SCHNITZER STEEL INDUSTRIES INC
Form 10-K
October 24, 2018
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K
(Mark One)
x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended August 31, 2018
or
o 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 0-22496
SCHNITZER STEEL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

OREGON	93-0341923
(State of Incorporation)	(I.R.S. Employer Identification No.)

299 SW Clay Street, Suite 350 Portland, Oregon	97201
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (503) 224-9900
Securities registered pursuant to Section 12(b) of the Act:

Class A Common Stock, $1.00 par value	The NASDAQ Global Select Market
(Title of Each Class)	(Name of each Exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act:
None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes x No o
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 o No x
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 x No o
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) 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. x
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer x Accelerated filer o Non-accelerated filer o
Smaller reporting company o Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

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

The aggregate market value of the registrant's outstanding common stock held by non-affiliates on February 28, 2018 was $892,383,882.

The registrant had 26,502,406 shares of Class A common stock, par value of $1.00 per share, and 200,000 shares of Class B common stock, par value of $1.00 per share, outstanding as of October 22, 2018.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the January 2019 Annual Meeting of Shareholders are incorporated by reference into Part III of this report.

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FORWARD-LOOKING STATEMENTS

Statements and information included in this Annual Report on Form 10-K by Schnitzer Steel Industries, Inc. (the "Company") that are not purely historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934 and are made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Except as noted herein or as the context may otherwise require, all references to "we," "our," "us," and "SSI" refer to the Company and its consolidated subsidiaries.

Forward-looking statements in this Annual Report on Form 10-K include statements regarding future events or our expectations, intentions, beliefs and strategies regarding the future, which may include statements regarding trends, cyclicality and changes in the markets we sell into; the Company's outlook, growth initiatives or expected results or objectives, including pricing, margins, sales volumes and profitability; strategic direction or goals; targets; changes to manufacturing and production processes; the cost of and the status of any agreements or actions related to our compliance with environmental and other laws; expected tax rates, deductions and credits and the impact of federal tax reform; the impact of tariffs, quotas and other trade actions; the realization of deferred tax assets; planned capital expenditures; liquidity positions; ability to generate cash from continuing operations; the potential impact of adopting new accounting pronouncements; obligations under our retirement plans; benefits, savings or additional costs from business realignment, cost containment and productivity improvement programs; and the adequacy of accruals.

Forward-looking statements by their nature address matters that are, to different degrees, uncertain, and often contain words such as "outlook," "target," "aim," "believes," "expects," "anticipates," "intends," "assumes," "estimates," "evaluates," "should," "could," "opinions," "forecasts," "projects," "plans," "future," "forward," "potential," "probable," and similar expres

However, the absence of these words or similar expressions does not mean that a statement is not forward-looking.

We may make other forward-looking statements from time to time, including in reports filed with the Securities and Exchange Commission, press releases, presentations and on public conference calls. All forward-looking statements we make are based on information available to us at the time the statements are made, and we assume no obligation to update any forward-looking statements, except as may be required by law. Our business is subject to the effects of changes in domestic and global economic conditions and a number of other risks and uncertainties that could cause actual results to differ materially from those included in, or implied by, such forward-looking statements. Some of these risks and uncertainties are discussed in "Item 1A. Risk Factors" of Part I of this Form 10-K. Examples of these risks include: potential environmental cleanup costs related to the Portland Harbor Superfund site or other locations; the cyclicality and impact of general economic conditions; changing conditions in global markets including the impact of tariffs, quotas and other trade actions; volatile supply and demand conditions affecting prices and volumes in the markets for both our products and raw materials we purchase; imbalances in supply and demand conditions in the global steel industry; the impact of goodwill impairment charges; the impact of long-lived asset and cost and equity method investment impairment charges; inability to sustain the benefits from productivity and restructuring initiatives; difficulties associated with acquisitions and integration of acquired businesses; customer fulfillment of their contractual obligations; increases in the relative value of the U.S. dollar; the impact of foreign currency fluctuations; potential limitations on our ability to access capital resources and existing credit facilities; restrictions on our business and financial covenants under our bank credit agreement; the impact of consolidation in the steel industry; inability to realize expected benefits from investments in technology; freight rates and the availability of transportation; the impact of equipment upgrades, equipment failures and facility damage on production; product liability claims; the impact of legal proceedings and legal compliance; the adverse impact of climate change; the impact of not realizing deferred tax assets; the impact of tax increases and changes in tax rules; the impact of one or more cybersecurity incidents; environmental compliance costs and potential environmental liabilities; inability to obtain or renew business licenses and permits or renew facility leases; compliance with climate change and greenhouse gas emission laws and regulations; reliance on employees subject to collective bargaining agreements; and the impact of the underfunded status of multiemployer plans in which we participate.

PART I

ITEM 1. BUSINESS

General

Founded in 1906, Schnitzer Steel Industries, Inc. ("SSI"), an Oregon corporation, is one of North America's largest recyclers of ferrous and nonferrous scrap metal, including end-of-life vehicles, and a manufacturer of finished steel products. Worldwide demand for recycled scrap metal is driven primarily by steel production levels, as recycled scrap metal is the primary feedstock for steel mill production using electric arc furnace ("EAF") technology and one of the raw materials utilized for steel manufacturing using blast furnace technology. Steel mills around the world, including those in the North American domestic market in which our own steel mill operates, are the primary end markets for our recycled scrap metal. Our steel mill in Oregon produces finished steel products using internally sourced recycled scrap metal as the primary raw material and sells to industrial customers primarily in North America.

SSI acquires and recycles autobodies, rail cars, home appliances, industrial machinery, manufacturing scrap and construction and demolition scrap through its 96 auto and metals recycling facilities. We source material through well-developed, regional supply chains that collect scrap from large and small businesses and individuals. Our largest source of autobodies is our own network of 52 retail self-service auto parts stores, which operate under the commercial brand-name Pick-n-Pull. The majority of our auto parts stores are located in close geographic proximity to our regional metals recycling operations which have large-scale shredders and deep water port access. The level of vertical integration of our auto parts stores and metals recycling operations provides for efficient processing of salvaged automobiles into recycled metal products for new metal production in steel mills and smelters globally or for further processing by other consumers.

We process recycled metals ranging from iron and steel to aluminum, copper, lead, stainless steel and zinc for use in the manufacture of new or refined products. With scrap recycling facilities located in 23 States, Puerto Rico and Western Canada, we are well-positioned to efficiently acquire scrap metal throughout North America and deliver recycled metal products to customers around the world from our seven deep water ports, and also to our steel mill in Oregon. In fiscal 2018, we sold our products to customers located in 26 countries, including the United States ("U.S.") and Canada, and we sold to external customers or delivered to our steel mill an aggregate of 4.3 million tons of ferrous recycled scrap metal and sold 636 million pounds of nonferrous recycled scrap metal to external customers.

Our internal organizational and reporting structure includes two operating and reportable segments: the Auto and Metals Recycling ("AMR") business and the Cascade Steel and Scrap ("CSS") business.

AMR is our largest segment, representing 80% of our total revenues from sales to external customers in fiscal 2018. AMR generated 93% of its revenues in fiscal 2018 from sales of ferrous and nonferrous scrap metal, with the remainder generated primarily from retail auto parts and other sales. AMR's revenues from sales of recycled scrap metal, disaggregated by major product category, were 73% ferrous scrap metal and 27% nonferrous scrap metal in fiscal 2018. Our metals recycling operations reported within CSS also generate revenue from external sales of ferrous and nonferrous scrap metal.

