

Some operators were unable to stay profitable, even with severe cost-cutting measures causing them to close many operations. IBISWorld estimates that the number of industry establishments has grown minimally at an average annual 0.5% to 3,845 in the five years to 2013 due to more recent recovery.

Although the injection of federal stimulus funds strengthened demand conditions in road and highway...
Industry Performance

Demand falls with recession continued

construction during and following the recession, it has failed to offset the dramatic declines experienced in other downstream construction markets. The value of nonbuilding construction has stalled in recent years because tight public-sector budgets have caused projects to be delayed or scaled back. The housing construction market has collapsed to its lowest level in decades. A slump of more than 40.0% in the multifamily apartment market in the two years to 2010 had a notably adverse impact on the industry.

Profit margins feel the pressure

Despite a considerable widening of margins during the construction boom leading up to the recession, the industry has experienced an overall reduction in profit over the past five years. During and after the recession, margins severely contracted in response to rising price competition for contracts in downstream construction markets. Many contractors faced hostile bidding environments in which competitors bid for contracts below cost to maintain cash flow and market position. Particularly low bids became common from contractors that followed demand into new markets but lacked the experience to make estimates on specialized projects. Although conditions have improved somewhat in 2013, average profit is expected to equal about 3.0% in 2013.

Limiting factors

The major barrier to industry growth over the medium-to-long term has been the trend toward replacing steel-based construction materials with other materials, such as concrete, glass and mixing polymers, on structures like multistory buildings and grain-handling facilities. Substitution threatens industry growth because companies may lose customers that choose to use different materials; nevertheless, many industry participants have also adapted to working with some of the new materials, including steel-reinforced trusses, beams and prefabricated walls.

One of the most important industry developments during the past five years has been the widespread acceptance of steel-reinforced concrete components for foundation work, walls, flooring and framework. Steel manufacturers have promoted using steel-reinforced concrete because the technique boosts the steel content of new buildings. Despite its high steel content, however, steel-reinforced concrete seldom requires skilled labor; therefore, its widespread acceptance has done more to contain rather than promote industry growth. Most industry operators view the trend as a double-edged sword: it raises demand for their fabrication businesses, which create the steel rebar used in reinforced concrete, but it also lowers demand for field professionals and on-site skilled workers.
Industry Performance

Industry Outlook

The Steel Framing industry is expected to enter a period of sustained growth over the next five years. This recovery will correspond with a long-awaited resurgence in US construction. Anticipated long-term improvements in investment in the transportation and institutional construction markets will also support demand for structural steel erection. As a result, the industry is forecast to record strong revenue growth, increasing at an annualized rate of 3.6% to $16.4 billion in the five years to 2018.

Continuing the strong growth expected in 2013, industry revenue is forecast to jump another 3.7% in 2014 to $14.6 billion as demand from downstream construction markets experience more robust growth. Private nonresidential construction, including commercial and office building construction, is expected to jump 5.9% in 2014 and grow at an annualized rate of 5.8% over the next five years.

Infrastructure trends

Steel framing companies also depend heavily on demand from infrastructure construction, which is dependent on government investment. IBISWorld estimates that government funding for highways will increase at an average annual rate of 2.6%, while government consumption and investment is expected to grow at an average annual rate of 1.6% through 2018. Investment in infrastructure typically means contracting out work to industry operators. This spending is key to increasing industry revenue, as public construction has become a larger portion of industry revenue.

Growth will be sluggish in 2014 as calls for reduced government spending and concerns over the national debt continue to define federal spending patterns. However, as the US economy returns to normalcy and unemployment falls, tax rolls will swell and allow for a return to higher infrastructure spending, particularly at the state level. As a result, state and federal expenditure on municipal buildings and utilities and energy structures is projected to increase more markedly in the latter part of the next five years. Bridge, tunnel, highway and street construction is also expected to grow strongly in the coming years, benefiting industry firms that focus on bridge projects. Demand from the bridge and tunnel construction industry is forecast to grow at an annualized rate of 2.8% over the five years to 2018. The key factors included in underlying activity in the bridge and tunnel construction market are increased funding for renovating and maintaining the existing bridge infrastructure, the start-up of several large-scale projects, the commitment to stable growth in bridge and tunnel funding under a new federal transportation infrastructure model and the push for new sources and methods of funding infrastructure development.
Industry Performance

Profit and size

The industry's profit performance is forecast to improve considerably with the increase in demand for steel erection services. The anticipated recovery in downstream construction markets is expected to boost industry profit higher by 2018 as operators have more projects to fill their queues and price competition lessens as a result.

In reaction to solid demand conditions, the industry is anticipated to experience an upswing in employment, which is forecast to grow at an annualized rate of 1.6% to 56,770 employees during the five years to 2018. Meanwhile, the number of enterprises is forecast to increase at an annualized rate of 2.6% to 4,211 during the same five-year period. The number of firms competing in the industry is projected to slightly lag establishment growth as a result of consolidation among a handful of larger contracting firms competing in the industry. New entrants will continue to face moderately difficult barriers to entry, and general contractors will still prefer experienced contractors with strong reputations locally, particularly as price becomes less of a determining factor in a stronger economic environment.
Industry Performance

The industry is highly dependent on the cyclical pattern of growth in downstream construction markets.

The industry is growing at a slower rate than the US economy.

The industry faces competition from the use of substitute construction products.
Industry Performance

Industry Life Cycle

This industry is considered to be in a mature stage of development and may be at risk of entering a long-term decline stage because of further technological advancements in substitute products. The key factor determining the industry's life cycle is its high dependency on activity in downstream nonresidential building and infrastructure construction markets. In the 10 years to 2018, the industry's contribution to the overall economy (i.e. industry value added) is expected to grow at an average annual rate of 0.2%, compared with annualized GDP growth of 2.1% over the same period.

None of the existing players has a dominant market share, which restricts the possibility of further adding of value, expanded profit margins and technological advances in erection services. Technological advances in steel use are subject to the marketing and research activities of major steel producers and distributors. The Steel Framing industry has little direct influence on the competitiveness of steel products over alternative products, such as concrete and ceramics. As technological advances in substitute products continue, demand for steel framing services may decline.
Products & Markets

Supply Chain  |  Products & Services  |  Demand Determinants
Major Markets  |  International Trade  |  Business Locations

Supply Chain

KEY BUYING INDUSTRIES

11 Agriculture, Forestry, Fishing and Hunting in the US
This industry demands steel erection and maintenance services on steel water tanks and grain storage facilities.

21 Mining in the US
This industry demands steel erection and maintenance services on steel infrastructure.

22 Utilities in the US
This industry demands steel erection and maintenance services on steel infrastructure in electric power, transmission, telecommunications and water services.

2231 Water Supply & Irrigation Systems in the US
This industry demands steel contractors' services, particularly on water storage tanks.

2331 Industrial Building Construction in the US
This industry demands industry services, particularly the erection of large-scale metal clad factories, warehouses and industrial structures (e.g. storage tanks, conveyor systems and so on).

2332a Commercial Building Construction in the US
This industry demands industry services particularly on multi-story buildings.

2332b Municipal Building Construction in the US
This industry demands industry services particularly on multi-story buildings.

2349 Heavy Industrial Facilities Construction in the US
This industry demands industry services, particularly on liquid (not water) storage tanks and blast furnaces.

23611b Apartment & Condominium Construction in the US
This industry creates demand for industry services, particularly on multi-story apartment buildings.

KEY SELLING INDUSTRIES

31-33 Manufacturing in the US
This industry supplies fabricated steel products, sheet metal, electrical equipment, welding consumables, machine tools (e.g. lathes) and structural steels.

3279 Precast Concrete Manufacturing in the US
Operators in this industry supply concrete products used on structural erection projects for post-tensioning, ballasts and more.

4235 Metal Wholesaling in the US
This industry provides metal and mineral wholesaling, including steel bars, plates, rods, sheets and metal strips.

4238 Industrial Machinery & Equipment Wholesaling in the US
This industry supplies capital equipment, such as metal fabricating machinery for lease or purchase.

52 Finance and Insurance in the US
This industry provides financial and insurance services to contractors, notably insurance coverage for professional indemnity, health, workers compensation and income protection.

5324 Heavy Construction Equipment Rental in the US
This industry leases construction equipment, such as cranes, scaffolding and welding equipment.
The Steel Framing industry's services are diverse, and there is considerable overlap between structural steel fabrication and erection. However, industry activity can generally be divided into three main areas: on-site welding work and fabrication, assembly work on a construction site (e.g., post-tensioning) and maintenance work on steel structures. The on-site welding and fabrication of steel components is structural steel erectors' main skilled input. Welding is the bonding of two similar metals by heating each to a molten state and then fusing the metals together. Welding and fabricating work on-site generally includes joining structural steel components (e.g., trusses and beams) using welding equipment and fabricating metal components (e.g., storage tanks, furnaces and oxy-cutting sheet metal) to final specifications prior to assembly.

**New nonresidential building construction**
Nonresidential building construction projects include: office buildings, hospitals, factories, power plants, mining shafts, communication lines, farms, railroads, schools, brokers' commissions and net purchases of used structures. Structural steel erection work on nonresidential projects accounts for 63.0% of the industry's revenue. This proportion has remained relatively stable during the five years to 2013 and is expected to remain consistent through 2018.

**Additions and alterations to existing structures**
Additions and alteration work includes but is not limited to adding, replacing, modifying, relocating, removing steel structures and pipes, such as framework, bridges and air-conditioning ducts. In 2013, this segment is generating an estimated 17.0% of industry revenue. Addition and alteration demand is expected to increase with the level of demand for manufacturing activities during the recovery period. Additionally, this segment is expected to benefit from an increase in government expenditures in transportation infrastructure.

**New nonbuilding construction**
Totaling 12.0% of industry revenue, new nonbuilding construction projects feature structural steel assembly work on construction sites, which often includes a limited amount of welding work but usually involves a large amount of non-welding activity, such
Products & Markets

Products & Services continued

as laying steel structures in foundations, placing steel components in seatings and fixing or joining steel components by bolting, nailing or screwing. These non-welding activities are undertaken in various projects, including erecting prefabricated structural steel components (e.g. silos, bridge spans, framework, steel decking, cladding and roofing) and erecting steel structures and equipment (e.g. high rise cranes, scaffolding and framework for storage tanks) for use on construction sites.

Other services

Other industry-related services, such as new residential building construction, maintenance and repair work, are expected to account for about 8.0% of industry revenue in 2013. Repair and maintenance work grew strongly as a share of revenue during the recession, when new construction ground to a halt. Essential repair work needed for steel structures could not be delayed, leading more industry operators to depend on maintenance and repair contracts when new construction services faced low demand.

Demand Determinants

The principal determinant of demand for industry services is the value of construction put into place in the nonresidential building market and the nonbuilding (i.e., infrastructure) construction market.

Demand from the nonresidential building market

The bulk of industry revenue is generated from work in the nonresidential building construction market. This share of industry revenue fluctuates between 66.0% and 75.0%, depending on the cyclical fluctuations in the construction put into place in several core markets, notably office and manufacturing building construction.

The industry derives about half its revenue from the commercial and institutional building market, especially multi-story office complexes with structural steel reinforcing, steel frames or steel trussed roofs. The balance of work on nonresidential buildings is in the manufacturing and light industrial building market, especially plants and warehouses with steel clad walls or roofs. The principal factors influencing demand for steel erection services in the nonresidential building market include vacancy rates for current and projected premises, rental yields for current and projected premises, prevailing interest rates, expected general economic growth and taxation treatment of building investment compared with other types of assets.

Demand from the nonbuilding construction market

This industry generates about 30.0% to 33.0% of its annual revenue from work in the nonbuilding (i.e., infrastructure) construction market, including construction work on bridges and highways, water storage, sewer infrastructure and tank storage facilities (not water). Key factors determining demand for infrastructure construction include demographic trends (e.g., inward migration and population growth) that impact demand for urban infrastructure, such as electricity, water and sewage; public-sector capital expenditure programs; government policies that impact private-sector investment decisions in the mining, tourism and manufacturing industries (e.g., taxation policies and tariff reform policies); and aging existing capital stock (e.g., electric power plants, water storage and sewage.
Demand Determinants continued

outlets that require upgrades or replacement due to technological obsolescence or write-off.

One-off events, such as damage to water, sewer, oil and other infrastructure resulting from natural disasters, may influence demand for structural steel erection over the short term. For example, the devastation in Louisiana, Mississippi, Alabama and Florida caused by Hurricane Katrina in 2005 stimulated demand for industry services over the years following the disaster, during which reconstruction work was performed.

Substitute products

The shift away from using steel in buildings and other structures negatively impacts demand for structural steel erectors. A range of factors influences the propensity to substitute steel products with alternative materials, such as polymers. Technological advancements in substitute materials have resulted in a gradual long-term trend away from steel products toward more versatile and less expensive alternatives. This trend has been particularly apparent with the increased use of reinforced concrete instead of steel on multistory building and bridge construction projects. The level of construction that uses steel-reinforced concrete slabs, spans or tilt walls is low and often undertaken by lower-skilled laborers or those qualified in other trades (e.g. concreters or carpenters).

Major Markets

The industry generates the bulk of its revenue on private-sector-funded construction projects. According to the historical Economic Census, 75.0% to 80.0% of industry revenue was derived from private construction prior to 2008. Since 2008, this has dropped to 65.0% to 70.0%. Public construction accounted for 20.0% to 25.0% of industry revenue prior to 2008. This has grown to over 35.0% in the past five years.

The value of work done in each segment of the structural steel erection market fluctuates according to the relative strength of the investment cycles in each of the key construction markets. Industry activity is generally concentrated in two broad market sectors: nonresidential buildings and nonbuilding construction.

Infrastructure construction

Infrastructure construction projects currently estimated to account for 31.0% of industry revenue. Services are provided to both building and nonbuilding projects, including transportation projects such as bridge, tunnel and highway construction, utility projects such as water storage and water sewage treatment and communication projects.

Subcontracting services from prime construction contractors (e.g. Bechtel Inc. and Turner Corporation) and government agencies (e.g. US Corps of Engineers and Florida Department of Transport) generates about three-quarters of annual industry revenue. The balance represents earnings from direct contracting by the owner or developer, such as municipal road authorities, electric power corporations, mining companies, manufacturers and farmers.

Commercial and office buildings construction

The commercial and office construction market, which includes construction of retail and office buildings, contributes about 9.9% of annual industry revenue and fluctuates with movements in construction activity in several core markets, notably office building...
Products & Markets

Major Markets continued

Total $14.1bn

construction. In 2013, revenue from this market is expected to be relatively stable. However, the share of work done in building markets has been gradually diluted over the past decade due to the penetration of substitute materials (e.g. reinforced concrete panels).

Residential construction
Residential construction accounts for an estimated 33.4% of industry revenue. This includes rental, vacant and residential additions or improvements. This market suffered in 2008 and 2009 as housing starts plummeted just over 35.0%. The residential construction segment is recovering but growth will be limited due to the increasing use of substitute products.

Other
This segment accounts for 25.7% of industry revenue. It includes education (i.e. schools and administration buildings), religious buildings, health care including hospitals, lodging including hotels and motels, amusement parks and recreation areas and manufacturing facilities. These areas have historically remained fairly stable and IBISWorld expects this trend to continue through 2018.

International Trade
Several leading infrastructure and commercial construction companies take on construction projects outside the United States that involve steel framing and erection services; however, structural steel erection work on “export” projects is typically subcontracted to local contractors in the country where construction occurs, or it is undertaken by the employees of prime contractors and not by industry participants.
Products & Markets

Business Locations 2013

Additional States (as marked on map)

1 VT 2 NH 3 MA 4 RI
0.2 0.4 1.3 0.4

5 CT 6 NJ 7 DE 8 MD 9 DC
1.0 3.4 0.4 1.8 0.1

Establishments (%)

- Less than 3%
- 3% to less than 10%
- 10% to less than 20%
- 20% or more

SOURCE: www.ibisworld.com
Products & Markets

Business Locations

The industry is characterized by many small-scale establishments that contest relatively narrow, geographically dispersed markets. The larger-scale contractors operate in several states but seldom across more than six states. The industry’s geographic distribution generally corresponds to population distribution and economic activity throughout the United States, with concentrated activity in major urban and industrial areas and a large number of participants operating in isolated agricultural and mining regions.

The Southeast region accounts for the largest share of industry establishments (25.1%), which corresponds with the region’s share of the national population (25.4%). Since the mid-1990s, this region has experienced a high level of heavy industrial construction activity (e.g., power plants, oil processing facilities, transmission lines and sporting stadiums).

According to data from the annual survey of County Business Patterns, the West region accounts for 17.9% of industry establishments, closely in line with the region’s share of the US population (17.1%). This high representation likely reflects the substantial level of steel-oriented construction in this region, notably the construction of multistory office complexes, bridges and warehousing and industrial complexes in California, which alone holds 12.5% of total industry establishments.

The Mid-Atlantic region, which includes major population centers New York City and Philadelphia, accounts for 15.2% of establishments, slightly below its share of population (15.5%). The Great Lakes region, with 13.3% of industry establishments, has a high demand for steel erection input into bridges, silos, rural water storage facilities, warehousing and manufacturing infrastructure (notably the automotive industry). Several of the region’s major players concentrate activities on the automotive manufacturing market.

The Southwest region accounts for about 13.9% of industry establishments, which is relatively consistent with the region’s share of the US population (12.2%). The region has marginally lower demand for steel erection of bridges, grain silos and manufacturing infrastructure, but it has high demand for steel erection services related to oil and gas infrastructure and the construction of multistory buildings and sports stadiums.
Competitive Landscape

Market Share Concentration  |  Key Success Factors  |  Cost Structure Benchmarks

Basis of Competition  |  Barriers to Entry  |  Industry Globalization

Market Share Concentration

The Steel Framing industry has a particularly low concentration of activity. The industry is characterized by a large number of small-scale operators that procure contracts to provide specialized labor, materials and expertise on building and infrastructure construction projects. Market share concentration has been increasing over the past five years as larger firms expand their scope of services to its clients. The four largest players account for less than 10.0% of annual industry revenue, with the industry's largest contractor, Schuff International, currently contributing about 3.7% of industry revenue. While steel framing and erection work requires crews of at least several people, many companies in the industry are small and work as subcontractors for other, larger contractors. About 62.0% of industry establishments employ fewer than 10 people, including about 45.0% that employ fewer than five people.

Key Success Factors

Having a good reputation
A reputation for high-quality workmanship, safety, timeliness, efficiency and industrial relations gives an operator an advantage.

Access to multisskilled and flexible workforce
Firms need to be able to quickly increase staff or subcontractors and have a flexible and mobile workforce.

Ability to compete on tender
The bulk of industry revenue is generated through subcontracting to other firms or public instrumentalities. Successful contractors must be capable of winning contracts and ensuring adequate cash flow and profit margins.

Having a high profile in the market
Establishing a dominant position in a specialized market enhances the opportunities to attract quality contracts.

Management of seasonal production
The ability to manage a continuous workflow during periods of cyclical or seasonal fluctuation in demand is essential.

Cost Structure Benchmarks

Profit
The collapse in construction markets severely hurt demand for industry services and led to canceled projects nationwide, leaving many firms in negative financial territory. Conditions have improved in the past few years due to decreases in equipment and material expenditure. However, these costs are set to increase over the next five years, and profit is expected to remain below prerecession highs. Industry profit, or earnings before interest and taxes, is estimated to account for about 3.0% of revenue in 2013 as operators continue to struggle with pricing competition and slow growth in demand for office buildings and other large commercial structures.

Wages
The industry is highly labor intensive, and total labor costs comprise the largest component of the industry's cost structure. Total wages account for an estimated 20.1% of revenue in 2013. Operators cut their workforce during the recession as they saw projects and revenue drop off. However, wages have not recovered as the overall recovery has not been as fast and strong as predicted. IBISWorld estimates that
wages should increase over the next five years as demand from the construction industry increases.

Purchases
Purchases (i.e. construction materials and business operating supplies) absorb about 38.0% of annual industry revenue. Steel framers typically procure the necessary steel beams, bars and other forms for a project, whether they are contracting independently or beneath a general contractor. As such, purchase costs are relatively high in the industry. Many operators have vertically integrated fabrication segments, which helps keep purchase costs down. Companies must also purchase gasoline and other fuels needed to operate machinery and equipment on-site.

Rent and other costs
Rental costs for machinery and buildings are high for structural steel erection contractors relative to most special construction trades because industry contractors often require workspace and equipment for fabrication activity prior to on-site installation. Rent and utilities absorb about 5.0% of revenue. Depreciation costs are average, compared with other specialty contractors, at about 1.4% of revenue. Heavy machinery, such as cranes and heavy transport trucks, is used to raise and frame steel structures. Marketing costs are low because new contracts are typically gained through personal connections and word-of-mouth recommendations. Other costs, which include liability insurance and bonds, administrative costs and equipment repair, are estimated to total 30.9% of revenue in 2013.
Competitive Landscape

Basis of Competition

The quality of workmanship largely determines competition, and price is seldom the sole basis in the competition for new contracts. The importance of price competition increases during periods of cyclical decline in industry demand. Prime contractors that have been subcontracted on medium-scale and large-scale construction projects perform about three-quarters of this industry’s work. To compete for subcontracting work, industry participants need to establish a strong reputation for quality, timeliness and efficiency with prospective prime contractors.

Contractors often establish ongoing relationships with regular end users of structural erection work, such as overhead crane operators and electricity and communication firms that require erection and maintenance of transmission towers.

Industry participants operating in rural markets (i.e. erecting metal silos and water and other liquid storage tanks) generally compete with established prefabricated tank manufacturers for repair service activities and typically establish a local reputation for quality and value through word-of-mouth referrals.

Competition level and trend

The industry has an extremely high degree of competition. The industry is characterized by many small-scale, regionally dispersed contractors that compete against larger construction companies for a share of the total steel erection market. The competitive conditions in this industry are expected to ease slightly over the next five years as demand from downstream construction markets recovers from recessionary lows.

Barriers to Entry

The industry has barriers to entry consistent with most other specialist construction trades. To operate in this industry, new entrants are required to hold the relevant structural steel erection qualifications (principally acquired through apprenticeship training and certificated courses) and must obtain state-based licensing and registration.

Beyond the mandatory qualifications, contractors are increasingly required to hold industry-based accreditation. Formal qualifications are recognized by the American Welding Society and American Institute of Steel Construction, and accreditation includes Certified Steel Erector or Certified Advanced Steel Erector. Membership with the Steel Erectors Association of America enhances the opportunity for new entrants to gain market acceptance.

<table>
<thead>
<tr>
<th>Barriers to Entry checklist</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition</td>
<td>High</td>
</tr>
<tr>
<td>Concentration</td>
<td>Low</td>
</tr>
<tr>
<td>Life Cycle Stage</td>
<td>Mature</td>
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<tr>
<td>Capital Intensity</td>
<td>Low</td>
</tr>
<tr>
<td>Technology Change</td>
<td>Medium</td>
</tr>
<tr>
<td>Regulation &amp; Policy</td>
<td>Heavy</td>
</tr>
<tr>
<td>Industry Assistance</td>
<td>None</td>
</tr>
</tbody>
</table>

Source: www.ibisworld.com

New entrants may encounter difficulties establishing a foothold in this industry due to lack of a proven track record for timeliness and work standards; however, new entrants typically enter the industry by subcontracting through an established firm or labor placement agency and can thereby leverage the reputation of the existing player.
Competitive Landscape

The Steel Framing industry has a low level of globalization. Construction and specialty trade services are seldom traded internationally, and there are few foreign-based steel erection firms operating in the United States. Less than 5.0% of industry revenue is estimated to come from services provided by foreign-owned firms. This is particularly the case with government projects, which typically limit contracts to strictly US-based companies and materials.
Other Companies

Several of the leading players in the Steel Framing industry supply both steel fabrication and erection services. Many of the large general construction firms undertake general contracting work on steel erection projects. Other important industry players not discussed include Ben Hur Construction Co., SME Steel, Buckner Co. and the Williams Group.

**Schuff International**

Estimated Market Share: 3.7%

Arizona-based Schuff International (formerly Schuff Steel) is a group of steel fabrication and erection companies providing a fully integrated range of steel construction services, including design engineering, detailing, joint manufacturing, fabrication, erection and project management. Schuff fabricates and erects structural steel for commercial and industrial construction projects (e.g. office complexes, hotels, casinos, convention centers, sports arenas, shopping malls, hospitals, dams, bridges, mines and power plants). The company's customers include developers, engineering firms and general contractors. Among its major customers are construction giants Fluor Corporation and Bechtel Group. The company was founded in 1976 and in 2012 had total revenue of $447.1 million.

Schuff claims to be the largest steel fabrication and erection company in the United States, erecting more than 200,000 tons of steel each year. Vertical integration has given the company a considerable advantage. By offering an integrated package of steel construction services from a single source, the company is able to efficiently supply design and construction services on large, complex “fast track” construction projects.

In the five years to fiscal 2013 (year-end January), Schuff International's revenue is estimated to decline at an annualized rate of 6.7% to $447.0 million. Up until fiscal 2009, the company benefited from a surge in demand from nearly every downstream construction market. However, the residential construction market collapsed in 2007, and similar declines in the commercial sector followed. The significant downturn in demand from the nonresidential building markets resulted in two consecutive years of declining revenue for the company. In fiscal 2011, Schuff experienced a rebound in performance, with revenue surging 36.4% as construction demand began to recover; however, total revenue remains far below pre-recession highs. In fiscal 2012, company revenue rose a strong 14.0%. In 2013, revenue is expected to be $482.8 million.

**Midwest Steel Inc.**

Estimated market share: 1.0%

Midwest Steel Inc. was founded in 1968 in Detroit and grew rapidly during the 1990s into a multinational steel fabrication and erection specialist. Sister company Indiana Bridge-Midwest Steel Inc., based in Muncie, IN, undertakes Midwest Steel's fabrication activities.

The firm concentrates activities in the industrial, institutional and commercial markets and has extensive experience in erecting structural steel for steel mills, auto-manufacturing plants, power plants, high-rise buildings, stadiums, hospitals and bridges. Midwest Steel has also erected a massive deep-space radio-frequency antenna radar dish for NASA. Most recently, the company was awarded a structural steel erection contract for Toyota's new Highlander vehicle assembly plant, and stamping and paint buildings in Blue Springs, MS. Midwest Steel's revenue is estimated to reach about $145.0 million in 2013.

**American Bridge Company**

Estimated market share: Less than 1.0%

Pennsylvania-based American Bridge Company was founded in April 1900
Major Companies

Other Companies continued

through the JP Morgan-led consolidation of 28 of the nation’s largest steel fabricators and constructors. The firm was formerly a subsidiary of US Steel Corporation, but it has been privately owned since 1987. The American Bridge Company is a vertically integrated engineering, manufacturing and construction company that designs, develops, erects and maintains bridges of all types. The company’s projects also include complex marine and military structures.

American Bridge operates in four divisions: international, which comprises bridge and complex construction outside the United States requiring suspension, arch, movable, truss and cable-stay design; manufacturing, which fabricates structural steel for bridges and industrial uses; marine and facilities, which covers installing piling for ports, associated buildings and security infrastructure, military and government buildings, civil infrastructure and heavy concrete construction; and structural, which covers complex structural projects, including bridges, superstructures and other infrastructure like industrial facilities, stadiums, convention centers, arenas, power plants, aerospace launch complexes, high-rise buildings and movable structures of all types. American Bridge Company operates modern fabricating shops on the Ohio River near Pittsburgh and on the Umpqua River in Oregon.

Recent major contracts by American Bridge include the Woodrow Wilson Bridge Bascule Spans (completed in 2008), the San Francisco Oakland Bay self-anchored suspension bridge construction and the Chesapeake Bay Bridge westbound suspension bridge redecking. New projects include a $64.0-million contract to assist in the construction of the world’s largest observation wheel in Las Vegas, to be completed in 2013; multiple contracts for bridge work in Florida, awarded in Spring 2012; and a recently completed $21.3-million contract for the rehabilitation of Ogdensburg bridge in New York. In 2013, the company is projected to generate industry-relevant revenue of about $120.0 million.

Area Erectors Inc.
Estimated market share: Less than 1.0%
Headquartered in Rockford, IL, Area Erectors provides steel and precast concrete erection services to fabricators and general contractors. The company operates from 6 offices across Illinois and Wisconsin. Initially operating as a steel fabricator and steel erection company, Area Erectors diversified its services in the 1980s and now offers steel erection and precast concrete erection services. Area Erectors employs 360 people and is estimated to generate about $75.0 million in revenue in 2013.

LPR Construction Inc.
Estimated market share: Less than 1.0%
LPR Construction was founded in 1979 and is headquartered in Loveland, CO. LPR specializes in structural steel erection and industrial construction services. The firm employs about 300 people and generates revenue of about $50.0 million annually.

LPR’s key markets are sports, arena and convention center construction and industrial projects. LPR has completed projects from Washington to Florida and claims to be the only structural steel erection contractor in the United States to achieve the Voluntary Protection Program partnership with the Occupation Safety and Health Administration on a regional basis.

LPR credits its teams of experienced journeyman ironworkers for its consistency in quality and safety. In a business characterized by high labor turnover, LPR boasts an average tenure among full-time field personnel of 5-7 years.
Operating Conditions

Capital Intensity | Technology & Systems | Revenue Volatility
Regulation & Policy | Industry Assistance

Capital Intensity

The Steel Framing industry has a low level of capital intensity, with operators spending an estimated $0.07 on capital for every dollar spent on labor. The industry's direct payroll and indirect contracted labor expenses absorb roughly 20.1% of revenue, underlining the labor-intensive nature of industry activity. Much of the welding equipment used on a construction site (e.g., metallic inert gas and tungsten inert gas systems) is relatively low cost and has a long lifespan. Capital inputs, such as overhead cranes, hoists and scaffolding, are often leased by the operator or owned by the prime contractor. Firms maintaining fabrication workshops for pre-assembling steel products require high-cost steel presses and rollers to shape the steel before taking them on-site.

Tools of the Trade: Growth Strategies for Success

New Age Economy
Recreation, Personal Services, Health and Education. Firms benefit from personal wealth so stable macroeconomic conditions are imperative. Brand awareness and niche labor skills are key to product differentiation.

Labor Intensive

Traditional Service Economy
Wholesale and Retail. Reliant on labor rather than capital to sell goods. Functions cannot be outsourced therefore firms must use new technology or improve staff training to increase revenue growth.

Old Economy
Agriculture and Manufacturing. Traded goods can be produced using cheap labor abroad. To expand firms must merge or acquire others to exploit economies of scale or specialize in niche, high-value products.

Investment Economy
Information, Communications, Mining, Finance and Real Estate. To increase revenue firms need superior debt management, a stable macroeconomic environment and a sound investment plan.

Capital Intensive

Heavy Industrial Facilities Construction
Steel Framing
Bridge, Tunnel Construction

Change in Share of the Economy
Capital Intensity continued

and gauntlets), a protective visor to screen ultraviolet rays (helmet or handheld), chipping hammers and wire brushes to clean the surface before and after each weld.

The Steel Framing Industry principally uses welding equipment, including the traditional oxy-acetylene (gas-welding) system, the basic (electrical) arc-welding system and the technologically advanced tungsten inert gas (TIG) and metallic inert gas (MIG) arc-welding systems. The TIG and MIG systems are advancements on the basic arc-welding principle.

Oxy-acetylene welding system
The oxy-acetylene (gas-welding) system involves applying a concentrated flame to the work piece to render it sufficiently molten. The heat delivered by gas welding is relatively low and, hence, this system is usually confined to thin sheets of steel and other soft metals or to locations where a supply of electricity is not available. Gas welding requires a blowpipe, two regulators, canvas-rubber hoses and two gas cylinders (one of oxygen and one of acetylene). It is estimated that about 20.0% of all welding done on construction sites is done using gas. Oxy-flame cutting equipment is essentially the same as an oxy-acetylene welder with an additional nozzle or nozzles for pure oxygen cutting.

Arc-welding system
Electric arc welding is preferred for heavy work using thick steel because of the intensity of the heat generated. The welding arc is achieved using a transformer to convert AC current electricity into very high amperage (50 to 300 amps) and a very low voltage (45 to 60 volts) to create an electric arc of very high intensity (heat in the region of 6,000 degrees Celsius) between the electrode and the metal. The electrode is coated with a varying thickness of flux to give a stable arc and improve the precision of workmanship.

TIG and MIG systems
The TIG and MIG systems are the most commonly used forms of arc-welding systems in structural steel erection because they automatically feed the welding wire onto the work piece and require no flux. These welding systems are "contact or touch" type, which allows the user to keep the electrode in continuous contact with the work piece. The TIG and MIG systems, which are significantly more expensive than other welding systems, shield or envelope the electric arc with an inert gas, thereby preventing oxidation of the molten metal. TIG and MIG systems produce invisible joints, which require no polishing and are widely used for aluminum, stainless steel and nonferrous metals.

The high level of personal risk to industry participants and the resultant Occupational Safety and Health Administration safety regulations and litigation have contributed to substantial improvements in technology and management over the past decade, reducing the amount of time lost through injury.
Operating Conditions

Revenue Volatility

The Steel Framing industry has a medium level of revenue volatility. The spread of demand across many downstream markets has helped to moderate this volatility. Despite high volatility in the downstream construction markets, the Steel Framing industry’s volatility has been slightly tempered by ongoing alteration and repair work and by work in less volatile infrastructure and industrial markets. In the past five years, industry revenue has fallen as much as 5.4% (in 2010) and is expected to grow as much as 5.0% (in 2013). As more construction markets pick up steam during the next five years, revenue volatility is forecast to lessen.

![Volatility vs Growth](image)

A higher level of revenue volatility implies greater industry risk. Volatility can negatively affect long-term strategic decisions, such as the timeframe for capital investment.

When a firm makes poor investment decisions, it may face underutilized capacity if demand suddenly falls, or capacity constraints if it rises quickly.

Regulation & Policy

The industry is highly regulated in terms of trade qualification grounds and occupational safety. Licenses to undertake steel framing activities are issued by each state building authority, and industry associations issue certificates of competency to industry participants that take part in authorized training programs. In addition, industry participants must also hold recognized certificates to operate various types of welding systems (e.g., TIG, MIG, sub-ARC, and oxy-acetylene). Compliance with these regulatory controls typically adds to the costs of operating in this industry but also ensures safer work practices and lower exposure to litigation.

The American Institute of Steel Construction (AISC) supplies training and examination for the Certified Steel Erector (CSE) and the Certified Advanced Steel Erector (CASE), which are rapidly becoming the industry standard.

Certified Steel Erector

These erection contractors provide services necessary for erecting structures, such as schools, shopping centers, light manufacturing plants, warehouses, low-rise beam and column structures, light truss structures, simple non-continuous bridges and steel frame buildings up to 10 stories high. Management must express its commitment to quality and safety and demonstrate a commitment to minimizing the risk of accidents. A CSE must have the following items: erection plan, formal safety plan, program to promote project planning, formal
Operating Conditions

program to monitor compliance with required welding and bolting procedures and a written substance abuse plan and policy.

Certified Advanced Steel Erector
These erection contractors provide services necessary for erecting structures, such as large public and institutional buildings, heavy manufacturing plants, bunkers and bins, major bridges, continuous girder bridges, railroad bridges, powerhouses, major industrial facilities, locks and dams, high-rise structures taller than 10 stories, as well as repairing and rehabilitating existing steel structures. Management must demonstrate its commitment to quality and safety. The organization must demonstrate the capacity and experience necessary to erect complex steel structures, which involves techniques and requirements including but not necessarily limited to construction in water, staged construction for maintaining traffic, coordination with railroads, composite construction, concrete-core construction, close tolerance erection (as in architecturally exposed structural steel), use of gantry and other specialized crane systems and implementation of the quality and safety systems defined by AISC. A CASE must comply with the requirements to be a CASE as well as the following additional items: have experience in retrofitting and maintenance; have experience with complex projects, such as working over water and railroad tracks; have experience with large-scale erection projects; have experience and equipment for rivet removal; and have a written procedure for jacking and the use of false work.

In addition, the AISC provides certification across other categories, such as conventional steel building structures, complex steel building structures, simple steel bridges, major steel bridges, metal building systems, sophisticated paint endorsement and fracture critical endorsement.

The American Welding Society provides training and examination for advanced certificates in welding, including Certified Welding Inspector, Senior Certified Welding Inspector, Certified Welding Educator and Nondestructive Examination (NDE) Inspector; these certificates meet with codes, standards and specifications stipulated in the American National Standards Institute publication D1.1 Structural Welding Code – Steel.

Safety regulations
The Steel Framing industry must comply with stringent safety standards. The Occupational Safety and Health Administration within the US Department of Labor sets the compliance standards for the steel erection industry (Standards – 29 CFR) under Part 1926 Subpart R – Steel Erection. These regulations cover 1926.752 – Site layout, site-specific erection plan and construction sequence; 1926.753 – Hoisting and rigging; 1926.754 – Structural steel assembly; 1926.755 – Column anchorage; 1926.756 – Beams and columns; 1926.757 – Open web steel joists; 1926.758 – Systems-engineered metal buildings; 1926.759 – Falling object protection; 1926.760 – Fall protection; and 1926.761 – Training.
Operating Conditions

Industry Assistance

This industry provides services and is therefore not protected by any import tariff. Nevertheless, many government contracts for infrastructure construction projects are limited to US-based firms, thereby reducing competition from foreign steel framing companies. In 2012, the government contracted out $14.7 billion to industry operators. The top spenders were the Department of Defense and the Department of Transportation.
## Key Statistics

### Industry Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue ($m)</th>
<th>Industry Value Added ($m)</th>
<th>Establishments</th>
<th>Enterprises</th>
<th>Employment</th>
<th>Exports</th>
<th>Imports</th>
<th>Wages ($m)</th>
<th>Domestic Demand</th>
<th>Total Value of Construction ($m)</th>
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<tbody>
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### Annual Change

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<tr>
<th>Year</th>
<th>Revenue (%)</th>
<th>Industry Value Added (%)</th>
<th>Establishments (%)</th>
<th>Enterprises (%)</th>
<th>Employment (%)</th>
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<th>Imports (%)</th>
<th>Wages (%)</th>
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### Key Ratios

<table>
<thead>
<tr>
<th>IVA/Revenue (%)</th>
<th>Imports/Revenue (%)</th>
<th>Exports/Revenue (%)</th>
<th>Revenue per Employee ($'000)</th>
<th>Wages/Revenue (%)</th>
<th>Employees per Est.</th>
<th>Average Wage ($)</th>
<th>Share of the Economy (%)</th>
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</thead>
<tbody>
<tr>
<td>2004</td>
<td>28.28</td>
<td>N/A</td>
<td>N/A</td>
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<td>25.98</td>
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<td>2005</td>
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<td>248.71</td>
<td>20.24</td>
<td>14.49</td>
<td>50.3377</td>
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### Sector Rank

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<tr>
<th>Economy Rank</th>
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<th>568/1325</th>
<th>556/1324</th>
<th>482/1324</th>
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<th>N/A</th>
<th>444/1325</th>
<th>N/A</th>
</tr>
</thead>
</table>

### Figures are in billions adjusted 2013 dollars. Rank refers to 2013 data.

Source: [webpage URL]
Jargon & Glossary

Industry Jargon

**ELECTRIC ARC WELDING** A process by which a power supply is used to create an electric arc between the electrode and the base material, preferred for work on thick steel because the high intensity of the heat it generates.