CSS produces finished steel products such as rebar, wire rod, coiled rebar, merchant bar and other specialty products using ferrous recycled scrap metal primarily sourced internally from its metals recycling operations and other raw materials. CSS's finished steel products are primarily used in nonresidential and infrastructure construction in North America. In fiscal 2018, CSS sold 519 thousand short tons of finished steel products.

See Note 16 – Segment Information in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report for a discussion of the primary activities of each reportable segment, total assets by reportable segment, operating results from continuing operations by reportable segment, revenues from external customers and concentration of sales to foreign countries.

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Tabular presentation of our active recycling and steel facilities by geographic region and segment is as follows:

	Auto Parts Stores	Metals Recycling Facilities[1]	Total Recycling Facilities	Large-Scale Shredders[2]	Deep Water Ports	Steel Facilities[3]	Segment
Northwest	7	3	10	1	1	—	AMR
WA, OR, MT	—	5	5	1	1	1	CSS
Southwest and Hawaii	22	7	29	2	2	—	AMR
CA, NV, UT, HI	—	—	—	—	—	1	CSS
Midwest and South IL, IN, OH, MO, KS, TX, AR	14	—	14	—	—	—	AMR
Northeast MA, ME, NH, RI	2	9	11	1	2	—	AMR
Southeast and Puerto Rico GA, AL, TN, FL, VA, PR	3	16	19	1	1	—	AMR
Western Canada BC, AB	4	4	8	—	—	—	AMR
Total	52	44	96	6	7	2	

(1) Excludes joint venture facilities.

(2) All large-scale shredding operations employ advanced nonferrous extraction and separation equipment.

(3) Includes one steel mini-mill in Oregon and one distribution center in California.

In fiscal 2017, we substantially completed a multi-year program of cost reduction, productivity improvement, and restructuring initiatives to more closely align our business with market conditions. By the end of fiscal 2017, we had achieved approximately $160 million in combined annual benefits to operating performance since the initial phase of initiatives was announced at the end of fiscal 2012. See Management’s Discussion and Analysis of Financial Condition and Results of Operations in Part II, Item 7 of this report for further discussion of restructuring initiatives, benefits and costs.

AMR

Business

AMR sells ferrous and nonferrous recycled scrap metal in both foreign and domestic markets. AMR acquires, processes and recycles autobodies, rail cars, home appliances, industrial machinery, manufacturing scrap and construction and demolition scrap through its 91 auto and metals recycling facilities. Our largest source of autobodies is our own network of retail auto parts stores, which operate under the commercial brand-name Pick-n-Pull. AMR procures salvaged vehicles and sells serviceable used auto parts from these vehicles through its 52 self-service auto parts stores located across the U.S. and Western Canada. Upon acquiring a salvaged vehicle, we remove catalytic converters, aluminum wheels and batteries for separate processing and sale prior to placing the vehicle in our retail lot. After retail customers have removed desired parts from a vehicle, we may remove remaining major component parts containing ferrous and nonferrous materials, which are primarily sold to wholesalers. The remaining autobodies are crushed and shipped to our metals recycling facilities to be shredded, or sold to third parties where geographically more economical.

To prepare scrap metal, we crush, sort and bale the material by product grade for easier handling and sale. AMR processes mixed and large pieces of scrap metal into smaller pieces by crushing, torching, shearing, shredding and

sorting, resulting in scrap metal pieces of a size, density and metal content required by customers to meet their production needs. The manufacturing process includes physical separation of ferrous and nonferrous materials through automated and manual processes into various sub-classifications, each of which has a value and metal content of importance to different customers for their end products. One of the most efficient ways to process and sort recycled scrap metal is through the use of shredding and separation systems.

AMR operates six deep water port locations, five of which are equipped with large-scale shredders. AMR's largest port facilities in Everett, Massachusetts; Oakland, California; and Tacoma, Washington each operate a mega-shredder with 7,000 to 9,000 horsepower. Our port facilities in Salinas, Puerto Rico and Kapolei, Hawaii each operate a shredder with 1,500 to 6,000 horsepower. Our port facility in Providence, Rhode Island does not operate a shredder, but exports ferrous recycled scrap metal acquired in the regional market. Our shredders are designed to provide a denser product and, in conjunction with advanced separation equipment, a more refined form of ferrous scrap metal which is used efficiently by steel mills in the production of new steel. The shredding process reduces autobodies and other scrap metal into fist-size pieces of shredded recycled scrap metal. The shredded material is then carried by conveyor under magnetized drums that attract the ferrous scrap metal and separate it from the nonferrous scrap metal and other residue, resulting in a consistent and high-quality shredded ferrous product. The nonferrous scrap metal and residue then pass through a series of additional mechanical sorting systems designed to separate the nonferrous metal from the residue.

The remaining nonferrous metal is then further sorted by product and size grade before being sold. AMR invests in nonferrous metal extraction and separation technologies in order to maximize the recoverability of valuable nonferrous metal and to meet the metal purity requirements of customers. AMR also purchases nonferrous metal directly from industrial vendors and other suppliers and prepares this metal for shipment to customers by ship, rail or truck.

In addition to the sale of recycled metal products processed at our facilities, AMR also brokers the sale of ferrous and nonferrous scrap metal generated by industrial entities and demolition projects to customers in the domestic market.

Products

AMR's primary products consist of recycled ferrous and nonferrous scrap metal. Ferrous recycled scrap metal is a key feedstock used in the production of finished steel and is largely categorized into heavy melting steel ("HMS"), plate and structural ("bonus") and shredded scrap ("shred"), although there are various grades of each category depending on metal content and the size and consistency of individual pieces. These attributes affect the product's relative value. Our nonferrous products include aluminum, copper, stainless steel, nickel, brass, titanium, lead, high temperature alloys and joint products such as zorba (primarily mixed aluminum nonferrous material) and zurik (predominantly stainless steel).

Prior to the shredding process, AMR sells serviceable used auto parts from salvaged vehicles through its self-service auto parts stores located across the U.S. and Western Canada. Each retail self-service store offers an extensive selection of vehicles (including domestic and foreign cars, vans and light trucks) from which customers can remove parts. We employ proprietary information technology systems to centrally manage and operate the geographically diverse network of auto parts stores, and we regularly rotate the inventory to provide customers with greater access to parts. In general, we believe the list prices of auto parts at our self-service stores are significantly lower than those offered at full-service auto dismantlers, retail car parts stores and car dealerships.

Customers

AMR sells its ferrous and nonferrous recycled metal products globally to steel mills, foundries, smelters, and recycled metal processors. AMR's self-service auto parts stores also serve retail customers seeking to obtain serviceable used auto parts at a competitive price. Retail customers remove the parts without the assistance of store employees and pay a listed price for the part. AMR also supplies a small portion of its scrap metal to CSS's shredding operation in Portland, Oregon, the substantial majority of which is processed and delivered to CSS's steel mill.

Presented below are AMR revenues by continent for the last three fiscal years ended August 31 (dollars in thousands):

	2018	% of Revenue	2017	% of Revenue	2016	% of Revenue
North America[1]	$736,494	39 %	$571,620	42 %	$429,997	41 %
Asia	834,038	44 %	593,332	44 %	433,415	41 %
Europe[2]	298,725	16 %	167,576	12 %	174,038	17 %
South America	25,277	1 %	19,158	1 %	23,142	2 %
Africa	14,432	1 %	11,932	1 %	—	— %
Intercompany sales to CSS	(24,892)	(1)%	(15,647)	(1)%	(12,081)	(1)%
Total (net of intercompany)	$1,884,074		$1,347,971		$1,048,511	

(1) Includes intercompany sales to CSS.

(2) Includes sales to customers in Turkey.

In fiscal 2018, the five countries from which AMR derived its largest revenues from external customers were the U.S., Turkey, China, Bangladesh, and South Korea, which collectively accounted for 75% of total AMR external revenues. In fiscal 2017 and 2016, the five countries from which AMR derived its largest revenues from external customers accounted for 81% and 85%, respectively, of total AMR external revenues. We attribute revenues from external customers to individual countries based on the country in which the customer takes delivery of the goods.

AMR's five largest external ferrous scrap metal customers accounted for 33% of external recycled ferrous metal revenues in fiscal 2018, compared to 31% and 37% in fiscal 2017 and 2016, respectively. AMR had no external

customers that accounted for 10% or more of consolidated revenues in fiscal 2018, 2017 and 2016.
Total sales volumes of ferrous scrap metal vary from year-to-year due to the level of demand, availability of supply, economic growth, infrastructure spending, relative currency values, availability of credit and other factors. Ferrous scrap metal sales are

primarily denominated in U.S. dollars, and nearly all of our large shipments of ferrous scrap metal to foreign customers have historically been supported by letters of credit.

The table below sets forth, on a revenue and volume basis, the amount of recycled ferrous scrap metal sold by AMR to foreign and domestic customers, including sales to CSS, during the last three fiscal years ended August 31:

Ferrous Recycled Metal	2018		2017		2016	
	Revenues[1]	Volume[2]	Revenues[1]	Volume[2]	Revenues[1]	Volume[2]
Foreign	$959,001	2,623	$608,339	2,197	$452,242	2,040
Domestic	329,286	1,085	234,883	948	173,275	859
Total	$1,288,287	3,708	$843,222	3,145	$625,517	2,899

(1) Revenues stated in thousands of dollars.

(2) Volume stated in thousands of long tons (one long ton = 2,240 pounds).

AMR sells nonferrous recycled scrap metal to specialty steelmakers, foundries, aluminum sheet and ingot manufacturers, copper refineries and smelters, brass and bronze ingot manufacturers, wholesalers, wire and cable producers, and other recycled metal processors globally. AMR invests in advanced separation technologies in order to extract higher nonferrous yields from the shredding process and to enhance the separation of nonferrous metals in order to maximize the grade and value of the individual metals, making them desirable to a wide range of customers.

The table below sets forth, on a revenue and volume basis, the amount of recycled nonferrous scrap metal sold by AMR to foreign and domestic customers during the last three fiscal years ended August 31:

Nonferrous Recycled Metal	2018		2017		2016	
	Revenues[1]	Volume[2]	Revenues[1]	Volume[2]	Revenues[1]	Volume[2]
Foreign	$264,628	357,389	$216,362	319,629	$186,989	290,430
Domestic	217,149	214,316	178,615	221,162	143,362	183,307
Total	$481,777	571,705	$394,977	540,791	$330,351	473,737

(1) Revenues stated in thousands of dollars.

(2) Volume stated in thousands of pounds and volume information excludes platinum-group metals (“PGMs”) in catalytic converters.

AMR’s retail auto parts sales account for less than 10% of SSI’s consolidated revenues in all of the periods presented.

Pricing

Domestic and foreign prices for ferrous and nonferrous recycled scrap metal are generally based on prevailing market rates, which differ by region, and are subject to market cycles that are influenced by worldwide demand from steel and other metal producers as well as by the availability of materials that can be processed into saleable scrap metal, among other factors. Trade actions, including tariffs, quotas and restrictions or bans on access to certain markets, can also impact pricing for the affected products. Ferrous scrap metal export sales contracts generally provide for shipment within 30 to 60 days after the price is agreed to which, in most cases, includes freight. Nonferrous scrap metal sales contracts generally provide for shipment within 30 days after the price is agreed to, which also typically includes freight.

AMR responds to changes in selling prices for processed metal by seeking to adjust purchase prices for unprocessed scrap metal in order to manage the impact on its operating income. The spread between selling prices and the cost of purchased scrap metal (metal spread) is subject to a number of factors, including differences in the market conditions between the domestic regions where scrap metal is acquired and the areas in the world to which the processed metals are sold, market volatility from the time the selling price is agreed upon with the customer until the time the scrap metal is purchased, and changes in transportation costs. We believe AMR generally benefits from sustained periods of rising recycled metal selling prices, which allow it to better maintain or increase both operating income and scrap metal flow into its facilities. When recycled scrap metal selling prices decline for a sustained period, AMR’s operating margins typically compress.

The sales prices for auto parts from salvaged vehicles are deeply discounted from prevailing national new and refurbished sales prices offered at full-service auto dismantlers, retail auto parts stores and car dealerships. Our stores provide a list price, available at each location and online. Prices for autobodies sold to third parties and for major component parts, such as engines, transmissions and alternators sold to wholesalers, are based on prevailing scrap market rates which differ by region and are subject to market cycles. Prices for catalytic converters sold to third-party processors are based on prevailing market rates for the extracted metals.

By consolidating shipments of autobodies and component parts, we are able to optimize prices by focusing on larger wholesale customers that pay a premium for volume and consistency of shipments.

Markets

Global production of finished steel products drives demand for materials used in the steel-making process, including ferrous recycled scrap metal which is the primary feedstock used in EAFs and can also be used in blast furnaces to manufacture steel. AMR exports ferrous recycled scrap metal primarily to countries in Asia, the Mediterranean region and North, Central and South America. Ferrous exports made up approximately 70% of AMR's total ferrous sales volume in fiscal 2018, 2017 and 2016. In fiscal 2018, the combination of improved U.S. and global economic growth, a continued reduction in the level of Chinese steel exports, and further development of the steel industries using EAFs in other export markets contributed to improved demand and prices for ferrous recycled scrap metal. We believe long-term demand for recycled metals will continue to be driven by factors including global economic growth and an increased focus on environmental policies promoting natural resource conservation, lower greenhouse gas emissions and lower energy costs. We believe the significant environmental benefits and production efficiencies associated with EAF steel-making, which uses scrap metal as a primary raw material, compared to blast furnace steel-making, which primarily uses iron ore mined from natural resources, will positively contribute to worldwide long-term demand for ferrous recycled scrap metal.

Nonferrous exports made up 63%, 59% and 61% of AMR's total nonferrous sales volumes in fiscal 2018, 2017 and 2016, respectively. While China has historically been the primary destination for our nonferrous exports, AMR sold a higher proportion of its combined nonferrous exports to other countries in Asia and to Europe in fiscal 2018 primarily in response to new regulations, increased inspection requirements and tariffs on U.S. scrap imports put in place by China during the year.