**GENERAL CONTRACTOR** The construction management firm hired to oversee every aspect of a build-out, including hiring subcontractors and specialized labor.

**TUNGSTEN INERT GAS (TIG)** An arc welding process that uses a tungsten electrode to produce the weld.

IBISWorld Glossary

**BARRIERS TO ENTRY** High barriers to entry mean that new companies struggle to enter an industry, while low barriers mean it is easy for new companies to enter an industry.

**CAPITAL INTENSITY** Compares the amount of money spent on capital (plant, machinery, and equipment) with that spent on labor. IBISWorld uses the ratio of depreciation to wages as a proxy for capital intensity. High capital intensity is more than $0.333 of capital to $1 of labor; medium is $0.125 to $0.333 of capital to $1 of labor; low is less than $0.125 of capital for every $1 of labor.

**CONSTANT PRICES** The dollar figures in the Key Statistics table, including forecasts, are adjusted for inflation using the current year (i.e., year published) as the base year. This removes the impact of changes in the purchasing power of the dollar, leaving only the "real" growth or decline in industry metrics. The inflation adjustments in IBISWorld’s reports are made using the US Bureau of Economic Analysis’ Implicit GDP price deflator.

**DOMESTIC DEMAND** Spending on industry goods and services within the United States, regardless of the country of origin. It is derived by adding imports to industry revenue, and then subtracting exports.

**EMPLOYMENT** The number of permanent, part-time, temporary, and seasonal employees. Working proprietors, partners, managers, and executives within the industry.

**ENTERPRISE** A division that is separately managed and keeps management accounts. Each enterprise consists of one or more establishments that are under common ownership or control.

**ESTABLISHMENT** The smallest type of accounting unit within an enterprise, an establishment is a single physical location where business is conducted or where services or industrial operations are performed. Multiple establishments under common control make up an enterprise.

**EXPORTS** Total value of industry goods and services sold by US companies to customers abroad.

**IMPORTS** Total value of industry goods and services brought in from foreign countries to be sold in the United States.

**INDUSTRY CONCENTRATION** An indicator of the dominance of the top four players in an industry. Concentration is considered high if the top players account for more than 70% of industry revenue. Medium is 40% to 70% of industry revenue. Low is less than 40%.

**INDUSTRY REVENUE** The total sales of industry goods and services (exclusive of excise and sales tax); subsidies on production; all other operating income from outside the firm (such as commission income, repair and service income, and rent, leasing and hiring income); and capital work done by rental or lease. Receipts from interest, royalties, dividends and the sale of fixed tangible assets are excluded.

**INDUSTRY VALUE ADDED (IVA)** The market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry’s contribution to GDP, or profit plus wages and depreciation.

**INTERNATIONAL TRADE** The level of international trade is determined by ratios of exports to revenue and imports to domestic demand. For export revenues: low is less than 5%, medium is 5% to 20%, and high is more than 20%. Imports/domestic demand: low is less than 5%, medium is 5% to 35%, and high is more than 35%.

**LIFE CYCLE** All industries go through periods of growth, maturity and decline. IBISWorld determines an industry’s life cycle by considering its growth rate (measured by IVA) compared with GDP; the growth rate of the number of establishments; the amount of change in the industry’s products; and the rate of technological change. The life cycle is then mapped onto the industry’s output and services.

**NONEMPLOYING ESTABLISHMENT** Businesses with no paid employment or payroll, also known as nonemployers. These are mostly set up by self-employed individuals.
Jargon & Glossary

IBISWorld Glossary continued

PROFIT IBISWorld uses earnings before interest and tax (EBIT) as an indicator of a company's profitability. It is calculated as revenue minus expenses, excluding interest and tax.

VOLATILITY The level of volatility is determined by averaging the absolute change in revenue in each of the past five years. Volatility levels: very high is more than ±20%; high volatility is ±10% to ±20%; moderate volatility is ±3% to ±10%; and low volatility is less than ±3%.

WAGES The gross total wages and salaries of all employees in the industry. The cost of benefits is also included in this figure.
At IBISWorld we know that industry intelligence is more than assembling facts. It is combining data with analysis to answer the questions that successful businesses ask.

Identify high growth, emerging & shrinking markets
Arm yourself with the latest industry intelligence
Assess competitive threats from existing & new entrants
Benchmark your performance against the competition
Make speedy market-ready, profit-maximizing decisions

IBISWorld
Where knowledge is power

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EXHIBIT 7
Construction: Industry Forecasts

Highlights

A year of contrasting fortunes in 2013 for the construction sector, powering ahead in some economies, characterised by ongoing wrenching contraction in others.

Growth in construction activity in China is likely to slow from last year's heady pace, owing to a GDP forecast downgrade in 2015, and efforts by the authorities to tilt the economy more towards consumption spending, and also to curb the activities of the shadow banking sector.

The long boom in infrastructural spending in Australia related to the mining boom appears to be drawing to a close, giving rise to a net contraction in construction spending this year.

Higher interest rates and weak currencies in emerging markets are detrimental to the construction sector there.

In Canada, despite overheated conditions in some housing markets, ongoing infrastructural upgrades should underpin construction activity overall.

Global construction output is projected to post more than 4% growth this year, a significant lift from the 2.5% registered in 2013.

<table>
<thead>
<tr>
<th>Construction</th>
<th>Annual percentage changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1.1</td>
</tr>
<tr>
<td>France</td>
<td>-1.7</td>
</tr>
<tr>
<td>Italy</td>
<td>-3.6</td>
</tr>
<tr>
<td>UK</td>
<td>-0.9</td>
</tr>
<tr>
<td>Spain</td>
<td>-6.7</td>
</tr>
<tr>
<td>EU15</td>
<td>-2.6</td>
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<tr>
<td>United States</td>
<td>-3.1</td>
</tr>
<tr>
<td>Japan</td>
<td>-2.7</td>
</tr>
<tr>
<td>Developed countries</td>
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<tr>
<td>EASTERN EUROPE (EU13)</td>
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</tr>
<tr>
<td>Brazil</td>
<td>5.4</td>
</tr>
<tr>
<td>Russia</td>
<td>2.4</td>
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<td>India</td>
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<td>China</td>
<td>13.4</td>
</tr>
<tr>
<td>BRICs</td>
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<tr>
<td>Emerging Markets</td>
<td>6.8</td>
</tr>
<tr>
<td>World</td>
<td>-0.4</td>
</tr>
</tbody>
</table>

Note: Output is measured in value-added terms in 2005 prices, unless otherwise stated.
Forecast overview

A Year of Feast or Famine

Two thousand and thirteen was a year of feast or famine for the construction sector in most economies. In certain economies the sector rebounded powerfully, in others further wrenching contraction underscored ongoing economic weakness.

Fortunately, powerful expansion was the order of the day in the largest economies — the US, Japan, China — and more modest recoveries occurred in other important economies such as Germany (in the latter part of the year), and Sweden. There were also a number of smaller economies where the sector exhibited impressive vigour, such as South Korea, Turkey, Hungary, Norway, Ireland, Latvia, Chile, and New Zealand.

However, in Mexico a “perfect storm” for the construction sector was an unwelcome feature of an economy that fell well short of expectations. Eurozone countries such as Italy and the Netherlands registered hefty declines in keeping with their economic angst. In Australia — long the lucky economy — the protracted boom in mining investment is drawing to a close, and a drawdown in infrastructural investment is likely to lead to shrinkage of construction spending overall.

For many economies the question driving the forecast for construction in 2014 and beyond relates to the role of the public sector. In countries such as China, Japan, and South Korea the question is for how much longer a surge in public sector expenditures will continue to fuel a boom in construction activity. In short, it seems most probable that the pace of spending will ease. Conversely, in Mexico and the Eurozone, the question instead is whether stalled public sector infrastructural investment programmes can resume, especially as austerity loosens its grip in the Eurozone. In Canada while overheated conditions in some housing markets has lead to a 40% drop in multi-unit housing starts in Toronto, ongoing expenditures to renew the country’s infrastructure coupled to enviable public finances seems likely to avert a major drawdown in construction overall, contrary to the prognostications of some bearish commentators.
China in particular appears to be at the crossroads. It is common cause that the authorities boosted infrastructural investment and increased spending on low cost housing to counteract a possible downturn last year, with the result that the construction sector expanded by 10%, outstripping the economy overall. In the future, though, the authorities have an objective of rebalancing the economy away from investment-related activities and towards a greater reliance on consumption to drive growth. Measures are being introduced to rein in the shadow banking sector, an important source of finance for much construction activity.

At the headline level, our forecast GDP growth has been trimmed by 0.5% in 2015, to below 7%. All of these factors would argue for a slowdown in construction spending. However, the level of air pollution in major cities is a major concern, and China has an already established commitment to increasing the role of clean energy sources in power generation. The migration of the population from the rural hinterland to the cities has yet to end, and in the long-term living standards are edging ever closer to western levels. These are supportive arguments for construction spending. Overall, the pace of increase may moderate from 2013's policy induced surge, even at times dipping below the rate of GDP growth.

While the tumult in emerging market currencies appears to have settled, this restoration of calm has been achieved at the cost of higher interest rates, dramatically so in countries such as Brazil, Turkey and India. Even so, construction in Brazil is set to firm overall, despite the mediocre economic outlook, while the sector in Turkey appears set to remain impressively strong. Growth in India too is projected to remain robust by global standards, albeit muted in relation to its own recent history.

Much uncertainty continues to revolve around construction in the Eurozone. Civil engineering and infrastructural activity has been a particular casualty of austerity, as it often is, typically falling foul of measures to pare government expenditure. But austerity may well ease off somewhat, and the overall Eurozone PMI is strong right now, stronger then in other major regions!

Bear in mind that the G20, in a communique issued this week, has undertaken to raise the growth trajectory 2% points above what is currently projected based on current policies over the next five years, with infrastructural investment central to the policy measures proposed. It remains to be seen how much muscle lies behind this policy initiative.
Forecast risks

In economies such as China, Japan, South Korea, and Hungary, construction sector strength has been at least in part powered by public sector spending. The surge in government spending could prove to be short-lived, leading to a reversal of fortunes in the construction sector.

Against this, substantial scepticism in relation to prospects for the Eurozone, leaves scope for an upside surprise. The aggregate PMI for the Eurozone was in February the strongest of any major economic zone. We remain heartened by prospects for the Spanish construction sector, although this is not evident in the 2013 GVA GDP data.

There is also the sometimes patchy nature of the construction data itself, and the need to make inferences for forecasting purposes from imperfect sources. In important economies such as Japan and the Netherlands, series related to the breakdown of construction sector output were recently discontinued. In Spain and Mexico different data series that purportedly measure the same activity give quite contrasting accounts of 2013 outcomes.

The rapidly unfolding events in Ukraine have invoked the possibility of an escalation of East/West tensions, which would impact adversely on both Russian and Eurozone economies and construction.

Where is construction expanding fastest?

<table>
<thead>
<tr>
<th>Construction - Top 10 fastest growing countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Annual percentage changes)</td>
</tr>
<tr>
<td>Iraq</td>
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<tr>
<td>Uruguay</td>
</tr>
<tr>
<td>Malaysia</td>
</tr>
<tr>
<td>Venezuela</td>
</tr>
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<td>Philippines</td>
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<tr>
<td>Latvia</td>
</tr>
<tr>
<td>Ecuador</td>
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<tr>
<td>Estonia</td>
</tr>
<tr>
<td>New Zealand</td>
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<tr>
<td>Hong Kong</td>
</tr>
</tbody>
</table>

Where is construction suffering the most?

<table>
<thead>
<tr>
<th>Construction - Top 10 slowest growing countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Annual percentage changes)</td>
</tr>
<tr>
<td>Cyprus</td>
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<tr>
<td>Greece</td>
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<td>Portugal</td>
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<td>Croatia</td>
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<tr>
<td>Spain</td>
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<tr>
<td>Netherlands</td>
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<td>Ukraine</td>
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<tr>
<td>UK</td>
</tr>
<tr>
<td>Ireland</td>
</tr>
<tr>
<td>Slovenia</td>
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</table>
Risk Scenario analysis

Three risk scenarios place the construction sector at or near the top of the rankings in terms of their relative impact. This is because the contractionary forces that would be unleashed exert a quite powerful influence on the construction sector, while the offsetting influences such as lower exchange rates do little to benefit the construction sector, which is primarily under the sway of domestic forces.

**Baseline**: The world economy should exhibit stronger growth this year than last, expanding by 2.8% up from 2.1%. But growth is a little disappointing compared to expectations that were held a year ago, especially in countries such as Brazil and India. There are also doubts about the resilience of consumer spending in the US. This scenario carries a 50% probability.

**Capital outflows from emerging markets intensify**: The perturbation in emerging market currencies may have been arrested, at least temporarily, but at the price of higher interest rates. Unfortunately, construction is not underpinned by currency weakness, but is sensitive to any credit crunch arising from capital outflows, especially allied to fluctuations in interest rates. Consequently, the simulations show that construction sector output would be quite severely impacted should this scenario, to which we attach a 10% probability, materialise.

**Banking Crisis in China**: This scenario would be prompted by Fed tapering, declining commodity prices, and slumping property values in the major cities in China. Because the property sector would be heavily implicated in the downturn, and especially if the shadow banking sector which funds much construction sector activity in China was found to be undercapitalised, and bankruptcies spread to property developers, there would be a major effect on construction sector output. The global impact on construction sector output overall would result from material slowdown in the US and other economies, and that construction sector growth in the US is projected to be robust, so there is ample scope for a slowdown. This scenario also carries a 10% probability.

**The Eurozone slumps into deflation**: Since deflation principally exerts its detrimental influence by increasing the real burden of debt, and provoking a wave of bankruptcies, the construction sector, even if not the worst hit of all sectors, would again be markedly
Impaired by such an eventuality. Credit flows would dry up and since construction activity is credit-funded, and construction firms tend to have rather large debt loads, this would have repercussion through the sector. The effect would be softened somewhat by lower interest rates, given the interest rate sensitivity of the construction sector. A further partial offsetting effect would occur if the public sector took the decision to capitalise on low interest rates and boost spending on infrastructural projects to impart an economic stimulus. We assign a 15% probability to this scenario.

**US surprises on the upside**

Although there have been a plethora of sub-par data releases of late, these could be sending false signals about the underlying strength of the US economy, which could instead perform more strongly than expected. Construction sector output is already projected to expand at a brisk pace, with fairly limited additional upside. Moreover, a stronger economy would give rise to higher bond yields, which would exert a dampener on any additional construction sector activity. From the vantage point of countries other than the US, it would be export sectors rather than construction that would benefit from a stronger US economy. We attach a 10% probability to this scenario.
## Construction

<table>
<thead>
<tr>
<th>Region</th>
<th>Baseline</th>
<th>EM capital outflows intensity</th>
<th>China banking crisis</th>
<th>Eurozone deflation</th>
<th>US upside surprise</th>
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<tr>
<td>US Baseline</td>
<td>2.9</td>
<td>5.8</td>
<td>6.1</td>
<td>5.8</td>
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<td>5.9</td>
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<td>Eurozone deflation</td>
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<td>7.2</td>
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<td>US upside surprise</td>
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</table>
China banking crisis (10%)
China's credit bubble quietly becomes a crisis. NPLs rise rapidly, and banks are forced to backstop the economy.
Growth falls well below 5% pa, despite government intervention, and is limited by US credit growth in the US.
Other emerging economies are hit hard, and the eurozone and Japan fall back into recession. The US fares better, but growth still falls to near-negative rates.

Baseline (50%)
US growth accelerates as impact of fiscal austerity fades and strong competitiveness drive investment.
Momentum builds slowly in Europe as austerity fades, but tax rise slows Japan's growth.
Fragile emerging markets remain under pressure and continue to tighten policy. Rebalancing in China continues.

Capital flows out of emerging markets (15%)
Global policies are too weak, and emerging markets suffer a forced liquidation.

Eurozone slides in deflation (10%)
Weak demand, excess capacity and strong euro push Eurozone into deflation. CDP falls for another two years.
ECB only responds late with further liquidity boost. CMT is activated.
Peripherals require banking union to stay in EMU.
Global risk aversion increases as stability of EMU is again questioned.

Financial fragility
Domestic demand fragility
## Construction

(Annual percentage changes unless specified)

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### OECD

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### EMERGING MARKETS

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**Construction shares**

**World**

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- 0.67
- 0.67
- 0.67
Key Macro Drivers

House building is heavily dependent on trends in the wider economy, labour markets, interest rates, credit conditions and (in the long term) demographics. It can also be prone to 'booms', with subsequent stock 'overhangs' and/or high prices affecting conditions. As a result, recent trends have varied considerably across countries, for example being negative in Italy and the Netherlands, while the US sees a sharp bounce from a very low base.

Non-residential activity depends on private and public investment, with the latter now being cut in many developed countries having been ramped up during the 2008-09 recession. The outlook for commercially-driven investment meanwhile was more positive in late 2010 and early 2011, following a tumultuous fall in 2009, but prospects have since stalled.
Latest Monthly Trends

Recent data pertaining to the US construction sector mirrored the sub-par data releases in the rest of the economy that have yet to be fully explained. Housing starts dived 16% in January, to 880,000 at a seasonally adjusted annual rate, from above the 1m mark in December. Building permits also fell, by 5.4%. The data may understate the underlying strength in both. 2013 was the strongest year for the US construction sector since 2007. Labour shortages are starting to become evident.

Revised UK data for 2013 have just been released: construction sector output now shows a modest advance of 0.2% in Q4 compared to an initial estimate of a slight decline. Overall UK construction sector output rose 1.35% in all of 2013, following a contraction of 7.5% in 2012. The strongest rate of advance in the current cycle thus far was in Q3, when the sector expanded 2.63%.

Is there any evidence yet of the boost to Japan’s construction sector from public sector expenditure fading? Hardly; construction put in place in the public sector rose 23.4% in nominal terms in Q4 2013 from the previous year, only slightly lower than the figure of 25.7% that was recorded in Q3.
China: House Prices

% year

2006 2007 2008 2009 2010 2011 2012 2013 2014

Residential

Beijing

Shanghai

China: Real Estate Climate

March 1995 = 100

Jan-09 Jan-10 Jan-11 Jan-12 Jan-13 Jan-14

Source: Haver Analytics

Construction: House prices

% year

Jan-09 Jan-10 Jan-11 Jan-12 Jan-13 Jan-14

UK

US

3 month moving average

Source: Halifax / National Association of Realtors

US: House sales

% year

Jan-09 Jan-10 Jan-11 Jan-12 Jan-13 Jan-14

Existing houses

New houses

3 month moving average

Source: Haver Analytics

Industry Output - Construction

Value Added Index (2005=100) and year-on-year % changes, seasonally adjusted

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Forecast in Detail – Europe, Middle East & Africa

EU15: Construction output growth

Source: Oxford Economics

EUS: Construction by component

Source: Oxford Economics

Construction: Output

Source: Oxford Economics

Construction: Output

Source: Oxford Economics

Construction: Output

Source: Oxford Economics

Construction: Output

Source: Oxford Economics
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**Detailed output:**

local currency bn, 2005 prices

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* These series do not correspond to official data, but are Oxford Economics estimates based on official measures of total construction sector GVA and other data such as fixed investment in the three types of structure.
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<tr>
<td>% change y-o-y</td>
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</table>

| **ARGENTINA**         | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 164.3 | 149.3 | 154.4 | 191.7 | 168.6 | 178.5 |
|                       | 2.4  | 2.1  | 4.1  | 4.8  | 4.3  | 4.1  |
|                       | -11.6 | 22.1  | 2.3  | 3.0  | 3.0  | 4.1  |

| **BRAZIL**            | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 130.8 | 141.0 | 145.9 | 149.4 | 151.4 | 154.3 |
|                       | 1.4  | 2.2  | 2.8  | 3.1  | 1.4  | 1.9  |
|                       | 5.4  | -0.0  | 2.9  | 4.7  | 2.3  | 1.5  |

| **CHILE**             | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 135.8 | 156.8 | 159.5 | 171.7 | 184.9 | 183.3 |
|                       | 8.1  | 15.5  | 8.1  | 4.5  | 4.4  | 4.4  |
|                       | -0.9  | 5.2  | 4.4  | 7.3  | 3.9  | 3.9  |

| **COLOMBIA**          | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 102.6 | 178.1 | 185.5 | 195.0 | 203.8 | 212.8 |
|                       | 6.3  | 9.5  | 4.6  | 4.8  | 4.5  | 4.4  |
|                       | 5.0  | -10.0 | 6.9  | 6.0  | 5.5  | 4.2  |

| **ECUADOR**           | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 169.5 | 181.1 | 180.3 | 198.9 | 207.7 | 215.6 |
|                       | 14.8  | 10.9  | 4.8  | 5.1  | 14.4  | 3.8  |
|                       | -5.7  | 2.5  | 9.9  | 3.3  | 3.3  | 3.3  |

| **MEXICO**            | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 134.8 | 111.2 | 112.5 | 158.9 | 125.4 | 131.9 |
|                       | 2.7  | -5.8  | 0.2  | 5.7  | 5.5  | 5.1  |
|                       | -1.9  | 3.3  | 6.3  | 5.0  | 2.1  | 4.7  |

| **URUGUAY**           | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 134.9 | 147.0 | 155.1 | 150.1 | 166.0 | 173.9 |
|                       | 18.7  | -2.6  | 2.8  | 4.7  | 5.0  | 4.7  |
|                       | 2.7  | -5.4  | 4.0  | 5.2  | 2.9  | 3.1  |

| **VENEZUELA**         | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 189.5 | 189.5 | 195.5 | 200.3 | 208.4 | 216.7 |
|                       | 10.6  | -4.3  | 2.3  | 3.5  | 4.1  | 4.0  |
|                       | -7.5  | 4.8  | 1.9  | 3.1  | 3.1  | 3.1  |

| **AMERICAS**          | **Value Added Index, 2005=100** |
| **TOTAL**             | 41-43  |
| % change y-o-y        | 102.4 | 104.4 | 109.3 | 115.2 | 121.1 | 127.1 |
|                       | 4.8  | 2.9  | 4.7  | 5.4  | 5.1  | 4.9  |
|                       | 0.7  | -1.4  | 1.0  | -2.5 | 4.4  | 4.0  |
## Construction

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<th>Civil Engineering</th>
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<td>% change y-o-y</td>
<td>% change y-o-y</td>
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*These series do not correspond to official data, but are Oxford Economics estimates based on official measures of total construction sector GVA and other data such as fixed investment in the three types of structure.*
Forecast in Detail – Asia Pacific

Asia Pacific: Construction output growth

Japan: Construction by component

Japan: Construction output growth

Construction: Output

Construction: Output

Economist: Graham Boyd, Senior Economist | Tel: +44 20 7803 1447 | e-mail: gboyd@oxfordeconomics.com
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### Asia Pacific: Construction

**NACE 48**

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**Output**

Value Added Index, 2005=100
### Construction

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<th>Non-Residential Building</th>
<th>Civil Engineering</th>
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<td></td>
</tr>
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<td>8.1</td>
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*These series do not correspond to official data, but are Oxford Economics estimates based on official measures of total construction sector GVA and other data such as fixed investment in the three types of structure.*
EXHIBIT 8
Construction contractors and equipment distributors are optimistic that local non-residential construction activity will improve in 2014 compared to the prior year. The Optimism Quotient (OQ) — this survey's primary benchmark for measuring construction industry executive sentiment — is at a historic high of 124, up 18 points from 106 in 2013 and up from the survey low of 42 in 2009.
A message from Wells Fargo Equipment Finance

The construction industry has come a long way over the last five years. After tumbling to an all-time low of 42 in January 2009, the Optimism Quotient (OQ) has climbed steadily and reached new high points in two of the last three years. For 2014 the OQ is an unquestionably positive 124 — the highest overall score in this metric’s 18-year history. Executives overwhelmingly expressed anticipation that local non-residential activity this year will increase compared to 2013.

We see this optimism in responses from across the country and among contractors, dealers, and other stakeholders alike. In contrast to previous Forecasts, we're seeing more consistency between residential and non-residential construction; the optimism about improvement in both sectors is equally positive. However, we also see signs of hesitancy about the strength of the economic recovery that are tempering overall enthusiasm.

You'll find greater detail in the pages of this Forecast, including evidence for the following findings:

- **Equipment rental will remain strong.** Equipment users and sellers both say that this growing trend will not slow down in 2014. More contractors than a year ago say they will be renting. Distributors and equipment rental companies almost universally say they will maintain or grow the size of their rental fleets.

- **Equipment acquisition will also rise, slightly.** More contractors than a year ago say they will increase new and used equipment acquisitions. Consistent with our August 2013 survey, we found a meaningful proportion of contractors who are willing to acquire equipment online without personally inspecting the asset.

- **There is still some concern about the economy.** "Economic uncertainty" was listed by contractors as the greatest risk to the U.S. construction industry in 2014. Given that more than 80% of contractors said they want to keep the equipment they buy for 60 months or more, we don't see it as a surprise that contractors are still using rentals.

This year we had the strongest response we've seen since moving to an online survey format. More than 500 construction industry executives from all regions of the country participated. Thank you for sharing your opinions and views about the industry!

Although there is still some hesitancy about the strength of the economic recovery, optimism about incremental growth has been strong over the last few years. Are you ready to take advantage of these growth opportunities with an up-to-date equipment acquisition strategy? When you need assistance creating that strategy or putting it into action, the construction specialists at Wells Fargo Equipment Finance can help.

Make it a great year!

John Crum, National Sales Manager
Wells Fargo Equipment Finance
Construction Group
412-454-4629
john.d.crum@wellsfargo.com

Wells Fargo Equipment Finance provides competitive fixed- and floating-rate loans and leases covering a full range of commercial equipment for businesses nationwide in the United States and Canada. Wells Fargo Equipment Finance is the second-largest bank-affiliated equipment leasing and finance company in the United States by asset portfolio and annual originations, with more than 130,000 customers and 1,100 team members.
Overview

The 2014 Construction Industry Forecast is the nation's premier, forward-looking sentiment survey of the U.S. construction industry. Each January, Wells Fargo Equipment Finance surveys construction industry executives to gather insight into current business conditions and to measure their sentiment for construction activity in the coming year. The results presented in this Forecast represent the 38th year in which Wells Fargo Equipment Finance and its predecessors have surveyed construction industry executives.

Survey dates
January 8 through January 24, 2014

Total surveys completed
522

Composition of survey respondents
What best describes your primary function in the construction industry?

36 Other
17 Industry service supplier
33 Construction equipment manufacturer
41 Construction equipment rental company
134 Construction equipment distributor
261 Construction contractor or aggregates producer

Survey responses came from construction executives based in all 50 U.S. states.

Respondent classification
- "Contractors" are companies that execute construction projects. Producers of aggregate materials and other companies that rely on heavy construction equipment also fall into this category. These companies often buy, lease, or rent large construction equipment for the purpose of completing such projects.
- "Distributors" are dealers of construction equipment. These companies most often sell heavy equipment, light equipment, or general construction equipment, and provide a range of products and services to the construction industry.
- "Equipment rental companies" acquire equipment for the purpose of renting it out to contractors.
- "Manufacturers" create or build the equipment that contractors use.
Annual revenue size of respondents

$100 million or more
16.3%

Less than $5 million
25.7%

$5 million to less than $100 million
52.5%

$5 million to less than $25 million
25.5%

2014

Geographic breakdown

Survey responses came from all 50 U.S. States. All surveys were completed by construction executives in the United States. Percentages may not add up to 100% due to rounding.
Overall industry sentiment

The Optimism Quotient (OQ) presented by Wells Fargo Equipment Finance is this survey's primary metric for assessing respondents' sentiment about local non-residential construction activity for the current calendar year compared to the previous year.

The OQ for 2014 is a conclusively positive 124. After seeing a slight dip in optimism to 106 in 2013, the OQ is back in record-high territory for the year ahead, signaling executives' overwhelmingly expressed anticipation that local non-residential activity in 2014 will increase compared to 2013. The sentiment survey does not predict the degree of growth — only that the coming year will see greater activity than the previous year and that there is broad optimism about the direction of the construction industry.

In 2009 the OQ reached an all-time low of 42, and it didn't recover much in 2010 (OQ of 66), but it saw rapid increases for each of the next three years. Optimism was somewhat tempered in 2013 when compared to the all-time high recorded in 2012, but it has since rebounded to a record level in 2014.

An OQ score of 100 or more represents high optimism for increased local construction activity relative to the perceived level of activity for the prior calendar year. A score above 75 represents more cautious or measured optimism. A score below 75 signals that fewer executives say local construction activity will increase than say it will decrease — a more pessimistic point of view.
What is your projection for local non-residential construction activity this year compared to last year?

![Bar chart showing projections for 2013, 2014 percentages with legend indicating decrease, remain the same, increase.]

Base: 522 construction executives

Although 38.9% of respondents said they anticipate local non-residential construction activity to remain comparable to that of 2013, an even greater percentage (55.4%) believes non-residential activity will increase compared to 2013. This survey has never seen so few executives respond that local construction activity would decrease.

When do you expect local non-residential construction activity to begin improving?

![Pie chart showing percentages for each quarter in 2014 with legend indicating various quarters.]

Base: 233 respondents who said local non-residential activity would decrease or remain the same in 2014 compared to 2013

Of the executives who said they expect similar or decreased activity compared to 2013, almost half (45.5%) said they anticipate some improvement before the end of 2014. However, more than one in four executives (27.0%) said that an improvement wouldn't come until the third quarter of 2015 or later.
What is your projection for local residential construction activity this year compared to last year?

The sentiment for residential construction activity in 2014 is strikingly similar to the sentiment for non-residential activity. While 38.5% of respondents said they expect similar levels of residential activity as in 2013, a much larger percentage (55.7%) said they expect increased residential activity. This consistency between non-residential and residential activity is somewhat rare; in years past, the difference between the two categories has been more pronounced.

When do you expect local residential construction activity to begin improving?

Of the executives who said they expect similar or decreased residential activity in 2014, more than one third (36.8%) said improvement would not begin until the third quarter of 2015 or later.
Within the next two years, which of the following scenarios is most likely to occur?

[Diagram showing distribution with percentages: 27.8% for significant expansion of the U.S. construction industry, 2.7% for significant contraction of the U.S. construction industry, 69.5% for neither a significant expansion nor a significant contraction of the U.S. construction industry.]

Base: 522 construction executives

Respondents are optimistic about growth prospects in the construction industry. Only 2.7% said a significant downturn is more likely than any kind of growth and none of those respondents were equipment dealers, manufacturers, or rental companies. About one-fourth (27.8%) said a significant expansion is most likely within the next two years.
Overall counts of light and heavy equipment units sold in the U.S. follow a similar curve to that of the OQ over the last ten years.

- Heavy equipment = dozers, wheel loaders, 8+ ton excavators, motor graders, articulated trucks, rigid frame trucks
- Light equipment = wheeled skidsteer, tracked skidsteer, backhoe loader, mini excavator

U.S. construction industry metrics
When compared with other metrics that measure the health of the U.S. construction industry, the OQ has been found to correlate well with several key industry indicators including:

- Overall counts of heavy equipment units sold
- Overall counts of light equipment units sold
- Consumer Confidence Index
- Industrial Production
Risk, regulation, and opportunity

Which of these factors poses the greatest RISK to the U.S. construction industry in 2014?

<table>
<thead>
<tr>
<th>Factor</th>
<th>First Choice</th>
<th>Second Choice</th>
<th>Third Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic uncertainty</td>
<td>38.7%</td>
<td>23.0%</td>
<td>14.2%</td>
</tr>
<tr>
<td>Political uncertainty</td>
<td>27.4%</td>
<td>21.3%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Rising interest rates</td>
<td>11.9%</td>
<td>14.2%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Regulatory uncertainty</td>
<td>9.2%</td>
<td>15.3%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Residential construction market</td>
<td>3.1%</td>
<td>6.5%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Non-residential construction market</td>
<td>3.8%</td>
<td>7.7%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Tier IV emissions standards</td>
<td>2.9%</td>
<td>6.2%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Other</td>
<td>1.1%</td>
<td>1.0%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Public-private partnerships</td>
<td>1.0%</td>
<td>1.0%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Base: 523 construction executives — respondents were asked to rank order the top three risks to the U.S. economy.

Economic uncertainty (31.8%) emerged as the factor that executives cited most frequently as a great risk to the U.S. construction industry this coming year. Political uncertainty (27.4%) was not far behind while rising interest rates (21.3%) and regulatory uncertainty (11.9%) were a close third and fourth.

Given the severity of the recent recession and the slow nature of the post-recession economic recovery, it's not surprising that construction industry executives are still somewhat wary about the economy's long-term trajectory. The team at Wells Fargo Equipment Finance believes this wariness is tempering the broad sense of industry optimism and lending strength to the equipment rental market.

Which of these factors creates the greatest OPPORTUNITY for growth in the U.S. construction industry in 2014?

<table>
<thead>
<tr>
<th>Factor</th>
<th>First Choice</th>
<th>Second Choice</th>
<th>Third Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving economic situation</td>
<td>35.1%</td>
<td>22.8%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Increased consumer confidence</td>
<td>15.1%</td>
<td>21.1%</td>
<td>19.3%</td>
</tr>
<tr>
<td>Improving political climate</td>
<td>11.5%</td>
<td>12.5%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Residential construction market</td>
<td>12.5%</td>
<td>10.3%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Non-residential construction market</td>
<td>6.9%</td>
<td>9.8%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Stable regulatory environment</td>
<td>5.6%</td>
<td>11.1%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Increased govt spending</td>
<td>7.7%</td>
<td>8.8%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Public-private partnerships</td>
<td>3.6%</td>
<td>2.9%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Other</td>
<td>1.7%</td>
<td>0.4%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Base: 523 construction executives — respondents were asked to rank order the top three opportunities.

Juxtaposed against the risks, an improving economic climate (75.9%) and improving consumer confidence (55.6%) were cited as the top two opportunities for the construction industry in 2014. An improving political climate ranked third.

With the economy seen as both a great risk and a potential opportunity, we see just how tightly interwoven the construction and broader economic environment appear to be. Respondents may be sensing that economic growth could march forward or slide back.
Which of the following regulatory issues is of greatest interest to you as it relates to the success of your company?

<table>
<thead>
<tr>
<th>Issue</th>
<th>29.5%</th>
<th>24.3%</th>
<th>14.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax incentives such as</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus Depreciation and Section 179</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highway Funding Bill</td>
<td>32.4%</td>
<td>16.8%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Affordable Care Act</td>
<td>15.3%</td>
<td>11.9%</td>
<td>19.3%</td>
</tr>
<tr>
<td>Gas tax</td>
<td>7.3%</td>
<td>16.7%</td>
<td>34.4%</td>
</tr>
<tr>
<td>Debt ceiling</td>
<td>5.6%</td>
<td>12.1%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Tier IV emission standards</td>
<td>6.5%</td>
<td>8.2%</td>
<td>35.2%</td>
</tr>
<tr>
<td>Hours of service (HOS)</td>
<td>2.1%</td>
<td>7.1%</td>
<td>71.8%</td>
</tr>
<tr>
<td>Other</td>
<td>1.3%</td>
<td>0.4%</td>
<td>8.0%</td>
</tr>
</tbody>
</table>

Base: 522 construction executives—respondents were asked to rank order the top three regulatory issues.

The regulatory issue of greatest interest (59.2%) for the year was related to tax incentives such as Bonus Depreciation and Section 179 deductions. The Highway Funding Bill (60.2%) and the Affordable Care Act (46.6%) were also among those issues most frequently listed.

Compared to its predecessors, how well will Tier IV equipment retain its resale value?

How much do you agree or disagree with this statement: The new Tier IV emissions standards do a good job of balancing the need for reliable equipment that can get the job done efficiently and taking steps to reduce emissions that are harmful to the environment.

<table>
<thead>
<tr>
<th>Agreement Level</th>
<th>2014 Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>2.5%</td>
</tr>
<tr>
<td>Agree</td>
<td>21.3%</td>
</tr>
<tr>
<td>Neutral</td>
<td>30.3%</td>
</tr>
<tr>
<td>Disagree</td>
<td>23.0%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>17.6%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

Base: 261 contractors

Contractors were least likely among all respondent types to view the resale value of Tier IV equipment negatively.
Rental review

Wells Fargo Equipment Finance expects the equipment rental market to remain strong in 2014 and we can identify a number of factors that are contributing to this trend. Contractors say they tend to keep their equipment for at least 48-60 months. They also say that the biggest risks to the growth of the industry are economic and political uncertainty. Without the stability of knowing that there will be consistent work, it's not surprising that the rental industry has seen strong growth in recent years.

Do you think that your rental of construction equipment in 2014, compared to 2013, will:

Four out of five contractors (79.7%) said they rented equipment in 2013. A greater proportion (91.2%) said they will rent in 2014. The percentage of contractors that said they will increase their rentals (22.2%) surpassed the percentage that said they will decrease their rentals (14.6%).

When faced with the decision of whether to rent construction equipment, which factors will be most important to consider?

<table>
<thead>
<tr>
<th>Total</th>
<th>Reasons for renting instead of purchasing</th>
<th>First choice</th>
<th>Second choice</th>
<th>Third choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>72.5%</td>
<td>Lack of consistent work</td>
<td>28.4%</td>
<td>29.1%</td>
<td>15.3%</td>
</tr>
<tr>
<td>67.4%</td>
<td>Need for project-specific equipment</td>
<td>32.2%</td>
<td>19.5%</td>
<td>15.7%</td>
</tr>
<tr>
<td>52.5%</td>
<td>Overall cost of equipment</td>
<td>13.0%</td>
<td>16.9%</td>
<td>22.6%</td>
</tr>
<tr>
<td>46.7%</td>
<td>Economic conditions</td>
<td>13.4%</td>
<td>15.8%</td>
<td>18.0%</td>
</tr>
<tr>
<td>21.5%</td>
<td>Fixed equipment costs</td>
<td>5.0%</td>
<td>6.1%</td>
<td>10.3%</td>
</tr>
<tr>
<td>10.3%</td>
<td>Political conditions</td>
<td>2.1%</td>
<td>2.7%</td>
<td>4.6%</td>
</tr>
<tr>
<td>10.3%</td>
<td>Bonding company considerations</td>
<td>1.5%</td>
<td>3.6%</td>
<td>5.0%</td>
</tr>
<tr>
<td>8.4%</td>
<td>Regulatory conditions</td>
<td>1.5%</td>
<td>3.8%</td>
<td>3.1%</td>
</tr>
<tr>
<td>7.2%</td>
<td>Other</td>
<td>1.9%</td>
<td>1.1%</td>
<td>4.3%</td>
</tr>
<tr>
<td>2.7%</td>
<td>Risk of equipment becoming obsolete</td>
<td>—</td>
<td>1.5%</td>
<td>11.1%</td>
</tr>
</tbody>
</table>

Lack of consistent work was cited most frequently (72.8%) as an important factor to consider when facing the decision of whether to rent; however, the need for project-specific equipment (67.4%) was selected most often as the #1 factor to consider. Overall costs of the equipment (52.5%) and general economic conditions (46.7%) were also mentioned as key factors.

Base: 281 contractors – respondents were asked to rank order the top three factors.
Do you think that the size of your rental fleet in 2014, compared to 2013, will...?

![Bar chart showing the distribution of responses regarding fleet size change.]

- **Decrease**: 3.4%
- **Remain the same**: 42.9%
- **Increase**: 53.7%

Base: 175 construction equipment distributors and equipment rental companies.

The majority of equipment distributors and rental companies remain optimistic about the continued growth of the rental industry and do not see an end to the growing trend of fleets rentals in 2014. Only 3.4% of respondents said they expect to decrease the size of their rental fleet this year. More than half (53.7%) said they expect to increase their rental fleets and 42.9% expect the size of their fleets to remain the same.
Internet purchasing habits

The proliferation of information technologies has created new channels through which equipment buyers can confidently acquire the construction equipment they need — and get the customer experience they want.

In the past 12 months, have you purchased construction equipment over the internet without physically inspecting it?

Overall, how satisfied were you with the purchase(s)?

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>2014 Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely satisfied</td>
<td>19.6%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>68.6%</td>
</tr>
<tr>
<td>Neutral</td>
<td>11.8%</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>0%</td>
</tr>
<tr>
<td>Extremely dissatisfied</td>
<td>0%</td>
</tr>
</tbody>
</table>

Base: 261 contractors

Similar to the survey results from August 2013, contractors who acquired equipment online were overwhelmingly positive about the experience. Very few, if any, indicated that they were dissatisfied with the purchase.

What type of construction equipment would you consider buying online without inspecting it first?

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>2014 Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excavators and backhoes</td>
<td>14.6%</td>
</tr>
<tr>
<td>Wheel loaders</td>
<td>13.0%</td>
</tr>
<tr>
<td>Dozers and graders</td>
<td>12.3%</td>
</tr>
<tr>
<td>Lifts and telehandlers</td>
<td>4.6%</td>
</tr>
<tr>
<td>Plants, screens, and crushers</td>
<td>3.4%</td>
</tr>
<tr>
<td>Articulated trucks</td>
<td>3.4%</td>
</tr>
<tr>
<td>Asphalt and concrete pavers</td>
<td>1.9%</td>
</tr>
<tr>
<td>Trenchers and tunnelers</td>
<td>1.5%</td>
</tr>
<tr>
<td>Cranes</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Base: 261 contractors

Contractors indicated they do not view all equipment types with equal interest when it comes to online equipment buying. The categories of equipment they are most willing to consider acquiring online are the more common types of equipment such as excavators, wheel loaders, and dozers. Three out of four contractors (78%) surveyed said they would not consider purchasing any of the listed categories of equipment online.
Business strategy

What percentage of your budget related to construction equipment acquisition will be allocated to the following types of equipment financing?

<table>
<thead>
<tr>
<th>Category</th>
<th>Average percentage</th>
<th>% of respondents who said that none of their budget would be allocated to this equipment acquisition strategy</th>
<th>% of respondents who said that 50% or more of their budget would be allocated to this equipment acquisition strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term lending</td>
<td>50.3%</td>
<td>13.2%</td>
<td>60.3%</td>
</tr>
<tr>
<td>Cash</td>
<td>16.9%</td>
<td>40.7%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Rental</td>
<td>14.1%</td>
<td>35.4%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Line of credit</td>
<td>9.1%</td>
<td>70.4%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Leasing</td>
<td>6.2%</td>
<td>73.0%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Other</td>
<td>4.5%</td>
<td>88.9%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

Base: 186 contractors

On average, how long do you own the construction equipment that you acquire?

- 1% 1 don’t know
- 4.6% Less than 12 months
- 48 to less than 60 months
- 60 to less than 72 months
- 72 months or more

Base: 261 contractors

How prepared is your business to handle...

<table>
<thead>
<tr>
<th>A significant contraction in the construction industry</th>
<th>A significant expansion of the construction industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very well prepared</td>
<td>20.3%</td>
</tr>
<tr>
<td>Prepared</td>
<td>55.2%</td>
</tr>
<tr>
<td>Neutral</td>
<td>20.1%</td>
</tr>
<tr>
<td>Not prepared</td>
<td>3.6%</td>
</tr>
<tr>
<td>Very poorly prepared</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Base: 522 construction executives
How much do you agree or disagree with this statement: Public-private partnerships (PPPs) have become an effective way to finance important infrastructure projects.

<table>
<thead>
<tr>
<th></th>
<th>2014 percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>5.7%</td>
</tr>
<tr>
<td>Agree</td>
<td>36.0%</td>
</tr>
<tr>
<td>Neutral</td>
<td>40.0%</td>
</tr>
<tr>
<td>Disagree</td>
<td>7.1%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>2.5%</td>
</tr>
<tr>
<td>Don't know</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

Base: 522 construction executives

What effect has the growing trend of public-private partnerships (PPPs) had on your company?

<table>
<thead>
<tr>
<th></th>
<th>2014 percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly positive effect</td>
<td>1.3%</td>
</tr>
<tr>
<td>Positive effect</td>
<td>16.7%</td>
</tr>
<tr>
<td>Neutral</td>
<td>62.5%</td>
</tr>
<tr>
<td>Negative effect</td>
<td>3.8%</td>
</tr>
<tr>
<td>Highly negative effect</td>
<td>1.7%</td>
</tr>
<tr>
<td>Don't know</td>
<td>14.0%</td>
</tr>
</tbody>
</table>

Base: 522 construction executives
Distributors and contractors

In the past, construction equipment distributors have tended to be more optimistic about local construction activity than construction contractors, and that trend holds true once again for 2014. In this case, the 20-point gap between contractors and distributors is one of the most pronounced in the history of the OQ, behind the 26-point difference in 2006 and the 28-point difference in 2012.

What is your projection for local non-residential construction activity this year compared to last year?

New and used equipment acquisition ended up being more robust in 2013 than contractors initially anticipated. Although 87.2% of executives said their companies acquired new or used equipment in 2012, only about 50% of those contractors indicated they would purchase new or used equipment in 2013. However, when contractors reported on their new and used equipment acquisition for 2013, 87.7% said they acquired equipment.
Distributors

Do you think that your sales of NEW construction equipment this year, compared to last year, will...

Construction equipment distributors remain quite optimistic about realizing year-over-year improvement in sales of new equipment compared to a year ago. In 2013, about six out of 10 executives (57.8%) said they expected sales to increase, but for the coming year 62.7% said that they expect an increase in new equipment sales. About 5% of distributors said they expect new equipment sales to decrease compared to 2013 — an improvement compared to the 11% who said they expected decreases in 2013.

Do you think that your sales of USED construction equipment this year, compared to last year, will...

The overall composition of responses regarding year-over-year equipment sales seems to favor new equipment somewhat over used equipment. Equipment distributors remain bullish about equipment sales whether they are new or used. Only 5.2% of distributors expressed the opinion that new or used equipment sales would decrease compared to 2013.
Contractors

Do you think that your purchases of **NEW** construction equipment this year, compared to last year, will...?

Sentiment among U.S. contractors is that purchases of new construction equipment in 2014 will remain similar to, but perhaps up slightly from, the volume of equipment they purchased in 2013. Fewer contractors than a year ago said they would decrease new equipment purchases and a greater percentage said they would increase purchases. Only 11.9% of contractors said they would not acquire new construction equipment in 2014 compared to 19.1% in 2013.

Do you think that your purchases of **USED** construction equipment this year, compared to last year, will...?

Almost half of U.S. contractors (42.1%) said that purchases of used construction equipment in 2014 will remain mostly consistent with the volume of used equipment purchased in 2013. The percentage of executives who said they would increase buying activity of used equipment was offset by a similar percentage of executives who expect to decrease used equipment acquisition. However, the percentage who said they would not acquire used equipment dipped to 13.8%, indicating that overall used equipment could rise in the coming year.
Auto industry has soared since 2010, leading economic recovery

January 03, 2014 | By Jerry Hirsch

The auto industry finished 2013 with more sales, more jobs and big expansion plans, solidifying its key role in the economic recovery.

It was the industry's best year since 2007. The Great Recession drove U.S. auto sales to a low of 10.4 million vehicles sold in 2009, but the industry has rocketed back since, to 15.6 million sold last year.

"Auto sales were one of the brightest spots on the economic horizon last year," said Carl Tannenbaum, chief economist for Northern Trust Corp. in Chicago.

Car companies and parts manufacturers have added more than 173,000 jobs over the last four years and now employ more than 826,000 workers in the U.S., according to federal jobs reports. That's still down from the 1.1 million before the recession, but it represents vital growth, economists said.

"Autos and housing are on the leading edge of overall economic growth, and we are starting to see the ripple effects on other parts of the economy," said Gary Schlossberg, an economist at Wells Capital Management.

There's more growth ahead.

Ford Motor Co. said it will add more than 5,000 U.S. jobs this year — including 3,300 salaried positions. It is also pouring more than $1 billion into its Kansas City, Mo.-area plant to retool and expand the factory.

Suppliers are making similar moves.

Alcoa Inc. just completed a $300-million expansion of an aluminum plant in Davenport, Iowa, and is about to launch a $275-million expansion of a factory in Knoxville, Tenn., to help satisfy the auto industry's growing appetite for lightweight aluminum alloys.

"Overall the industry has staged a dramatic return to health since the recession that started in 2008," said Joe Hinrichs, Ford's president of the Americas.

The financial crisis spurred the industry to slash costs and boost efficiency through restructuring efforts, he said. Those included closing factories, cutting underperforming brands, forging more competitive labor agreements and reducing retiree healthcare liabilities.

"We can still remain profitable, even at much lower annual selling rates than we could in the past," Hinrichs said.

Ford and the other automakers have reinvested those savings in developing the most competitive portfolio of fuel-efficient new vehicles, including hybrids and electric cars, that the industry has ever seen, Hinrichs added. He said increased efficiency, along with safety improvements, brought consumers back to dealer lots.

Automakers have also weaned themselves from the heavy reliance on incentives and discounts, as well as overproduction, that helped drive the industry into the ground.

"For this coming year, while we see the overall pace of industry growth slowing a bit, we still expect a very stable and healthy industry," Hinrichs said.

Damped by bad winter weather, December auto sales were just under 1.4 million, about the same as December 2012's, according to Autodata Corp.

Ford logged December U.S. sales of 216,592 vehicles, up 1.7% from the same month a year earlier, according to Autodata. The automaker's sales grew 10.8% for the year.

The automaker had a record sales year for the Fusion sedan and Escape crossover. December was also strong for trucks. Ford sold 74,592 of its F-Series pickups last month and 763,402 for the year, making it the top-selling vehicle in America.

In the U.S., Chrysler Group's sales increased 5.7% to 161,007 vehicles last month and grew 9% for the year.

Nissan Motor Co. sales rose 10.5% to 109,758 vehicles in December and 9.4% for the year.

Honda Motor Co. sales rose 1.9% to 135,255 vehicles, its best December ever. Annual sales were up 7.2% to make 2013 its second-best year in the U.S.
Hyundai Motor Co. sales increased 6% last month to 63,005. Its full-year sales grew 2.5%.

Not every automaker posted U.S. sales gains last month.

General Motors Co. sales fell 6.3% to 230,157 vehicles compared with December 2012. But GM’s sales rose 7.3% for the year.

Toyota Motor Corp.’s sales slipped 1.7% to 190,843 vehicles. However, sales grew 7.4% for the year. With sales of 408,484, the Camry was the nation’s top-selling passenger car.

Yet despite a nearly 8% gain over 2012 sales, there are worrying signs of an industry slowdown, said Adam Jonas, an analyst with Morgan Stanley.

“Some key U.S. auto indicators imply we’re in late or even extra innings,” Jonas said.

It could be harder to get buyers into cars in the coming year. Lending to consumers with subpar credit is already closing in on pre-recession levels. Leasing — which gets people into cars with a smaller cash payment upfront — is at a record 30% of car sales, he said.

“Incentives and discounts are starting to rise, and automakers are adding production capacity to their factories at a rate that is faster than consumer demand,” Jonas said.

Most in the industry believe auto sales growth will slow but still top 16 million next year, said Schlossberg, the Wells Capital Management economist. That’s a healthy industry by historical standards, he said.

Although December was a bit weaker than expected, it doesn’t signal a downturn, said G. Mustafa Mohatarem, GM’s chief economist.

Job growth is picking up, and the average vehicle on the road is about 11 years old, which means millions of cars are due to be replaced.

“The economic fundamentals,” Mohatarem said, “are very, very solid. We’ve got a strong base to grow from. We’re a long ways from meeting all the expected demand that’s there.”

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**ALSO:**

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Nissan’s Detroit Auto Show concept will likely tease next Maxima
US auto industry’s remarkable recovery

By FT Reporters

September 30, 2013 4:55 pm

Sales are up sharply for the big three Detroit carmakers, just four years after General Motors and Chrysler were officially declared bankrupt and Ford was forced to close several plants and renegotiate many contracts.

In this interactive timeline we show how the industry went from boom to bust and its subsequent recovery.

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2005-13: A remarkable recovery

The US’s auto industry is undergoing a remarkable recovery, with sales up sharply and the big three domestic manufacturers — General Motors, Ford and Chrysler — taking market share from the foreign carmakers that had been comprehensively outcompeting them. It is a remarkable recovery only four years after GM and Chrysler were forced into government-managed bankruptcies.
2005: Industry's last hurrah

A mixture of easy credit, low fuel prices and a booming economy made the mid-2000s a historic high for the US auto industry. General Motors, Ford and Chrysler benefit from robust sales of the big, high-margin sports utility vehicles which, along with pick-up trucks, have become the mainstay of their line-ups. However, a report on the industry's competitiveness in 2005 suggests the greater efficiency of Japanese-owned car plants in the US allows them to produce each vehicle for $350 to $500 less than the big three.
2006-08: Car sales in freefall

A gradual rise in oil prices towards $100 a barrel turns the Detroit Three's strength in large, fuel-hungry vehicles into a liability, sending customers scurrying towards smaller, more fuel-efficient cars, often built by Asian and European manufacturers. Declining consumer confidence sends demand for cars falling, a process that accelerates in 2008 as the financial crisis cuts off funding for auto loans.

In November 2006, Ford, sensing trouble ahead, mortgages all its US plants and automotive assets as security for an $18bn loan, to ensure the company will not run out of cash in a crisis. By the end of 2008, during which GM makes net losses of $30.9bn, it is clear GM and Chrysler face potential bankruptcy. In December, the outgoing Bush administration extends $17.4bn in loans to Chrysler and GM, contingent on their showing they can restructure radically and become profitable again.
2009-10: Government intervention

A collapse in auto sales exacerbates the Detroit carmakers’ problems and their demands in cash from the federal government. The incoming Obama administration’s auto industry task force eventually hits on a strategy of restructuring both GM and Chrysler through short-managed bankruptcies.

Chrysler seeks Chapter 11 bankruptcy protection on April 30 and emerges in June controlled by Italy’s Fiat, with which it has formed a joint venture, and its union’s healthcare fund. GM enters Chapter 11 on June 8 and emerges on June 10, owned by a mixture of the US and Canadian governments, the union healthcare fund and holders of the old GM’s bonds. Both companies have transformed their healthcare and pension obligations and shut significant excess capacity. In November 2010, both governments substantially reduce their stakes in a $23bn IPO.

Source: WardsAuto.
Graphic by Steve Bernard, Kate Camie, Tom Pearson, Robert Wright.
2010-13: The recovery

Shorn of the dead weight of excess plants and other obligations, all three Detroit carmakers restart investment in new models to compete with foreign-owned rivals. Low interest rates release demand for cars pent up over the years of the Great Recession. The Detroit Three gain market share in the US and among their strongest performers are the rejuvenated small car ranges. As fuel prices fall, demand also grows for SUVs and pick-up trucks, where the Detroit Three continue to be disproportionately strong.

The US Treasury announces in December 2012 that GM is to buy back $5.5bn in Treasury-owned shares and that it will subsequently gradually sell down its remaining shares. In August 2013, the seasonally-adjusted annual rate of vehicle sales in the US returns to 16m for the first time since 2007 and Alan Mulally, Ford's chief executive, suggests it could eventually return to its 17m historic highs.

Graphic by Steve Bernard, Katie Carrin, Tom Pearson, Robert Wright.
U.S. Car Sales Soar to Pre-Slump Level
Low Interest Rates, Job Growth Encourage Consumers to Buy

By NEAL E. BOUDETTE and JEFF BENNETT
Updated Sept. 4, 2013 7:57 p.m. ET

The U.S. auto industry has shifted into high gear with new-car buyers snapping up vehicles last month at a pace not seen since before the financial crisis.

Low interest rates and slow-but-steady job growth are encouraging consumers to trade in cars and trucks that average about 11 years old, say auto makers, which are adding production capacity and overnight shifts to satisfy demand.

All told, buyers purchased 1.5 million vehicles last month, up 17% from a year ago, with nearly all major auto makers reporting double-digit sales gains. The demand has customers scrambling for certain models and colors, and prices climbing on hard-to-find cars including Nissan Motor Co.'s compact Sentra, Ford Motor Co.'s Fusion sedan and Subaru's Forester wagon.

The faster-than-expected rebound in the U.S. is a bright spot for U.S. and other car makers coping with slumping demand in Europe and uncertainty in some big developing markets. Strong sales helped lift the Dow Jones Industrial Average nearly 100 points on Wednesday. General Motors Co. shares rose 5%, to $35.85, and Ford shares climbed 3.5%.

August's sales translated to an annualized pace of 16.09 million vehicles, up from December 2007's about 16 million. Some 17.4 million vehicles were sold in 2000.

"It was just phenomenal. The market is real strong right now," said Doug Waikem, owner of seven dealerships in Massillon, Ohio, a rust-belt state hard hit during the recession five years ago. "It hasn't been like this since the '80s," Mr. Waikem said.

Asian and European car makers also had strong showings.

reported gains of 23%, 27% and 22%, respectively. Germany's BMW AG said sales of its luxury cars and sport-utility vehicles soared 36% over a year earlier.

Automotive website TrueCar.com estimates car companies spent an average of $2,477 on sales incentives last month, down 2.6% from a year ago and the lowest level since January.

While the sales pace returned to prerecession levels, the U.S. auto industry looks nothing like its old self. GM, Ford and Chrysler Group LLC are now much leaner. GM employs about 212,000 people in the U.S., about 31,000 fewer than in 2008. Ford's workforce here is about 171,000, down 42,000 from five years ago. Before Chrysler was split off from its German partner, Daimler AG, it employed 83,000. Today, its payroll is about 65,000.

The three auto makers combined have closed more than two dozen auto-assembly, stamping, engine and transmission plants across the Midwest and in Canada. Health care costs for retired union workers, which once added about $2,000 to the cost of a car, are now born not by the companies but union-controlled trusts. Union wages have also fallen. New hires started at about $14 an hour, half of what veteran workers make.

Detroit auto makers abandoned brands such as Pontiac, Saturn, Hummer and Mercury. GM and Chrysler dropped more than 2,000 dealers from their sales networks, and all three companies stopped profit-denting practices such as dumping cars into rental car fleets and stuffing dealers with cars and trucks that consumers didn't want.

As a result, the Detroit Three can now make money at lower sales volumes, and on lower-priced vehicles. A decade ago, all three companies struggled to make money when Americans were buying more than 16 million cars a year regularly. Now they say they can make money with sales below 12 million vehicles a year.

Because of their dramatically lower fixed costs, they are now able to put money into designing and building stylish and well-equipped small cars. Ten years ago, GM, Ford and Chrysler sold hardly any subcompacts at all. Last month, GM sold 11,354 Chevrolet Sonics—beating the combined total for the Toyota and Honda models in that category. GM makes the Sonic at a plant in Orion, Mich., where labor costs were cut because GM was able to staff up with new workers hired at the lower, $14 wage.

With car volumes soaring and home builders and others again snapping up high-margin pickup trucks, the Detroit auto makers are ringing up profits unimaginable five years ago.
In the past three years, for example, GM has rung up a combined $18.8 billion in profit, and Ford has notched $32.5 billion.

"Five years after the Lehman shock, auto sales surpassed the 16 million milestone and entered a new era," said Jim Press, a former Toyota and Chrysler executive who now consults with auto makers. "This time the industry sits on a good foundation of economic fundamentals instead of relying on an unsustainable cocktail of irresponsible credit, excess capacity and insane discounts."

Price cuts and more aggressive promotions are even putting juice into sales of cars that were tough sales a year ago, such as the Chevrolet Volt plug-in hybrid and the Nissan Leaf electric car. GM last month sold 3,351 Volts, more than double the average monthly sales for the previous seven months.

GM Chief Economist Mustafa Mohatarem said on Wednesday he expects the strong monthly sales rate to push overall U.S. sales above 15.8 million for the year. Until now, most auto makers have held their full-year 2013 U.S. sales forecasts to between 15.3 million and 15.5 million. Stronger sales forecasts could lead auto makers to order increased production during the balance of the year.

On Wednesday, Ford said it plans to produce 785,000 cars and trucks in the fourth quarter, an increase of 50,000, or 7%, from a year ago.

Toyota, which outsold Ford to rank No. 2 among U.S. auto suppliers, said August was its best month in the U.S. in more than five years. Imports are taking back share lost in the wake of the 2011 Japanese earthquake. Import brands held 56.1% of sales last month, up from a low of 49.9% in June 2011.

GM said brisk sales of pickup trucks, Cadillacs and Buicks pushed its sales to 275,847 vehicles, 15% more than a year ago. It was the highest monthly total for GM since September 2008, just before the start of the financial crisis.

"The economy is on solid footing, and the industry should remain strong," Mr. McNell said.

Ford's sales increased 12% to 220,404 cars and light trucks. The total included a staggering 71,115 F-series pickup trucks. Ford said that was the equivalent of selling one F-series truck every 42 seconds, 24 hours a day. The company hadn't sold that many pickup trucks in one month since 2006. In contrast, GM sold 61,620 pickups.

Chrysler, meanwhile, reported sales of 120,161 vehicles, up 11%. Its sales have risen for 41 months in a row. The smallest of the Detroit Three benefited from a 31% jump in sales of Ram pickup trucks and sport-utility vehicles such as the Jeep Grand Cherokee and Dodge Durango.

Ford economist Ellen Hughes-Cromwick said U.S. sales are being driven by low interest rates that are helping to keep loan payments stable even on higher priced cars, and by job gains. "People are getting back to work and they need vehicles for commuting," she said.

Ms. Hughes-Cromwick also said consumers appear to be unconcerned about rising tensions in the Middle East and the prospect of American military action against Syria. "We simply do not know what the reaction will be. The consumer has remained fairly resilient through several events that have taken place since 2008," she said.
—Mike Ramsey
contributed to this article.

Write to Neai E. Boudette at neai.boudette@wsj.com and Jeff Bennett at jeff.bennett@dowjones.com
After the Bailout: Future Prospects for the U.S. Auto Industry

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December 2012
INTRODUCTION

In this paper, we first review the financial “comeback” of the Detroit Three General Motors (GM), Ford, and Chrysler) in the last three years in the North American market. We then describe the larger picture of the comeback of the entire U.S. motor vehicle and parts manufacturing industry. We then use a series of Center for Automotive Research (CAR) forecasts to estimate where the U.S. auto industry is heading in the next four to five years in terms of sales, production, and employment. Finally, we discuss the growth prospects of the U.S. industry in the long run including the industry’s potential for adding to the growth of the overall U.S. economy.

Section I: The Detroit Three Comeback

Any discussion of the benefits of the $80 billion in assistance provided by the U.S. and Canadian governments to GM and Chrysler in 2009 should review the current operational performance of these companies in the North American market. Further, this discussion should be placed in context of the overall “comeback” from the recent Great Recession of the entire U.S. auto industry and market and its prospects in the years ahead as a major industry in the U.S. economy. However, it should be remembered that the Detroit automakers were in difficult circumstances in their home market long before the advent of the recent recession.

The structured bankruptcies at GM and Chrysler in June and July of 2009 and the related labor contracts with the UAW resulted in the elimination of over $80 billion in fixed obligations for GM, Chrysler and also Ford Motor Company (which followed the other two companies closely in terms of labor union concessions). For example, in the case of GM, $54.4 billion in consolidated debt and $20 billion in long term obligations of the VEBA (Voluntary Employee Benefit Association/UAW retiree health trust) were reduced to a total of $17.4 billion in long term liabilities post-bankruptcy. A J.P. Morgan analyst recently estimated that GM reduced its annual North American fixed costs from $27 billion per year in 2009 to $19 billion a year at present.\(^1\) The end result was the elimination by GM of thousands of dollars in fixed cost per vehicle in the North American market. Another important result of the restructuring was that the companies were able to accelerate their downsizing of their North American assembly and component capacity, a process that had already begun in the early part of the last decade. As shown in Figure 1, the three Detroit automakers reduced their North American vehicle production capacity by 3.9 million units or 29 percent during 2004-2012.

\(^1\) Automotive News, December 10, 2012, p. 64.
The reduction in capacity and related employment by the Detroit Three has clearly reduced their operating costs since 2009. Previously, the companies' manufacturing operations ran at low utilization levels. This was true despite the use of large incentive programs characteristic of the companies pricing during 2001-2008. The companies had employed large rebates and low financing for years in an attempt to generate sales that would employ not only their factories but also, due to the union contract, thousands of workers whose costs on layoff were no different than their costs when working. Contract requirements that included the infamous "Jobs Bank" and the plant closing moratorium motivated the companies to use rebate campaigns and carry much unneeded capacity for years. As a result of the incentive programs, new vehicle price inflation in the U.S. market was almost non-existent during 2001 – 2008. Figure 2 shows that this situation has improved remarkably since 2009.
Figure 2 lists monthly values for the new vehicle price index on the vertical axis and monthly light vehicle sales SAAR rates on the horizontal axis. Aside from the reduced capacity, a multi-year period of high values of the Japanese Yen has also improved the pricing environment as has steadily increasing consumer demand.
A new business mantra for the Detroit Three in recent years is the concept of “price discipline.” For many years, the Detroit automakers failed to produce profits on sales of passenger cars which losses were hardly offset by more favorable returns on the sale of large trucks. Losses in market share or high levels of inventories usually resulted in major incentive programs that sacrificed potential profits on sales to favorable customers who were actually willing to pay more. The essential problem for the companies was they were too large in terms of capacity and employment in the highly competitive North American market. Current strategies for the downsized Detroit Three emphasize “pricing to market” and the careful management of production and inventories.
Figure 3 shows the combined monthly U.S. market share of the Detroit Three from March 2010 through October 2012. Except for the summer spike in 2011 that reflected the effects of the Great Japan Earthquake on inventories and sales of the Japanese automakers, the Detroit automakers have maintained a steady share of about 45 percent of the U.S. market. Prices above unit cost and adequate margins, not market share, are the current targets for the Detroit Three.
Does not include Volvo or Hummer sales after February 2010.
Source: Automotive News, Center for Automotive Research

The result of the reduction of capacity and the subsequent decrease in incentive programs has produced an impressive increase in revenue per unit for the Detroit companies. This is shown in Figure 4 for the period 2006 - 2012. Average revenue per unit for the companies was about $24,000 before 2008. Recent results for 2010 – 2012 have averaged about $28,000 or a $4,000 per vehicle increase. Table 1 shows a comparison between GM and Toyota of their average transaction prices by segment so far in 2012. In five of the ten segments, GM vehicles are selling for a higher price than Toyota models. In a similar table CAR produced in 2009, GM vehicles sold at a lower price than Toyota models in all ten segments.
Figure 4: Detroit 3 North American Automotive Revenue per Vehicle, 2006-9M2012

Source: Center for Automotive Research based on company's financial reports

Table 1: 2012 Weighted Average Transaction Prices on Base Models

<table>
<thead>
<tr>
<th>Segment</th>
<th>GM</th>
<th>Toyota</th>
<th>GM vs. Toyota</th>
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<tbody>
<tr>
<td>Lower Small</td>
<td>$14,599</td>
<td>$14,601</td>
<td>$(2)</td>
</tr>
<tr>
<td>Upper Small</td>
<td>$17,740</td>
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<td>$1,696</td>
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<td>Upper Middle</td>
<td>$23,115</td>
<td>$22,529</td>
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<tr>
<td>Lower Luxury</td>
<td>$34,525</td>
<td>$32,407</td>
<td>$2,118</td>
</tr>
<tr>
<td>Middle CUV</td>
<td>$24,081</td>
<td>$23,960</td>
<td>$121</td>
</tr>
<tr>
<td>Middle Luxury CUV</td>
<td>$33,485</td>
<td>$36,554</td>
<td>$(3,069)</td>
</tr>
<tr>
<td>Large SUV</td>
<td>$37,789</td>
<td>$39,638</td>
<td>$(1,849)</td>
</tr>
<tr>
<td>Luxury Large SUV</td>
<td>$60,414</td>
<td>$78,389</td>
<td>$(17,975)</td>
</tr>
<tr>
<td>Small Pickup</td>
<td>$17,931</td>
<td>$17,112</td>
<td>$819</td>
</tr>
<tr>
<td>Large Pickup</td>
<td>$21,514</td>
<td>$22,741</td>
<td>$(1,227)</td>
</tr>
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</table>

Source: Truecar, Wards' Auto and Center for Automotive Research
The combination of higher prices and lower fixed costs have produced a steady increase in North American operating profits starting in 2010 for all three Detroit automakers. This is a striking development compared to operating results before and during the recession. As can be seen in Figure 5, massive losses were reported in North America by both GM and Ford prior to the recession in 2006 and 2007. Starting in 2010, the three companies have reversed this position with all three companies operating at profitable levels and Ford, in particular, earning record margins of close to 11 percent in 2012. In fact as Figure 6 illustrates, the three Detroit companies on average have earned higher operating profits per vehicle in North America than the average for Toyota and Honda before and after the Great Japan Earthquake of 2011. This situation is undoubtedly unprecedented.

Figure 5: Detroit 3 North American Operating Profit per Vehicle, 2006 – 9M 2012

Automotive operating income per vehicle sold. Global average for Chrysler figure.
Source: Company reports
The good news for the Detroit companies since the restructuring has not come without some costs, particularly in terms of employment. Figure 7 presents company data on annual GM/Delphi U.S. hourly employment for 1985 – 2012. As can be seen, despite the bankruptcy of Delphi in 2005, hourly employment at the two related firms still stood at 129,000 in 2006. This total was reduced to 80,000 in 2009 and is now 49,000 in 2012. The last employment figure has remained steady for the last two years with the attrition of each traditional contract worker now replaced by the hire of a new “2nd tier worker” at approximately half the hourly cost. Contract provisions allow this replacement of 2nd tier workers without limit until 2015. The 2007 labor agreement, the concession agreements of 2009, and the current 2011 contract have resulted in a considerable reduction in the cost of labor at the three companies.

Figure 8 shows the results of a CAR analysis of Detroit Three labor costs in 2011. GM’s cost in 2011 for hourly labor, for example, was $56 per hour, a considerable improvement over the $79 per hour cost in 2006. Chrysler’s hourly cost of $52 per hour is even lower than CAR’s estimate of $55 per hour for Toyota USA. The major improvements, of course, involved the transfer of such legacy costs as retiree health benefits to independent VEBAs managed by the UAW.
Figure 7: GM/Delphi U.S. Hourly Population, 1985-2012

Source: Company reports

Figure 8: 2011 Labor Cost Competitiveness in the United States

<table>
<thead>
<tr>
<th>Company</th>
<th>Labor Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ford</td>
<td>$58</td>
</tr>
<tr>
<td>GM</td>
<td>$55</td>
</tr>
<tr>
<td>Toyota</td>
<td>$55</td>
</tr>
<tr>
<td>Chrysler</td>
<td>$52</td>
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<tr>
<td>Honda</td>
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<tr>
<td>Nissan</td>
<td>$47</td>
</tr>
<tr>
<td>Hyundai</td>
<td>$44</td>
</tr>
<tr>
<td>VW</td>
<td>$38</td>
</tr>
</tbody>
</table>

Source: Company reports, Center for Automotive Research
The relative comeback of the Detroit Three in their North American operations can be summarized in Figure 9. In 2006, U.S. light vehicle sales reached a level of 16.6 million, yet the combined global net income of the Detroit Three was a loss of $17.6 billion compared to a gain of $19.0 billion for Toyota and Honda. So far in 2012, the U.S. market has trended at a sales level of 14.3 million units or 14 percent lower than sales in 2006. Yet the three companies have earned $10.5 billion in the first three quarters of 2012 compared to $12.0 billion for Toyota and Honda. The so-called break-even sales level in North America for the Detroit companies is clearly lower. Only significant losses in their European operations which outweigh their growing profits in the Chinese market prevent the Detroit companies from matching or exceeding their major Japanese competition in profitability.

Figure 9: Profitable at Lower Sales Volumes, 2006 ~ 2012*

*Through September 2012.
Source: Automotive News, Company Annual Reports
Section II: CAR Forecasts of Auto Sales, Production, and Employment

The U.S. automotive market is on the verge of posting its third consecutive annual double-digit percentage increase in vehicle sales. Many determinants of automotive sales are improving. The U.S. unemployment rate is finally below 8 percent and consumer confidence is at a four year high according to the indexes. Used vehicle prices are at a record level reducing competition from existing vehicles and increasing the size of trade in allowances. The age of vehicles on the road are also at a historical high reflecting the potential of enormous pent-up demand for new vehicles. Also, the spike in fuel prices has ended for now and the outlook on petroleum production has brightened. And the housing market appears to be bottoming out and some stability and even increases in home prices have been reported. Even recent natural disasters, such as Tropical Storm Sandy, may improve near term sales through replacement demand.

However, the general condition of the U.S. economy still faces many challenges which may negatively affect auto sales in the next several years. The economy or GDP is still growing slowly and over 12 million Americans are still unemployed. States and municipalities are still cutting employment month after month. Corporations have reduced their investment and hiring plans for next year in the general uncertainty regarding the “Fiscal Cliff” and the gathering recession in the Eurozone. Finally, the stock market appears to be especially volatile for many reasons and the housing recovery is far from a sure thing. To top it all off, there is a looming regulatory cliff in Washington for automakers that may greatly increase the price of vehicles and reduce the value of many attributes in motor vehicles.

This section will attempt to parse these influences into a series of CAR forecasts of automotive sales, production and employment for the next several years.
Since the beginning of 2012 (with the exception of May), monthly light vehicle sales have grown at an annual rate above 14.0 million units, as shown in Figure 10. 2012 vehicle sales are expected to increase by 12 percent, which marks the third consecutive year of double-digit sales growth since 2009. Despite sluggish U.S. economic growth, the recovery in vehicle sales has been steady and promising.
Figure 11 shows the relationship between U.S. GDP and light vehicle sales growth rates from 1952 through 2012. These two variables were once statistically correlated to a degree that one could almost predict the GDP growth rate using only vehicle sales growth. However, the close relationship between GDP and vehicle sales seems to have broken in 2010. Double-digit growth in U.S. vehicle sales in 2010, 2011, and 2012 YTD has been accompanied by GDP growth rates of 3 percent or lower. Based on historical trends, the predicted GDP growth rate for the past three years should have been 4 percent or higher based on recent growth in vehicle sales.

The connection between the auto industry and the U.S. economy also seems to be disconnected. There are three possible explanations: first, vehicle sales may be driven by pent-up vehicle demand, which would make sense given the economy alone is not a strong enough driver for the current rate of sales growth and the age of the fleet is at record highs; second, interest rates on new vehicle loans are very low—and credit is widely available, even for sub-prime borrowers; and finally, GDP growth rates may be suppressed by the persistently high unemployment rate, which is still above 8 percent—3 percent higher than 2007. Output of the economy would grow if the unemployment rate were lower.

*Through 3Q 2012.
Source: Bureau of Economic Analysis
The historical trend of U.S. GDP growth rates and vehicle sales growth from 1950 through 2012 is shown in Figure 12. The data shows that GDP growth of 3 percent or higher is necessary to have a positive automotive sales growth. But since 2011, data observations have not been following the trend. In 2011, light vehicle sales grew by 10.3 percent, but GDP only grew by 1.8 percent; through the third quarter of 2012, vehicle sales grew by 13.6 percent, but GDP only grew by 2.0 percent. These short-term observations show that vehicle sales were either above trend by at least 10 percentage points, or the GDP growth rates were below trend by 3 percentage points.
Figure 13 shows the simple correlation between unemployment rate and the level of U.S. light vehicle annual sales. The ordinary least squares (OLS) regression line shown implies that as the unemployment rate decreases by one percentage point, U.S. light vehicle sales are expected to increase by one million units. In order to have a 15 million unit sales year, the unemployment rate should be close to 6 percent. As of the third quarter 2012, the average unemployment rate was 8.1 percent, and the seasonally adjusted annual sales level was 14.2 million. According to this regression results, 14 million units of sales is not a sustainable level unless the unemployment rate decreases to lower than 7 percent.

Source: Bureau of Economic Analysis, Bureau of Labor Statistics
Consumer confidence is another indicator affecting light vehicle sales. As shown in Figure 14, during the 2008-2009 recession, the University of Michigan’s (UM) Consumer Sentiment index dropped as low as 55.3. As of November 2012, the UM index has improved 27.4 points to 82.7, and U.S. light vehicle sales also increased 37 percent from 10.4 million in 2009 to over 14 million in 2012. The OLS regression line indicates that a one-point increase in the consumer sentiment index would produce an expected gain of 125,000 units in light vehicle sales. In other words, to sustain a 15 million sales level, the consumer sentiment index would have to be at least 90.
Figure 15: Monthly Expenditure Per Household By Type of Product/Service, 1995-2012*

*Through 3Q 2012.
Source: Center for Automotive Research based on Personal Consumption Expenditures by Type of Product, Bureau of Economic Analysis

Figure 15 shows monthly personal consumption expenditures per household by types of products and services for the years 1995 through 2012. The solid line on the left represents the category of motor vehicle and parts which include new and used vehicles, and accessories, but does not include motor vehicle maintenance and repair services. The broken line represents energy usage per household, which include house electricity, natural gas, fuel oil, and gasoline. The dotted line represents average household expenditures on cable and satellite television services, telecommunication services, and Internet access. The solid line in the chart at right represents healthcare expenditures, which include outpatient and hospital services, and nursing home services, but not pharmaceutical and other medical products.

During the recession, both energy and motor vehicle expenditures dropped significantly. However, personal consumption expenditures on TV, phone, and Internet services, and healthcare services did not decline at all. These categories are just two of the many examples of service expenditures that have become necessities, as purchases of goods (including energy) have become discretionary expenditures.
Household net worth is an indicator to estimate the wealth effect on light vehicle sales (see Figure 16). Home value is a major element of household net worth. From 1975 to the late 1990s, household net worth grew steadily, accumulating by an average rate of 8 percent per year. Just before the 2008 recession, the accumulation rate was as high as 14 percent. This unusually high rate of accumulation for household wealth is believed to be the reason for the light vehicle sales “bubble” between 2001 and 2007. During this period of time, vehicle sales were consistently above 16 million units. Low vehicle prices and high home equity triggered consumers to buy additional vehicles, and once the housing bubble burst, light vehicle sales plummeted.
Despite an unemployment rate that is still close to 8 percent, and real GDP growth rate that is, at best, 2.5 percent, CAR's 2013 light vehicle sales forecast is 14.9 million units, 4.2 percent higher than 2012 (see Figure 17). U.S. household net worth has bottomed out, and is expected to grow for the third consecutive year in 2013. Low interest rates on new vehicle loans, along with record-high used car prices, also drives the new car market to grow at a faster rate than the overall economic recovery. However, long term market growth is hampered by slower-than-expected economic recovery and a higher-than-normal unemployment rate; therefore CAR estimates the market will only grow modestly in 2014 and 2015—15.2 million and 15.4 million, respectively. CAR does not forecast light vehicle sales returning to 16 million units any time soon.
Figure 18 represents U.S. light vehicle sales from 2007 to 2011, and CAR’s baseline sales forecast from 2012 to 2016. CAR’s baseline forecast uses macroeconomic indicators as variables of a dual-equation model. Other determinants are also included in the model, such as the relative price of motor vehicles (to overall Consumer Price Index (CPI)), vehicle saturation rate (numbers of registered vehicles per household), and light vehicle production. The details of CAR’s sales model are explained in Appendix 1.