Distribution

AMR delivers recycled ferrous and nonferrous scrap metal to foreign customers by ship and to domestic customers by barge, rail and road transportation networks. Cost efficiencies are achieved by operating deep water terminal facilities in Everett, Massachusetts; Oakland, California; Tacoma, Washington; and Providence, Rhode Island, all of which are owned, except for the Providence, Rhode Island facility which is operated under a long-term lease. We also have access to deep water terminal facilities at Kapolei, Hawaii and Salinas, Puerto Rico through public docks. The use of deep water terminals enables us to load ferrous material in large vessels capable of holding up to 50,000 tons for trans-oceanic shipments. We believe the use of our owned and leased terminal facilities is advantageous because it allows us to more effectively manage loading costs and minimize the berthing delays often experienced by users of unaffiliated terminals. From time to time, AMR may enter into contracts of affreightment, which guarantee the availability of ocean going vessels, in order to manage the risks associated with ship availability and freight costs. Our nonferrous products are shipped in containers, which hold 20 to 30 tons, from container ports and rail ramps located in close proximity to our recycling facilities. Containerized shipments are exported by marine vessels to customers globally and domestic shipments are typically shipped to customers by rail or by truck.

AMR sells used auto parts from its self-service retail stores. Upon acquiring a salvaged vehicle and after retail customers have removed desired parts, we extract and consolidate certain valuable ferrous and nonferrous components from autobodies for shipment by truck primarily to wholesale customers. The salvaged autobodies are crushed and shipped by truck to our metals recycling facilities where geographically feasible, or to third-party recyclers, for shredding.

Sources of Unprocessed Metal

The most common forms of purchased unprocessed metal are obsolete machinery and equipment, such as automobiles, railroad cars, railroad tracks, home appliances and other consumer goods, waste metal from manufacturing operations and demolition metal from buildings and other infrastructure. Unprocessed metal is acquired from a diverse base of suppliers who unload at our facilities, from drop boxes at suppliers' industrial sites, and through negotiated purchases from other large suppliers, including railroads, manufacturers, automobile salvage facilities, metal dealers, various government entities and individuals. We typically seek to locate our retail auto parts stores in major population centers with convenient road access. Our auto parts store network spans 15 states in the

U.S. and two provinces in Western Canada, with a majority of the stores concentrated in regions where our large shredders are located. Through our network of auto parts stores, we seek to obtain salvaged vehicles from five primary sources: private parties, tow companies, charities, auto auctions and municipal and other contracts. AMR has a program to purchase vehicles from private parties called “Cash for Junk Cars” which is advertised in local markets. Private parties either call a toll-free number and receive a quote for their vehicle or obtain an instant online quote. The private party can either deliver the vehicle to one of our retail locations or arrange for the vehicle to be picked up. AMR also employs car buyers who travel to vendors and bid on vehicles. Further, AMR enters into limited duration contracts with public entities and other third parties for vehicle dismantling and disposal services, which provide a source of low-cost salvage vehicles. The expiration of such contracts may lead us to seek alternative sources of vehicles, potentially at a higher cost.

The majority of AMR's scrap metal collection and processing facilities receive unprocessed metal via major railroad routes, waterways or highways. Metals recycling facilities situated near industrial manufacturing and major transportation routes have the competitive advantage of reduced freight costs because of the significant cost of freight relative to the cost of metal. The locations of AMR's West Coast facilities provide access to sources of unprocessed metal in the Northern California region, northward to Western Canada and Alaska, and to the East, including Idaho, Montana, Utah, Colorado and Nevada. The locations of the East Coast facilities provide access to sources of unprocessed metal in New York, Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Eastern Canada and, from time to time, the Midwest. In the Southeastern U.S., approximately half of AMR's ferrous and nonferrous unprocessed metal volume is purchased from industrial companies, including auto manufacturers, with the remaining volume being purchased from smaller dealers and individuals. These industrial companies provide AMR with metals that are by-products of their manufacturing processes.

The supply of scrap metal from these various sources can fluctuate with the level of economic activity in the U.S. and can be sensitive to variability in scrap metal prices, particularly in the short term. The supply of scrap metal can also fluctuate, to a lesser degree, due to seasonal factors, such as severe weather conditions, which can inhibit scrap metal collections at our facilities and production levels in our yards. Severe weather conditions can also adversely impact the timing of shipments of our products, the level of manufacturing activity utilizing our products, and retail admissions at our auto parts stores.

Backlog

As of September 30, 2018, AMR had a backlog of orders to sell $86 million of export ferrous metal compared to $96 million at the same time in the prior year primarily due to the timing of sales. Additionally, as of September 30, 2018, AMR had a backlog of orders to sell $34 million of export nonferrous metal compared to $34 million in the prior year. We expect to fill the entirety of the backlog of orders for export ferrous and nonferrous metal during fiscal 2019.

Competition

AMR competes in the U.S. and in Western Canada for the purchase of scrap metal with large, well-financed recyclers of scrap metal, steel mills that own scrap yards, and with smaller metals facilities and dealers. AMR's auto stores compete for the purchase of end-of-life vehicles with other auto dismantlers, used car dealers, auto auctions and metals recyclers. In general, the competitive factors impacting the purchase of scrap metal are the price offered by the purchaser and the proximity of the purchaser to the source of scrap metal and end-of-life vehicles. AMR also competes with brokers that buy scrap metal on behalf of domestic and foreign steel mills.

AMR competes globally for the sale of processed recycled metal to finished steel and other metal product producers. The predominant competitive factors that impact recycled metal sales are price (including duties and shipping cost), reliability of service, product quality, the relative value of the U.S. dollar and the availability and price of raw material alternatives, including scrap metal substitutes such as pig iron and direct-reduced iron (both derived from iron ore), and semi-finished products, such as steel billets. Our ability to compete in certain export markets may be impacted by trade actions such as tariffs and import restrictions. Such restrictions may require us to perform additional processing of certain nonferrous recycled scrap metal products, as well as engage in increased inspection and certification activities, in order to continue selling into the affected markets.

Commencing in fiscal 2012 and spanning through the first half of fiscal 2016, low-priced steel billets using iron ore as their primary raw material contributed to lower scrap metal demand and prices. These challenging market conditions led to an industry trend of reductions in capacity through idling of equipment and curtailment of operations, including by large and well-capitalized companies, while a number of smaller competitors consolidated or exited the scrap market due to the protracted cyclical downturn. In fiscal 2015, we idled a large-scale shredder in Johnston, Rhode Island and another in Surrey, British Columbia, and in fiscal 2016, we idled a small shredder in Concord, New Hampshire to more closely align our business with the prevalent market conditions. In fiscal 2018, the previously idled shredder in Surrey, British Columbia was dismantled and sold. Market conditions improved in fiscal 2017 and further in fiscal 2018 mainly due to higher demand from steel manufacturers in the domestic and export markets resulting in higher selling prices for raw materials used in steel production and increased supply flows of scrap metal, including end-of-life vehicles. Higher average selling prices and supply volumes, in combination with increased sales

diversification and the continuing focus on our operating efficiency from our multi-year cost savings and productivity initiatives, led to significant improvement in our operating performance over the last three years.

AMR also competes for the sale of used auto parts to retail customers with other self-service and full-service auto dismantlers. The auto parts industry is characterized by diverse and fragmented competition and comprises a large number of aftermarket and used auto parts suppliers of all sizes, ranging from large, multinational corporations which serve both original equipment manufacturers and the aftermarket on a worldwide basis to small, local entities which have more limited supply. The main competitive factors impacting the retail sale of auto parts are price, availability and visibility of product, quality and convenience of the retail stores to customers.