CAR’s baseline forecast is that 2012 will be the last year to have double-digit sales growth before 2016. 2013 sales are forecast to grow only 4.2 percent, or 600,000 additional units compared to 2012 sales. The baseline forecast did not consider the impact of the federal government’s “deficit reduction” policies on sales, and is a look at what light vehicle market demand could be if “deficit reduction” or the “fiscal cliff” did not exist. The impact of U.S. fiscal policies will be discussed later in this study.
In addition to light vehicle sales, CAR also forecast U.S. light vehicle production for 2012 through 2016 (Figure 19). CAR's production model is part of a dual-equation model that is simultaneously estimated with sales. CAR's estimate is that 2013 U.S. light vehicle production will grow by 9.3 percent to 10.6 million units, compared to 9.7 million units in 2012. Unlike vehicle sales which will probably not come back to pre-recession level any time soon, vehicle output is expected to fully recover by 2014. Output growth is stronger than sales growth partially because the weak U.S. dollar discourages vehicle imports, and therefore encourages transplants to increase U.S. production.
Figure 20: Motor Vehicle & Parts Manufacturing Employment 1999 – 2012 September

Source: Bureau of Labor Statistics

U.S. automotive employment is not yet back to its 2008 level after three years of recovery, as shown in Figure 20. In September 2012, U.S. automotive employment was still 84,100 fewer than it was in 2008. In fact, from 1999 to September 2012, U.S. automotive employment dropped by 42 percent. Three Midwest states—Michigan, Ohio, and Indiana—where much of the automotive industry is concentrated, had even steeper drops in automotive employment. Since the recession, employment numbers have been recovering, but they are not expected to return to 1999 levels (when the auto industry employed more than 1 million people in the United States) in the foreseeable future.
Figure 21: U.S. Vehicle Production & CAR Motor Vehicle & Parts Employment Forecasts, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>MV Employment</th>
<th>Parts Employment</th>
<th>Vehicle Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>174,000</td>
<td>650,000</td>
<td>9,700,000</td>
</tr>
<tr>
<td>2013</td>
<td>190,000</td>
<td>710,000</td>
<td>10,600,000</td>
</tr>
<tr>
<td>2014</td>
<td>195,000</td>
<td>715,000</td>
<td>10,800,000</td>
</tr>
<tr>
<td>2015</td>
<td>197,000</td>
<td>720,000</td>
<td>10,900,000</td>
</tr>
<tr>
<td>2016</td>
<td>203,000</td>
<td>740,000</td>
<td>11,200,000</td>
</tr>
</tbody>
</table>

Source: Center for Automotive Research

Figure 21 shows CAR’s forecast of U.S. automotive employment from 2012 through 2016. Overall, the industry is expected to add 90,000 employees by 2016, of which about one-third will be in motor vehicle manufacturing and two-thirds will be in the automotive supplier sector. Currently the ratio of automotive supplier employment to automaker employment is about three to one. Therefore, the projected two-to-one ratio for future automotive employment growth indicates that future vehicle production and OEM employment will support fewer domestic parts workers. It could also mean that production from the foreign automakers will comprise a larger share of production growth than that of domestic automakers, assuming foreign automakers as a whole source a smaller proportion of their inputs from U.S. auto suppliers than domestic automakers do.
Figure 22 shows U.S. vehicle production and the number of vehicles per job, a productivity measure which is calculated by dividing vehicle production by automotive employment (including motor vehicle manufacturing and automotive parts manufacturing workers). Before the recession, there were 12.7 vehicles for every automotive job. During the recession, the figure plummeted to below 10. One year after the recession, the figure bounced back to 13.3, and continued to grow in 2011 and 2012. Currently, automotive labor productivity is at the highest level ever recorded since 1960, which means fewer workers are needed to produce the same number of vehicles. There are many changes and improvements in the manufacturers' production systems, work scheduling, and in overtime trends that increase labor productivity, but productivity could also be driven by increasing imports of automotive parts.
According to National Automobile Dealers Association (NADA), the average retailer price for vehicles increased from $20,450 in 1995 to $30,659 in 2011 (represented by the bars in Figure 23). During the same period of time, the total amount of imported automotive parts ballooned from $46 billion to $108 billion, and imported parts per vehicle tripled from $4,114 to $12,764. Some may argue that a portion of imported parts are for aftermarket or used vehicles, which both grew significantly during the same period of time. However, personal consumption expenditure on motor vehicle parts and accessories (all of them are considered aftermarket parts) only grew by 35 percent. Price inflation, which is about 45 percent during this period, is not sufficient to explain the growth in the share of imported parts per vehicle, which increased more than 300 percent over the past 16 years. In the same period of time, U.S. auto parts employment dropped by 44 percent. There used to be 7 U.S. automotive parts workers per 100 vehicles produced, now there are only 5.3 workers per 100 vehicles produced. Both the number of automotive parts establishments and size of establishments shrunk during this period. It is clear that the U.S. automotive parts industry has been shrinking fast in the past decade.
Table 2: CBO's Baseline and Alternative Budget Projections ($ Bil.)

CAR Research based on CBO’s Baseline Budget Projections, August 2012

Assumed TWO YEAR extension of most expiring tax provisions except for the lower tax rates on high income tax payers, and index the AMT for inflation.

<table>
<thead>
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<tbody>
<tr>
<td>Revenue</td>
<td>2,803</td>
<td>2,495</td>
<td>2,625</td>
<td>2,863</td>
<td>3,541</td>
<td>3,817</td>
<td>4,083</td>
<td>4,329</td>
<td>4,551</td>
<td>4,790</td>
<td>5,039</td>
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<tr>
<td>Outlay</td>
<td>3,601</td>
<td>3,563</td>
<td>3,554</td>
<td>3,595</td>
<td>3,754</td>
<td>4,008</td>
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<td>4,407</td>
<td>4,681</td>
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<tr>
<td>Deficit (-) or Surplus</td>
<td>-1,800</td>
<td>-1,128</td>
<td>-929</td>
<td>-732</td>
<td>-213</td>
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<td>-123</td>
<td>-79</td>
<td>-130</td>
<td>-141</td>
<td>-144</td>
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<tr>
<td>Deficit reduction-full</td>
<td>172</td>
<td>189</td>
<td>197</td>
<td>519</td>
<td>27</td>
<td>63</td>
<td>44</td>
<td>-51</td>
<td>-12</td>
<td>-70</td>
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<tr>
<td>Deficit reduction-half</td>
<td>99.5</td>
<td>98.3</td>
<td>259.3</td>
<td>13.3</td>
<td>31.5</td>
<td>22</td>
<td>25.5</td>
<td>6</td>
<td>-1</td>
<td>-35</td>
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CAR Research based on CBO’s Alternative Budget Projections, August 2012 (in red circle) and November 2012 (in blue circle)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Revenue</td>
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<td>2,435</td>
<td>2,563</td>
<td>2,625</td>
<td>3,111</td>
<td>3,361</td>
<td>3,596</td>
<td>3,808</td>
<td>3,966</td>
<td>4,195</td>
<td>4,399</td>
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<tr>
<td>Outlay</td>
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<td>3,621</td>
<td>3,748</td>
<td>3,921</td>
<td>4,193</td>
<td>4,430</td>
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<td>-1,038</td>
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<td>-810</td>
<td>-832</td>
<td>-834</td>
<td>-870</td>
<td>-1,008</td>
<td>-1,102</td>
<td>-1,200</td>
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<tr>
<td>Deficit reduction-CBO alternative</td>
<td>172</td>
<td>96</td>
<td>115</td>
<td>113</td>
<td>-22</td>
<td>-2</td>
<td>-86</td>
<td>-133</td>
<td>-99</td>
<td>-98</td>
<td>-162</td>
</tr>
</tbody>
</table>

Increase Revenue (Tax Increases) 0 42 38 150 458 487 520 555 594 640 687
Decrease spending 0 -67 -153 -167 -120 -82 -374 -210 -96 478 461

Source: Center for Automotive Research based on two CBO studies: Economic Effects of Policies Contributing to Fiscal Tightening In 2013, Congress of the United States, Congressional Budget Office, November 2012; An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022, Congress of the United States, Congressional Budget Office, August 2012.

A number of tax provisions will expire in 2013 if Congress and the President do not come to an agreement to change current tax and spending laws. As a result, personal income taxes may increase dramatically starting in January 2013. This so-called “fiscal cliff” would have an impact on personal disposable income as well as private investment. The Congressional Budget Office (CBO) estimated in August 2012 that real GDP could decline by 0.5 percent, and the unemployment rate could rise to about 9 percent in 2013. In November 2012, CBO released an estimate update titled “Economic Effects of Policies Contributing to Fiscal Tightening in 2013.” In this update, CBO assumed a two-year extension of most expiring tax provisions (except for the payroll tax cut), and indexing the alternative minimum tax. CBO estimated in the short term (2013 and 2014), GDP would grow by 2.2 percent. Table 2 shows CBO’s baseline and alternative budget projections based on the agency’s two studies on this subject in 2012. The circle on the left indicates a small increase in revenue due to the extension of tax provisions, and the circle on the right shows a large revenue increase when all tax provisions expire.
CAR estimates the impact of the “fiscal cliff” will affect vehicle sales immediately, and that the U.S. light vehicle market will be more than 6 million units smaller in the next decade as a result. Figure 24 shows CAR’s baseline sales estimate (extending all tax provisions), and an alternative sales estimate (all tax provisions expire in 2015). The tax revenue difference between CBO’s two projections (baseline and alternative) will increase to $430 billion in 2015 and to $687 billion by 2022. The projected tax increases will lower personal disposable income by about 3.0 percent starting in 2015. CAR estimates the income elasticity on motor vehicle demand ranges from 0.84 in the short run to 1.20 in the long run. Therefore, the impact of this reduction in personal disposable income could affect motor vehicle demand by as much as 4.0 percent by the end of this decade.
Section III: The Auto Industry’s Contribution to Economic Growth

The output of the U.S. auto industry, manufacturers and retailers, has always contributed a significant share to GDP. However, the industry’s share of GDP has fallen over time with the growth of other sectors and of the government in the economy. As Figure 25 shows, the industry’s share was about 3.3 percent of GDP (and about 5.0 percent of private sector GDP) through the first three quarters of 2007. The following recession period, however, saw the industry’s share fall to perhaps an all-time low of 1.7 percent by the first quarter of 2009. The recovery of sales since 2009 has seen a recovery in the industry’s share of GDP to just over 3.0 percent. Although several components of auto output such as personal consumption expenditures or private fixed investment have not yet recovered to pre-recession levels, net-exports are more positive than before the recession by about $20 billion.

Even though the U.S. automotive industry has lost nearly half of its employment in the past decade, it is still the largest manufacturing industry by gross output in the United States. Not only do people buy motor vehicles for personal use, but businesses and governments also buy vehicles. In fact, personal consumption expenditure on new motor vehicles accounts for only half of total motor vehicle output. The remainder of vehicle sales goes to private and public investment. Without a viable domestic automotive industry, the country could only rely on imports, which will cost the U.S. economy hundreds of billions of dollars each year.

Figure 25: U.S. Motor Vehicle Output and share of GDP, 1Q2007 – 2Q 2012

Source: Bureau of Economic Analysis
A more important topic perhaps than the industry’s share of GDP is its contribution to change in real GDP or economic growth. As stated previously, auto sales seem to be outpacing the overall growth of the economy. Figure 26 shows the contribution of the auto industry to percentage change in quarterly real GDP during 1Q 2008 through 2Q 2012. In a number of quarters, the industry contribution ranges from 25 to 100 percent of change in real GDP. Continuing strong growth in auto output could greatly assist future growth in the overall economy.

Figure 26: Auto Contributions to Percent Change in Real GDP, 1Q 2008 – 2Q 2012

Source: Bureau of Economic Analysis
The potential of the industry to contribute to long run economic growth depends on a number of familiar trends in the population, preferences for vehicle ownership, the sourcing of automotive output, and the efficiency of automotive production. The top half of Table 3 reviews these trends which are explained below.

Table 3: Potential for U.S. Automotive Growth?

<table>
<thead>
<tr>
<th>Annual Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth in # of Households: &lt;1%</td>
</tr>
<tr>
<td>Veh./Household, % of Households w/ Veh.: &lt;0%</td>
</tr>
<tr>
<td>Overseas Exports: &lt;1%</td>
</tr>
<tr>
<td>Reducing Imports: &lt;0%</td>
</tr>
<tr>
<td>Manufacturing productivity: 0%</td>
</tr>
</tbody>
</table>

- Beneficial Innovations ($ gross annual value):
  - Fuel economy performance (increase by 100%): + $200 B
  - Improved safety (reduce fatalities by half): + $119 B
  - Lower congestion costs (by half): + $ 50 B
  - Other attributes?: - ???

But related innovation and infrastructure costs may be greater than benefits!

Source: See footnotes

-- Growth in vehicle sales over the long run depends on growth in the number of independent households in the U.S. economy. Typically, for about 87 percent of the working population, a motor vehicle is the preferred means of commuting to work. In fact, for most Americans, the independence of a household depends partly on vehicle ownership. The U.S. Census forecasts the growth rate of households in the U.S. population at about 1 percent a year through 2025.²

-- The number of vehicles that are owned per household can also determine the growth rate of automotive sales. This ratio recently reached an all-time peak of about 2.1 vehicles per household in about 2006 and has declined since. An additional decline to the long-run level of about two vehicles per household appears to be a reliable trend going forward because of slow growth in PDI. Also there is no apparent trend in the percentage of households that own a vehicle.³

-- Recently, exports of U.S. produced vehicles to other countries have been increasing at a very slow rate. This is related to the exchange value of the dollar and to Free Trade

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Agreements such as that recently established between the United States and Korea. The annual percentage increase, however, is very low and will probably not increase at a high rate in the future.⁴

Offsetting any increase in exports of automotive output is the strong growth of automotive imports especially automotive parts and components. Although this trend was reversed to a certain extent during the Great Recession, it has now been resumed and automotive parts imports will set a record in 2012.⁵ (See Figure 23 and above discussion)

Productivity in auto manufacturing can influence economic growth in several ways. First, if automotive output can be produced for less it can also be sold for less and overall sales and production may increase at an even faster rate. Second, if overall sales and production do not increase by much, higher efficiency in production can still allow resources to be released to the rest of the economy for other purposes that increase overall economic growth. Unfortunately, it appears that almost all auto companies operating in the U.S. industry now operate at very high efficiency levels, such as those at Toyota Manufacturing. This has been true since about 2008 and very little progress appears to be likely in the years ahead.⁶

Thus, based on the trends discussed above it appears that maintaining a high level of growth in output will be difficult for the auto industry in the years ahead. However, another source of potential growth is strong innovation in the motor vehicle itself or how it is produced. For example, Henry Ford’s innovation of introducing the moving assembly line, the division of labor, and further standardization of parts to auto manufacturing reduced the cost of making automobiles by up to 80 percent but also famously increased the market for the product in exponential terms. Surprisingly, many of the beneficial innovations that may occur in the future are now driven by government regulatory processes and even public investment instead of the market or perhaps the industry itself. The major innovations under discussion include the following,

- **Improvements in fuel economy performance** have now been mandated through 2025 by the both the Environmental Protection Agency (EPA) and the National Highway Safety Administration (NHTSA). Starting with a base of 27.5 miles per gallon (mpg) for passenger cars and a lower level of (23.5 mpg) for light trucks in 2007, the National Standards Act and the most recent CAFE (Corporate Average Fuel Economy) mandates finalized in 2012 will require a combined fleet fuel economy average of 54.5 mpg by

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⁵ ibid
2025. If this is achieved, it would reduce fuel consumption by 50 percent. In 2012 terms, such an improvement would result in annual fuel savings worth over $200 billion. Of course, motorists would certainly drive additional miles in vehicles with higher fuel economy offsetting some of the fuel savings. However, the cost of new fuel economy performance technologies placed on the vehicle would not be minor as well. CAR has estimated this cost at over $5,000 per vehicle. Finally, it is very likely that some vehicle attributes would have to be sacrificed in order to double fuel economy performance which implies additional costs to the consumer. The success of this program now appears to depend crucially on consumer acceptance of the new technologies and the eventual price of motor vehicle fuel.

- Improved safety technologies will soon be mandated by the NHTSA. The stated goal of NHTSA officials is a zero fatality rate on U.S. highways and roads. NHTSA has pursued this regulatory agenda primarily through technology mandates for the motor vehicle. A number of new, primarily electronic, driver-assist, electronic technologies will be mandated in the next several years. It is somewhat possible that the recent record low level of 34,000 highway fatalities may be reduced by the implementation of these technologies (for example, collision avoidance and lane departure warning devices). If the current fatality level is reduced by half it could be worth as much as an annual savings of $119 billion using a conservative value for lives saved. In contrast to previous safety mandates that featured protective safety devices such as airbags which saved lives but did not prevent accidents (in fact they may have increased accidents), the new technologies are designed to prevent accidents and survivable injuries. However, cost and consumer acceptance may limit the gains to these new technologies as is the case for fuel economy technologies.

- Lower congestion costs may be possible proponents claim if certain “connectivity” technologies are adopted that allow vehicle-to-vehicle communication and communications with the transportation infrastructure. Even the possibility of autonomous (self-driving) vehicles has been discussed. The Texas Transportation Institute (Texas A&M) has estimated national congestion costs at a level of $101 billion in 2010. If the proposed connectivity technologies were successful enough to reduce congestion by half this would produce savings of over $51 billion per year. However, previous attempts to relieve congestion have failed because improvements have resulted in an off-setting increase in demand for increased travel. Once again, the

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1 Personal Consumption Expenditure on vehicle fuels, lubricants, and fluids, Bureau of Economic Analysis.
required technologies are not without cost and will not generally work without full implementation to the entire vehicle fleet.

- **Other new vehicle attributes** are possible of course, given the normal operation of markets and consumer demand. However, the costs of mandated technologies listed above may leave little room left in vehicle price for the sale of such features. In other words, mandated innovation may crowd out normal innovation in the vehicle and if not valued by the consumer at cost, such mandates may even lower sales and production in the years ahead.
Conclusions

We have provided evidence in this paper on the subject of the Detroit Three’s financial “comeback” especially in such areas as prices and profitability. The Detroit companies are now demonstrably better able to withstand future cycles in the North American automotive market compared to their position before the restructurings of 2009. Questions about their international operations or their future market share, however, remain.

CAR has provided a set of forecasts on U.S. automotive sales, production and employment. CAR expects auto sales growth to slow to single digit percentage annual increases from its rapid growth in the last three years. Sales growth will largely be driven by record pent-up demand for new vehicles rather than by a strong performance from the U.S. economy. CAR expects automotive vehicle production to fully recover to pre-recession levels in the next two years. However, recovery in automotive employment is slowing and may not reach pre-recession levels.

A high growth rate in future U.S. automotive output does not appear probable when the usual underlying trends that influence such growth are examined. However, a set of significant innovations have been mandated by the federal government for future motor vehicles that may carry great promise for savings and other benefits not only in the automotive market but throughout the economy. Yet it remains to be seen what the long run costs of these innovations and their final acceptance by consumers will be in an auto industry and market that will see many changes in the years ahead.
Appendix 1: CAR's U.S. Light Vehicle Sales and Production Model

CAR adopts a dual-equation (supply and demand) model to forecast the U.S. light vehicle sales and production. The equations use annual data from 1958-2011 to estimate parameter coefficients that will later on be used in forecasting. The supply and demand equations are shown as follow:

\[ PRDD = f(R\_GDP, PRICE, SALES) \]
Where:
\[ PROD = \text{U.S. light vehicle production index (1996=100, roughly 11.5 million)} \]
\[ R\_GDP = \text{Real GDP growth rate.} \]
\[ PRICE = \text{New vehicle relative price} = \frac{CPI\_\text{New Vehicle}}{CPI\_\text{All Items}} \]
\[ SALES = \text{U.S. light vehicle sales index (15 million = 100)} \]

\[ SALES = f(VH, UNEMP, PRICE, NETWORTH, PRDD) \]
Where:
\[ VH = \text{Vehicle stock per household} = \frac{\text{Total light vehicle registration}}{\text{Number of household}} \]
\[ UNEMP = \text{Unemployment rate} \]
\[ NETWORTH = \text{Household net worth percentage change} \]

The dual-equation model will take the parameter estimates generated by these equations, along with CAR's macroeconomic assumptions fed into the model, and produce 2012-2022 sales and production estimates that are present in this study.
EXHIBIT 11
LENGTH: 336 words

HEADLINE: China wire rod case drives new imports

BYLINE: Stacy Irish

BODY:

NEW YORK — U.S. wire rod buyers have expressed surprise at attractive new import offers from Turkey, Russia, Spain and Portugal that have been driven by an ongoing trade case vs. Chinese product.

While new offers for early summer delivery from those four countries are higher than previous prices from China, it’s not by much, buyers said.

“We’re getting offers from Turkey, Portugal and Russia that are slightly higher than previous Chinese wire rod prices, and it was not what we were expecting,” one U.S. wire rod buyer told AMM. “There are no more Chinese wire rod offers to the U.S. That game is over.”

Since the end of January, sources indicated that wire rod offers from China have dried up due to the pending trade case, effectively forcing buyers to find new markets (amm.com, Feb. 18).

However, wire rod was sold at between $580 and $590 per ton c.i.f. Port of Houston last week, with most offers from Turkey for late May or June delivery, sources said. That’s up from $570 to 580 per ton c.i.f. Port of Houston before the Chinese New Year holiday.

The lack of Chinese offers could continue. The U.S. International Trade Commission last week found indication of material injury to the U.S. industry (amm.com, March 14).

Market sources added that several thousand tons of wire rod from China is currently en route to U.S. shores ahead of final determinations in the trade case.

But with so much uncertainty, others said imports might not be the best bet.

“I have not heard much, as we have only been spot buying domestic to fill in around large import buys inked in the third and fourth quarter (of 2013),” a second rod buyer said. “I had an offer from South Korea at $32.50 per hundredweight ($650 per ton) for June/early July delivery. We did not buy on this offer and expect to be in a holding pattern with the rest of the industry for another month or two.”

The U.S. Commerce Department will issue its preliminary countervailing duty determination by April 28 and its anti-dumping determination by July 10.
HEADLINE: Wire rod import prices rise, China offers shrink

BYLINE: Stacy Irish

BODY:

NEW YORK — U.S. wire rod import transaction prices have risen as lower-priced offers from China have dried up, market sources told AMM.

Wire rod was sold last week at $610 to $620 per ton c.i.f port of Houston for May and early June delivery, mostly from Turkey, sources said, up from $560 to $560 per ton previously.

"Turkey has been knocking at my door with wire rod offers," one wire rod buyer said. "The lower offer prices from China have dried up."

Wire rod offers from China have disappeared since the end of January due to a pending trade case, sources have said, effectively forcing buyers to find new markets (amm.com, Feb. 18).

U.S. wire rod buyers have been purchasing material from a variety of sources, including Russia and Spain, but Turkey has been the most attractive source due to its competitive prices, AMM has been told.

Some importers booked medium to large wire rod tonnages from China at the end of last year and early this year, which are expected to arrive in the United States in April and May.

"Turkey is a big market but there are offer prices from other countries. Wire rod is being sourced from Turkey, Spain and Russia. People still have material on order from China, so they do not need to buy for at least a month," one wire rod trader said.

The lack of wire rod offers from China could continue, as the U.S. International Trade Commission in mid-March found indication of material injury to the domestic industry (amm.com, March 14).

LOAD-DATE: April 1, 2014
EXHIBIT 13

Vlasjuk V.S.
SE UPE Co. Research & Consulting, Ukraine

75th Session of the OECD Steel Committee Meeting, Paris, 05–06 December 2013
1. In 2010-2013 crude steel production in Ukraine has stabilized in range of 33-35 million tonnes.

This year crude steel production in Ukraine will increase by 0.3 Mt (+0.9% y-to-y) to 33.3 Mt due to export growth.

Source: State Statistics Service of Ukraine
2. Ukraine remains in the top 10 world largest steel producers

<table>
<thead>
<tr>
<th>Country</th>
<th>Production (Mt)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>651</td>
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</tr>
<tr>
<td>Japan</td>
<td>92</td>
<td>7.0%</td>
</tr>
<tr>
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<td>73</td>
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</tr>
<tr>
<td>India</td>
<td>66</td>
<td>5.0%</td>
</tr>
<tr>
<td>Russia</td>
<td>58</td>
<td>4.4%</td>
</tr>
<tr>
<td>South Korea</td>
<td>55</td>
<td>4.1%</td>
</tr>
<tr>
<td>Germany</td>
<td>36</td>
<td>2.7%</td>
</tr>
<tr>
<td>Turkey</td>
<td>29</td>
<td>2.2%</td>
</tr>
<tr>
<td>Brazil</td>
<td>29</td>
<td>2.2%</td>
</tr>
<tr>
<td><strong>Ukraine</strong></td>
<td><strong>28</strong></td>
<td><strong>2.1%</strong></td>
</tr>
</tbody>
</table>

Source: WSA, State Statistics Service of Ukraine

By the results of 10 months 2013 Ukraine holds 10th place (with share 2.1% from the world production) in the rating of the largest steel-producing countries.
3. Iron ore production in Ukraine has steadily increased since 2010, but coke production has downtrend in 2012-2013.

The growth of iron ore production in Ukraine 2010-2013 was caused mainly by increase of exports to China (17.5Mt in 2013). In contrary, the current production of coke fell to level 2009.
4. Structure of Ukrainian steel capacity by process

Ukrainian steel capacities by process, Mt

- **Electric Furnaces**
- **Oxygen Blown Converters**
- **Open Hearth Furnaces**

Source: State Statistics Service of Ukraine

During 2011-2013 5.5 Mt of open-hearth furnaces were decommissioned whereas EAF (1.3 Mt) were commissioned. Complete replacement of open hearth technology in Ukraine is planned till 2018.
5. Current Ukrainian steel capacity utilization corresponds to the world average level

During 2013 crude steel capacity in Ukraine was utilized at 76.1%
6. Ukrainian export continues to play an important role. However, in 2009-2013 it was significantly below pre-crisis level.

- 2007: 28.3 Mt
- 2008: 26.3 Mt
- 2009: 22.6 Mt
- 2010: 23.8 Mt
- 2011: 24.3 Mt
- 2012: 22.6 Mt
- 2013E: 23.1 Mt

Estimation based on 10 months 2013

Source: State Statistics Service of Ukraine

After record 2007, in 2009-2013 Ukraine's steel export reduced by 5.2 Mt, especially to America, Turkey, Middle East and Asia.
7. Ukrainian export market is well diversified. EU and CIS remain the biggest partners

Regional structure Ukrainian steel export

Source: State Statistics Service of Ukraine

The shares of the EU and the CIS in the structure of exports from Ukraine are 27% and 20% in 2013.
8. Outlook 2014: GDP, industrial production, construction will rise moderately ...

Source: State Statistics Service of Ukraine
9. ...as a result Ukrainian steel consumption 2014 will increase

Steel products, Mt

Source: State Statistics Service of Ukraine, UEX Co. (forecast).

The expected growth rate of apparent steel consumption is 3.5% in 2014 after reduction by 5.8% in 2013.

This year Ukraine will import up to 1.78 Mt of steel products or 22.8% of total consumption.

In 2014 steel import to Ukraine is expected nearly 1.7 Mt.
Expected growth of steel production in 2014 was 2.7% versus 0.9% in the current year. It will be determined by the growth of exports (+0.5Mt) and domestic consumption (+0.3Mt).
Investments in energy efficiency and environment protection
12. In 2011-2013 modernization of Ukraine's steel industry has accelerated

Ukrainian steel production by process

- Open Hearth Furnaces
- Oxygen Blown Converters
- Electric Furnaces

The share of steel production by energy-intensive open-hearth technology in Ukraine has decreased by more than twice from 44.2% (2007) to 19.2% (2013)

Source: State Statistics Service of Ukraine
13. Implementation of pulverized coal injection technology in Ukraine has advanced substantially

Structure of pig iron production by usage coke, natural gas and pulverized coal

Source: State Statistics Service of Ukraine

In 2010-2013 PCI technology was implemented in four Ukrainian iron&steel works — Alchevsk ISW, Zaporozhstal ISW and Mariupol Ilyich ISW
14. Implementing PCI has led to a decrease in consumption of natural gas per 1 tonne of pig iron in Ukraine

Natural gas consumption in Ukrainian metallurgy, million m³
- 2007: 7,338
- 2008: 6,459
- 2009: 4,086
- 2010: 5,173
- 2011: 5,173
- 2012: 3,886
- 2013E: 3,130

Natural gas consumption per 1t pig iron, m³/t
- 2008: 81.3
- 2009: 57.3
- 2010: 75.8
- 2011: 68.5
- 2012: 35.9
- 2013: 23.6

Source: Metallurgprom

Compared with 2008, the consumption of natural gas per 1t pig iron production decreased from 81.3 m³ to 23.6 m³ in 2013.
15. Due to the closures of obsolete steel capacities in Ukraine, steel sector have decreased CO2 emissions

CO₂ emissions in steel sector, Mt

<table>
<thead>
<tr>
<th>Year</th>
<th>CO₂ emissions, Mt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>72.7</td>
</tr>
<tr>
<td>2008</td>
<td>62.7</td>
</tr>
<tr>
<td>2009</td>
<td>49.8</td>
</tr>
<tr>
<td>2010</td>
<td>53.9</td>
</tr>
<tr>
<td>2011</td>
<td>56.1</td>
</tr>
<tr>
<td>2012</td>
<td>51.8</td>
</tr>
<tr>
<td>2013E</td>
<td>51.9</td>
</tr>
</tbody>
</table>

CO₂ emission per 1t steel production, t

<table>
<thead>
<tr>
<th>Year</th>
<th>CO₂ emission per 1t, t</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1.70</td>
</tr>
<tr>
<td>2008</td>
<td>1.68</td>
</tr>
<tr>
<td>2009</td>
<td>1.67</td>
</tr>
<tr>
<td>2010</td>
<td>1.59</td>
</tr>
<tr>
<td>2011</td>
<td>1.59</td>
</tr>
<tr>
<td>2012</td>
<td>1.57</td>
</tr>
<tr>
<td>2013E</td>
<td>1.56</td>
</tr>
</tbody>
</table>

Source: State Statistics Service of Ukraine, Metallurgprom, UEX

Closure of open-hearth furnaces
Donetsksteel (2012) – 0.99Mt, Azovstal ISW (2012) – 3.15Mt, Nizhnedneprovskii TRP (2012) – 0.78Mt

Closure of coke batteries Azovstal ISW (2012), sinter plant Azovstal ISW (2013)
EXHIBIT 14
LONG STEEL PRODUCTS

One Year Forecast
January, 2014
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2013 annual review

The table on Page 2 highlights our 2013 forecast (given in January 2013) and actual data. As we have every year since this report started in 2009, we correctly forecasted the direction of global long steel prices – in this case downwards. We believe that this is an outstanding track record.

Overall in 2013, we forecast a $15-30/tonne decline in global prices. In fact, prices dropped by $30-70/tonne. Our US forecast was on the money, but global prices were depressed by a more severe contraction in Chinese margins than we expected as mills continued to export at low prices despite the industry as a whole barely making money. CIS mills were therefore forced to drop prices to lower-than-expected levels in order to compete and Turkey followed suit. In Europe, the somewhat surprising strength of the currency drove domestic prices lower-than-expected under pressure from lower global prices.

2014 forecast

The table on Page 2 also highlights our 2014 forecasts. We highlight our core themes below:

• For the first time in 3 years, we are forecasting an increase in certain prices in 2014 with small gains in North America and Europe.

• However, the increase will be small – up $10-20/tonne.

• On the other hand, we believe that Asian prices (driven by China) will not see significant gains.

• The reason for the stabilisation in prices will be an improved global economy that will drive crude steel higher; a forecast 4.5% in 2014. Chinese growth will remain positive at 5%, which is slightly lower than in 2013, and reflects the continued resilience of the economy and the government’s ability to engineer lower growth, although we expect that investment will remain a core part of the overall demand. A recovery in Europe will trigger re-stocking while North American output will also be higher given strong demand, although with current prices well above international levels, we are cautious on its relative price performance, but will be helped by impending tariff protection.

Given a relatively buoyant economic outlook, higher steel output and consequently higher utilisation rates that will push through 80% globally, why are we not more bullish?

• The primary reason is that we expect raw material prices to fall.

Pricing is rallying into 2014, but expected to turn by mid-year

![Graph showing steel prices](image)

Source: Steel-Insight
Iron ore has been flat at $130-140/tonne c.i.f China for the last five months. We expect it to stay in that range and may move higher in Q1, but by late Q2 we expect excess inventories and supply to push prices lower. We are forecasting that average annual prices will be $15/tonne lower (resulting in lower steelmaker costs of $25/tonne).

Coal is currently very weak at around $135/tonne f.o.b Australia for HCC. Stronger demand, reduced exports from the USA and potentially some closures should result in prices moving higher through Q2 and Q3. However, in comparison with 2013 (and high prices at the beginning of the year), Australian contract prices are expected to be $10/tonne lower through the year.

Along with slightly lower scrap prices, lower energy prices in some markets (although others will have higher costs) and even alloy prices, we believe that the global cost structure could be up to $40/tonne lower in 2014. Historically, these have been passed through to steel customers, but we believe that the uptick in demand and higher utilisation rates in 2014 will see higher steel mill margins this year in mature economies, but in those markets that are exposed to aggressive Chinese prices, the margin gains will be more limited.

There are also risks. We are cautious on emerging economy demand in particular if lower oil prices trigger reduced capital expenditure, while the withdrawal of Fed liquidity could trigger some currency crises with a knock-on impact on local demand and rising steel exports.

On the upside, where we believe the bias of risks are, another 8% rise in Chinese demand (similar to 2013) would limit the downward move in raw material prices and also give Chinese mills some pricing power in the domestic market and limit aggressively-priced exports. That would improve global utilisation rates sharply and could push prices sharply higher. Indeed we believe that this could take place in 2015 if the global economy finally exits recession and there is a synchronised global recovery.

<table>
<thead>
<tr>
<th>Steel-Insight 1-Year Long Steel Prices Review &amp; Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2012 Actual</strong></td>
</tr>
<tr>
<td>USA rebar</td>
</tr>
<tr>
<td>EU rebar</td>
</tr>
<tr>
<td>Asia rebar</td>
</tr>
<tr>
<td>CIS billet</td>
</tr>
<tr>
<td>Turkish rebar</td>
</tr>
</tbody>
</table>

*taken from January 2013 briefing
GLOBAL

- The OECD LEI indicator rose again in October to 100.7. It continues to signal the slow expansion of the global economy in 2014.

NORTH AMERICA

- US construction expenditure has stalled in the last 6 months and has been virtually flat since April. While residential provided much of the drive behind growth in the first half of the year, it has flattened off since mid-year, possibly due to lower mortgage re-financing. Non-residential continues to make slow gains, while public expenditure continues to slow. Overall, while many are bullish on construction next year, the easy part of the recovery is over and growth rates are likely to be lower.
- The ISM purchasing manufacturing index rose again in November to 57.3 – from 56.4 in October. This indicator continues to bode well for US industrial output. However, this index is not resulting in accelerating industrial output.
- US GDP however was revised upwards in Q3 to 3.6% year-on-year.

EUROPE

- Q3 GDP was just 0.1% higher quarter-on-quarter – in line with the preliminary estimate. It highlights that Europe continues to struggle as output is still down 0.4% year-on-year.
- France continues to struggle. December’s French manufacturing PMI came in at a seven-month low of 47.
- Rising unemployment (now 11%) will hold back consumer expenditure, while business expenditure remains hampered by high taxation levels.

ASIA

- The HSBC Chinese PMI dipped in December to 50.5 from 50.8 in December. This followed the easing of Chinese IP growth to 10.0% in November (from 10.3% in October). However, this appears robust and sustainable for now. Urban fixed asset investment over January-November also eased to 19.9% year-to-date (from 20.1%). This continues to suggest that the economy is moving away from investment, but for now at a sustainable level. Real estate investment remains steady at 19.5% higher year-to-November with floor space up 16.1%, although sales are dropping with growth of 10% over the same period.
- The HSBC Taiwanese PMI rose to 55.2 in December from 53.4 in November while the HSBC Korean PMI rose to 50.6 from 50.4. Taiwan is benefitting from its exposure to the US market.
- The HSBC Indonesian PMI rose to 50.9 from 50.3 – primarily due to improved domestic demand rather than exports. The HSBC Indian PMI however slipped to 50.7 from 51.3.
- The overall Asian outlook therefore is one of cautious optimism and continued growth, albeit somewhat spotty rather than a concerted upturn.

---

**LME 3-month billet price ($/tonne)**

![Graph showing LME 3-month billet price](image)

Source: LME

**LME Billet Inventory (000 tonnes)**

![Graph showing LME Billet Inventory](image)

Source: LME

---
futures briefing

LME billet prices moved up slowly, but the market remains essentially moribund. Inventory is now down to its lowest since the contract started and over half includes cancelled warrants.

raw material briefing

Prices hold in range, but inventory accumulates

62% Fe iron ore fines averaged $136/tonne cfr China in December – the fifth successive month that the average has been between $130 and $140/tonne. The index is truly rangebound.

News of Chinese output cuts in mid-month sent the index to the lower end of the range, but output levels above 2m tpd in the second half of the month stabilised the market.

Iron ore inventory at ports continued to climb during December – reaching 8.6m tonnes at the end of the month. It continued to climb at steel mills too as it reached 2.25m tonnes in Hebei for example. Imports continued to arrive at high levels with 78m tonnes arriving in November bringing the year-to-date total to 673m tonnes – an increase of almost 11% year-on-year.

This is a normal seasonal build (to cover disruptions to domestic supply and international disruptions over the winter and through Q1) and we expect to see steady buying throughout the first quarter of 2014 as we expect utilisation rates to move to 2.2-2.3m tpd after slower rates in January/February. This will keep prices in the $130-140/tonne range and possibly at the top of that.

However, as seasonal disruptions are curtailed and inventories no longer need to be built, we expect to see some pullback. Initially, this is not expected to be significant as operating rates will remain elevated and rising steel prices will facilitate higher steel output. However, as the steel market moves into excess supply along with rising output internationally, we believe that the market may correct in either late Q2 (base case) or later in Q3.

<table>
<thead>
<tr>
<th></th>
<th>China spot</th>
<th>Asian contract</th>
<th>Asia contract</th>
<th>US spot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-13</td>
<td>150</td>
<td>110</td>
<td>185</td>
<td>150</td>
</tr>
<tr>
<td>Feb-13</td>
<td>155</td>
<td>110</td>
<td>185</td>
<td>150</td>
</tr>
<tr>
<td>Mar-13</td>
<td>140</td>
<td>110</td>
<td>185</td>
<td>150</td>
</tr>
<tr>
<td>Apr-13</td>
<td>138</td>
<td>127</td>
<td>172</td>
<td>149</td>
</tr>
<tr>
<td>May-13</td>
<td>126</td>
<td>127</td>
<td>172</td>
<td>150</td>
</tr>
<tr>
<td>Jun-13</td>
<td>115</td>
<td>137</td>
<td>172</td>
<td>150</td>
</tr>
<tr>
<td>Jul-13</td>
<td>129</td>
<td>119</td>
<td>145</td>
<td>135</td>
</tr>
<tr>
<td>Aug-13</td>
<td>138</td>
<td>119</td>
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<td>135</td>
</tr>
<tr>
<td>Sep-13</td>
<td>155</td>
<td>119</td>
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<td>135</td>
</tr>
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<td>Oct-13</td>
<td>133</td>
<td>125</td>
<td>152</td>
<td>135</td>
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<tr>
<td>Nov-13</td>
<td>137</td>
<td>126</td>
<td>152</td>
<td>133</td>
</tr>
<tr>
<td>Dec-13</td>
<td>126</td>
<td>126</td>
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</tr>
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<td>Jan-14</td>
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<td>143</td>
<td>130</td>
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<tr>
<td>Feb-14</td>
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<td>143</td>
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<tr>
<td>Mar-14</td>
<td>125</td>
<td>127</td>
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<tr>
<td>Apr-14</td>
<td>120</td>
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</tr>
<tr>
<td>May-14</td>
<td>110</td>
<td>125</td>
<td>150</td>
<td>150</td>
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<tr>
<td>Jun-14</td>
<td>105</td>
<td>125</td>
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<td>Jul-14</td>
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<td>Oct-14</td>
<td>120</td>
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<td>Nov-14</td>
<td>130</td>
<td>107</td>
<td>160</td>
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<tr>
<td>Dec-14</td>
<td>125</td>
<td>107</td>
<td>160</td>
<td>145</td>
</tr>
</tbody>
</table>

(1) $/tonne cfr Qingdao 62% Fe  
(2) $/tonne fob Australia  
(3) $/tonne fob US East Coast  
Source: MB, Steel-Insight
Coal prices weaken further, but we retain a more upbeat outlook for 2014.

Spot coking coal prices dropped below $136/tonne fob Australia at the end of December amidst widespread sales and limited purchasing. US prices are now $130/tonne fob. Ample port inventories in China are hampering any attempt to increase prices. This is now below the Q1 contract price that was settled at $143/tonne fob Australia.

This is now increasingly unprofitable – especially for US mills. While we expect export volumes to drop out of the USA next year as contracts are no longer renewed, excess supply remains the issue. A weaker Aussie dollar has reduced the cost structure of the Australians, but even here higher cost mines could face closure, particularly in the second-tier market where prices are now below $120/tonne fob.

There are some potential upsides. Environmental controls in China could favour imports, while steel expansion projects in India (particularly in H2) will require imported coking coal. Higher steel output in Europe, Japan and Taiwan will also alleviate excess supply. As these tend to be contract deals, this may end up tightening the spot market that is mainly Asian.

As such, we are somewhat contrarian in our outlook for coking coal prices, expecting a rally in late Q1, with potential upside if there are weather-related disruptions.

Nevertheless, the average price in 2014 will be lower than in 2013 as prices in the first half of 2013 averaged almost $170/tonne fob Australia for contract sales.
Global output grew 4.3% year-on-year in November based on WSA data. China continues to lead the way with an increase of 5.9% year-on-year with output in the rest of the world up 2.8%. Output in the rest of the world (ex-China) has been on a rising trend since September, but this primarily reflects low year-on-year comparisons after cutbacks in Q4 of 2012.

Output globally over year-to-November is up 3.4% with China up 8.5% and the rest of the world down 1.1%.

We are forecasting a more synchronised upturn in 2014.

- China is expected to slow somewhat after some inventory accumulation in 2013 and tighter credit availability hampering construction. Nevertheless with GDP expected to come in around 7-7.5% and IP growth of 8-10%, we believe that output will grow in the region of 5%.

- Output in the rest of the world is forecast to grow by 4%.

- We are forecasting total crude steel output of 4.5%.

- Europe is expected to show some recovery as it exits recession and there is a need to re-stock through the supply chain. The fastest growth will be in central Europe as furnaces there are re-started rather than in higher-cost Western Europe.

- New capacity in the Middle East, Africa, India, CIS and SE Asia will also drive output higher in those economies, but this may be accompanied by higher exports from those markets as it may exceed domestic demand growth.

- North American output will also grow driven by higher Mexican capacity, but higher rates of demand (and prices) will also attract imports.

### Global Crude Steel Production & Forecasts (000 tonnes)

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>Q1 13</th>
<th>Q2 13</th>
<th>Q3 13</th>
<th>Q4 13</th>
<th>2013</th>
<th>% change</th>
<th>Q1 14</th>
<th>Q2 14</th>
<th>Q3 14</th>
<th>Q4 14</th>
<th>2014</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>997,747</td>
<td>914,142</td>
<td>191,745</td>
<td>197,348</td>
<td>197,473</td>
<td>190,000</td>
<td>770,826</td>
<td>-2.7%</td>
<td>210,000</td>
<td>215,900</td>
<td>208,000</td>
<td>187,000</td>
<td>815,000</td>
<td>5.0%</td>
</tr>
<tr>
<td>Other Asia</td>
<td>271,617</td>
<td>274,381</td>
<td>88,611</td>
<td>70,218</td>
<td>68,606</td>
<td>70,550</td>
<td>277,936</td>
<td>1.3%</td>
<td>71,100</td>
<td>72,250</td>
<td>70,750</td>
<td>73,100</td>
<td>287,260</td>
<td>3.3%</td>
</tr>
<tr>
<td>EU15</td>
<td>150,279</td>
<td>143,108</td>
<td>34,904</td>
<td>36,796</td>
<td>35,727</td>
<td>36,150</td>
<td>141,617</td>
<td>(0.5%)</td>
<td>37,300</td>
<td>36,400</td>
<td>35,150</td>
<td>37,500</td>
<td>140,250</td>
<td>4.8%</td>
</tr>
<tr>
<td>CIS</td>
<td>122,433</td>
<td>111,310</td>
<td>27,146</td>
<td>27,490</td>
<td>27,123</td>
<td>28,750</td>
<td>106,510</td>
<td>(2.5%)</td>
<td>27,700</td>
<td>28,330</td>
<td>27,200</td>
<td>26,950</td>
<td>110,150</td>
<td>7.5%</td>
</tr>
<tr>
<td>NAFTA</td>
<td>117,673</td>
<td>120,425</td>
<td>28,352</td>
<td>28,756</td>
<td>28,924</td>
<td>31,560</td>
<td>119,580</td>
<td>(0.7%)</td>
<td>31,450</td>
<td>30,400</td>
<td>29,950</td>
<td>31,650</td>
<td>123,300</td>
<td>3.1%</td>
</tr>
<tr>
<td>C &amp; S America</td>
<td>49,043</td>
<td>48,376</td>
<td>11,246</td>
<td>12,088</td>
<td>12,599</td>
<td>12,500</td>
<td>49,358</td>
<td>(0.9%)</td>
<td>12,850</td>
<td>13,050</td>
<td>12,690</td>
<td>12,990</td>
<td>51,490</td>
<td>5.4%</td>
</tr>
<tr>
<td>Other Europe</td>
<td>33,421</td>
<td>39,046</td>
<td>9,164</td>
<td>9,687</td>
<td>9,977</td>
<td>9,950</td>
<td>37,408</td>
<td>(3.6%)</td>
<td>9,520</td>
<td>9,965</td>
<td>9,550</td>
<td>9,010</td>
<td>36,778</td>
<td>1.7%</td>
</tr>
<tr>
<td>EU12</td>
<td>26,297</td>
<td>26,574</td>
<td>8,097</td>
<td>6,065</td>
<td>6,288</td>
<td>6,450</td>
<td>24,551</td>
<td>(6.9%)</td>
<td>6,725</td>
<td>6,965</td>
<td>6,150</td>
<td>6,730</td>
<td>26,575</td>
<td>8.2%</td>
</tr>
<tr>
<td>Middle East</td>
<td>20,444</td>
<td>21,777</td>
<td>5,470</td>
<td>5,785</td>
<td>5,815</td>
<td>5,960</td>
<td>23,030</td>
<td>(5.8%)</td>
<td>5,800</td>
<td>5,850</td>
<td>5,800</td>
<td>5,450</td>
<td>24,900</td>
<td>8.1%</td>
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<tr>
<td>Africa</td>
<td>14,818</td>
<td>15,180</td>
<td>3,800</td>
<td>4,122</td>
<td>4,054</td>
<td>4,000</td>
<td>15,976</td>
<td>5.2%</td>
<td>4,100</td>
<td>4,250</td>
<td>4,150</td>
<td>4,140</td>
<td>16,600</td>
<td>3.9%</td>
</tr>
<tr>
<td>Australasia</td>
<td>7,251</td>
<td>5,806</td>
<td>1,413</td>
<td>1,397</td>
<td>1,413</td>
<td>1,425</td>
<td>5,948</td>
<td>(2.7%)</td>
<td>1,630</td>
<td>1,430</td>
<td>1,425</td>
<td>1,425</td>
<td>5,710</td>
<td>1.1%</td>
</tr>
<tr>
<td>Global total</td>
<td>1,497,603</td>
<td>1,502,105</td>
<td>366,906</td>
<td>393,721</td>
<td>395,547</td>
<td>394,575</td>
<td>1,570,161</td>
<td>7.2%</td>
<td>419,181</td>
<td>428,000</td>
<td>411,375</td>
<td>392,175</td>
<td>1,497,510</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

YoY % change: 7.2% 1.5% 2.6% 1.7% 4.5% 5.9% 3.9% 0.7% 7.5% 6.7% 3.9% (0.7%) 4.3%
**RECENT DEVELOPMENTS**

- Scrap prices are up $50/ton over December/January in the strongest move for sometime. High operating rates at mills, strong profitability and the need to run higher inventories to cover potential disruptions over the winter mean that mills are more concerned about availability than price.

- US mills announced two $10/ton increases in rebar prices through December. These were largely accepted by the market. Current prices in the Midwest are now $670/ton, although southern prices continue to lag somewhat.

- US wire rod mills added a second $30/ton increase in mid-December taking nominal prices to $700/ton. Initially, it struggled to be passed through and prices were in a wide range through the month as wire product manufacturers were reluctant to raise their prices, but as material on the ground is chewed up and buyers accept that input prices have increased and push through their own price increases for 2014, we believe that Midwest prices will settle at around $680/ton in January.

**MARKET OUTLOOK**

In our December 2012 report, we forecast that US domestic rebar prices would be $733/tonne ($665/ton) in 2013 - a fall of nearly 4%.

US domestic rebar prices in fact were $731/tonne ($655/ton) and we were exactly right.

For 2014, we are forecasting that rebar prices will be slightly higher than in 2013 after two years of consecutive declines. However, the increase is only expected to be marginal. We expect prices to make further gains through Q1 - passing through $700/ton. However, as scrap prices drift down during Q2, we do not expect mills to be able to hold prices at elevated levels as while there will be some relief from Turkish and Mexican imports, other sources will take their place and limit potential gains. Indeed, we would not be hugely surprised if imports in 2014 matched or were even higher than in 2013.

However, we do expect some improvement in margins over the year as scrap prices will be flat to marginally down.

Despite higher steel output, we expect weakness in global iron ore prices in the second half of the year to undermine ferrous scrap to some extent.

As such, it will not be a bad year for producers as volumes will grow in the region of 5% while margins are slightly higher.
Scrap prices jump

A delayed start to the month after Thanksgiving appeared to help scrap dealers and brokers gain higher prices in December. Shredded was up $25-30/ton in the Midwest to around $415-415/ton. Strong mill demand and winter covering led the way.

The strength is likely to be maintained into January with both factors meaning there is solid demand. With spreads over scrap remaining elevated, mills are more concerned about availability than price. Early indications are for additional strength taking prices to $435-435/ton for Midwest shredded in January.

That is higher than international prices and there may be some move from exporters to ship material inland rather than to the export market, while prime prices may not be as strong with the start-up of the Nucor DRI plant as well as good pig iron availability.

We question whether the scrap strength can be maintained out into Q2. Improved availability as well as a potential move downwards by steel prices in Q2 along with the end of the need for elevated inventory could trigger a correction. Until then however, we expect prices to remain high.

Rebar marches steadily upwards

As expected, US rebar mills added another $10/ton to their list prices effective with new orders from December 2nd. Higher scrap prices provided the justification, but this is another increase in what mills will hope will be a steady march-up through Q1. With lead times into the New Year, this was for January delivery. Although there will be some quibbling given that demand at this time of the year is

### North American long steel statistics

<table>
<thead>
<tr>
<th>USA* Rebar</th>
<th>Shipments</th>
<th>Imports</th>
<th>Exports</th>
<th>Consumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>USA*</td>
<td>5,086</td>
<td>6,927</td>
<td>5,677</td>
<td>6,232</td>
</tr>
<tr>
<td>Imports</td>
<td>419</td>
<td>517</td>
<td>688</td>
<td>879</td>
</tr>
<tr>
<td>Exports</td>
<td>450</td>
<td>573</td>
<td>543</td>
<td>664</td>
</tr>
<tr>
<td>Consumptions</td>
<td>5,076</td>
<td>6,271</td>
<td>5,722</td>
<td>6,547</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Wire rod</th>
<th>Shipments from AISI</th>
<th>Extra production from reported**</th>
<th>Non-reported production**</th>
<th>Total production</th>
<th>Imports</th>
<th>Exports</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA*</td>
<td>1,644</td>
<td>1,835</td>
<td>2,161</td>
<td>2,642</td>
<td>674</td>
<td>502</td>
<td>609</td>
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<tr>
<td></td>
<td></td>
<td>172</td>
<td>216</td>
<td>458</td>
<td>558</td>
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<td>122</td>
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<td></td>
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<td></td>
<td>1,100</td>
<td>2,137</td>
<td>2,627</td>
<td>2,760</td>
</tr>
<tr>
<td>Wire rod</td>
<td>3,216</td>
<td>4,288</td>
<td>5,276</td>
<td>5,860</td>
<td>1,510</td>
<td>1,339</td>
<td>1,383</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Imports</td>
<td>155</td>
<td>168</td>
<td>208</td>
</tr>
<tr>
<td>Wire rod</td>
<td>3,216</td>
<td>4,288</td>
<td>5,276</td>
<td>5,860</td>
<td>1,510</td>
<td>1,339</td>
<td>1,383</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Exports</td>
<td>155</td>
<td>168</td>
<td>208</td>
</tr>
<tr>
<td>Wire rod</td>
<td>3,216</td>
<td>4,288</td>
<td>5,276</td>
<td>5,860</td>
<td>1,510</td>
<td>1,339</td>
<td>1,383</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consumption</td>
<td>3,216</td>
<td>4,288</td>
<td>5,276</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada* Rebar</th>
<th>Output</th>
<th>Exports</th>
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<tbody>
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<td>540</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>531</td>
<td>0</td>
<td>0</td>
</tr>
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<td>530</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>554</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>147</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>154</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>139</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>148</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>144</td>
<td>0</td>
<td>0</td>
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<td>48</td>
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<td>48</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>n/a</td>
<td>0</td>
<td>0</td>
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</table>

<table>
<thead>
<tr>
<th>Mexico</th>
<th>Rebar</th>
<th>Output</th>
<th>n/a</th>
<th>n/a</th>
<th>n/a</th>
<th>3,561</th>
<th>917</th>
<th>863</th>
<th>854</th>
<th>873</th>
<th>916</th>
<th>309</th>
<th>308</th>
<th>n/a</th>
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</thead>
<tbody>
<tr>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: AISI, Statcan, Steel Insight
*Note: US data is in short tons, Canadian & Mexican data is in metric tonnes
**AISI does not report all US wire rod production – this is our estimate - see April 2008 report for analysis
Numbers in italics are estimates
quiet, consumers are unlikely to withhold orders knowing that import material will be thinner on the ground in Q1 when demand is stronger and they will probably have to pay higher prices at that time. Distributor inventory through October has remained at below peak levels, but is not what we would term tight at around 10 weeks.

Stronger scrap and widespread acceptance of the price increases encouraged mills to go for another $10/ton just prior to the holidays with immediate effect. Mill lead times at the beginning of January are now into mid-February with little available at less than 5 weeks.

The initial move pushed Midwest prices to $660/ton ex-works and the second increase saw prices up to $670/ton with some buyers paying as much as $680/ton. The south-east and south-west markets have lagged with mills struggling there to push through all the price increases and are around $20/ton below Midwest and list prices, but as cheaper rebar is worked through on the ground (from both previous domestic supply and imports) and import deliveries slacken, we believe that mills will get the price increase for New Year deliveries.

With scrap rising strongly in December and January, we expect further increases to be announced in January for late Q1 deliveries and into Q2.

**Import alternatives already in play**

While Turkish rebar is still arriving, it is expected to slow in the New Year with no new orders in the last month or so. However, alternatives are already appearing. Spanish and Portuguese rebar landed in November according to licence data at $620/tonne fob, which is probably equivalent to around $670/tonne cif or around $620/tonne ex-dock. Import licence data also shows Peruvian material has landed. We still think that Japanese and South Korean suppliers will also be active.

These arrivals may curb the ability to extend margins excessively, although improved demand and the reluctance of these suppliers to discount to the same degree may aid US mills through Q1. However, strong demand and high prices will pull in volumes and we would not be surprised to see total imports at the same level and possibly even higher in 2014.

**Positive outlook for 2014**

US rebar supply and demand has moved steadily upwards in 2013. Monthly consumption averaged 545,000 tpm in 2012 and until October 2013, the monthly average has been 655,000 tpm. Third quarter consumption was over 2m tons and volumes are expected to be the strongest since 2007. Strong growth in private sector housing and some limited recovery in non-residential has been supportive, but the re-stocking of the supply chain should not be ignored.
While private sector construction growth may slow in 2014, we do expect it to be 3-5% higher and there is continued optimism that non-residential construction will improve by a greater amount, while public sector activity will not worsen. While underlying growth may therefore come in at around 5%, there is the potential for rebar demand to exceed this as there will be the continued need to re-stock the supply chain, albeit to a lesser extent than seen in 2012/13 in the early part of the recovery.

The recent run-up in scrap prices has hit margins, but we expect that this will be clawed back over the next few months and the outlook for the year is positive therefore for both mill margins and volumes.

**Wire rod mills pass on scrap**

All the major wire rod mills added $25-30/ton to wire rod prices in mid-December for January shipments. Initially, it was a struggle with previous prices not being fully enforced and discounting remaining a factor in the market. Prices in early December were therefore in a range with rod available in the south-east as low as $630/ton while prices in other markets were as high as $660/ton if the increase was fully passed through. Part of the reason for the reluctance to accept the higher price was the difficulty in pushing through wire product increases, although many are now trying to do that in January. If successful, we believe that wire rod buyers are more likely to commit to tonnage.

**US long product prices ($/tonne)**

<table>
<thead>
<tr>
<th></th>
<th>Ferrous scrap(1)</th>
<th>yoy % change</th>
<th>Rebar import(2)</th>
<th>yoy % change</th>
<th>Rebar domestic(2)</th>
<th>yoy % change</th>
<th>Wire rod import(2)</th>
<th>yoy % change</th>
<th>Wire rod domestic(2)</th>
<th>yoy % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-13</td>
<td>415</td>
<td>4%</td>
<td>625</td>
<td>(1%)</td>
<td>745</td>
<td>1%</td>
<td>643</td>
<td>(1%)</td>
<td>740</td>
<td>(1%)</td>
</tr>
<tr>
<td>Jan-14</td>
<td>455</td>
<td>7%</td>
<td>650</td>
<td>1%</td>
<td>760</td>
<td>3%</td>
<td>670</td>
<td>1%</td>
<td>760</td>
<td>1%</td>
</tr>
<tr>
<td>Feb-14</td>
<td>440</td>
<td>10%</td>
<td>660</td>
<td>2%</td>
<td>775</td>
<td>5%</td>
<td>680</td>
<td>1%</td>
<td>780</td>
<td>4%</td>
</tr>
<tr>
<td>Mar-14</td>
<td>420</td>
<td>(2%)</td>
<td>605</td>
<td>5%</td>
<td>775</td>
<td>2%</td>
<td>685</td>
<td>1%</td>
<td>780</td>
<td>3%</td>
</tr>
<tr>
<td>Apr-14</td>
<td>410</td>
<td>4%</td>
<td>650</td>
<td>4%</td>
<td>760</td>
<td>2%</td>
<td>670</td>
<td>4%</td>
<td>750</td>
<td>2%</td>
</tr>
<tr>
<td>May-14</td>
<td>390</td>
<td>4%</td>
<td>640</td>
<td>3%</td>
<td>730</td>
<td>1%</td>
<td>660</td>
<td>3%</td>
<td>740</td>
<td>1%</td>
</tr>
<tr>
<td>Jun-14</td>
<td>360</td>
<td>(1%)</td>
<td>615</td>
<td>2%</td>
<td>700</td>
<td>(3%)</td>
<td>635</td>
<td>2%</td>
<td>710</td>
<td>(2%)</td>
</tr>
<tr>
<td>Jul-14</td>
<td>350</td>
<td>(11%)</td>
<td>600</td>
<td>(5%)</td>
<td>700</td>
<td>(3%)</td>
<td>620</td>
<td>(5%)</td>
<td>710</td>
<td>(1%)</td>
</tr>
<tr>
<td>Aug-14</td>
<td>340</td>
<td>(9%)</td>
<td>600</td>
<td>(6%)</td>
<td>700</td>
<td>(2%)</td>
<td>620</td>
<td>(6%)</td>
<td>710</td>
<td>(1%)</td>
</tr>
<tr>
<td>Sep-14</td>
<td>350</td>
<td>(6%)</td>
<td>605</td>
<td>(2%)</td>
<td>720</td>
<td>1%</td>
<td>625</td>
<td>(2%)</td>
<td>730</td>
<td>2%</td>
</tr>
<tr>
<td>Oct-14</td>
<td>365</td>
<td>0%</td>
<td>615</td>
<td>(2%)</td>
<td>720</td>
<td>0%</td>
<td>635</td>
<td>2%</td>
<td>730</td>
<td>4%</td>
</tr>
<tr>
<td>Nov-14</td>
<td>375</td>
<td>(4%)</td>
<td>625</td>
<td>(1%)</td>
<td>740</td>
<td>1%</td>
<td>645</td>
<td>(1%)</td>
<td>750</td>
<td>3%</td>
</tr>
<tr>
<td>Dec-14</td>
<td>395</td>
<td>(5%)</td>
<td>640</td>
<td>2%</td>
<td>760</td>
<td>2%</td>
<td>680</td>
<td>2%</td>
<td>770</td>
<td>4%</td>
</tr>
</tbody>
</table>

| 2006 ave. | 430   | 42%   | 929   | 50%   | 501   | 36%   | 913   | 39%   | 935   | 49%   |
| 2009 ave. | 240   | (44%) | 513   | (65%) | 562   | (68%) | 533   | (42%) | 626   | (37%) |
| 2010 ave. | 382   | 51%   | 636   | 24%   | 691   | 23%   | 556   | 23%   | 780   | 25%   |
| 2011 ave. | 445   | 23%   | 733   | 15%   | 786   | 18%   | 753   | 15%   | 913   | 17%   |
| 2012 ave. | 409   | (8%)  | 667   | (5%)  | 761   | (4%)  | 666   | (3%)  | 779   | (15%) |
| 2013 ave. | 390   | (5%)  | 628   | (6%)  | 731   | (4%)  | 646   | (6%)  | 732   | (6%)  |
| 2014 ave. | 366   | (11%) | 630   | 0%    | 737   | 1%    | 650   | 1%    | 744   | 2%    |

(1) Shredded-off average US mill (2) c/f major port (3) ex-mill
All prices are an average of a range of prices that are present in the market, and exclude grade and finishing extras
Source: Steel Insight
By the end of the month however, mills were collecting a significant portion of the increase as the sharply higher scrap prices over the last two months left them little option to discount. In the Midwest, prices are now a minimum of $670/ton ex-works with quoted prices as high as $700/ton (largely not being paid), and although southern prices remain around $10-20/ton lower, we expect mills will expect to collect that in January.

Lead times for wire rod remain relatively short at around 3-5 weeks but concerns over a potential trade case remain, which could push up lead times if it goes ahead. As we have noted previously, this will not be easy.

For now Chinese wire rod continues to be offered at around $510-620/tonne cif Gulf port or around $560/ton and $100/ton below domestic. While attractive deliveries are not now available until Q2 and buyers are cautious on trade cases.

**Outlook uncertain**

With so much uncertainty about the wire rod case, it is difficult to forecast the market this year. In terms of demand, we are mildly optimistic with a recovery in non-residential construction a key factor. Industrial output is also expected to gain momentum.

However, the fragmented nature of the US market and the potential for imports to continue to undercut means that we expect the market to be highly competitive once again. We have forecast that wire rod will return to its more normal premium level in the second half of the year and this should allow some improvement in margins over the year for producers.

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**Forecast US scrap and long product prices ($/tonne)**

![Graph showing forecast US scrap and long product prices](source: Steel-Insight)

**Forecast US domestic rebar prices ($/tonne)**

![Graph showing forecast US domestic rebar prices](source: Steel-Insight)
ALTERNATIVE SCENARIOS

Base case - 50% probability

Rebar mills enter 2014 on a solid footing as lead times are extended and price increases are being accepted. Moreover, the solid macro-economic environment should allow further improvements in 2014 with underlying demand up in the region of 5% and boosted by the ongoing need to re-stock the supply chain. Our base case is for the trade filing to be successful, in which case Q1 import arrivals will be very low and this will probably result in sharply higher pricing and some margin extension. However, by Q2, importers will have found alternatives and we do not see a major fall off in total import volumes that were never particularly excessive in our opinion. That will coincide with an end to the scrap price surge and prices will drift back. In wire rod, the availability of import on the ground will continue to put pressure on local mills compounded by aggressive competition between the fragmented local market suppliers. With imports still attractive and lead times still short, we struggle to see wire rod do anything but move with scrap, although a trade case filing is the wildcard.

Upside case – 30% probability

An anti-dumping investigation into Chinese wire rod would push prices up in this market. A return by non-residential markets early in 2014 would also boost demand. Stronger demand across the whole sector would keep scrap and long prices elevated for an extended period. We are now slightly biased towards the optimistic side.

Downside case – 20% probability

The US economy continues to make steady gains. With the budget resolution largely in place and acceptance of tapering within the market, downside risks appear to be shrinking. However a stock market correction from current high levels is not inconceivable if there is a significant withdrawal of Fed liquidity. If that hits, consumer confidence, automotive and housing markets will be hit as well as business confidence. Further weakness in global (particularly Chinese) markets would push raw material prices down for an extended period and there would be limited recovery in pricing in Q1 followed by an extended period of lower prices.
recent developments

- December is a quiet month, but rising scrap prices put pressure on mills to increase prices. They were able to do so to a limited extent, but only really around €10/tonne.
- Rebar prices in northern Europe edged up to €490/tonne ex-works with around €475/tonne in the south.
- We expect higher scrap prices to be passed through in January with northern European prices up to over €500/tonne ex-works.
- This does open up the arbitrage opportunity for Turkish suppliers to sell into Europe as they are struggling to find markets.
- Exports remain quiet and largely focused on Algeria, although there are opportunities to develop North American sales.

market outlook

- Our 2013 forecast for the EU rebar price was $860/tonne ex-works (€465/tonne) - or a 2% decline from the 2012 average price.
- The average actual price for the year was $626/tonne (€460/tonne) - a 7% decline. While we got the direction right, EU margins were even more severely depressed than we anticipated (see chart).
- We are forecasting a modest gain in average prices in 2014 to $843/tonne (€475/tonne). Our view is that raw material prices will weaken over the year (despite an increase in output) thanks to global iron ore price weakness. This will keep international prices low and with ongoing strength in the euro, domestic producers will have to price to international levels and this will keep a lid on prices.
- Pricing is expected to therefore remain in a relatively narrow range of €450-500/tonne ex-works with only limited times outside this range.
- Volumes however will improve - albeit from a low base. Construction activity will increase in most markets with small gains in industrial output.
- There has been some asset closures, but the industry remains under-utilised and the increase in activity will be unlikely to push out lead times significantly or allow producers any pricing power.
- Despite this, our bias is to the upside with the potential for a synchronised global recovery to push steel output higher and maintain higher raw material prices. However, we consider that this will be more likely to develop through 2015.

EU long product prices ($/tonne)
EU trade in long products (000 tonnes)*

<table>
<thead>
<tr>
<th></th>
<th>Q2 11</th>
<th>Q3 11</th>
<th>Q4 11</th>
<th>Q1 12</th>
<th>Q2 12</th>
<th>Q3 12</th>
<th>Q4 12</th>
<th>Q1 13</th>
<th>Q2 13</th>
<th>Q3 13</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>397</td>
<td>797</td>
<td>159</td>
<td>912</td>
<td>973</td>
<td>722</td>
<td>878</td>
<td>393</td>
<td>904</td>
<td>688</td>
<td>(44%)</td>
</tr>
<tr>
<td>Spain</td>
<td>652</td>
<td>533</td>
<td>615</td>
<td>606</td>
<td>614</td>
<td>470</td>
<td>525</td>
<td>492</td>
<td>532</td>
<td>394</td>
<td>(16%)</td>
</tr>
<tr>
<td>Germany</td>
<td>560</td>
<td>425</td>
<td>450</td>
<td>465</td>
<td>560</td>
<td>450</td>
<td>492</td>
<td>545</td>
<td>480</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>327</td>
<td>441</td>
<td>375</td>
<td>362</td>
<td>337</td>
<td>351</td>
<td>318</td>
<td>355</td>
<td>351</td>
<td>429</td>
<td>22%</td>
</tr>
<tr>
<td>France</td>
<td>238</td>
<td>198</td>
<td>216</td>
<td>236</td>
<td>247</td>
<td>220</td>
<td>240</td>
<td>225</td>
<td>219</td>
<td>185</td>
<td>(10%)</td>
</tr>
<tr>
<td>UK</td>
<td>100</td>
<td>83</td>
<td>74</td>
<td>99</td>
<td>97</td>
<td>73</td>
<td>81</td>
<td>92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>364</td>
<td>388</td>
<td>355</td>
<td>309</td>
<td>333</td>
<td>317</td>
<td>375</td>
<td>302</td>
<td>292</td>
<td>305</td>
<td>(9%)</td>
</tr>
<tr>
<td>Total</td>
<td>3,147</td>
<td>2,971</td>
<td>3,054</td>
<td>3,008</td>
<td>3,133</td>
<td>2,923</td>
<td>2,759</td>
<td>2,546</td>
<td>2,581</td>
<td></td>
<td>(2%)</td>
</tr>
</tbody>
</table>

Net imports/(exports) EU long products (000 tonnes)*

Source: Eurofer, Steel-Insight

*3-month ave.

Selected European long product data (000 tonnes)

<table>
<thead>
<tr>
<th></th>
<th>Q2 11</th>
<th>Q3 11</th>
<th>Q4 11</th>
<th>Q1 12</th>
<th>Q2 12</th>
<th>Q3 12</th>
<th>Q4 12</th>
<th>Q1 13</th>
<th>Q2 13</th>
<th>Q3 13</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rod</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>1,395</td>
<td>1,300</td>
<td>1,370</td>
<td>1,470</td>
<td>1,630</td>
<td>1,230</td>
<td>1,390</td>
<td>1,425</td>
<td>1,520</td>
<td>1,270</td>
<td>3%</td>
</tr>
<tr>
<td>Italy</td>
<td>1,127</td>
<td>856</td>
<td>922</td>
<td>972</td>
<td>900</td>
<td>776</td>
<td>654</td>
<td>910</td>
<td>972</td>
<td>733</td>
<td>(6%)</td>
</tr>
<tr>
<td>Spain</td>
<td>842</td>
<td>840</td>
<td>877</td>
<td>748</td>
<td>770</td>
<td>627</td>
<td>609</td>
<td>679</td>
<td>702</td>
<td>585</td>
<td>(8%)</td>
</tr>
<tr>
<td>France</td>
<td>529</td>
<td>413</td>
<td>463</td>
<td>515</td>
<td>530</td>
<td>375</td>
<td>524</td>
<td>557</td>
<td>566</td>
<td>424</td>
<td>(13%)</td>
</tr>
<tr>
<td>Poland</td>
<td>296</td>
<td>285</td>
<td>300</td>
<td>288</td>
<td>294</td>
<td>299</td>
<td>256</td>
<td>295</td>
<td>287</td>
<td>288</td>
<td>(4%)</td>
</tr>
<tr>
<td>UK</td>
<td>279</td>
<td>237</td>
<td>259</td>
<td>240</td>
<td>217</td>
<td>267</td>
<td>261</td>
<td>293</td>
<td>249</td>
<td>237</td>
<td>(11%)</td>
</tr>
<tr>
<td>Others</td>
<td>826</td>
<td>735</td>
<td>797</td>
<td>862</td>
<td>855</td>
<td>714</td>
<td>730</td>
<td>830</td>
<td>836</td>
<td>785</td>
<td>(10%)</td>
</tr>
<tr>
<td>Total</td>
<td>5,082</td>
<td>4,466</td>
<td>4,698</td>
<td>5,090</td>
<td>5,286</td>
<td>4,288</td>
<td>4,624</td>
<td>4,504</td>
<td>5,114</td>
<td>4,332</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: Various, Steel-Insight

Numbers in italics are estimates
December was quiet

December is a quiet month for European long product mills. Lead times in northern Europe were not extended particularly, but with holiday shutdowns looming, these are now extended out to 4 weeks prior to the holiday period. Rebar prices in northern Europe were largely unchanged at around €480-495/tonne ex-works for rebar with a bias to the upside and later transactions taking place at the top end of the range. Mill efforts to push prices higher slackened prior to the holidays in the face of slow buying, but with scrap prices continuing to rise, that pressure will return in the New Year. Wire rod (mesh) continues to trade at a discount. Southern European rebar prices were closer to €460-470/tonne ex-works for rebar with wire rod retaining a €10/tonne premium. Prices have made small gains on higher scrap. However, mills and distributors seeking to shift stock prior to the year-end prevented any more significant gains.

Export activity was reasonable in early December as Algerian mills lined up for New Year deliveries with southern EU mills quoting €470/tonne fob for January delivery although transaction prices were typically somewhat below that (€55-60/tonne) as buyers wrung out every last euro. There has also been a strategic shift to North American sales for some mills as they eye the potential in this market and develop sourcing strategies.

Mills will push for more in the New Year

Scrap prices are heading up. Rising prices in the USA mean that Turkish mills are turning to EU suppliers while mills are also stockpiling for their Q1 needs.

Export prices are now close to €285/tonne fob from Rotterdam for shredded with northern European shredded prices now at or above €300/tonne delivered to mill with southern European prices around €320/tonne. We expect further gains of €10-15/tonne in January and more into February as winter tightens availability.

This will mean that northern European mills will be looking for more than €500/tonne ex-works in January and southern European mills closer to €480/tonne ex-works.

That may open up the import arbitrage again as Turkish mills have cut margins to low levels and are still exporting at around $580/tonne fob (€460/tonne cif European port).

Spanish mills cut on power pricing

Spanish mills are being hit with power price increases and this is curbing their ability to discount and making them firmer on offer levels.

- Alfonso Gallardo (mainly sections and merchant bar) announced it will cut production in 2014 at all its EAPs.
- Riva (Siderurgica Sevillana) has reduced output since December 1st and is not taking new orders. It is running only at off-peak times.

Spanish rebar mill utilisation rates

Source: WSA, Steel-Insight  *3-month ave.

EU rebar to scrap margins ($/tonne)

Source: Steel-Insight  *3-month ave.
• Celsa (Nervacero in northern Spain) has reduced output.

• Megasa is also considering closing its 1m tpy Spanish plant while retaining output in Portugal where power prices are lower.

According to Eurostat, Spanish industrial consumer power prices for Q1 2013 were €28 cents/kilowatt hour. This compares to the European average of €23 cents/kwh.

However, price increases through the year have pushed this to as high as 30 cents in Q4. Italian prices are similar. The issue for Spanish steelmakers however is that their relative position to other EU steelmakers is worsening as up to mid-2012 their prices were largely in line with the EU average. With low operating rates and high financing costs also hitting margins, Spanish mills are increasingly under cost pressure.

The impact of slowing output will have two effects:

• Firstly, it should make scrap cheaper and this appears to be taking place in Spain with prices there moving down slightly in mid-December.

• Secondly, it should curb output further and thus allow prices to increase.

However, the combination of cheaper scrap and higher prices may then encourage steelmakers to bring capacity back online and reverse those two trends.