AMR's ability to process substantial volumes of scrap metal products, advanced processing equipment, number and geographic dispersion of locations, access to a variety of different modes of transportation, and the operating synergies of its integrated platform provide its business with the ability to compete successfully in varying market conditions.

CSS

Business

CSS operates a steel mini-mill in McMinnville, Oregon that produces a range of finished steel long products such as reinforcing bar (rebar) and wire rod. The primary feedstock for the manufacture of its products is ferrous recycled scrap metal. CSS's steel mill obtains substantially all of its scrap metal raw material requirements from its integrated metals recycling and joint venture operations. CSS's metals recycling operations comprise a collection, shredding and export operation in Portland, Oregon, four feeder yard operations located in Oregon and Southern Washington, and one metals recycling joint venture ownership interest. Additionally, CSS purchases small volumes of ferrous scrap metal from AMR and sells ferrous and nonferrous recycled scrap metal into the export market. CSS's revenues from external sales of recycled scrap metal account for less than 10% of SSI's consolidated revenues in all of the periods presented.

Manufacturing

CSS's melt shop includes an EAF, a ladle refining furnace with enhanced steel chemistry refining capabilities, and a five-strand continuous billet caster, permitting the mill to produce special alloy grades of steel not currently produced by other mills on the West Coast of the U.S. The melt shop produced 561 thousand, 489 thousand and 499 thousand short tons of steel in the form of billets during fiscal 2018, 2017 and 2016, respectively. The substantial majority of these billets are used by CSS in its rolling mill to produce finished steel products.

Through the end of fiscal 2016, CSS operated two computerized rolling mills. In the first quarter of fiscal 2017, we implemented a plan to shut down and decommission the older rolling mill, which was entered into service over 40 years ago, and which in recent years had been producing only a small proportion of CSS's finished steel products. This action, in conjunction with an initiative to enhance the operating efficiency of the newer and more technologically advanced rolling mill, is expected to improve product quality, while expanding its overall effective annual production capacity. The newer rolling mill currently has an effective annual production capacity of 580 thousand tons of finished steel products.

Billets produced in CSS's melt shop are reheated in a natural gas-fueled furnace and are then hot-rolled through the rolling mill to produce finished products. CSS continues to monitor the market for new products and, through discussions with customers, to identify additional opportunities to expand its product lines and sales.

Our steel mill has an operating permit issued under Title V of the Clean Air Act Amendments of 1990, which governs air quality standards. The permit is based upon an annual production capacity of 950 thousand tons. The permit was first issued in 1998 and has since been renewed through February 1, 2018. The permit renewal process occurs every five years, and the renewal process is underway; however, the existing permit is extended by administrative rule until the current renewal process is finalized.

Products

CSS produces semi-finished goods (billets) and finished goods, consisting of rebar, coiled rebar, wire rod, merchant bar and other specialty products. Semi-finished goods are predominantly used for CSS's finished products, but also have been produced for sale to other steel mills. Rebar is produced in either straight length steel bars or coils and used to increase the strength of poured concrete. Coiled rebar is preferred by some manufacturers because it reduces the waste generated by cutting individual lengths to meet customer specifications and, therefore, improves yield. Wire rod is steel rod, delivered in coiled form, used by manufacturers to produce a variety of products such as chain link fencing, nails, wire, stucco netting, and pre-stressed concrete strand. Merchant bar consists of rounds and square steel bars used by manufacturers to produce a wide variety of products, including bolts, threaded bars, and dowel bars. CSS is also certified to produce high-quality rebar to support nuclear power plant construction and has a license to produce certain patented high-strength specialty steels.

The table below sets forth, on a revenue and volume basis, the sales of finished steel products during the last three fiscal years ended August 31:

	2018		2017		2016	
	Revenues[1]	Volume[2]	Revenues[1]	Volume[2]	Revenues[1]	Volume[2]
Finished steel products	$363,849	519,162	$280,206	495,516	$269,355	488,212

(1) Revenues stated in thousands of dollars.
(2) Volume stated in short tons (one short ton = 2,000 pounds).

The metals recycling operations within CSS produce substantially the same recycled scrap metal products as those produced by the metals recycling operations within AMR and are exposed to similar market and competitive forces.

Customers

CSS's finished steel customers are primarily steel service centers, construction industry subcontractors, steel fabricators, wire drawers and major farm and wood products suppliers. During fiscal 2018, CSS sold its finished steel products to customers located primarily in the Western U.S. and Western Canada. Customers in California accounted for 48%, 53%, and 48% of CSS's steel revenues in fiscal 2018, 2017 and 2016, respectively. CSS's ten largest steel customers accounted for 46%, 51% and 45% of its steel revenues during fiscal 2018, 2017 and 2016, respectively. No CSS steel customer accounted for 10% or more of consolidated revenues in fiscal 2018, 2017 and 2016.

The metals recycling operations within CSS also sell ferrous and nonferrous recycled metal products to external customers comprising primarily steel mills, foundries, smelters and recycled metal processors in Asia.

Pricing

CSS's finished steel product prices differ by product size and grade. Selling prices are influenced by the price of raw materials, including the cost of recycled ferrous scrap metal and required consumables including graphite electrodes, as well as regional demand in the West Coast market. Selling prices for our finished steel products may be affected by competition from steel imports.

Distribution

CSS sells finished steel products directly from its mini-mill in McMinnville, Oregon and its owned distribution center in City of Industry, California (Los Angeles area). Finished steel products are shipped from the mini-mill to the distribution center primarily by rail. The distribution center facilitates sales by maintaining an inventory of products close to major customers for just-in-time delivery. CSS communicates regularly with major customers to determine their anticipated needs and plans its rolling mill production schedule accordingly. Finished steel shipments to customers are made by common carrier, primarily truck or rail.

CSS delivers recycled ferrous scrap metal to export customers by bulk ship using its deep water terminal facility in Portland, Oregon, and nonferrous recycled scrap metal to export customers in containers by ship.

Supply of Scrap Metal

We believe CSS operates the only mini-mill in the Western U.S. that obtains its scrap metal requirements from an integrated metals recycler. CSS's metals recycling operations provide its steel mill with a mix of recycled metal grades, which allows the mill to achieve optimum efficiency in its melting operations.

Energy Supply

CSS needs electricity to run its steel manufacturing operations, primarily its EAF. CSS purchases electricity under a long-term contract with McMinnville Water & Light ("MW&L"), which in turn relies on the Bonneville Power Administration ("BPA"). We entered into our current contract with MW&L in October 2011 that will expire in September 2028.

CSS's steel manufacturing operations also need natural gas to run its reheat furnace, which is used to reheat billets prior to running them through the rolling mill. CSS meets this demand through a natural gas agreement with a utility provider that obligates CSS at each month-end to purchase a volume of gas based on its projected needs for the immediately subsequent month on a take-or-pay basis priced using published natural gas indices.

Energy costs represented 4%, 5%, and 6% of CSS's cost of goods sold in fiscal 2018, 2017 and 2016, respectively.

Backlog

As of September 30, 2018 and 2017, CSS had a backlog of finished steel orders of $33 million and $19 million, respectively. We expect to fill the entirety of the backlog of orders for finished steel products during fiscal 2019.

Competition

The primary domestic competitors of CSS for the sale of finished steel products include Nucor Corporation's manufacturing facilities in Arizona, Utah and Washington; Commercial Metals Company's manufacturing facility in Arizona; and Gerdau Long Steel North America's facility in California (which Commercial Metals Company has agreed to acquire). In addition to domestic competition, CSS competes with foreign steel producers, principally located in Asia, Canada, Mexico and Central and South America, primarily in shorter length rebar and certain wire rod

grades. The principal competitive factors in CSS's market are price, quality, service, product availability and the relative value of the U.S. dollar.

In recent years, relatively large volumes of low-priced steel imports, driven by global overcapacity in steel-making production and by the relative strength of the U.S. dollar, negatively impacted CSS's ability to compete. For more than a decade, CSS's steel

manufacturing operation, as part of a U.S. industry coalition, has petitioned the U.S. Government under our international trade laws for relief in the form of antidumping and countervailing duties against wire rod and rebar products from a number of foreign countries. Many of those cases were successful and led to a decrease in finished steel imports into CSS's domestic markets from the peak reached in fiscal 2016. As of the start of fiscal 2018, antidumping duty orders were in effect related to imports of rebar from Belarus, China, Indonesia, Japan, Latvia, Mexico, Moldova, Poland, Taiwan, Turkey and Ukraine; a countervailing duty order was in effect related to imports of rebar from Turkey; antidumping duty orders were in effect related to imports of wire rod from Brazil, China, Indonesia, Mexico, Moldova and Trinidad and Tobago; and countervailing duty orders were in effect related to imports of wire rod from Brazil and China. During 2018, following a petition by the U.S. domestic industry and successful resolution, new antidumping duty orders were imposed against wire rod from Belarus, Italy, South Korea, Russia, South Africa, Spain, Turkey, Ukraine, United Arab Emirates and the United Kingdom, and countervailing duty orders were imposed against wire rod from Italy and Turkey.

The duties imposed as part of these orders are periodically reassessed through the administrative review process. In addition, every five years the U.S. Government conducts sunset reviews to determine whether revocation of the orders would likely lead to resumption of dumping and subsidization and negatively impact the U.S. domestic industry. Affirmative decisions allow the orders to continue for an additional five years. The sunset review for rebar from Belarus, China, Indonesia, Latvia, Moldova, Poland and Ukraine was initiated in June 2018 and, following an affirmative decision, orders covering these countries will be in place for another five years. The next sunset review for Mexico and Turkey (from the 2014 investigation) will be in 2019 and for the newest order covering imports from Japan, Taiwan and Turkey will be in 2022. The next sunset reviews for wire rod from Brazil, China, Indonesia, Mexico, Moldova and Trinidad and Tobago will be in 2019, and for the remaining countries, likely in 2022. During fiscal 2018, the antidumping margins on one large Mexican manufacturer of both wire rod and rebar were decreased significantly in the administrative review process.

There are antidumping and countervailing duty orders in effect in Canada covering rebar from Belarus, China, Chinese Taipei, Hong Kong, Japan, South Korea, Portugal, Spain and Turkey which we expect will continue to lead to a reduction in the volume of imports into Canada from these countries.

The long-term effectiveness of existing antidumping and countervailing duty orders related to imports of wire rod and rebar products is largely uncertain and is impacted by the U.S. Government's ability to efficiently identify and respond to violations of U.S. international trade laws affecting CSS's steel manufacturing operations.

On March 8, 2018, the President of the United States announced the imposition of tariffs in the amount of 25 percent and 10 percent on imports of steel and aluminum, respectively. The imposition of the tariffs was the conclusion of an investigation started in April 2017 under Section 232 of the Trade Expansion Act of 1962 that allows for an exemption from normal international trade rules if imports of a product are harming national security. Currently, imports from Argentina, Australia, Brazil and South Korea are exempt from these duties pursuant to various agreements, including quotas. The Department of Commerce also implemented an exclusion process whereby U.S. entities can request that certain products be excluded from the duties. CSS reviews any exclusion requests relevant to its product line to determine whether an objection might be appropriate. Canada, Mexico and the European Union have implemented retaliatory tariffs. The Canadian retaliatory tariffs, enacted in July 2018, impose a 25 percent tariff on U.S. steel products and may impact CSS's ability to export its steel products to Canada at competitive prices. Sales of finished steel products to customers in Canada represented 7% of our steel mill's external sales in fiscal 2018, and 6% in each of fiscal 2017 and 2016.

Environmental Matters

Impact of Legislation and Regulation

Compliance with environmental laws and regulations is a significant factor in our operations. Our businesses are subject to extensive local, state and federal environmental protection, health, safety and transportation laws and regulations relating to, among others:

- The United States Environmental Protection Agency ("EPA");
- Remediation under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA");
- The discharge of materials and emissions into the air;
- The prevention and remediation of soil and groundwater contamination;
- The management, treatment and discharge of wastewater and storm water;
- Climate change;
- The generation, discharge, storage, handling and disposal of hazardous materials and secondary materials; and
- The protection of our employees' health and safety.

These environmental laws regulate, among other things, the release and discharge of hazardous materials into the air, water and ground; exposure to hazardous materials; and the identification, storage, treatment, handling and disposal of hazardous materials.

Concern over climate change, including the impact of global warming, has led to significant U.S. and international regulatory and legislative initiatives to limit greenhouse gas ("GHG") emissions. In 2007, the U.S. Supreme Court ruled that the EPA was authorized to regulate carbon dioxide under the U.S. Clean Air Act. The EPA subsequently initiated a series of regulatory efforts aimed at addressing greenhouse gases as pollutants, including finding that GHG emissions endanger public health, implementing mandatory GHG emission reporting requirements, and setting carbon emission standards for light-duty vehicles.

Environmental legislation and regulations have changed rapidly in recent years, and it is likely that we will be subject to even more stringent environmental standards in the future. Legislation has been proposed in the U.S. Congress to address GHG emissions and global climate change, including "cap and trade" programs, and some form of federal climate change legislation or additional federal regulation is possible. A number of states, including states in which we have operations and facilities, have considered, are considering or have already enacted legislation to develop information or address climate change and GHG emissions, including state-level "cap and trade" programs. Currently, we are required to annually report GHG emissions from our steel mill to the State of Oregon Department of Environmental Quality and the EPA.

Although our objective is to maintain compliance with applicable environmental laws and regulations, we have, in the past, been found to be not in compliance with certain environmental laws and regulations and have incurred liabilities, expenditures, fines and penalties associated with such violations. In December 2000, we were notified by the EPA that we are one of the potentially responsible parties that owns or operates, or formerly owned or operated, sites which are part of or adjacent to the Portland Harbor Superfund site. Further, we have been notified that we are or may be a potentially responsible party at sites other than Portland Harbor currently or formerly owned or operated by us or at other sites where we may have responsibility for such costs due to past disposal or other activities. See discussion in Part I, Item 1A. Risk Factors and Note 8 – Commitments and Contingencies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

In fiscal 2018, capital expenditures related to environmental projects were $20 million, and we expect to spend in the range of $20 million on capital expenditures related to environmental projects in fiscal 2019, excluding additional environmental projects currently under review.