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**EU long product prices ($/tonne)**

<table>
<thead>
<tr>
<th></th>
<th>Ferrous scrap&lt;sup&gt;(1)&lt;/sup&gt;</th>
<th>yoy % change</th>
<th>Billet import&lt;sup&gt;(2)&lt;/sup&gt;</th>
<th>yoy % change</th>
<th>Rebar import&lt;sup&gt;(3)&lt;/sup&gt;</th>
<th>yoy % change</th>
<th>Rebar domestic&lt;sup&gt;(4)&lt;/sup&gt;</th>
<th>yoy % change</th>
<th>Wire rod import&lt;sup&gt;(5)&lt;/sup&gt;</th>
<th>yoy % change</th>
<th>Wire rod domestic&lt;sup&gt;(6)&lt;/sup&gt;</th>
<th>yoy % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-13</td>
<td>395</td>
<td>(1%)</td>
<td>545</td>
<td>0%</td>
<td>625</td>
<td>(1%)</td>
<td>660</td>
<td>(2%)</td>
<td>635</td>
<td>(1%)</td>
<td>660</td>
<td>(1%)</td>
</tr>
<tr>
<td>Jan-14</td>
<td>420</td>
<td>(1%)</td>
<td>550</td>
<td>(1%)</td>
<td>660</td>
<td>1%</td>
<td>660</td>
<td>(1%)</td>
<td>660</td>
<td>(1%)</td>
<td>675</td>
<td>(1%)</td>
</tr>
<tr>
<td>Feb-14</td>
<td>430</td>
<td>4%</td>
<td>570</td>
<td>0%</td>
<td>680</td>
<td>2%</td>
<td>680</td>
<td>3%</td>
<td>670</td>
<td>0%</td>
<td>690</td>
<td>3%</td>
</tr>
<tr>
<td>Mar-14</td>
<td>420</td>
<td>(2%)</td>
<td>580</td>
<td>3%</td>
<td>665</td>
<td>3%</td>
<td>660</td>
<td>9%</td>
<td>675</td>
<td>2%</td>
<td>680</td>
<td>9%</td>
</tr>
<tr>
<td>Apr-14</td>
<td>400</td>
<td>(5%)</td>
<td>560</td>
<td>1%</td>
<td>650</td>
<td>2%</td>
<td>680</td>
<td>7%</td>
<td>660</td>
<td>2%</td>
<td>670</td>
<td>7%</td>
</tr>
<tr>
<td>May-14</td>
<td>380</td>
<td>(9%)</td>
<td>545</td>
<td>1%</td>
<td>640</td>
<td>3%</td>
<td>640</td>
<td>7%</td>
<td>660</td>
<td>3%</td>
<td>650</td>
<td>7%</td>
</tr>
<tr>
<td>Jun-14</td>
<td>370</td>
<td>(1%)</td>
<td>526</td>
<td>(1%)</td>
<td>615</td>
<td>2%</td>
<td>620</td>
<td>5%</td>
<td>625</td>
<td>2%</td>
<td>630</td>
<td>6%</td>
</tr>
<tr>
<td>Jul-14</td>
<td>360</td>
<td>(5%)</td>
<td>515</td>
<td>(5%)</td>
<td>600</td>
<td>6%</td>
<td>600</td>
<td>4%</td>
<td>610</td>
<td>(5%)</td>
<td>610</td>
<td>4%</td>
</tr>
<tr>
<td>Aug-14</td>
<td>380</td>
<td>(8%)</td>
<td>515</td>
<td>(7%)</td>
<td>600</td>
<td>(6%)</td>
<td>600</td>
<td>(5%)</td>
<td>610</td>
<td>(6%)</td>
<td>610</td>
<td>(5%)</td>
</tr>
<tr>
<td>Sep-14</td>
<td>380</td>
<td>(8%)</td>
<td>520</td>
<td>(4%)</td>
<td>605</td>
<td>(2%)</td>
<td>600</td>
<td>(2%)</td>
<td>615</td>
<td>(2%)</td>
<td>630</td>
<td>(2%)</td>
</tr>
<tr>
<td>Oct-14</td>
<td>370</td>
<td>(1%)</td>
<td>525</td>
<td>0%</td>
<td>615</td>
<td>(2%)</td>
<td>640</td>
<td>2%</td>
<td>625</td>
<td>(2%)</td>
<td>650</td>
<td>2%</td>
</tr>
<tr>
<td>Nov-14</td>
<td>380</td>
<td>(3%)</td>
<td>540</td>
<td>(2%)</td>
<td>625</td>
<td>(1%)</td>
<td>620</td>
<td>2%</td>
<td>635</td>
<td>(1%)</td>
<td>660</td>
<td>2%</td>
</tr>
<tr>
<td>Dec-14</td>
<td>380</td>
<td>(1%)</td>
<td>560</td>
<td>3%</td>
<td>640</td>
<td>2%</td>
<td>660</td>
<td>2%</td>
<td>650</td>
<td>2%</td>
<td>670</td>
<td>2%</td>
</tr>
</tbody>
</table>

---

| 2006 ave.  | 439                        | 40%           | 790                         | 42%           | 897                         | 47%           | 692                           | 33%           | 911                           | 54%           | 915                           | 40%           |
| 2009 ave.  | 257                        | (42%)         | 429                         | (46%)         | 483                         | (46%)         | 493                           | (46%)         | 602                           | (46%)         | 513                           | (44%)         |
| 2010 ave.  | 353                        | 36%           | 565                         | 32%           | 614                         | 27%           | 510                           | 24%           | 832                           | 26%           | 631                           | 23%           |
| 2011 ave.  | 438                        | 24%           | 656                         | 15%           | 718                         | 17%           | 738                           | 21%           | 740                           | 17%           | 783                           | 21%           |
| 2012 ave.  | 404                        | (6%)          | 592                         | (10%)         | 665                         | (7%)           | 674                           | (6%)           | 683                           | (8%)           | 667                           | (10%)         |
| 2013 ave.  | 388                        | (11%)         | 548                         | (7%)          | 630                         | (6%)           | 628                           | (7%)           | 643                           | (6%)           | 636                           | (7%)           |
| 2014 ave.  | 387                        | (3%)          | 543                         | (1%)          | 630                         | 0%             | 643                           | 3%             | 640                           | (0%)           | 663                           | 3%             |

---

(1) shredded del average EU mill (2) off Southern European port (3) ex-mill
All prices are an average of a range of prices that are present in the market, and exclude grade and finishing extras
Source: Steel-Insight
Medium-term billet opportunities?

In the medium-term, we see the potential for Spanish mills (like many Italian mills do) to switch between billet and steelmaking depending on the relative cost position. Although some mills are not set up to do this and there may be some logistical constraints, but this would be the obvious switch to consider. Spanish mill rebar utilisation rates dropped to 25% over the summer and are unlikely to recover much during Q4. However, closures in 2014 could raise the utilisation rate significantly and then rolling mills could utilise import billet during higher periods of demand.

Outlook for 2014

While not soaring, European construction demand is expected to improve in 2014 by around 2-4%, although Italy and France may still see further weakness. The declines in Spain and other peripheral markets mean that the base level is already very low, but any increase in demand will require some additional re-stocking through the supply chain.

This should mean that volumes will improve in both rod and rebar with some support from rod from higher industrial output as well.

Nevertheless, it will be difficult for mills to raise margins. Assuming the euro continues to remain strong, imports will remain a threat and with Turkish mills expected to struggle to find markets (loss of USA, new capacity in MENA), they will continue to target Europe. Although some capacity has been removed (Spain, Greece, Latvia), there remains the risk that it will return. However, given how low margins were in part of 2013, we do expect them to improve slightly.

Exports are also now lower. Q3 volumes were as low as they have been for several years and with increased output in Algeria, that market remains under pressure. In December, Morocco placed annual quotas on imports of rebar (28,000 tonnes) and wire rod (100,000 tonnes). Given that imports of these two products in 2013 will be in the region of 400,000 tonnes (much of which is from southern Europe), this will be another loss to exporters, although the quotas could be exceeded with a €60/tonne surcharge.

Overall therefore, we expect to see prices stay in line with scrap and as global raw material prices are somewhat lower, we expect prices to remain flat and continue to trade in the range of €450-500/tonne ex-works for most of the year. Our average price for 2014 is a forecast $624/tonne (€460/tonne), just a 1% gain on the year.

Forecast EU long product prices ($/tonne)

Forecast EU rebar price ($/tonne)
ALTERNATIVE SCENARIOS

Base case – 65% probability

As we have continually noted, EU finished product pricing will remain under pressure from aggressive suppliers chasing limited business. This is despite some capacity rationalisation. While demand from the construction sector may be stabilising and even marginally improving, it is from low levels. Volume business in Southern Europe will be dependent on export activity, which will be influenced by the value of the euro, but fundamentally will be eroded into 2014 on new domestic capacity in Algeria. Our range forecast for 2014 is €425-525/tonne ex-works – much the same as in 2013 with the bulk spent between €450-500/tonne. We expect prices to go to the top end of the range early in 2014 supported by scrap prices before sliding in the second half.

Upside case – 15% probability

Rising international demand and the consequent increase in raw material prices are the primary reason for upside performance. This could surprise, which could move prices to (or even above) the top end of the trading range to as high as €550/tonne. We hold out little hope for EU mills for an extended improvement in the spread over raw materials, as there remains plenty of spare operating capacity that could take advantage of this and drive down spreads.

While there has been some closure and consolidation in the last 2-3 years, overall operating capacity remains elevated when compared to demand.

Downside case – 20% probability

We continue to see little fundamental upside in EU demand for long products, so our base case is already conservative. Further weakness would be from poor Chinese/emerging market demand that would drive down raw material pricing even further and hold there for an extended period. This would push prices down to a trading range of €425-475/tonne for rebar. This remains a far more likely scenario.
asian steel market briefing

RECENT DEVELOPMENTS

- There was little change in Asian long product markets in December.

- Chinese prices fluctuated in a narrow range with a bias to the downside late in the month as concerns over credit and the outlook for 2014 increased.

- Asian mills nudged prices higher on an expected seasonal uptick in demand in Q1, as well as increases in scrap input prices, but the move higher was relatively small at around $10-20/tonne.

- Billet import prices were largely unchanged.

- Our short-term outlook is for incremental gains in Asia in the first couple of months of the year, but Chinese prices are unlikely to make any significant move until after Chinese New Year. Our expectation is that the initial move will be upward with Chinese export prices touching $560-575/tonne late in Q1 or early Q2.

MARKET OUTLOOK

- In January 2013, we forecast that Asian rebar prices would fall to $617/tonne cif SE Asian port. In fact, they fell further than this to $570/tonne cif. The primary reason was the extended trend of Chinese mills to export at prices close to marginal cost (or even below that). Chinese mill profitability was virtually zero in 2013 despite strong domestic demand growth. For parts of 2013, it was cheaper to buy Chinese finished long products than CIS billet and the average billet import price was $653/tonne – just $17/tonne below rebar – meaning that re-rolling only made sense into a protected domestic market.

- This irrationality makes 2014 forecasts somewhat difficult. It remains our view that iron ore prices will be down $15/tonne in 2014, which along with falls in average coal prices and slightly lower scrap, means that average costs will be down around $40/tonne over the year. Given the historical propensity of Chinese suppliers to pass on the reduction in costs to producers, we therefore expect prices to fall.

- Yet, there will be growth in Chinese demand and this may allow some improvement in margins and less pressure to export at low prices. As a result, we are only forecasting a small decline in the regional rebar price to $562/tonne cif SE Asia.

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**SE Asian long product import prices ($/tonne)**

Source: Steel-Insight

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**Chinese domestic construction steel prices ($/tonne ex-VAT)**

Source: Steel-Insight

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Chinese market slow

There have been no major moves in the Chinese market for several months now. Iron ore prices have been flat at around $135/tonne cif Chinese port, with range-trading around $5/tonne above and below this.

Domestic rebar and wire rod prices have traded in a narrow range for the last few months and December was no exception. Output remains at elevated levels, inventory at distributors is being cut back signalling still strong end-use demand, but demand is not strong enough to overcome that plentiful supply. There are signs – see below – that output could be cut back, but we still don’t expect a rally in prices until after the Chinese New Year. Domestic spot prices remain in the RMB3,400-3,500/tonne ($480/tonne ex-VAT) range, but did dip below that towards the end of the month on liquidity/credit concerns.

Without any major decline in iron ore prices, there is little room for prices to fall further. We estimate that profitability is marginal at best for non-integrated producers. Without any cutbacks to supply or increases in demand (unlikely on a seasonal basis), there is little upside for prices either.

Mills have trimmed January ex-works prices in the hope that this will stimulate some early re-stocking with Shagang for example dropping rebar prices by $20/tonne to $505/tonne ex-works.

Long steel inventories held at distributors in major Chinese cities (000 tonnes)

![Graph showing steel inventories held at distributors in major Chinese cities.](source: MIIlT, Steel-Insight)

Chinese long product market (000 tonnes)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Wire rod</td>
<td>79,872</td>
<td>95,966</td>
<td>105,368</td>
<td>122,084</td>
<td>138,719</td>
<td>13,215</td>
<td>13,605</td>
<td>12,694</td>
<td>11.0%</td>
</tr>
<tr>
<td>Imports</td>
<td>523</td>
<td>511</td>
<td>656</td>
<td>660</td>
<td>438</td>
<td>48</td>
<td>50</td>
<td>65</td>
<td>19.4%</td>
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<tr>
<td>Exports</td>
<td>5,057</td>
<td>1,091</td>
<td>2,351</td>
<td>3,028</td>
<td>5,012</td>
<td>543</td>
<td>749</td>
<td>613</td>
<td>44.0%</td>
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<tr>
<td>Consumption</td>
<td>75,288</td>
<td>55,390</td>
<td>103,403</td>
<td>119,795</td>
<td>131,545</td>
<td>12,721</td>
<td>12,906</td>
<td>12,146</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rebar</td>
<td>95,186</td>
<td>123,042</td>
<td>130,746</td>
<td>151,288</td>
<td>175,634</td>
<td>18,304</td>
<td>18,015</td>
<td>17,800</td>
<td>14.5%</td>
</tr>
<tr>
<td>Imports</td>
<td>23</td>
<td>57</td>
<td>58</td>
<td>57</td>
<td>71</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>(15.9%)</td>
</tr>
<tr>
<td>Exports</td>
<td>1,169</td>
<td>305</td>
<td>225</td>
<td>224</td>
<td>261</td>
<td>24</td>
<td>24</td>
<td>18</td>
<td>5.4%</td>
</tr>
<tr>
<td>Consumption</td>
<td>95,055</td>
<td>122,795</td>
<td>130,579</td>
<td>151,132</td>
<td>178,243</td>
<td>18,285</td>
<td>17,995</td>
<td>17,787</td>
<td>14.5%</td>
</tr>
</tbody>
</table>

Source: CISA, Steel-Insight

[STEEL-INSIGHT]

January, 2014
Exports steady

Rebar export prices are holding at around $515/tonne fob – mainly into SE Asia – with wire rod at $520/tonne fob. This is around $530-550/tonne cif SE Asian port depending on destination. This is still in line with landed CIS billet prices and makes any other suppliers uncompetitive.

What impact will environmental restrictions have?

There has been a lot of noise/noise about outcrops being enforced on Chinese steel mills around key cities due to air pollution. Affected cities include Nanjing (Jiangsu), Tangshan (Hebei), Tianjin (Tianjin), Handan (Hebei), Taiyuan (Shanxi), Changzhou (Jiangsu), Rizhao (Shandong). Although not hugely scientific, those provinces account for two-thirds of Chinese steel output – see chart. If these are truly enforced, then we would expect the following:

- A sharp reduction in output
- Falling iron ore sales and prices
- Rising steel prices and margins

While, as with all central government measures, local implementation is key and historically this has been huge, lacking. Nevertheless, we note that the smog patterns are having a direct impact on local standards of living and it is here that there is some scope to suggest that actual implementation this time around could be greater. We await with interest Chinese output numbers in December to see if they fall significantly below 2.1m tpd. Data over the first half of the month suggests that it will come in around 2.05m tpd. In our opinion, this level of output will not be enough to drive prices higher.

Outlook for 2014 in China

Official forecasts from CISA and WSA remain relatively bearish for Chinese demand growth in 2014 at 2-4%. The rationale remains that the macro shift from investment to consumption will be a drag on construction output, exacerbated by restrictions on credit to real estate companies. We struggle to see that much weakness given that steel demand growth this year has been around 7-8%, albeit including some inventory accumulation. Assuming that Chinese GDP remains around 7% and IP around 9% i.e. current levels, then we are forecasting that output will be around 5% higher in 2014 as there will be some de-stocking and a slight slowing of construction demand.

This is the equivalent of around 2.35m tpd on average through the year. With limited investment in new capacity over the last 2 years and some closures, we believe that utilisation rates will improve in China and this could provide some support for pricing, although the fragmentation of the Chinese market means that mills tend to price market share and volumes over pricing. Nevertheless, with raw material prices expected to decline in the second half, we

### Japanese apparent consumption of long products (000 tonnes)

![Japanese apparent consumption of long products (000 tonnes)](image)

Source: WSA, Steel-Insight

### South Korean apparent consumption of long products (000 tonnes)

![South Korean apparent consumption of long products (000 tonnes)](image)

Source: WSA, Steel-Insight
could see at least a marginal improvement in spreads and potentially reduced exports. This could help Asian pricing in 2014. Another year of 8% demand growth however could see the Chinese market finally tighten and this would provide significant upside to global pricing.

**Regional prices tick higher**

Tokyo Steel Manufacturing raised its January prices for rebar by ¥2,000/tonne to ¥65,000/tonne ($632/tonne) after successfully implementing hikes last month. It cited continued strong domestic demand for material. We would also point to slightly higher scrap prices and the continued weakness in the currency.

Taiwanese producers are also edging prices higher on pricier scrap. Domestic prices are up to around $615-625/tonne ex-works for rebar while demand is steady amid good project work and need to replenish inventory.

In Malaysia, mills raised prices for early January by up to $20/tonne on the back of power tariff hikes and costlier scrap. It took ex-works prices to around $630/tonne. Mill concerns have been offset to some extent by new import licensing requirements for rebar and wire rod that may deter volatile import flows and could ease the acceptance of the higher prices.

### Asian long product prices ($/tonne)

<table>
<thead>
<tr>
<th></th>
<th>Ferrous scrap</th>
<th>yoy % change</th>
<th>Billet import</th>
<th>yoy % change</th>
<th>Rebar import</th>
<th>yoy % change</th>
<th>China Rebar domestic</th>
<th>yoy % change</th>
<th>Wire rod import</th>
<th>yoy % change</th>
<th>China Wire rod domestic</th>
<th>yoy % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-13</td>
<td>400</td>
<td>(2)%</td>
<td>545</td>
<td>(2)%</td>
<td>555</td>
<td>(3)%</td>
<td>480</td>
<td>(4)%</td>
<td>575</td>
<td>(1)%</td>
<td>485</td>
<td>(4)%</td>
</tr>
<tr>
<td>Jan-14</td>
<td>425</td>
<td>(6)%</td>
<td>550</td>
<td>(2)%</td>
<td>555</td>
<td>(7)%</td>
<td>470</td>
<td>(6)%</td>
<td>575</td>
<td>(8)%</td>
<td>475</td>
<td>(8)%</td>
</tr>
<tr>
<td>Feb-14</td>
<td>430</td>
<td>(4)%</td>
<td>570</td>
<td>(2)%</td>
<td>570</td>
<td>(8)%</td>
<td>470</td>
<td>(8)%</td>
<td>585</td>
<td>(9)%</td>
<td>475</td>
<td>(9)%</td>
</tr>
<tr>
<td>Mar-14</td>
<td>440</td>
<td>(4)%</td>
<td>590</td>
<td>1%</td>
<td>600</td>
<td>2%</td>
<td>500</td>
<td>7%</td>
<td>610</td>
<td>2%</td>
<td>505</td>
<td>1%</td>
</tr>
<tr>
<td>Apr-14</td>
<td>440</td>
<td>0%</td>
<td>590</td>
<td>(1)%</td>
<td>620</td>
<td>8%</td>
<td>520</td>
<td>7%</td>
<td>630</td>
<td>8%</td>
<td>525</td>
<td>7%</td>
</tr>
<tr>
<td>May-14</td>
<td>420</td>
<td>1%</td>
<td>545</td>
<td>(1)%</td>
<td>570</td>
<td>2%</td>
<td>500</td>
<td>4%</td>
<td>580</td>
<td>2%</td>
<td>505</td>
<td>4%</td>
</tr>
<tr>
<td>Jun-14</td>
<td>400</td>
<td>3%</td>
<td>525</td>
<td>(1)%</td>
<td>550</td>
<td>5%</td>
<td>480</td>
<td>9%</td>
<td>560</td>
<td>1%</td>
<td>495</td>
<td>9%</td>
</tr>
<tr>
<td>Jul-14</td>
<td>375</td>
<td>(6)%</td>
<td>515</td>
<td>5%</td>
<td>525</td>
<td>(8)%</td>
<td>470</td>
<td>(2)%</td>
<td>535</td>
<td>(5)%</td>
<td>475</td>
<td>(2)%</td>
</tr>
<tr>
<td>Aug-14</td>
<td>375</td>
<td>(9)%</td>
<td>515</td>
<td>7%</td>
<td>525</td>
<td>(8)%</td>
<td>450</td>
<td>(6)%</td>
<td>525</td>
<td>(8)%</td>
<td>455</td>
<td>(6)%</td>
</tr>
<tr>
<td>Sep-14</td>
<td>375</td>
<td>(6)%</td>
<td>520</td>
<td>4%</td>
<td>535</td>
<td>(4)%</td>
<td>460</td>
<td>(3)%</td>
<td>545</td>
<td>(4)%</td>
<td>465</td>
<td>(3)%</td>
</tr>
<tr>
<td>Oct-14</td>
<td>390</td>
<td>(3)%</td>
<td>535</td>
<td>0%</td>
<td>550</td>
<td>0%</td>
<td>475</td>
<td>1%</td>
<td>560</td>
<td>0%</td>
<td>480</td>
<td>0%</td>
</tr>
<tr>
<td>Nov-14</td>
<td>400</td>
<td>(2)%</td>
<td>540</td>
<td>2%</td>
<td>560</td>
<td>2%</td>
<td>490</td>
<td>1%</td>
<td>570</td>
<td>2%</td>
<td>495</td>
<td>1%</td>
</tr>
<tr>
<td>Dec-14</td>
<td>420</td>
<td>5%</td>
<td>560</td>
<td>3%</td>
<td>570</td>
<td>1%</td>
<td>500</td>
<td>4%</td>
<td>580</td>
<td>1%</td>
<td>505</td>
<td>4%</td>
</tr>
</tbody>
</table>

| 2008 ave. | 488 | 40% | 773 | 50% | 825 | 44% | 578 | 35% | 838 | 47% | 580 | 35% |
| 2009 ave. | 290 | (41)% | 434 | (44)% | 497 | (40)% | 458 | (21)% | 512 | (38)% | 452 | (22)% |
| 2010 ave. | 405 | 40% | 568 | 31% | 628 | 26% | 523 | 14% | 641 | 26% | 517 | 14% |
| 2011 ave. | 480 | 18% | 650 | 17% | 705 | 13% | 514 | 17% | 724 | 13% | 610 | 18% |
| 2012 ave. | 426 | (11)% | 563 | (9)% | 632 | (10)% | 535 | (13)% | 647 | (11)% | 536 | (12)% |
| 2013 ave. | 419 | (2)% | 553 | (8)% | 570 | (16)% | 483 | (10)% | 581 | (10)% | 485 | (5)% |
| 2014 ave. | 406 | (3)% | 543 | (2)% | 562 | (1)% | 483 | (9)% | 572 | (2)% | 488 | (0)% |

(1) shredded off SE Asia (2) of SE Asia (3) Shanghai market ex-17% VAT
All prices are an average of a range of prices that are present in the market, and exclude grade and finishing extras
Source: Steel Insight
Regional billet unchanged

CIS billet was sold for around $540-550/tonne cfr SE Asia in December and while mills are looking for a little more in January, there have yet to be transactions at the higher levels. South Korean exporters are also holding on for $540/tonne fob, while there are somewhat cheaper deals available from second-tier Asian suppliers. With scrap prices rising, we believe that billet will follow in the New Year.

Outlook for 2014 in Other Asia

South Korean and Japanese long product demand has been pretty flat in 2013 (see charts) and we expect no major difference in 2014 with a bias to the downside in South Korea with some potential upside in Japan.

Smaller imports continue to offer some import opportunities:

- Indonesia imports more than 1.5m tonnes of long products and is expected to grow
- Malaysia imports around 1.2m tonnes of long products with a bias to wire rod, but with constraints now placed on Chinese imports, there are opportunities
- The Philippines imports less than 1m tonnes of long products, but with growth and reconstruction needed, it could see a boost. Moreover, billet imports in excess of 1.25m tpy could also rise.

- Taiwan is a relatively small importer (around 600,000 tpy of long products) and with aggressive pricing, we see no major uplift here.
- Thailand is set to import in excess of 2m tonnes of long products
- Vietnamese billet imports have been falling sharply as output has grown, but an improved construction sector could see some finished imports increase from levels of around 0.5m tpy.

On balance therefore, we see little fundamental change in regional demand with some growth in smaller economies in both billet and finished products. In construction-grade, finished products from China now dominate.
ALTERNATIVE SCENARIOS

Base case – 50%

The China situation will dominate Asia once again in 2014. Low-priced finished exports of wire rod and rebar has forced out other suppliers of construction products, with Japanese and Korean suppliers focused on higher grades only or on markets where they have preferential access. Other Asian suppliers have only a limited ability to compete on price with Chinese suppliers and will therefore seek to focus on domestic markets and minimise input and conversion costs. Higher Chinese demand in 2014 will be supplied domestically, but there is plenty of capacity available for export. As a result, we see modest price gains on seasonal activity through the first half of the year. However, we expect to see supply exceed demand by mid-year and this will curb output at that point that will exacerbate the expected decline in iron ore pricing and prices will drop.

Upside scenario – 35%

If Chinese strength remains strong through 2014 i.e. at 7-8% consumption growth, this could sustain elevated raw material pricing levels for longer than expected with much less of a second-half pullback as well as lessen their aggressive export policy. This would provide relief to other Asian mills. Under this scenario, prices would stay at current levels for a month or two before improving for a sustained period through most of 2014. We consider this more likely than our negative outlook.

Downside scenario – 15%

While the Chinese economy remains overly-dependant on investment and construction-led activity with increasing levels of debt, there are no signs of this resulting (as yet) in a major correction. At some point, that edifice may crumble with huge negative effects on steel demand. Chinese mills would turn to exporting at ever-more aggressive prices. While not foreseeable in the short-term, this remains the primary medium-term risk, but we have downgraded our likelihood of this in the near term.
emerging economies steel market briefing

RECENT DEVELOPMENTS

• CIS billet suppliers got $505/tonne fob for sales to the Middle East late in the month for January rollings/February deliveries. This was a marginal increase from early in December. Mills are now asking for $510/tonne fob.

• Despite an increase in scrap, Turkish mills were unable to get higher prices for rebar. Limited sales to the USA and Gulf markets left them dependent on Yemen and Iraq after November's surge into Egypt. Sales were mainly at $580-590/tonne through the month.

• Higher scrap prices are putting pressure on their margins, but these are being offset partially by the depreciation in the lira, which is cutting their conversion costs.

• Gulf activity was low in December, but UAE mills raised prices in January on the back of an expected improvement in demand and a gamble that Turkish mills will have to raise prices for February delivery.

• Brazilian construction activity has picked up in H2 2013 and this has drawn in some imports, but rising domestic capacity may curb this in 2014.

MARKET OUTLOOK

• Our 2013 forecast (from January 2013) was for a 4% decline in CIS billet prices to $336/tonne fob from $558/tonne fob in 2012. Prices actually fell 8% to $508/tonne fob. While the direction was correct, we underestimated the compression in margins.

• Our 2013 forecast for Turkish rebar export was for a 3% decline to $615/tonne fob (from $630/tonne in 2012). Prices actually fell 6% to $590/tonne fob. Once again, the direction was correct, but the underlying decline in billet pushed down finished prices.

• Unlike in other markets, we are cautious about emerging market long product prices and expect margins to remain compressed through 2014.

• Lower iron ore and coal prices in 2014 will mean that CIS mills maintain their competitive position in billet, while backward integration in the Middle East (e.g. Jindal Oman) could see fewer billet sales into that market. As such, we expect a competitive environment.

• The loss of the US market, reduced sales into the GCC, pressure on Latin American sales and the ongoing inability to supply Asia due to Chinese exports will maintain pressure on Turkish mills and particularly their margins.

• As such, we are essentially forecasting flat prices for both CIS billet and Turkish rebar in 2014 with CIS billet averaging $503/tonne fob (down $5/tonne) and Turkish rebar at $590/tonne fob (unchanged).

• Our bias to risk is to the upside. A stronger Chinese performance could keep raw material prices higher than forecast and this would push up global long product prices.

CIS long product export prices ($/tonne fob Black Sea)

Turkish long product export prices ($/tonne fob)

Source: Steel-Insight

January, 2014

Source: Steel-Insight
CIS billet flat

There was no major move in billet in the first half of December after weakness in late November. Prices hovered around $500/tonne fob, with slightly discounted deals out of ports with winter risks. As we noted in our update, we expected strong demand in the Middle East in Q1 and there were a number of deals signed at around $505/tonne fob in late December for delivery in late January/early February. Mills then posted prices at $510/tonne fob, but there have been few transactions to date at this level, but we expect this to be reached in January given the upward momentum in ferrous scrap.

CIS rebar is around $560-560/tonne fob depending on payment terms. Wire rod is around $560-570/tonne fob. Domestic prices have slumped against a background of weak demand (seasonal) and the upcoming holiday period, which did lead to some discounted sales in mid-December, but the recovery in billet now means that the above prices are in place for January rolling.

Turkish mills facing squeeze

With scrap prices trending upwards – US suppliers are now looking for more than $400/tonne cfr for shredded for New Year deliveries – Turkish mills are facing a squeeze. Prices in the first half of December were closer to $395/tonne cif.

However, sales of rebar through December were around $580-590/tonne fob and that has not really shifted early in the New Year. Larger cargoes are even selling slightly below the bottom-end. That is a spread of less than $200/tonne, which we consider marginal. That may encourage the take-up of billet in the New Year as the spread here is at least workable given current prices of around $520-525/tonne cif Turkey.

The charts highlight that the spread between billet (CIS fob and rebar (Turkey fob) has been stable at around $80/tonne for most of the year. However, the scrap (delivered Turkey) to rebar (fob) spread has been more volatile at around $180-220/tonne. In our view, once the spread from scrap to rebar dips below $200/tonne, some Turkish mills switch to importing billet.

Yemen and Iraq continue to be strong markets for Turkish rebar and Egypt has come back for now, but with the impending loss of US sales and weakness in GCC markets, lead times are trending lower with widespread availability for short-term deliveries. Turkish mills are hoping for an improvement in the domestic market in Q1, but that remains more of a hope rather than a reality given increasing pressures and we expect margins to be tight for the Turkish mills, although a depreciating currency offers some short-term relief. Europe offers an alternative, while Turkish mills continue to be active into strong markets in Latin America and Eastern Africa, although Brazilian volumes could dry up later in the year (see below).

Brazilian long product apparent consumption* (000 tonnes)

![Brazilian long product apparent consumption graph](image)

Source: IBS, Steel-Insight

Brazilian production, trade and consumption of long products

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Aug-13</th>
<th>Sep-13</th>
<th>Oct-13</th>
<th>Nov-13</th>
<th>Year-to-date % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>8,358</td>
<td>10,245</td>
<td>10,877</td>
<td>10,763</td>
<td>997</td>
<td>852</td>
<td>988</td>
<td>981</td>
<td>3.6%</td>
</tr>
<tr>
<td>Imports</td>
<td>577</td>
<td>1,347</td>
<td>985</td>
<td>1,236</td>
<td>59</td>
<td>112</td>
<td>123</td>
<td>139</td>
<td>3.3%</td>
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<tr>
<td>Exports</td>
<td>1,441</td>
<td>1,167</td>
<td>1,258</td>
<td>971</td>
<td>106</td>
<td>112</td>
<td>114</td>
<td>98</td>
<td>24.2%</td>
</tr>
<tr>
<td>Apparent consumption</td>
<td>7,484</td>
<td>10,425</td>
<td>10,605</td>
<td>11,058</td>
<td>840</td>
<td>952</td>
<td>996</td>
<td>1,022</td>
<td>1.8%</td>
</tr>
<tr>
<td>YoY % change</td>
<td>39.1%</td>
<td>1.7%</td>
<td>4.3%</td>
<td>(6.1%)</td>
<td>4.8%</td>
<td>7.5%</td>
<td>17.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IBS, Steel-Insight

January, 2014
Gulf slow at the end of the year

With UAE domestic prices at $600/tonne ex-works for December sales, there is little incentive for now to book Turkish material and consequently we expect January Turkish arrivals to be low. CIS billet offers in December were around $540/tonne cif however, and are workable for re-rollers and we there was some activity.

With expectations of strong demand in 2014, UAE mills edged prices higher in January. This is despite no change in Turkish prices that can be landed for around $590/tonne cif. Conares, Qatar Steel and Emirates all raised prices by around $10-15/tonne to $610-615/tonne ex-works. With minimal short-term arrivals, buyers have no choice and mills may be gambling that higher scrap prices into Turkey in the New Year will force prices higher for February arrivals.

In Saudi, Al-Tuwairqi and other private sector mills are selling rebar for $540/tonne ex-works with Hadeed at $650/tonne. These prices are unchanged. Turkish material is offered at around $590/tonne cif Jeddah, but at around $620/tonne landed duty paid, it is not generating much interest with demand still slow.

We forecast a strong year for the Gulf in 2014

Fundamentally, we expect 2014 will be a stronger year for Gulf demand in terms of volumes (with the exception of Saudi Arabia, which we expect to be slow during the first half). Oman, Qatar and the UAE will all see the start of a large number of projects, although this could be skewed towards the second half. Yet the region is becoming increasingly self-sufficient (in rebar and wire rod) and higher operating rates at domestic mills could be achieved as long as pricing strategies do not push local prices significantly above regional levels.

Brazilian construction strengthening

After a sluggish start to the year, Brazilian construction demand has been strong since the summer and long product demand is expected to rise around 2-3% for the year as a whole. This is drawing in imports (mainly Turkish rebar) and facilitating higher domestic output. This is good news for the steel mills that will come on-stream in Brazil in 2014,

• GV do Brasil (part of the Mexican Industrias CH group) is due to start a 500,000 tpy scrap-fed minimill in Q1 producing rebar, wire rod and merchant bar.
• Commercial sales at CSN’s first long product mill is expected in January with a capacity of 500,000 tpy.
• Gusa Nordesta is expected to start production in the first half of 2014 at its 500,000 tpy mill.

These will join the 400,000 tpy Sitrel plant of Votorantim that started in 2013 producing rebar.

With new competitors arriving that will challenge the dominant groups (ArcelorMittal, Votorantim and Gerdau), they may use price as a weapon to gain market share. That may curb imports even if demand rises in 2014 by the 5-8% that we are forecasting.
Forecast CIS long product export prices ($/tonne fob Black Sea)

Source: Steel-Insight

Forecast Turkish rebar prices ($/tonne fob)

Source: Steel-Insight

CIS & Turkey long product prices ($/tonne)

<table>
<thead>
<tr>
<th></th>
<th>CIS Ferrous scrap</th>
<th>CIS Billet import</th>
<th>CIS Rebar import</th>
<th>CIS Wire rod export</th>
<th>Turkey Billet export</th>
<th>Turkey Rebar export</th>
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<td>596</td>
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(1) shredded cif Izmir (2) fob Black Sea (3) fob Turkey
All prices are an average of a range of prices that are present in the market, and exclude grade and finishing extras.
Source: Steel-Insight
ALTERNATIVE SCENARIOS

Base case – 50%
Trading in 2013 has been within tight ranges all year and with over-capacity remaining an issue in 2014, we expect to see similar range-trading for the bulk of the year. We are forecasting scrap will remain in the $350-400/tonne range with CIS billet around $500/tonne and Turkish rebar around $550-600/tonne fob. Strength in raw materials in the New Year will see prices at or even above that range through Q1 with significant weakness in Q3.

Upside case – 30%
The primary upside case would be unexpected demand strength that could keep prices at the top end of the trading range for an extended period. That would be driven by higher-than-expected demand in Asia and across all major global markets. We have shifted our bias to the upside this month.

Downside scenario – 15% likelihood
Our downside scenario would be based on Chinese weakness. This would mean pricing remaining in a lower trading range around $550/tonne fob for Turkish rebar, which would hold through 2014.
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Please refer to other reports
Flat Steel Products Five-Year Forecast
Flat Steel Products One-Year Forecast
### EU macro-economic overview (y-o-y change in %)

<table>
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<td>(f)</td>
<td>(f)</td>
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(e) = estimate (f) = forecast

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## EU Macro-economic overview

- **H2'13: continuation of fragile growth**
- **Indicators suggest mild acceleration**
- **Industry to gather momentum in 2014**
- **Better business climate 2014-2015**
- **Euro seen losing strength this year**
- **Domestic demand on the mend**
- **Stubbornly high unemployment**
- **ECB policy to remain accommodative**
- **EU economy: modest growth ahead**

Final figures for Q3-2013 confirm a continuation of hesitant economic growth in the European Union. GDP rose 0.2% quarter-on-quarter; while investment growth picked up some speed compared with the previous quarter and net exports slackened, the strongest contribution to the variation in GDP came from a rise in business inventories.

Underlying trends at the country level continued to diverge, but appear to become less North-South oriented. Growth in Germany continued albeit at a slower rate than in Q2, but France registered negative growth. Spain came out of recession while Italy posted again slight negative growth. The UK remained the EU core country with the strongest dynamics as GDP growth accelerated to 0.8% q-o-q.

Estimates and first hard data for the final quarter of 2013 appear to confirm the continuation of rather fragile economic growth, driven by exports and a further moderate improvement in investment. On balance, the EU economy is estimated to have contracted by 0.1% in 2013.

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1) Based on information available as of 24th January, 2014
Indicators suggest mild acceleration
While economic growth remained rather tepid in the second half of 2013 following its mid-year turnaround, the most recent forward looking indicators suggest a slightly more pronounced upturn in 2014.

EU Economic Sentiment
long-term average 1990-2010 = 100

EU economic sentiment improved further in November and December, pushing the index to the highest level since July 2011. Meanwhile, Markit's Eurozone PMI Composite Output index has been keeping a steady level around 52 in recent months, which suggests that improved momentum in the private sector should be supportive to investment and spending in the months ahead.

The Markit Eurozone manufacturing PMI recorded its strongest monthly growth in December, reaching a two-and-a-half year peak of 52.7 at the end of 2013, supported by an improved assessment of actual output levels and order books. In most large EU countries and particularly so in Germany there was a solid rise in incoming new orders. The indicator has now improved for 3 consecutive months.

The brightening outlook for the manufacturing sector is also confirmed by the sustained rise in the EU industrial confidence indicator since May 2013.

Industry to gather momentum in 2014
Broadly in line with the improvement in manufacturing indicators, EU industrial production started to show signs of improvement: year-on-year growth is positive again since September and accelerated to 3% y-o-y in November. The trend in monthly production levels remained nevertheless fairly volatile, whereas - due to weak levels of manufacturing activity in the first half of the year - the year-to-date output level remained still slightly below the year earlier level.

EU Industrial Production
SA index 2010=100 (excl. constr.)

On balance, the mild improvement in activity seen in recent months and the robust levels of the manufacturing indicators suggest that the manufacturing recovery in the EU looks set to gain further strength in 2014 and 2015.

Better business climate in 2014-2015
Several factors are expected to contribute to better business conditions in the 2014-2015 period.
First of all, the Eurozone crisis is believed to be largely under control. There will still be bumps along the road, but the Euro area has demonstrated its ability to handle large obstacles; this reduces the risk of smaller bumps triggering renewed panic on the financial markets in the months to come.
Although some countries are at risk of remaining fragile, the region is foreseen to be heading into a period of
greater stability as ongoing policy reforms will steadily pave the way for better economic, financial and industrial framework conditions. This should be supportive to business sentiment which as a consequence will have a positive effect on investment. Another important factor is the brightening outlook for the global economy and in particular for the US. The world’s largest economic bloc appears to be well positioned to strengthen robustly this year and next, owing to continued improvements in the labour and housing markets, high levels of manufacturing and consumer confidence, the two-year agreement on the budget and a reduced drag from government spending cuts. Also Japan is expected to show a rather solid economic performance in this forecasting period. This will result in the first synchronised economic upturn in the advanced economies since 2009, with positive spin-off effects for other regions. Although the main emerging countries last year appear to have entered a period of structural economic rebalancing following several years of more pronounced GDP growth, it is expected that their momentum will improve over the coming 2 years. The global upswing is foreseen to result in international trade gaining traction. This should result in demand from third countries for EU goods and services strengthening again following rather weak momentum in 2013. It remains to be seen to what extent Eurozone exporters will be able to benefit from this trend; exchange rate conditions will play an important role.

**Euro seen losing strength in 2014**
The Euro gaining further strength vis-à-vis the US dollar and other foreign currencies late 2013 surprised many forex analysts who had forecasted a weaker Euro due to ongoing budget and deficit concerns in some member states. However, the Euro has been supported by EU banks repatriating funds late 2013 to comply with capital requirements which will be required in the ECB Asset Quality Review which started recently. Liquidity also tightened owing to banks repaying crisis loans to the ECB.

![Euro strengthened further in Q4-2013](image)

Early January the Euro traded at around 1.36US$.

It is widely expected that the Euro will lose some strength during 2014 once the liquidity squeeze starts to fade and the Asset Quality Review has been conducted. Moreover, solid economic prospects for the US and the eventual start to the Fed tapering will result in the Euro pulling back compared with the US dollar. However, the expected economic recovery in the Eurozone will limit the single currency’s depreciation.

**Domestic demand seen rising in 2014**
Improving economic framework conditions in the EU and abroad as well as the Euro losing some of its previous strength will be supportive to the business climate and as a consequence to corporate investment in the years ahead. Moreover, after a sustained period of weak growth, pent-up demand is significant.

Investment in 2014 is currently foreseen to rise by 2.4% and by 3.2% in 2015 following a marked reduction in 2012 and 2013. Strongest growth is expected in investment in machinery and equipment – posting some 3%
growth in 2014 and 4.5% in 2015 - whereas investment in construction will on average rise only by around 1.5% this year and 2% next year. For the time being, large building stocks and funding issues will act as a drag on the property markets. Government consumption in the EU is expected to stabilise around the 2013-level in the years ahead, hiding diverging trends at the country level. While Spain, Italy and the UK are faced with the stringent need for further spending cuts and as a consequence foresee a further reduction in government consumption in 2014 and 2015, most other countries are expected to be able to maintain government consumption at the year earlier level or even to allow for a softer stance on austerity. The latest projections for private consumption signal a moderate increase of consumer spending during the forecast period. At the end of 2013, consumer confidence was back at a similar level registered on average from mid-2010 to mid-2011. The first tentative signs of a moderate rebound in private consumption could be seen in the rise in car sales and lower savings rates in several EU countries in the second half of 2013. However, for the time being still high unemployment and restrained wage growth will most likely dampen potential private consumption growth.

**Stubbornly high labour market pressures**

The unemployment rate in the EU remained at just below 11% in November 2013. Meanwhile, it is reported by several multi-national employment agencies that lately there has been an encouraging pickup in demand for temporary workers in Spain and Italy after labor reforms in those countries. The rate of decline in demand appears also to be easing in France. This could indicate that the labour market is slowly coming out of the severe downturn it suffered due to the impact of restructuring measures private companies and governments had to take during the crisis. The unemployment rate is seen falling only very hesitantly in the coming years. The corporate sector will restrain from hiring until more evidence staving the economic rebound becomes available. Employment in the public sector will most likely remain under pressure for the time being.

**ECB policy will remain accommodative**

In November the ECB decided to lower the key interest rates further after an unexpectedly sharp drop in inflation in October. The interest rate on the main refinancing operations was lowered by 25 basis points to 0.25% and the rate on the marginal lending facility by 25 basis points to 0.75%.

This was largely in line with the forward guidance policy introduced in July last year which aims to maintain ECB key interest rates at lower levels for an extended period of time, thus keeping monetary policy accommodative for as long as necessary in an overall still uncertain environment, in order to keep deflation at bay.

According to Eurostat’s flash estimate annual HICP inflation fell to 0.8% in December coming from 0.9% in November, still well below the ECB target of 2%. Meanwhile, the ECB conceded that underlying price pressures in the euro area are
expected to remain subdued over the medium term. Should inflation drop further this year, the ECB may announce a further slight drop in interest rates. Should this not have the desired effect, more controversial new policies such as negative interest rates and quantitative easing are not to be excluded. Low inflation in combination with current high levels of corporate and household debt is a clear risk for the Eurozone economy, since it will delay the process of required deleveraging.

EU economy: modest growth ahead
The January 2014 outlook from EUROFER’s Economic Committee shows that the EU economy is in the process of making a slow but steady transition to a broader and more durable recovery. For several quarters now, improving economic barometer readings signal that change is in the air. GDP expanded at a muted pace since Q2-2013, primarily driven by exports. Improving domestic demand conditions – supported by the continuation of accommodative monetary ECB policies and less fiscal tightening - suggest that in the course of 2014 economic momentum will gain some strength, to reach eventually almost trend growth in 2015. On balance, the EU economy is foreseen to grow 1.3% in 2014, followed by 1.8% growth in 2015.

Risk overview: negatives & positives
Financial-economic stability in the EU improved in recent months. Significant progress has been made with respect to the competitiveness, public finances and deficit situation of the peripheral Eurozone economies, largely owing to structural reforms. Also in the banking sector and in the governance structure of the single currency reforms are underway. While the Eurozone crisis appears to be largely under control, underlying structural issues still need to be resolved. Therefore, uncertainties and risks for the EU economy remain. France and Italy are lagging the recovery seen in other EU core economies; clearly, they will need more time and reforms to improve their competitiveness and growth perspectives. While progress is being made in Portugal and Greece, it cannot be excluded that additional financial support for these two countries is needed after the termination of their bail-out programmes this year.

The European elections in May could push the political balance towards increased Euro scepticism and jeopardise support for further progress with regards to the necessary reforms. Finally, should ECB’s Asset Quality Review reveal larger capital shortages in the EU banking sector than currently anticipated, this would have a negative impact on credit supply. On the positive side, after a sustained period of weak growth, pent-up investment demand is significant. Due to cost-cutting measures the corporate sector is “meaner and leaner” than before. Improving earnings growth will boost confidence and, as a consequence, investment. The expected synchronised upturn of the advanced economies in the forecast period will stimulate international trade. Given the strong likelihood of a moderate Euro depreciation – owing to ample ECB liquidity and the possibility of further monetary policy action – Eurozone exporters should be able to benefit from this trend. Moreover, this should also have a positive impact on economic momentum in the emerging countries which, despite efforts to rebalance growth towards becoming more domestic demand driven, still largely depend on exports.
USA
- Economic strength late 2013
- Indicators signal further expansion
- QE tapering largely factored in
- GDP seen growing 3% in 2014 and close to 3.5% in 2015

GDP growth in Q3-2013 beat expectations, posting 3.6% growth at an annualised rate. Although both private consumption and investment grew moderately, the main contribution to growth came from inventory change. GDP growth is expected to have continued in Q4. The US budget impasse appears to have done less damage than feared. Strong job creation in the past months pushed unemployment in November to its lowest point since late 2008. The construction recovery continued, both in the residential and non-residential sector. December data show that consumer confidence is up; retail sales remained robust. New manufacturing orders improved further in November; PMI index readings are at high level. On balance, GDP is estimated to have grown 1.7% in 2013. Economic fundamentals for 2014 and 2015 are looking robust. The positive labour market trend is seen continuing, owing to improving activity in the corporate sector. Also the budget comprises will have favourable near-term effects on government spending and hiring and confidence levels in general.

The construction sector looks set to continue its rebound. Meanwhile, prospects for the manufacturing industry are bright: domestic demand and export demand is expected to rise, bank lending to corporates is expanding and the domestic energy boom supports competitiveness. The Fed announced to “cautiously” reduce its quantitative easing during 2014. The rise in US bond yields is foreseen to be modest since the financial markets appear to have largely priced in tapering.

All in all, the US economy is expected to grow by around 3%, followed by probably almost 3.5% in 2015.

Key emerging regions
- BRICs lost momentum in 2013
- Global demand seen boosting trade and GDP in 2014 and 2015

China’s latest economic indicators, especially the manufacturing and services PMI, signalled sagging momentum towards the end of 2013. GDP had grown 7.8% in Q3. China’s manufacturing PMI fell to 50.5 in December, the lowest reading since August 2013. In December, credit supply tightened again, forcing the central bank to add liquidity to the market as it did last June. GDP is reported to have grown 7.7% in 2013. GDP in 2014-15 could grow 7.3% per annum. While exports will remain a key driver, the economy will steadily become more consumption-driven, away from credit-led investment which fuelled overcapacity in several sectors. A major risk would be a Chinese debt crisis, fuelled by a poorly regulated financial system and the rapid growth of shadow banking. Non-performing loans are concentrated in public infrastructure and private real estate projects. They could result in defaults, undermine confidence and trigger bank runs.

In India GDP growth edged up slightly in Q3-2013, driven by domestic demand and exports which benefitted from the cheaper rupee. However, inflation is also rising, keeping the monetary policy tight. GDP is seen growing 5% this year and next. Brazil’s GDP fell 0.5% q-o-q in Q3, the first quarterly contraction since 2009. The central bank raising interest rates dampened investment growth. Recent industrial activity data are rather good, suggesting that Q4 could see a mild improvement. GDP could grow 2.5% this year and around 3% in 2015.

Russia’s GDP stagnated in Q3-2013, reflecting weaker than expected domestic demand due to a drop in investment and slowing consumption growth. GDP growth probably slowed to 1.4% last year. Low investment, weak exports and a lack of infrastructure reforms will keep GDP growth at around 2.5% p.a. in 2014-15.
II. The EU Steel Market

Overview Steel Using Sectors

Development of the main steel using sectors – EUROFER forecast January 2014
% change year-on-year in the SWIP (Steel Weighted Industrial Production) index

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- Q4'13: y-o-y rebound in activity
- Moderate recovery is under way
- SWIP to strengthen in 2014-2015

In line with expectations, preliminary data for Q4-2013 signal that EU's steel using sectors registered the first positive year-on-year growth in activity since Q4-2011. The estimated 1.6% rise in the SWIP is slightly better than expected. Moreover, the drop in Q3 output was also more moderate than previously anticipated. Except for the construction industry and the mechanical engineering sector, all other steel using sectors contributed positively to Q4 activity growth.

On balance, total output in the steel using sectors in the EU is now estimated to have contracted by 1.8%; this basically reflects a very weak first quarter and a gradual improvement in subsequent quarters. This growth pattern and significantly improved sentiment levels in industry at the start of this year appear to confirm that a moderate recovery in the steel using sectors is under way.

For 2014-2015 activity in the steel using sectors is seen gradually gaining traction after the weak performance over the past two years.

As EU and global economic momentum builds, the investment cycle will turn positive again, to a significant extent supported by pent-up demand. The outlook for capital goods investment in the EU is rather bright for the coming two years, whereas also private consumption is seen gaining some strength again. The SWIP index is forecast to increase by 2.5% in 2014, followed by almost 3.5% growth in 2015. Showstoppers could be continued Euro strength and difficult access to finance.

1) As of 2013, "steel structures" is no longer a separate sector but is included in the construction sector. Shipbuilding activity is now included in "other transport" which includes all non-automotive transport equipment such as railway material, air & spacecraft and motorcycles.
Construction

- **H2-2013 data suggest downturn is bottoming out - country divergences remain significant**
- **Mild growth 2014-15 mainly supported by residential and R&M sector**

In Q3-2013 construction activity in the EU fell by 1.1% y-o-y, a sharp contrast with the extremely weak performance in the first half of last year. First estimates for the final quarter of 2013 show a further slight contraction of activity. This appears to underpin that finally the downturn in EU construction activity is gradually bottoming out, in line with the very modest improvement in construction confidence in the EU since the middle of last year.

However, the divergence in activity growth at the country level remained significant over this period. Germany and the UK were the only two large EU markets that registered growth; also in smaller markets such as Sweden and the Netherlands output improved compared with the same period of 2012. Meanwhile, the construction slump continued in Spain, Italy and Poland, albeit with less sharp contractions in activity than seen in preceding quarters. A similar trend could be observed in the Czech Republic and Slovakia. On balance, construction output is estimated to have decreased almost 3% last year.

The outlook for 2014 and 2015 is for a slow and cautious recovery of the EU construction market. Construction investment is seen improving only hesitantly, having fallen over the past 6 years.

The pick-up in construction output will largely be driven by the residential sector and renovation and modernisation work. Markets such as Germany and the UK will continue to benefit from the improved attractiveness of residential property investment, also because of low interest rates.

In contrast, prospects for the non-residential sector are clearly less benign, due to the squeeze from still weak corporate profit margins on investment in private industrial and commercial projects. Generally speaking, there is still significant spare capacity in most non-residential market segments across the EU.

As far as the infrastructure sector is concerned, overall weak public sector investment will continue to act as a drag on activity. Poland is expected to see a modest revival of activity in this sector owing to renewed access to EU funds.

EU construction activity is forecast to rise almost 1.5% in 2014 and by close to 2.5% in 2015. The divergence at the country level will gradually decline over this period.
Automotive

- **Improving sales boost output in H2-2013**
- **EU car sales to end 6-year slump in 2014**
- **Output to rise 3%**
- **Further slight recovery in 2015**

EU passenger car sales have been on an upward trend in H2-2013. Coming from a double-digit decline at the start of last year, the year-to-date drop was reduced to 1.7% in December. The UK remained the most dynamic market in the EU, but also in Spain, Portugal and Poland car sales showed growth.

A similar trend could be observed in the EU commercial vehicle market: improving demand in H2-2013 resulted in an easing decline in sales, to -1.7% over 11 months. Also export demand from third countries strengthened in recent months, which was particularly supportive to car production in Germany and the UK; especially demand from the US was robust.

Following a 2.5% rise y-o-y in Q2-2013, improving market conditions pushed growth of EU automotive output to 4% y-o-y in Q3. Activity in Q4-2013 is currently estimated to have increased 6% y-o-y, reflecting not only improving demand but also a base effect and destocking coming to an end.

On balance, total automotive output in 2013 stabilised just above the year earlier level.

The outlook for 2014-2015 is for a moderate rebound in automotive output, ending its slump of 5 quarters. The overall mature car market in Europe is expected to improve only cautiously, and will basically remain driven by replacement demand. In this buyers’ market, competition will remain extremely fierce and as a consequence pressure on margins very high.

While in principle better business conditions will be supportive to commercial vehicle demand in Europe, it remains to be seen whether the surge in H2-2013 sales – which have potentially been advanced by this year’s introduction of Euro 6 regulations - will dampen demand in 2014 and 2015.

Export demand from the US and Asia will continue to boost activity at the German and UK premium segment manufacturers.

On balance, EU automotive production activity – including the manufacture of parts and components - is forecast to increase by 3% in 2014, whereas 2.5% growth is currently pencilled in for 2015.

Most EU countries expect to see moderate output growth, while the UK is foreseen to more or less stick to current favourable output levels. Output growth in Spain and most Central European countries will be slightly higher than average growth in the EU.
Decline in activity bottoming out in H2-2013
Investment to rise in 2014-15
Pent-up demand to be unleashed
Output +3% in 2014, acceleration to 4.5% in 2015

Activity in the mechanical engineering sector in the EU fell 2.6% y-o-y in Q3-2013, approximately half the rate of reduction in activity witnessed in the first half of last year. Preliminary data and estimates for activity in Q4 signal that the year-on-year decline was reduced further to around 0.8%.

Divergences in performance at the country level remained high in H2-2013. Output stalled in Germany and Spain, whereas most maller EU countries generally reported a hesitant year-on-year improvement in activity. Worst hit under current market conditions are apparently producers in Italy and the UK. Italy’s export performance is hampered by two constraints: its geographically concentration on countries with lower economic growth and its specialisation in low-tech sectors, where competition from countries with a lower cost base is strong. Meanwhile, the UK’s weaker performance appears to be mainly related to the marked appreciation of the pound which outpaced the strengthening of the Euro vis-à-vis other foreign currencies.

On balance, total output is estimated to have fallen by just over 3.5% in 2013, reflecting weak EU and global demand for machinery and equipment, difficult access to finance in the EU and overall high levels of uncertainty.

The outlook for 2014 and 2015 is relatively bright. Demand in the domestic EU market is foreseen to recover from its current lows, supported by the expected pick-up in capital goods investment, improved business confidence and moderate easing of financing constraints. Over the past two years, the private sector focused on survival strategies, cost-cutting operations and efficiency improvement. Undoubtedly, these factors aligned to significant pent-up demand. The global investment cycle and as a consequence export demand appears to have reached a turning point as well. As far as foreign demand is concerned, the Euro – and pound sterling - remaining stronger than expected for a prolonged period would hurt EU exports.

EU mechanical engineering activity is seen rising by almost 3% in 2014, followed by an acceleration to around 4.5% in 2015.
Tubes

- **Sharp drop Q3-2013 output**
- **Strong divergences at the country level, depending on product mix and market segment**
- **Brighter prospects ahead**
- **2014 output seen growing 3%**
- **Sustained growth in 2015**

EU steel tube production fell 6.8% y-o-y in Q3-2013. Preliminary data and estimates for activity in Q4 signal that output most likely stabilised at the year earlier level. On balance, business conditions remained difficult during the second half of 2013. However, the performance of this sector diverged strongly at the country level, depending on the product mix and market segment. Producers in Italy, the UK and Sweden managed to increase sales in H2-2013 because of their focus on small welded and precision tubes. Improving activity in major market segments such as the automotive industry and relatively low stocks in the downstream supply chain supported a mild recovery in demand.

Much in contrast, countries with a dominating share of large welded steel tubes in the product mix of the major producers continued to suffer badly from extremely weak demand and heavy competition in the international line pipe markets. As a consequence, output in Germany and France continued to show double-digit declines in H2-2013. Most other countries reported a relatively moderate reduction in activity over this period.

EU steel tube output is estimated to have declined by almost 4.5% in 2013. Prospects for 2014 and 2015 have become somewhat brighter; it is generally expected that total steel tube production will register a moderate increase over the coming two years. The improvement is basically related to strengthening demand from major small-welded tube using sectors such as construction, automotive and metal goods as well due to some restocking in the distribution chain.

Uncertainty remains with respect to the large welded tube sector. The start of the Southstream project in 2014 should benefit EU producers, because of the fact that the first stretch (700,000 tonnes) will be built from Bulgaria; this will give an advantage with respect to transport costs. Nevertheless, competition is foreseen to remain fierce due to global overcapacity.

EU production of steel tubes is expected to rise by around 3% in 2014 and 5% in 2015.
Domestic Appliances

- **Output recovers in H2-2013**
- **Not all producers benefit**
- **2014-2015 market demand seen improving**
- **Competition will remain fierce**

Output of electrical domestic appliances in the EU increased 3.1% y-o-y in Q3-2013. First estimates for Q4 show a fairly similar year-on-year rise in activity of almost 2%.

The recovery in H2-2013 is not only the result of weak output levels in the corresponding period of 2012, although this played major role.

New residential building activity and renovation and modernisation in the housing sector increased robustly in Germany and the United Kingdom. This has been supportive to demand for white goods in the EU market.

In addition, export demand has been rather solid, particularly in the United States where the housing recovery boosted demand for domestic appliances. As a consequence, output increased not only in most Central European countries, but also in Germany, France and Spain.

Meanwhile, the situation in Italy and the UK remained depressed; this basically reflects competitive issues related to operational performance and costs, product mix, geographical focus and exchange rate differentials.

All in all, production of electrical domestic appliances is estimated to have grown by around 1% in 2013. The outlook for the white goods market in 2014 and 2015 is for moderate growth in demand and production.

The improving financial-economic framework together with higher levels of consumer confidence will support a mild increase in private consumption. It will also have a positive on the housing sector which is expected to register a sustainable rebound. Also export demand is expected to be rather robust.

Competition in this market will remain fierce though. Appliance manufacturers shifted production to markets with a lower cost base to protect their margins. This trend appears to be unstoppable, even for high-end producers which have so far been successful in maintaining their market share owing to product durability, technology and service.

In 2014, activity in the white goods sector is foreseen to rise by around 3%, followed by slightly higher growth in 2015. Growth in Central Europe will continue to outperform average EU growth.
Real Consumption

Forecast for real consumption - % change year-on-year

<table>
<thead>
<tr>
<th>Period</th>
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<th>Q213</th>
<th>Q313</th>
<th>Q413</th>
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</table>

- **Final demand H2-2013 exceeded expectations**
- **Real consumption estimated to have fallen by just below 2% in 2013**
- **Prospects 2014 moderately positive: almost 2% growth**
- **2.5% growth pencilled in for 2015**

In Q3-2013 the year-on-year decline in real steel consumption came to a standstill, on a par with the general trend of improving activity in several steel using sectors in the EU. Estimates for Q4-2013 signal that real steel consumption stabilised just above the level registered in the same quarter of 2012. This implies that on balance final demand in H2-2013 slightly exceeded expectations, underpinning that the stabilisation of the downward trend in real consumption has become undeniable. All in all, EU real steel consumption is now estimated to have fallen by slightly less than 2% in 2013. The outlook for 2014 and 2015 is for a gradual and rather cautious recovery of real steel consumption in the EU, in line with activity in the key steel using sectors gaining traction again following their disappointing performance in the past two years. Prospects for 2014 are moderately positive. Nevertheless, the fragile recovery expected for the construction sector will dampen demand for constructional steels. Investment in machinery and equipment should overall be supportive to higher levels of end-use demand, but the process of recovery will depend strongly on the pace of improvement in business conditions. Real steel consumption is expected to grow almost 2% in 2014. Higher growth is pencilled in for 2015. The expected further improvement in the financial-economic framework should bolster confidence and investment in the EU. Also the cyclical drag from steel intensity will ease as investment growth picks up speed.

On balance, real steel consumption is foreseen to rise almost 2.5% in 2015.

1) steel intensity is the ratio of steel consumption to steel weighted production in the steel using industries (SWIP)
**Apparent Consumption**

**Forecast for apparent consumption - % change year-on-year**

<table>
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| Year 2014 | 3.3 | 4.1 | 1.2 | 3.9 | 3.2 | 2.9 |

**EU Real & Apparent Consumption (yearly)**

<table>
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<th>EU Apparent Consumption in million tonnes per annum</th>
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<tr>
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<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
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</table>

- **Rebound apparent consumption in H2-2013**
- **Low stocks – real and apparent demand well balanced**
- **2013 demand reduced by 0.5%**
- **EU steel market seen strengthening in 2014-2015**

EU apparent steel consumption rose 3.8% in Q3-2013. Apparent consumption in Q4-2013 is estimated to have grown by around 6.5% compared with the extremely weak demand level registered in the same period of 2012. On balance, the sharp year-on-year reduction in the first half of last year was more or less reversed in the second half. Key factors in this positive trend have been the low level of inventories which did not require the massive destocking as seen in H2-2012 and real steel consumption slightly outperforming expectations. As low stocks also meant that real and apparent steel consumption were closely balanced, the cautious upturn in steel users’ activity translated directly into better demand levels.

As a consequence, the annual drop in apparent steel consumption in the EU amounted to only 0.5% in 2013. Both domestic mills’ deliveries and imports were on a rising trend in H2-2013. However, as imports rose almost 10% over the whole of 2013 and domestic deliveries fell almost 2% due to particularly high Q1 imports, EU mills lost market share to foreign supplies last year.

EU apparent consumption is forecast to rise by just over 3% in 2014, reflecting higher levels of activity in the steel using sectors and as a consequence strengthening real consumption. As stocks in the supply chain at the start of this year are still rather low, some restocking is expected in the first half of the year. The EU steel market is seen gaining further strength in 2015, driven by higher levels of real consumption and somewhat stronger restocking. EU apparent steel consumption is foreseen to rise by around 3% in 2015.
• EU imports remained below Q2 but rose 16.8% y-o-y in Q3'13
• Further y-o-y rise in monthly imports October-November
• Rise in imports driven by semis and long products
• Total imports +9.5% in 2013
• Further rise in 2014 and 2015

EU customs data for total steel imports show as expected slightly lower monthly tonnages arriving in the EU in Q3-2013. Imports fell 7% q-o-q but increased almost 17% compared with the same period of 2012.

Available data for the final quarter of last year signal a fairly similar trend with imports stabilising close to the preceding quarter but rising year-on-year. Year-to-date total steel imports had increased 9% y-o-y in October, in line with our Q3-2013 forecast. The rise in finished imports amounted to 12% y-o-y (including November).

Drilling down into the underlying data by product signals that the year-on-year rise in Q3 imports was driven by semis and long products. The rise in Q3 semis imports amounted to 38% y-o-y and to 27% for long products, whereas flat product imports remained very close to the tonnage registered in the same period of 2012.

Recent finished product import data confirm the continuation of the year-on-year rise in long products in October and November, but also flat product imports increased in general compared with the same period of 2012.

At the product group level, the 50% year-to-date rise in beams stands out; also cold-rolled and hot-dipped metal coated imports rose markedly during 2013, with respectively 38% and 20%. Meanwhile, organic coated sheet imports fell 24% y-o-y.

With regards to the main countries of origin, the situation is unchanged compared with the preceding quarters of last year. Ukraine and the Russian Federation continued to dominate semis' imports, whereas China, Russia, Ukraine, Turkey and South Korea accounted for about 70% of finished product imports.

Total imports in 2013 are estimated to have risen by around 9.5%.

For 2014 it is expected that imports from third countries will remain relatively close to the levels registered in 2013, rising by 2%. The expected further recovery of the EU steel market will trigger a stronger rise in imports in 2015.
Exports

- EU exports fell 9.4% y-o-y in Q3
- October exports also down on the same period of 2012
- EU remained net importer of semis
- Trade surplus basically in long products
- Total exports fell almost 2.5% in 2013
- Moderate rise in 2014-2015 in line with rising global steel demand

Total EU steel exports to third countries decreased 9.4% y-o-y in the third quarter of 2013, they were 3% down in comparison with the monthly volumes in the second quarter.

As far as the final quarter of last year is concerned, only October data are currently available. Exports appear to be slightly higher than monthly tonnages in Q3, but compared with the same month of 2012 they are 10% lower.

Year-to-date exports in 2013 are 2% lower than in 2012. Finished product exports fell 5% y-o-y over this period. Meanwhile, EU total net exports amounted to 549,000 tonnes per month, a 34% reduction compared with the average monthly trade surplus registered in 2012. This is basically the result of lower net exports of flat finished products. Nevertheless, both for flat and long products a trade surplus was registered, whereas the EU remained a net importer of (flat) semis.

At the product level, rebar, wire rod and beams remained the most commonly exported steel products. Since no major shifts took place with respect to the main countries of destination, Algeria remained the main outlet for EU long product exports, whereas Turkey was the key export market for flat products.

Total exports are estimated to have fallen almost 2.5% last year.

The outlook for the 2014-2015 period is for a moderate increase in third country exports in line with the expected increase in global steel demand.
<table>
<thead>
<tr>
<th>Changes in %</th>
<th>IMPORTS Third Countries</th>
<th>EXPORTS Third Countries</th>
<th>DELIVERIES into EU 28</th>
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**FORECAST**

| Q.4/2013    | 10.0                    | -5.3                     | 6.3                   | 4.0             |
| Year 2013   | 9.6                     | -2.3                     | -1.6                  | -1.6            |
| Q.1/2014    | -4.4                    | 2.6                      | 3.2                   | 3.2             |
| Q.2/2014    | 2.5                     | 5.9                      | 3.6                   | 4.0             |
| Q.3/2014    | 6.2                     | 4.3                      | -0.8                  | 0.5             |
| Q.4/2014    | 5.1                     | 2.9                      | 3.9                   | 3.8             |
| Year 2014   | 2.0                     | 3.9                      | 2.6                   | 2.9             |
| Year 2015   | 8.9                     | 1.8                      | 2.3                   | 2.2             |
EXHIBIT 16
Ukraine's Choice: European Association Agreement or Eurasian Union?

Anders Åslund

Anders Åslund has been senior fellow at the Peterson Institute for International Economics since 2006 and is an adjunct professor at Georgetown University. He has worked as an economic adviser to the Russian and Ukrainian governments. Åslund is the author of 12 books, most recently the second edition of How Capitalism Was Built: The Transformation of Central and Eastern Europe, Russia, the Caucasus, and Central Asia (2012). He is also the author of How Ukraine Became a Market Economy and Democracy (2009), and Russia's Capitalist Revolution: Why Market Reform Succeeded and Democracy Failed (2007). He has also edited 16 books and published widely. Previously, Åslund was the director of the Russian and Eurasian Program at the Carnegie Endowment for International Peace. He was the founding director of the Stockholm Institute of Transition Economics and professor at the Stockholm School of Economics. Åslund served as a Swedish diplomat in Moscow, Geneva, and Kuala Lumpur. He earned his doctorate from the University of Oxford.

Author’s note: I thank Joshua Schoen and Vijay Khosla for excellent research assistance. Steve Weihsen and Madmeni Debschafepum have assisted me with eminent editing.

Since gaining independence in December 1991, Ukraine has vacillated between the European Union and Russia for economic and political cooperation. Until recently neither had offered Ukraine much, but in the last few months, things have heated up. Ukraine's intention to sign an Association Agreement for political association and economic integration with the European Union has raised a furor in the Kremlin, which is now trying to block Ukraine from aligning itself with the European Union. Moscow has imposed trade sanctions in clear violation of its obligations in the World Trade Organization (WTO) and is pursuing an intense confrontation.

Ukraine concluded negotiations on a deep and comprehensive free trade area (DCFTA) with the European Union in late 2011 and the Association Agreement in March 2012. The Association Agreement consists of over 1,200 pages, of which DCFTA forms the bulk with some 1,000 pages. The agreement is comprehensive covering all areas of interest. It offers enhanced cooperation in 28 key policy areas, including political cooperation, foreign and security policy, justice, and freedom. It aims to accelerate the deepening of political and economic relations between Ukraine and the European Union and gradually integrate Ukraine into the EU internal market. The Association Agreement thus provides for significant legal, regulatory, and political convergence with the European Union, for which the European Union offers considerable assistance. Yet it stops short of granting EU membership.

Ukraine should improve its macroeconomic policies to reduce its vulnerability and qualify for IMF funding. It should also comply with all the EU demands, including releasing Yulia Tymoshenko.

In the last two years, however, EU officials have balked at the Ukrainian government's flagrant violations of human rights and rule of law but hope that Ukraine will make amends so that it can sign this agreement at its Eastern Partnership summit in Lithuania's capital, Vilnius, on November 28-29.

Unwilling to "lose" Ukraine to the European Union, Russia launched substantial trade sanctions against Ukraine in July and August 2013. Russia wants Ukraine to reject the European bid and join its Customs Union with Belarus and Kazakhstan. President Vladimir Putin's adviser, Sergey Glazyev, puts it candidly, "We are preparing to tighten customs procedures if Ukraine makes the suicidal step to sign the association agreement with the EU." This impasse may have major

Figure 1  Ukraine’s foreign trade, by region, 2000 and 2012 (percent of total)

Exports

2000
- EU-27, 33%
- Russia, 24%
- CIS excluding Russia, 6%
- Asia, 10%
- Other countries, 27%

2012
- EU-27, 25%
- Russia, 26%
- CIS excluding Russia, 11%
- Asia, 10%
- Other countries, 28%

Imports

2000
- EU-27, 30%
- Russia, 42%
- CIS excluding Russia, 8%
- Asia, 4%
- Other countries, 8%

2012
- EU-27, 31%
- Russia, 32%
- CIS excluding Russia, 8%
- Asia, 16%
- Other countries, 13%

CIS = Commonwealth of Independent States

consequences for the Ukrainian economy because both the European Union and Russia are equally important as export markets. In 2012, each purchased one-quarter of Ukraine’s exports, and each accounted for about 30 percent of Ukraine’s imports (figure 1).

In this Policy Brief I argue that Europe, Ukraine, and Russia all share the blame for creating the current conflict but also that it’s in their interest to defuse tensions and seek a way out before it threatens the well-being of all involved. To resolve this problem, Europe, Russia, and Ukraine must alter their policies. For Ukraine, this means putting its own house in order. In the political sphere, Ukraine must reform its justice system, stop suppressing political dissent, and end the selective prosecution of opposition leaders, notably former Prime Minister Yulia Tymoshenko. In the economic sphere, Ukraine needs to reduce its budget expenditures, liberalize regulations, let its exchange rate float, and raise energy prices. It should enlist the help of the WTO to block Russia’s trade sanctions. The European Union, meanwhile, should welcome Ukraine and intensify its interaction with Ukraine but also demand
that it implement political and economic reforms. The United States can back Ukraine and the European Union in these efforts and organize a top-level visit to Kiev before the Vilnius summit. Russia should reconsider its economic warfare play, observe its obligations to the WTO, and recognize Ukraine’s right to independence.

**TWO BUMPY DECADES WITH LIMITED ECONOMIC INTEGRATION**

Economic cooperation among the former Soviet republics has been a process of trial and error. After Ukraine voted for independence with a 90 percent majority on December 1, 1991, Russian President Boris Yeltsin decided to dissolve the Soviet Union. He did so swiftly and presented it as a positive choice: “I was convinced that Russia needed to rid itself of its imperial mission” (Yeltsin 1994, 115).

As a replacement for the USSR, 11 former Soviet republics formed the loose Commonwealth of Independent States (CIS), a minimal organization without supranational power. Georgia and the already-independent Baltic states stayed outside. While Yeltsin wanted the CIS to be like the British Commonwealth, the dominant Russian view was that the Soviet demise was a tragedy and that the CIS should become like the European Union. Russia aspired to closer cooperation than any other state desired. Together with Belarus and Kazakhstan, Russia's closest partners, Russia attempted a customs union in 1995, which was revived in 2009. Ukraine, by contrast, kept Russia at a distance.

In April 1994, all the CIS countries except Turkmenistan signed a multilateral free trade agreement (FTA). But it was of low quality and never came into force because even Russia did not ratify it. Instead most CIS countries went on to conclude similar bilateral FTAs. Russia and Ukraine concluded one in 1993, which came into force in 1994 and has been the legal basis for their trading relationship. Yet, both countries frequently resorted to protectionist measures. Sudden quotas, tariffs, or outright prohibitions often disrupted Russian-Ukrainian trade. Since neither was a member of the WTO until 2008, when Ukraine joined, they had no recourse to any rules-based arbitration or penalty mechanisms.

In 2003, President Putin tried to integrate Ukraine into a new Single Economic Space (SES) with Russia, Belarus, and Kazakhstan. It was supposed to start as a free trade area, become a customs union, and eventually a currency union, modeled after the European Union. It was an evident attempt to tie Ukraine closer to Russia before the presidential elections in late 2004, but no Ukrainian government has accepted more than a free trade area. During the 2004 presidential campaign, Putin went to Ukraine twice to campaign for his preferred candidate, Viktor Yanukovych, although he did not think much of him. During the Orange Revolution in November-December 2004, hundreds of thousands of Ukrainians protested against the rigged election of Yanukovych, who lost the following rerun-off vote to Viktor Yushchenko. As a result, the SES fell by the wayside.

All along, Putin had expressed nostalgia about the Soviet Union, but after the Orange Revolution he stated: “the collapse of the Soviet Union was the biggest geopolitical disaster of the century.” To him, the key element of a minimal restoration of the Russian empire has been the inclusion of Ukraine.

**The European Union should support Ukraine but also maintain its standards to make sure that Ukraine complies with its conditions so that both parties can sign the European Association Agreement in Vilnius in November.**

The main conflict between Russia and Ukraine has been their dispute over the price of natural gas for Ukraine and over transit of natural gas to Europe. In January 2006 and January 2009, Putin cut Russian gas deliveries to Ukraine and a large part of Europe, prompting Ukraine to reduce its purchases of Russian gas. Russia has clearly given up on Ukraine for gas transit and is building pipelines around Ukraine to eliminate any gas or oil transit through Ukraine in the future.

**EUROPEAN ASSOCIATION AGREEMENT**

Ukraine has been asking for EU membership since 1995, but for years the European Union was too occupied with incorporating the 10 Central and East European countries, which was completed in 2004 and 2007, respectively.

In 2003, the European Union looked farther and launched a European Neighborhood Policy (ENP), designed for North African and Middle Eastern countries and the western CIS countries (Russia, Belarus, Ukraine, and Moldova). It attempted

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1. I discuss this in detail in Åslund (2007).


3. This section draws on Åslund (2009).
to standardize the EU approach to friendly neighbors, offering them more market access and interaction. Ukraine seized this opportunity, while Russia excluded itself. Instead, Armenia, Azerbaijan, and Georgia asked to be included in the ENP and the European Union accepted.

The Orange Revolution brought about the democratization that the European Union demanded for closer cooperation with Ukraine, and the ENP was a convenient instrument for closer cooperation. In February 2005, Ukraine concluded a substantial initial action plan with the European Union. Most of the action items were reforms that Ukraine committed itself to carrying out with plenty of EU assistance. The Orange government also accelerated Ukraine’s accession to the WTO, which was completed in 2008. Immediately afterwards, the European Union initiated negotiations with Ukraine on a DCFTA. In May 2009, the European Union launched an Eastern Partnership with the six ENP countries, declaring: “The main goal of the Eastern Partnership is to create the necessary conditions to accelerate political association and further economic integration between the European Union and interested partner countries” (Council of European Union 2009). In addition to FTAs, the European Union now offered broader Association Agreements, which also involved political and legal aspects, but EU membership remained out of reach.

In February 2010, Yanukovych won with a slight margin over Prime Minister Yulia Tymoshenko in a reasonably free and fair presidential election. He continued negotiations with the European Union on the DCFTA, which were successfully concluded in late 2011. Yet, the European Union held up the signing because of new concerns about violations of human rights and rule of law in Ukraine. On July 19, 2012, the DCFTA was initialed, not signed. In the summer of 2013, Moldova, Armenia, and Georgia also concluded DCFTAs with the European Union.

The DCFTA is a substantial FTA. It abolishes mutual customs tariffs, although the current average EU tariff on manufactures is only 1.19 percent and 2.45 percent in Ukraine, so the impact will be limited. The effect will be more significant for agricultural goods, for which the average EU tariff is 7.42 percent versus 6.41 percent in Ukraine, and agricultural goods will compose about one-third of Ukraine’s exports in 2013. The DCFTA also covers regulatory convergence in competition policy, state aid, property rights, and energy policy (Giucci 2013).

CUSTOMS UNION

In late 2009, Prime Minister Putin surprised everybody by stating that Russia, Belarus, and Kazakhstan would enter the WTO as a customs union. These three countries agreed to unify their customs tariffs. In 2010, the Customs Union came into existence, with the implementation of a common customs tariff and joint Customs Code. In January 2012, border controls were abolished. A joint secretariat, the Eurasian Economic Commission, was set up in Moscow with a staff of more than 1,000 people. The Eurasian Development Bank in Almaty, Kazakhstan, and an arbitration court in Minsk were also established (Movean and Giucci 2011).

Putin’s aim is to transform the Customs Union into a Eurasian Union by 2015—a political counterpart to the European Union—but Belarus and Kazakhstan resist closer integration. In Russia the Customs Union and the Eurasian Union are used nearly synonymously. The difference is best understood thus: “The ostensible purpose of [the Eurasian Union] is economic. Its primary objectives, however, are geopolitical, and these are to be achieved in large part by economic means” (Adomeit 2012). Russia has pressured all former Soviet republics to join. Kyrgyzstan has signed a letter of intent and Tajikistan may do so as well, but Putin’s real goal is to integrate Ukraine.