Indirect Consequences of Future Legislation and Regulation

Future legislation or increased regulation regarding climate change and GHG emissions could impose significant costs on our business and our customers and suppliers, including increased energy, capital equipment, emissions controls, environmental monitoring and reporting and other costs in order to comply with laws and regulations concerning and limitations imposed on climate change and GHG emissions. The potential costs of allowances, taxes, fees, offsets or credits that may be part of "cap and trade" programs or similar future legislative or regulatory measures are still

uncertain and the future of these programs or measures is unknown. Any adopted future climate change and GHG laws or regulations could negatively impact our ability (and that of our customers and suppliers) to compete with companies situated in areas not subject to or complying with such limitations. Furthermore, even without such laws or regulations, increased awareness and any adverse publicity in the global marketplace about the GHGs emitted by companies in the metals recycling and steel manufacturing industries could harm our reputation and reduce customer demand for our products.

GHG legislation and regulation is expected to have an effect on the price of electricity, especially electricity generated using carbon-based fuels. Since the electricity supply for CSS includes a significant element of hydro-generated production, CSS's energy costs are less likely to be impacted than those of competitors using electricity generated by carbon-based fuels. In addition, demand for scrap metal may increase from mills with blast furnaces as they seek to maximize the scrap metal component of raw material infeed, which requires less energy than melting iron ore. Since the use of recycled iron and steel instead of iron ore to make new steel results in savings in the consumption of energy, virgin materials and water and reduces mining wastes, we believe our recycled metal products position us to be more competitive in the future for business from companies wishing to reduce their carbon footprint and impact on the environment. In addition, our EAF generates significantly less GHG emissions than traditional blast furnaces.

Physical Impacts of Climate Change on Our Costs and Operations

There has been public discussion that climate change may be associated with rising sea levels as well as extreme weather conditions such as more intense hurricanes, thunderstorms, tornadoes and snow or ice storms. Extreme weather conditions may increase our costs or cause damage to our facilities, and any damage resulting from extreme weather may not be fully insured. As many of our recycling facilities are located near deep water ports, rising sea levels may disrupt our ability to receive scrap metal, process the scrap metal through our shredders and ship products to our customers. Periods of extended adverse weather conditions may inhibit construction activity utilizing our products, scrap metal inflows to our recycling facilities, and retail admissions and parts sales at our auto parts stores.

Employees

As of September 30, 2018, we had 3,575 full-time employees, consisting of 2,796 employees at AMR, 586 employees at CSS and 193 corporate administrative and shared services employees. Of these employees, 764 were covered by collective bargaining agreements. The Cascade Steel Rolling Mills contract with the United Steelworkers of America, which covers 281 of these employees, was renewed and ratified in April 2016 and will expire on March 31, 2019. We believe that in general our labor relations are good.

Available Information

Our Internet website address is www.schnitzersteel.com. We make available on our website, free of charge, under the caption "Investors – SEC Filings" our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports as soon as reasonably practicable after electronically filing with or furnishing such materials to the Securities and Exchange Commission ("SEC") pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934. Also available on our website are our definitive Proxy Statements and ownership reports pursuant to Section 16(a) of the Securities Act of 1933. Copies of these filings may also be obtained from the SEC's website (www.sec.gov) or by visiting the Public Reference Room of the SEC at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330.

We may use our website as a channel of distribution of material Company information. Financial and other material information regarding our Company is routinely posted on and accessible at http://www.schnitzersteel.com/investors.aspx. You may register your e-mail under the caption "Investors – E-mail Alerts" to receive e-mail notifications of new company information.

The content of our website is not incorporated by reference into this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS

Described below are risks, which are categorized as "Risk Factors Relating to Our Business," "Risk Factors Relating to the Regulatory Environment" and "Risk Factors Relating to Our Employees," that could have a material adverse effect on our results of operations, financial condition and cash flows or could cause actual results to differ materially from the results contemplated by the forward-looking statements contained in this Annual Report. See "Forward-Looking Statements" that precedes Part I of this report. Additional risks and uncertainties that we are unaware of or that we currently deem immaterial may in the future have a material adverse effect on our results of operations, financial condition and cash flows.

Risk Factors Relating to Our Business

Potential costs related to the environmental cleanup of Portland Harbor may be material to our financial position and liquidity

In December 2000, we were notified by the United States Environmental Protection Agency ("EPA") under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") that we are one of the potentially responsible parties ("PRPs") that own or operate or formerly owned or operated sites which are part of or adjacent to the Portland Harbor Superfund site (the "Site"). The precise nature and extent of cleanup of any specific areas within the Site, the parties to be involved, the timing of any specific remedial action and the allocation of the costs for any cleanup among responsible parties have not yet been

determined. The process of site investigation, remedy selection, identification of additional PRPs and allocation of costs has been underway for a number of years, but significant uncertainties remain. It is unclear to what extent we will be liable for environmental costs or natural resource damage claims or third party contribution or damage claims with respect to the Site.

While we participated in certain preliminary Site study efforts, we were not party to the consent order entered into by the EPA with certain other PRPs, referred to as the "Lower Willamette Group" ("LWG"), for a remedial investigation/feasibility study ("RI/FS"). During fiscal 2007, we and certain other parties agreed to an interim settlement with the LWG under which we made a cash contribution to the LWG RI/FS. The LWG has indicated that it had incurred over $115 million in investigation-related costs over an approximately 10 year period working on the RI/FS. Following submittal of draft RI and FS documents which the EPA largely rejected, the EPA took over the RI/FS process.

We have joined with approximately 100 other PRPs, including the LWG members, in a voluntary process to establish an allocation of costs at the Site, including the costs incurred by the LWG in the RI/FS process. The LWG members have also commenced federal court litigation, which has been stayed, seeking to bring additional parties into the allocation process.

In January 2008, the Portland Harbor Natural Resource Trustee Council ("Trustee Council") invited us and other PRPs to participate in funding and implementing the Natural Resource Injury Assessment for the Site. Following meetings among the Trustee Council and the PRPs, funding and participation agreements were negotiated under which the participating PRPs, including us, agreed to fund the first phase of the three-phase natural resource damage assessment. Phase 1, which included the development of the Natural Resource Damage Assessment Plan ("AP") and implementation of several early studies, was substantially completed in 2010. In December 2017, we joined with other participating PRPs in agreeing to fund Phase 2 of the natural resource damage assessment, which includes the implementation of the AP to develop information sufficient to facilitate early settlements between the Trustee Council and Phase 2 participants and the identification of restoration projects to be funded by the settlements. In late May 2018, the Trustee Council published notice of its intent to proceed with Phase 3, which will involve the full implementation of the AP and the final injury and damage determination. We are proceeding with the process established by the Trustee Council regarding early settlements under Phase 2. It is uncertain whether we will enter into an early settlement for natural resource damages or what costs we may incur in any such early settlement.

On January 30, 2017, one of the Trustees, the Confederated Tribes and Bands of the Yakama Nation, which withdrew from the council in 2009, filed a suit against approximately 30 parties, including us, seeking reimbursement of certain past and future response costs in connection with remedial action at the Site and recovery of assessment costs related to natural resources damages from releases at and from the Site to the Multnomah Channel and the Lower Columbia River. We intend to defend against such claims and do not have sufficient information to determine the likelihood of a loss in this matter or to estimate the amount of damages being sought or the amount of such damages that could be allocated to us.

Estimates of the cost of remedial action for the cleanup of the in-river portion of the Site have varied widely in various drafts of the FS and in the EPA's final FS issued in June 2016 ranging from approximately $170 million to over $2.5 billion (net present value), depending on the remedial alternative and a number of other factors. In comments submitted to the EPA, we and certain other stakeholders identified a number of serious concerns regarding the EPA's risk and remedial alternatives assessments, cost estimates, scheduling assumptions and conclusions regarding the feasibility and effectiveness of remediation technologies.