From an economic standpoint, the Customs Union is problematic because the economic interests and structures of Russia, Kazakhstan, and Belarus vary greatly. Kazakhstan is largely a raw material exporter, and Belarus is an exporter of Soviet-style manufactured goods. Russia is a comparatively protectionist post-Soviet country. The Customs Union also complicates relations with third parties, notably the WTO. As Russia joined the WTO as a member of the Customs Union in August 2012, Kazakhstan realized that it could not enter the WTO as intended because Russia had forced it to raise its import tariffs. Belarus and Kazakhstan complain that Russia’s WTO obligations apply to them, although they did not participate in those negotiations. These three countries already had tariff-free trade among them before the Customs Union, the only big Customs Union advantage is that border controls between them have been taken down (Carneiro 2013).

In effect, Russia is being forced to pay Belarus and Kazakhstan for the sacrifices they made to join the Customs Union. Every year Belarus receives implicit oil and gas subsidies of 15 to 18 percent of its GDP from Russia. When Belarus’ irresponsible economic policies brought about a severe payments crisis in 2011, Russia offered a large bailout package of $20 billion for three years. Even so, the relationship between the two countries is very bad, and Belarus is on the verge of a new financial crisis (Garber 2013).

Russia’s relationship with Kazakhstan is better, but the Kazakhs are not enthusiastic about the Customs Union. For Kazakhstan, the Customs Union is straightforward trade diversification. It forced Kazakhstan to raise its average customs tariffs from 6.7 to 11.1 percent on an unweighted basis and from 5.3 to 9.5 percent on a trade-weighted basis. The World Bank (2012)
assessed the cost to Kazakhstan of joining the Customs Union in its baseline scenario at 0.2 percent of GDP (Carmine 2013). 

Despite the Customs Union being Russia’s dominant priority, the CIS countries concluded a new multilateral FTA in October 2011. Only eight countries signed it, and Russia, Belarus, and Ukraine have ratified it. This FTA has replaced the bilateral FTA of 1993 as the basis of trade between Russia and Ukraine. It introduced two major novelties, namely that WTO rules and procedures should apply to CIS members belonging to the WTO and that a customs union could be a party to the FTA. The agreement exempts almost all goods from customs tariffs, with sugar being the exception. However, Russia’s export taxes on commodities, such as gas and oil, still apply to Ukraine, and Russia imposes quotas for certain sensitive products such as steel pipes. Russia also continues to block imports of agricultural products, dairy, and meats on alleged sanitary grounds (Giucci 2013). Thus, in a trade conflict between Russia and Ukraine, the WTO should take precedence, but the role of the Customs Union is confusing, since neither Belarus nor Kazakhstan belongs to it.

QUANTITATIVE ASSESSMENT

Many institutions—mainly Polish and Ukrainian institutes, the World Bank, and the Eurasian Development Bank5—have made quantitative assessments of the effects on the Ukrainian economy of Ukraine’s accession to the Customs Union versus implementation of the DCFTA. Using standard gravity and computable general equilibrium models, all but the Eurasian Development Bank have obtained very similar results.

Movechan and Giucci (2011, 11) provide the most complete recent mainstream study of the effects on Ukraine of both the DCFTA and the Customs Union. They conclude that in the long term, the DCFTA would add 11.8 percent to Ukraine’s GDP, while the Customs Union would reduce it by 3.7 percent. The DCFTA would substantially increase trade (both exports and imports), whereas the Customs Union would reduce trade. Other studies offer similar numbers.

The biggest impact comes from exports. Shepetylo (2013, 21) has estimated that the “expected long-run gains to Ukrainian exports to all countries under the CU scenario are equal to 17.9 percent,... and under the EU scenario 46.1 percent. Surprisingly, the highest unrealized potential is in exports to CIS countries,” notably to Russia.

The DCFTA will decrease or eliminate existing trade barriers between Ukraine and the European Union, leading to increased mutual trade. The main advantages for Ukraine will be better access to the vast EU market; increased inflow of foreign direct investment, which will modernize the Ukrainian economy, restructure enterprises, and create jobs; and harmonization of regulatory and institutional standards, which will improve the business environment and rule of law in Ukraine (Drobowski and Tarun 2012b, 23–24). All these effects should be substantial and positive. Conversely, the Customs Union market is smaller, technologically backward, less competitive, and does not offer Ukraine significant institutional benefits.

A counter study by a group of economists affiliated with the Eurasian Development Bank (Ivanter et al. 2012) presents analysis that is not based on any calculations but on scenarios and peculiar assumptions.

Ukraine’s joining the EU FTA would worsen the terms of trade in the post-Soviet area. In this case the SES countries can mitigate the negative consequences of such a move by Ukraine by raising the median customs tariffs. Because of a reduction in exports to the SES countries and an increase in imports from the EU,... Ukraine in this scenario can lose up to 1.5% of its baseline GDP (Ivanter et al. 2012, 40).

Apparently, the authors mean that the Customs Union countries would impose trade sanctions against Ukraine. However, if Ukraine joined the Customs Union, then “Over the period of 2011-2030, the total cumulative effect of the creation of the SES and Ukraine joining it on the four countries can reach $1.1 trillion in 2010 prices...” (Ivanter et al. 2012, 41). This study presents numbers that contradict all other mainstream Ukrainian and Western studies without revealing the authors’ methodology or calculations. It appears more like propaganda than research. Their message is political: It is good

for Ukraine to join the Customs Union but had to adopt the DCFTA. Another Eurasian Development Bank study (2012, 29) comes to a similar conclusion:

Ukraine's non-participation in the integration processes currently underway throughout the post-Soviet area leads to the continuation of the sectoral breakdown of its economy and as a result, to a potential slowdown in its economic growth rate.

But if Ukraine embraced the Customs Union, then

Under technological integration and the fostering of cooperation ties, assessment of the economic effect could be boosted to 6-7% of total GDP volume by 2030 (Eurasian Development Bank 2012, 29).

Putin's adviser, Sergei Glazyev, has stated that Ukraine would gain $9 billion a year if it joined the Customs Union, because he suggests that Ukraine would be allowed to buy Russian oil and gas at the same low prices as Belarus does (Mosley 2013).

Since these counter assessments appear insubstantial, we have every reason to rely on the many quantitative studies with revealed methodology that Ukraine can benefit substantially from the DCFTA with the European Union but would suffer considerable harm if it joined the protectionist, small, less developed, and less competitive Customs Union.

THE KREMLIN'S POLITICAL TRADE POLICY

The only way to make sense of the Kremlin's trade policy is to see it as politics mixed with old Soviet economic thinking. Glazyev, a former minister for external economic relations, became Putin's personal adviser on Eurasian integration in July 2012. He advocates state capitalism, and aside from Putin, is the main advocate of the Eurasian Union (Aslund forthcoming). Their thinking runs counter to modern trade theory.

First, while modern economics favors intensive competition, Customs Union advocates want to reduce competition so that countries lagging technologically, such as Russia and Ukraine, can produce and export more without technological change. Another Kremlin misperception is that only a customs union, and not an FTA, can lead to free trade. Third, the Kremlin does not understand that a country can have FTAs with many countries. Russia has FTAs only with former Soviet countries, so it has little practice. Clearly, they do not comprehend the concept of rules of origin. Russia's First Deputy Prime Minister Igor Shuvalov has stated that if Ukraine signs the DCFTA "there are serious worries that some groups of goods will enter the Customs Union without control." Presumably, he refers to Russia being unable to control the Belarusian border with Ukraine, but that is an internal Customs Union problem. Fourth, as a new member of the WTO, Russia has not been able to internalize the WTO rules. Even after one year of membership it has not set up a permanent mission to the WTO. Finally, the Kremlin appears to look at trade policy primarily as a foreign policy weapon.

Putin is the greatest enthusiast of Eurasian integration, often citing dubious numbers on the benefits of the Customs Union. In December 2012, he praised the Customs Union:

Trade with these countries grew by 10 percent (in 2012)—that is not bad at all. Most importantly, ... we have a very good structure of trade with the Customs Union countries. Machinery and equipment make up 20 percent of [Russian exports]. That is very good, because machinery and equipment make up only 2 percent in our [exports to] the rest of the world....

In other words, Belarus and Kazakhstan were forced to raise their import tariffs for cars from 5 to 15 percent and thus bought more cars produced in Russia than before. Similarly, in his talks with Ukrainian President Viktor Yanukovych in March 2013, Putin made the implausible claim that Ukraine would gain 1.5 to 6.5 percent in additional GDP growth (depending on the depth of integration) if it joined the Customs Union.8

UKRAINE'S ECONOMIC VULNERABILITY

Since independence, Ukraine's economy has persistently underperformed other economies in the neighborhood, such as Russia, Poland, and Turkey. After Yanukovych was inaugurated as president, he controlled both government and parliament. Initially, he focused on three goals: a favorable gas deal with Russia (see next section), an economic reform program, and a new International Monetary Fund (IMF) program.

An extensive reform program was quickly adopted in June 2010. On its basis, Ukraine concluded a new Stand-By Arrangement with the IMF in July 2010. It was supposed to

6. Mari Mepompaan, "Shavalov nazval besmyslyryn ob integritnosti Ukrainy i RS i I'3' ["Shavalov Called Further Negotiations about the Integration of Ukraine into the EU and the CU Meaningless"], Vedomosti, August 26, 2013.


last for two and a half years with a total disbursement of $15 billion, and Ukraine received two disbursements in the fall of 2010.

By November 2010, however, economic reforms and the IMF program went off the rails. The IMF posed four major demands to the Ukrainian government: reduce the budget deficit, raise the very low subsidized gas prices for consumers and utilities, deregulate the exchange rate market to render the exchange rate flexible, and carry out a major pension reform (IMF 2011). Eventually, the government carried out only the pension reform. Because of low global interest rates, the government could finance its substantial budget deficit with eurobonds.

Ukraine's economic outlook is precarious. The economy contracted by an annualized 1 to 2.5 percent in the last four quarters. The consolidated budget deficit was 6.3 percent of GDP in 2012 and is likely to be 5 percent of GDP in 2013. The public debt is $69 billion or 38 percent of expected GDP. The main concern is foreign imbalances. The current account deficit was 8.4 percent of GDP in 2012 and it is heading toward 6 percent of GDP in 2013. For no good economic reason, Ukraine maintains a dollar peg at an overvalued exchange rate. After global bond yields started rising in May 2013, the Ukrainian 10-year bond yields rose to 10 percent, precluding most international borrowing. To defend it, the National Bank of Ukraine pursued ever stricter currency regulations and high interest rates, which have killed investment and economic growth but brought inflation to zero.

Ukraine's critical weakness is its international reserves, which are declining quickly, having fallen from a peak of $38 billion two years ago to $21.7 billion in August 2013, covering only 2.7 months of imports (figure 2). Ukraine faces the risk of a run both on bank deposits and on foreign currency exchange in the country. The government's foolhardy economic policy has left the country vulnerable to external shocks, and Russia appears intent on exploiting that vulnerability.
THE EVER-DETERIORATING RUSSIAN-UKRAINIAN RELATIONSHIP

After Yanukovich's election victory in February 2010, both Putin and Yanukovich thought they had a wonderful opportunity to improve relations between the two countries, but they had different aims. Yanukovich wanted a favorable gas price agreement with Russia, while Putin wanted Ukraine to join the Customs Union.

In April 2010, the two countries concluded an agreement in Kharkiv. In exchange for a purported discount on the gas price of 30 percent, or $100 per one thousand cubic meters, Yanukovich extended the Russian lease of Sevastopol, the naval base of Russia's Black Sea fleet by 25 years until 2042. Most Ukrainians thought this was a bad deal, and sure enough the gas price Ukraine paid did not fall. After the Kharkiv agreement, Putin and Yanukovich could not agree on anything and their personal relations deteriorated.

The United States and the European Union should defend Ukraine against Russian economic aggression in the WTO and through vocal and economic support.

Yanukovich has persistently opposed Customs Union membership because it would make him and Ukraine too dependent on the Kremlin. The Customs Union would harm the Ukrainian economy, violate Ukraine's membership in the WTO, make it impossible for Ukraine to conclude any bilateral FTA, and most importantly make Yanukovich's reelection in 2015 impossible. Instead, Yanukovich has opted for the European Association Agreement. He has a steady majority behind him. According to an independent poll in August 2013, 42 percent of the respondents supported Ukraine's integration into the European Union, while 31 percent preferred the Customs Union. While Yanukovich wants to align himself and Ukraine with the European Union, he has a problem with observing European norms.

The European Union has protested persistently against 11 of Yanukovich's malpractices. On dubious legal grounds, he imprisoned several opposition leaders (notably, former Prime Minister Yulia Tymoshenko). He also violated the rules for free and fair elections and imposed his control over courts, law enforcement, and media. Specifically, five people had been elected to parliament, but courts had disqualified them and the European Union demanded new elections be held. The European Union has also objected to the deteriorating business and investment climate, as well as Ukraine introducing protectionist recycling fees for imported cars in violation of WTO rules.

In February 2013, Putin started his offensive for the Customs Union by claiming the inevitability of "the integration processes in the post-Soviet sphere," stating that "[t]ight integration is an objective global process. No rude shouting or screaming can stop it on our territories." Glazyev insisted that Ukraine choose between the European Union and the Customs Union.

As a goodwill gesture to Russia, Yanukovich agreed that Ukraine would become an observer to the Customs Union. On May 29, 2013, the Customs Union countries and Ukraine signed a Memorandum on the Deepening of the Interaction between the Eurasian Economic Commission and Ukraine. This document is as brief as it is empty: "Ukraine declares its intention to observe the principles...of the agreed legal framework of the Customs Union..." but the final article states that "[the present Memorandum is not an international agreement and does not cause rights or obligations regulated by international law]." Ukraine's status as an observer to the Customs Union was explicitly approved by EU Commissioner for Enlargement Stefan Füle, who clarified that the Association Agreement "does not prevent Ukraine from developing a constructive relationship with the Eurasian Customs Union as long as this is based on the respect of WTO rules and does not contradict the DCFTA."

Meanwhile, Ukraine has reduced its vulnerability to Russian sanctions by minimizing its gas purchases from Russia, which it plans to cease completely in a few years, violating the nation's January 2009 agreement with Gazprom. The country is cutting gas consumption and trying to develop multiple alternative sources of gas, including exploiting shale gas and importing gas from Europe. The government has just adopted an energy strategy aimed at making Ukraine self-sufficient in gas by 2030.

10. See, for example, "Soglasovanie s Yavkinyutom noreferrera plnya
Ukrainsaih cerel vTS—svemlik Puiusa" ["Putilov Adviser: An Agreement with the European Union Closes the Door for Ukraine to the Customs Union Forever"], Ukrainskaya pravda, April 27, 2013.
It appears that in June 2013 the Kremlin realized that the European Union really will sign the Association Agreement with Ukraine in November 2013.13 Russia has pulled out all the stops to block Ukraine from signing its Association Agreement and Moldova and Armenia from initialising their DCFTAs in November. Many observers draw parallels with 2008, when Russia tried to block Ukraine and Georgia from concluding Membership Action Plans with the North Atlantic Treaty Organization at its summit in Bucharest in April 2008. Then Russia succeeded in blocking that form of Western integration of these two states, but even so war erupted between Russia and Georgia in August 2008.

In July 2013, Russia started a trade war against Ukraine. The eminent independent weekly, Zerkalo nedeli, published a leaked Russian memorandum, allegedly authored by Glazyev.14 It aims to block Ukraine from signing the EU Association Agreement and force it into the Customs Union. It lists a large number of economic and political subversive measures that Russia could undertake, such as selective trade sanctions against specific businessmen.

In keeping with their plan, on July 16, the Russian government pulled important export quotas from two big Ukrainian steel pipe producers, Interpipe and the Industrial Union of Donbas. On July 24–25, the Russian Customs Committee labeled 40 large Ukrainian companies as "Risky," subjecting them to minute checks.15 On July 27–28, Putin went to Ukraine to celebrate the 1025th anniversary of the christening of Kievan Rus and refused to talk to Yanukovych, even while standing beside him. On July 29, the Russian food inspector banned imports of chocolates from the biggest Ukrainian producer, Roshen.16 On August 14, Russian customs authorities classed all Ukrainian producers as "high risk," which subjected all their deliveries to energetic checks, thus barring most Ukrainian imports from Russia.17 Customs claimed that they eased their sanctions on August 20, but troubles persist. Ukraine has not retaliated with sanctions against Russia.

Russian leaders have also gone on a public offensive against Ukraine joining the DCFTA, making even more shrill statements. As usual, Glazyev has taken the lead:

By signing an association agreement with the European Union, Ukraine would be depriving itself of its sovereign right on all issues of trade policy that we have handed over to the Customs Union. For as, Ukraine would stop being a strategic partner, because it would be disappearing as an international partner, as an entity under international law, because it will have to agree all its actions on trade with the European Union.18

On August 22, Putin warned that if Ukraine concluded the Association Agreement with the European Union, "the Customs Union countries must think about safeguards."19 Russia’s First Deputy Prime Minister Igor Shuvalov told Ukraine’s Prime Minister Mykola Azarov while visiting Moscow that if Ukraine opened its border to the European Union, Russia would be forced to limit its imports from Ukraine to defend its domestic production.20 Trade between Russia and Ukraine is likely to be sharply reduced as has previously happened between Russia and the three Baltic countries, Georgia, and Moldova.

The heavy-handed Russian intimidation had a direct impact on Yanukovych. Rather than giving in to the Russians, he altered his policy line in a pro-European direction in two big speeches, on Ukraine’s Independence Day on August 2421 and at the opening of the parliamentary session on September 3.22 In these speeches, Yanukovych not only reaffirmed his pro-European position but also fully embraced the European Union and laid out his legislative agenda for EU integration: "For Ukraine, association with the European Union must become an important stimulus for forming a modern European state. At the same time, we must preserve and continue deep-

ening our relations and processes of integration with Russia, countries of the Eurasian community....”

In early September, Yanukovych made an agreement with the opposition and currently the parliament is swiftly adopting one law after the other demanded by the European Union. Because of the agreement with the opposition, all laws are adopted by more than two-thirds majority. These laws will bring domestic customs regulation in line with WTO standards and improve the enforcement of court rulings, the electoral law, media access for the opposition, the business environment, and conditions for prisoners. They will also reform the prosecutor’s office, the judiciary, and the police and organize repeat elections in five constituencies where elected opposition deputies were deprived of their mandates. The Constitutional Court and the judicial system are being thoroughly reformed through a constitutional amendment.

One reason for Yanukovych’s quick and forceful pro-European action was that his political advisers thought that he had no chance of being reelected in 2015 unless he signed the EU Association Agreement. An additional reason was that on September 3 Putin had forced the president of Armenia, Serzh Sargsyan, to join the Customs Union and scrap the concluded DCFTA. Moldova has also come under heavy Russian pressure, but so far has resisted it.

The most significant EU condition that remains is the release of Tyomschenko. Yanukovych has an obvious choice. If he frees Tyomschenko from prison, the European Union will in all probability sign the Important Association Agreement in Vilnius in late November, which would offer Ukraine major benefits. Otherwise, it may refuse, which would leave Yanukovych vulnerable to Kremlin harassment.

In a speech to the European Parliament on September 11, EU Commissioner Pöiele came out with strong support for Ukraine, objecting to Russian intimidation: “Any threats from Russia linked to the possible signing of agreements with the European Union are unacceptable.” He referred specifically to “the possible misuse of energy pricing; artificial trade obstacles such as import bans of dubious WTO compatibility and cumbersome customs procedures; military cooperation and security guarantees.”

Pöiele has also refuted the Russian concern about rules-of-origin problems within the context of the CIS FTA: “EU goods exported to Ukraine through the future DCFTA will not qualify for preferential treatment when exported from Ukraine to Russia. Therefore, the signature of a free trade agreement with a third party, meaning us, may not be used as a justification for the tightening of customs procedures.”

As Moscow has emphasized, the ships are down. Putin’s actions suggest that he is intent on forcing Yanukovych down on his knees, but he offers no carrots, only sticks. His prime aim does not appear to be geopolitical but to arouse Russian nationalism. On September 4, he insulted Ukrainians by saying that “we are one people” and “we have a common language.”

All observers agree that this is not an economic but a political conflict. The question is whether it primarily concerns domestic politics or geopolitics. Eminent Ukrainian journalists Yuliya Mostovaya and Tarasya Stilia note that “Yanukovych does not recognize that the main threat to his power and wealth is not Tyomschenko but Russia.” According to Russia’s prominent foreign policy specialist Vyodor Lukyanov, “the customs war was just a rehearsal for Ukraine’s European choice. Moscow has clearly signaled how it will conduct relations with Kiev if the agreement with the EU goes forward.... Obviously, any discussion of Ukraine in Russia is largely geopolitical in nature.” German economists Ricardo Giunci and Robert Kirchner (2013) observe that “Russia has not succeeded to convince Ukraine to join the Customs Union voluntarily. Now it is trying to force it to accede.”

Putin is likely to isolate Russia and force Ukraine into the European community. Hardball is a game that Yanukovych understands very well. Both the European Union and the United States have protested the Russian trade sanctions against Ukraine, and the Ukrainian opposition is supporting their president against Russian pressure.

POLICY RECOMMENDATIONS

The analysis in this Policy Brief leads to numerous policy recommendations for the Ukrainian government, the European Union, the United States, and Russia.

1. The Ukrainian government should
   ■ establish elementary macroeconomic order to reduce its vulnerability. It should
     ■ reduce the budget deficit to a tenable level.

27. Mostovaya and Stilia, “Ruskinskii plan.”
liberalize currency controls to render the exchange rate flexible,
raise the very low gas prices gradually to a market level for domestic production, consumers, and utilities, and
meet IMF demands and become eligible for IMF funding.
comply with EU demands to receive its signature on the Association Agreement:
free Tymoshenko,
reform the judicial system and law enforcement so that rule of law can develop, and
allow more independent media.
seek resolution of conflicts with Russia:
notify the WTO about the Russian trade sanctions and proceed with its conflict resolution, and
take Russia to CIS arbitration in St. Petersburg for violating the CIS FTA.

2. The European Union should
make sure that Ukraine complies with its conditions so that they can sign the Association Agreement in Vilnius in November. The European Union could sign the agreement conditionally, demanding concrete prior actions before it comes into force.
protest Russian trade sanctions against Ukraine that violate WTO rules, and
intensiﬁy top-level political exchanges ahead of the Vilnius summit.

3. The United States has considerable inﬂuence on Ukraine. It should
support both the Ukrainian government and the European Union so that the Association Agreement can be signed in Vilnius in November,
protest Russian trade sanctions against Ukraine that violate WTO rules, and
organize a top-level visit to Kiev before the Vilnius summit.

4. The Kremlin is not acting in Russia’s national interest and is increasing budget costs, distorting the Russian economy, and undermining Russia’s international standing. It should:
obey the rules of the WTO and the CIS FTA and end its trade sanctions against Ukraine,
recognize Ukraine’s right to conclude FTAs and learn about rules of origin, and
reconsider the Customs Union, as it is harmful to Russia’s national interests.

REFERENCES


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EXHIBIT 17
SELLING TO THE EU UNDER THE DCFTA

Explaining the Benefits of the Deep and Comprehensive Free Trade Agreement (DCFTA) between Ukraine and the EU

Prepared by Mark Hellyer and Valeriy Pyatnitsky

2013
DCFTA Explained

What is the DCFTA?
The Ukraine EU DCFTA is a comprehensive, broad and meaningful trade agreement which aims at reducing and eliminating the tariffs applied to each other’s products, liberalising access to services markets, and also at aligning Ukraine’s business related rules and regulations with those of the EU, with a view to ensuring that products can be traded freely between the two countries and Ukrainian companies, products, services and institutions treated equally with those of the EU.

What’s in it for Ukraine?
In the long run, it has been estimated\(^1\) that the Ukraine EU DCFTA will result in an increase in the GDP in Ukraine of 0.5% per annum and overall welfare gain to its citizens of 1.2% per annum\(^2\). In terms of economic indicators, exports to the EU would rise by an estimated 6.3%, imports of EU goods would increase by 5.8% and average wages in Ukraine would rise by 5.5%.

\(^1\) ECORYS (2008): Trade Sustainability Impact Assessment for the FTA between the EU and Ukraine within the Enhanced Agreement

\(^2\) German Advisory Group Institute for Economic Research and Policy Consulting (2011): Quantitative Assessment of Ukraine’s Regional Integration Options
What will the DCFTA cover?

The DCFTA is much more than a tariff liberalisation agreement. The DCFTA consists of 15 Chapters, 14 annexes and 3 protocols. It covers a wide and complex range of topics including:

- Market access (tariffs): the EU and Ukraine will be eliminate the import duties charged on the majority of imports from each other.

- Rules of origin: Ukrainian products entering the EU duty free can use inputs from Ukraine, EU and selected Mediterranean countries to source competitively.

- Technical regulations: Ukraine will align EU regulations and procedures so that certified products will be assumed to comply with EU requirements with no further checks.

- Sanitary & phytosanitary measures: Ukraine will align with EU agriculture and food safety measures so that certified products will be assumed to comply with EU requirements with no further checks.

- Trade in services: Ukrainian business will be able to sell selected services to EU countries on better terms than any other countries and in some cases, be accorded national treatment. The agreement provides for a right of establishment of Ukrainian services providers(subject to a number of reservations) and extends automatically to new services in the future.

- Public procurement: Ukraine will apply EU rules on Public procurement. In return, Ukrainian businesses can compete for government contracts and be treated exactly the same as EU companies.

- Trade facilitation: Co-operation between customs authorities to simplify documentation and procedures at the borders whilst still having adequate measures in place to prevent fraud.
Other issues:

- Trade-related energy issues
- Trade defence and safeguard measures
- Intellectual property
- Competition policy
- Movement of capital
- Transparency
- Trade and sustainable development
What are the Common Misconceptions?

Signing the DCFTA will prevent Ukraine from trading with other countries

Incorrect

It has been said that Ukraine will have to change or cancel all its existing trade agreements to comply with the DCFTA with the EU and this would adversely affect Ukraine’s relations with its traditional trading partners. This is not true. Ukraine’s existing FTA agreements are tariff based and the preferences granted under these agreements will still stand. At the same time, EU products will gain access to Ukraine’s markets with the same or better tariff rates than those of Ukraine’s existing preferential trading partners. In this way, Ukrainian consumers may elect to buy from the EU rather than existing sources. However, since the EU already trades with Ukraine’s traditional trading partners, there is nothing to prevent Ukraine’s trade continue as it aligns with EU rules. As Ukraine adopts more of the EU rules for products, these other trading partners will have to comply with these rules if they wish to continue to sell into the Ukrainian market.
Signing the DCFTA will remove Ukraine’s sovereignty over its trade policy

Incorrect

The DCFTA will only apply to trade between the EU and Ukraine, without creating a customs union and without delegating trade policy functions to supranational bodies. Ukraine will therefore be free to set its own trade regime and policy with all other countries of the World. Therefore, Ukraine’s existing free trade agreements and ongoing trade negotiations with for example EFTA, CIS, Canada and Turkey will still be valid.

Opening up to the EU will cause economic collapse in Ukraine

Incorrect

Some in Ukraine fear that the DCFTA will open Ukraine’s door to a flood of imports from the EU and mean increased competition with Ukrainian products. However this is not the case. Firstly, DCFTA is reciprocal so that there are equal opportunities for Ukrainian business in the EU market as there are for EU companies in the Ukrainian market. In fact since under the DCFTA, the EU will open access to its market more quickly than Ukraine, Ukraine will enjoy better access to the EU than the EU will get in Ukraine in the first few years of the agreement. Secondly, EU products are already widely accepted in the Ukrainian market already with de facto few barriers to entry to the market except for tariffs. Even for tariffs, the barriers are relatively low with average tariffs on imports from all markets of 5% for non-agricultural and 11% for agricultural products. Average applied tariffs on actual imports from the EU are even lower so this means the impact of tariff liberalization for EU products will be very limited.
Changes will happen immediately

Incorrect

It is often believed that Ukraine will have to adopt all the EU rules immediately after conclusion of the negotiations which will lead to huge costs immediately to both the Ukrainian government and Ukrainian business. However, this is not the case. The FTA will be implemented progressively, with Ukrainian business rules changing gradually over a period of time, for some measures, Ukraine has 15 years to adjust. Therefore, Ukrainian business will have time to adjust and adapt its operations before it has to comply with new rules.

The DCFTA will only benefit big business

Incorrect

Although there will be huge opportunities for large producers, aligning Ukraine’s laws with those of the EU will mean that all businesses (large, medium and small) will have to adopt and apply these rules. This means that small and medium sized producers will be ready to trade into the European market at any time, when the opportunity presents itself. Moreover, the agreement will also cover other areas which will provide further opportunities such as access to EU services markets.
The DCFTA is more important to the EU than to Ukraine’s Trade

Incorrect

The EU is Ukraine’s largest trading partner accounting\(^3\) for approximately 30\% of all Ukraine’s exports whereas exports to Ukraine from EU account for only 1\% of overall EU exports.

The DCFTA will only affect exporting businesses

Incorrect

Many people think that the FTA will not affect them as they are not involved, and do not want to be involved in trade with the EU. However, FTA and closer links with the EU will affect all businesses and consumers as Ukraine aligns many EU laws and procedures and then applies these nationally throughout Ukraine.

This will have a number of benefits for all businesses in Ukraine. Firstly, it will establish the clear and transparent business rules and procedures in many areas which are currently complicated. This means that all Ukrainian businesses will have a business environment enabling them to effectively plan and grow their businesses. Also, because these new rules will be transparent and understandable and will be implemented in accordance with the EU standards, there will be less scope for unfair abuses in the system which simply raises the costs for legitimate business.

\(^3\) IMF Direction of World Trade Statistics
What are the benefits?

Improve access to a large market

The European Union is the largest single market in the world with 28 countries and a population 11 times that of Ukraine and over 500 million consumers, each with average income of US$39,000. For Ukraine to easily and effectively sell to this market, product regulations and health standards must be aligned with those of the EU. Following the alignment and implementation of the DCFTA, closer economic integration will provide Ukrainian products with greater access to an EU market.

Lower Import Duties for Ukrainian Goods

One of the biggest impacts for business of the DCFTA will be the immediate elimination of import duties on over 97% over all products exported from Ukraine to the EU, including agricultural products.

Only 3% of exports (certain agricultural products) will not see a total elimination of import duties. Even for these products, a proportion of exports under the tariff quotas will enter duty free. However, this proportion of restricted exports (referred to as tariff rate quotas) is fairly generous and as a result, it has been calculated that as soon as the DCFTA comes into effect, more than 99% of existing Ukrainian exports to the EU will enter duty free.

The following table provides details on tariff savings under the DCFTA for Ukraine's top export products (accounting for almost 60% of all exports to the EU):

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4 Eurostat Database
5 Calculated by Authors based on an analysis of tariffs and TRQs for the top 100 exports in 2012, which account for 60% of total exports.
### Agricultural Exports to EU

<table>
<thead>
<tr>
<th>Products</th>
<th>Current EU Duty paid by Ukraine</th>
<th>Duty/Quota under DCFTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables, fruits and nuts (HS 0713, 0802, 0811)</td>
<td>Up to 20.8% + 8.4€/100kg/net</td>
<td>0%</td>
</tr>
<tr>
<td>Wheat (HS 1001)</td>
<td>Up to 186€</td>
<td>0% for first 950,000 tonnes, increasing to 1 million tonnes over 5 years</td>
</tr>
<tr>
<td>Maize and Corn (HS 1005)</td>
<td>Up to 94€</td>
<td>0% for first 400,000 tonnes, increasing to 650,000 tonnes over 5 years</td>
</tr>
<tr>
<td>Soya beans, seeds and seed oil (HS 1201, 1204, 1205, 1206, 1207, 1507, 1512, 2306)</td>
<td>Up to 9.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Chocolate products (HS 1806)</td>
<td>Up to 43%</td>
<td>0% for first 2,000 tonnes, increasing to 3,000 tonnes over 5 years</td>
</tr>
<tr>
<td>Fruit juices (HS 2009)</td>
<td>Up to 33.6% + 20.66/100kg/net</td>
<td>0% for first 10,000 tonnes, increasing to 20,000 tonnes over 5 years</td>
</tr>
<tr>
<td>Alcohol (HS 2208)</td>
<td>Up to €1/% vol. + 6.4€/hl</td>
<td>0% for first 27,000 tonnes, increasing to 100,000 tonnes over 5 years</td>
</tr>
</tbody>
</table>
## Non-Agricultural Exports to EU

<table>
<thead>
<tr>
<th>Products</th>
<th>Current EU Duty paid by Ukraine</th>
<th>Duty/Quota under DCFTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral products (HS 25-27)</td>
<td>Up to €2.6/t net</td>
<td>0% transition period up to 3 years</td>
</tr>
<tr>
<td>Chemical products (HS 28-38)</td>
<td>Up to 17.3%</td>
<td>0% transition period up to 7 years</td>
</tr>
<tr>
<td>Plastics (HS 3907, 3920, 3923)</td>
<td>Up to 6.5%</td>
<td>0% transition period up to 3 years</td>
</tr>
<tr>
<td>Wood and Wood Products (4401-3, 4407, 4410, 4412, 4415, 4418)</td>
<td>Up to 10%</td>
<td>0% transition period up to 5 years</td>
</tr>
<tr>
<td>Textile and clothing (HS 5601, 6303, 6307)</td>
<td>Up to 12%</td>
<td>0%</td>
</tr>
<tr>
<td>Machinery and electrical appliances (HS 84-85)</td>
<td>Up to 14%</td>
<td>0% transition period up to 7 years</td>
</tr>
<tr>
<td>Transport vehicles and equipment (HS 8606, 8708, 8802, 8901)</td>
<td>Up to 7.7%</td>
<td>0%</td>
</tr>
<tr>
<td>Medical equipment (HS 9018, 9401, 9403)</td>
<td>Up to 5.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Sports equipment (HS 9506)</td>
<td>Up to 4.7%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Access to EU Government Contracts

Harmonisation of public procurement legislation and procedures will provide opportunities for Ukrainian businesses to participate on equal terms in EU public works, supply and services tenders at an EU, national and regional level which total almost US$ 2,500 bn.

**Increased Production**

<table>
<thead>
<tr>
<th></th>
<th>Ukrainian Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, fisheries, forestry</td>
<td>+1.1%</td>
</tr>
<tr>
<td>Cereals/oil seeds</td>
<td>+1.1%</td>
</tr>
<tr>
<td>Meat</td>
<td>+2.2%</td>
</tr>
<tr>
<td>Sugar/sugar confectionary</td>
<td>+4.7%</td>
</tr>
<tr>
<td>Animal/Vegetable Fats</td>
<td>+5.5%</td>
</tr>
<tr>
<td>Fruits and nuts</td>
<td>+3.8%</td>
</tr>
<tr>
<td>Machinery and Electronics</td>
<td>+7.4%</td>
</tr>
<tr>
<td>Motor vehicles/parts</td>
<td>+4.7%</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>+3.3%</td>
</tr>
<tr>
<td>Ferrous Metals</td>
<td>+2.6%</td>
</tr>
<tr>
<td>Metal Products</td>
<td>+5.8%</td>
</tr>
</tbody>
</table>

Studies⁶ have identified a number of sectors in Ukraine with potential for increased production resulting from alignment with EU rules and regulations. These include:

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⁶ CEPS, IFW & ICPS (2006): The Prospects of deep free trade between the EU and Ukraine and; ECORYS (2008): Trade Sustainability Impact Assessment for the FTA between the EU and Ukraine within the Enhanced Agreement
Reduced Prices and Increased Living Standards

Ukraine will also lower its tariffs on imports from the EU. This will lead to increased imports from the EU providing wider choice to consumer and reduced prices. This will also apply to industrial inputs so producers in Ukraine will also have access to a wider range and cheaper inputs and equipment.

Moreover, better health and safety standards will benefit Ukrainian consumers as they will be assured of the quality of the products on sale and reduce the risk of harm to all.

Improved access to third country markets

Improved access to markets of the third countries will be ensured through harmonization of technical regulations and standards with the EU and thus acquisition of internationally acceptable standards through the EU’s Mutual Recognition Agreements, which will also open up a possibility for acceptance of Ukrainian products in the US, Japanese, Canadian and Korean markets for selected products.

Anchor for Reforms

Aligning Ukraine’s business legislation in many areas with that of the EU according to a defined programme set out in the DCFTA will set a timetable for improving the domestic investment climate to a more transparent set of business rules that would make the domestic economic environment more attractive for foreign and domestic investors. This would reduce costs and business risk, increasing certainty of investing in Ukraine.
Next Steps

The benefits from the DCFTA will not however, accrue automatically. The Government of Ukraine, Verkhovna Rada and business also need to work together to implement the agreement, identify areas of opportunities and ensure that business makes the most of the opportunities provided within the DCFTA.

Government of Ukraine Obligations

The DCFTA requires Ukraine to align much of its business legislation and procedures to those of the EU. This will require the Government to review its laws and administrative procedures and change these to comply with those of the EU. The expected benefits of the DCFTA can only be realised through this process. For example, reduced costs and increased certainty through the improvement of business administration.

This means the Government must plan, coordinate and implement a comprehensive programme of reforms across government which will require technical skills and leadership to drive forward compliance with Ukraine's obligations under the DCFTA.

Whilst assistance from the EU, its member states and international organisations will certainly be required, the government needs to show political will in implementing the DCFTA in accordance with its timetables.
Verkhovna Rada

Comprehensive reforms will require introduction and reform of much of Ukraine’s business laws which fall within the competence and responsibility of Ukraine’s Parliament. In fact some of the market opportunities for Ukraine’s business will only come into effect when the required legislation is in place. For example, Ukrainian business will only gain access on equal terms to EU public procurement opportunities when Ukraine itself has adopted EU directives on public procurement.

Therefore, a comprehensive package of reforms will have to passed into Ukraine’s law over the next few years that mirrors that of the EU. Moreover, to maintain the benefits of the DCFTA, Ukraine’s legislation will have to be continually revised to reflect changes in EU directives in the areas covered by the DCFTA.

Therefore, cross party cooperation, coordination and analysis of the commitments, obligations and compliance of existing and new legislation is required by the Verkhovna Rada and its members to ensure that Ukraine’s legislation aligns with the obligations of the DCFTA in order that business and wider society can benefit.

To do this, systems and understanding within the Verkhovna Rada need to be improved to be open to the changes and be efficient in ensuring both compliance and exercising of their duties to the country in protecting national interests in the adoption of such legislation.
Business

International trade agreements and an effective domestic business environment are important ingredients for economic growth and development but alone, do not produce any real benefits. The benefits from trade come from business taking advantage of the opportunities.

Therefore, business has to prepare, plan and make strategies to take advantage of these opportunities. So what can business and business organisations in Ukraine do?

1. Better understand the agreement and all the relevant provisions (breaking down legal text into business speak)

2. Assess the general and industry-specific opportunities within the FTA (including timetable)

3. Research the market requirements to match these opportunities (provision of information) eg EU market for products where tariffs are no longer applied

4. Assess changes by sector required over time to trade with the EU or domestically when Ukraine’s legislation is aligned e.g. compliance with EU standards

5. Plan strategically to take advantage as appropriate in the short, medium and long term

6. Investments as necessary in firms to meet the needs of domestic and EU market

7. Continued monitoring and promotion of opportunities eg distribution of EU public procurement notices to interested firms

For Further Information

Business can contact EU Cooperation Department of the Ministry of Economic Development and Trade of Ukraine

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e-mail: ukraine-eu@me.gov.ua
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