In January 2017, the EPA issued a Record of Decision ("ROD") that identified the selected remedy for the Site. The selected remedy is a modified version of one of the alternative remedies evaluated in the EPA's FS that was expanded to include additional work at a greater cost. The EPA has estimated the total cost of the selected remedy at $1.7 billion with a net present value cost of $1.05 billion (at a 7% discount rate) and an estimated construction period of 13 years following completion of the remedial designs. In the ROD, the EPA stated that the cost estimate is an order-of-magnitude engineering estimate that is expected to be within +50% to -30% of the actual project cost and that changes in the cost elements are likely to occur as a result of new information and data collected during the

engineering design. We have identified a number of concerns regarding the remedy described in the ROD, which is based on data that is more than a decade old, and the EPA's estimates for the costs and time required to implement the selected remedy. Because of ongoing questions regarding cost effectiveness, technical feasibility, and the use of stale data, it is uncertain whether the ROD will be implemented as issued. In addition, the ROD did not determine or allocate the responsibility for remediation costs among the PRPs.

In the ROD, the EPA acknowledged that much of the data used in preparing the ROD was more than a decade old and would need to be updated with a new round of "baseline" sampling to be conducted prior to the remedial design phase. Accordingly, the ROD provided for additional pre-remedial design investigative work and baseline sampling to be conducted in order to provide a baseline of current conditions and delineate particular remedial actions for specific areas within the Site. This additional sampling needs to occur prior to proceeding with the next phase in the process which is the remedial design. The remedial design phase is an engineering phase during which additional technical information and data will be collected, identified and incorporated into technical drawings and specifications developed for the subsequent remedial action. Moreover, the ROD provided only Site-wide

cost estimates and did not provide sufficient detail to estimate costs for specific sediment management areas within the Site. Following issuance of the ROD, EPA proposed that the PRPs, or a subgroup of PRPs, perform the additional investigative work identified in the ROD under a new consent order.

In December 2017, we and three other PRPs entered into a new Administrative Settlement Agreement and Order on Consent with EPA to perform such pre-remedial design investigation and baseline sampling over a two-year period. We estimate that our share of the costs of performing such work will be approximately $2 million, which we recorded to environmental liabilities and selling, general and administrative expense in the consolidated financial statements in fiscal 2018. We believe that such costs will be fully covered by existing insurance coverage and, thus, also recorded an insurance receivable for $2 million in fiscal 2018, resulting in no net impact to our consolidated results of operations.

Except for certain early action projects in which we are not involved, remediation activities are not expected to commence for a number of years. In addition, as discussed above, responsibility for implementing and funding the remedy will be determined in a separate allocation process. We do not expect the next major stage of the allocation process to proceed until after the additional pre-remedial design data is collected.

Because there has not been a determination of the specific remediation actions that will be required, the amount of natural resource damages or the allocation of costs of the investigations and any remedy and natural resource damages among the PRPs, we believe it is not possible to reasonably estimate the amount or range of costs which we are likely to or which it is reasonably possible that we will incur in connection with the Site, although such costs could be material to our financial position, results of operations, cash flows and liquidity. Among the facts currently being developed are detailed information on the history of ownership of and the nature of the uses of and activities and operations performed on each property within the Site, which are factors that will play a substantial role in determining the allocation of investigation and remedy costs among the PRPs. We have insurance policies that we believe will provide reimbursement for costs we incur for defense (including the pre-remedial design investigative activities), remediation and mitigation for natural resource damages claims in connection with the Site, although there is no assurance that those policies will cover all of the costs which we may incur. Significant cash outflows in the future related to the Site could reduce the amount of our borrowing capacity that could otherwise be used for investment in capital expenditures, dividends, share repurchases and acquisitions. Any material liabilities incurred in the future related to the Site could result in our failure to maintain compliance with certain covenants in our debt agreements. See “Contingencies – Environmental” in Note 8 – Commitments and Contingencies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

We operate in industries that are cyclical and sensitive to general economic conditions, which could have a material adverse effect on our operating results, financial condition and cash flows

Demand for most of our products is cyclical in nature and sensitive to general economic conditions. The timing and magnitude of the cycles in the industries in which our products are used, including global steel manufacturing and residential construction in the U.S., are difficult to predict. The cyclical nature of our operations tends to reflect and be amplified by changes in economic conditions, both domestically and internationally, and foreign currency exchange fluctuations. Economic downturns or a prolonged period of slow growth in the U.S. and foreign markets or any of the industries in which we operate could have a material adverse effect on our results of operations, financial condition and cash flows.

Changing conditions in global markets including the impact of tariffs, quotas and other trade actions may adversely affect our business, financial position and results of operations

We generate a substantial portion of our revenues from sales to customers located outside the U.S., including countries in Asia, the Mediterranean region and North, Central and South America. In each of the last three years, exports comprised approximately 70 percent of AMR’s ferrous sales volumes and 60 percent of AMR’s nonferrous sales volumes. Further, in certain recent years, total sales to customers in each of China and Turkey exceeded 10 percent of our consolidated revenues in that year. Our ability to sell our products profitably, or at all, into international markets is subject to a number of risks including adverse impacts of political, economic, military, terrorist or major pandemic events; labor and social issues; legal and regulatory requirements or limitations imposed by foreign

governments including quotas, tariffs or other protectionist trade barriers, adverse tax law changes, nationalization, currency restrictions, or import restrictions for certain types of products we export; and disruptions or delays in shipments caused by customs compliance or other actions of government agencies. The occurrence of such events and conditions may adversely affect our business, financial position and results of operations.

For example, in fiscal 2017, regulators in China began implementing the National Sword initiative involving inspections of Chinese industrial enterprises, including recyclers, in order to identify rules violations with respect to discharge of pollutants or illegally transferred scrap imports. Restrictions resulting from the National Sword initiative include a ban on certain imported recycled products, lower contamination limits for permitted recycled materials, and more comprehensive pre- and post-shipment inspection requirements. Recent disruptions in pre-inspection certifications and stringent inspection procedures at certain Chinese destination ports have limited access to these destinations and resulted in the renegotiation or cancellation of certain nonferrous customer contracts in connection with the redirection of such shipments to alternate destinations. Based on the most current information

available, we believe that the potential impact on our recycling operations could include requirements that would necessitate additional processing of certain nonferrous recycled scrap metal products as well as increased inspection and certification activities with respect to exports to China, or a change in the use of our sales channels in the event of an outright ban on certain or all of our recycled metals products by China. As regulatory developments progress, we may need to make further investments in nonferrous processing equipment where economically justified, incur additional costs in order to comply with new inspection requirements, or seek alternative markets for the impacted products, which may result in lower sales prices or higher costs and may adversely impact our business or results of operations.

In March 2018, the U.S. imposed a 25 percent tariff on certain imported steel products and a 10 percent tariff on certain imported aluminum products under Section 232 of the Trade Expansion Act of 1962. These new tariffs, along with other U.S. trade actions, have triggered retaliatory actions by certain affected countries, and other foreign governments have initiated or are considering imposing trade measures on other U.S. goods. For example, China has imposed a series of retaliatory tariffs on certain U.S. products, including a 25 percent tariff on all grades of U.S. scrap and an additional 25 percent tariff on U.S. aluminum scrap. These tariffs and other trade actions could result in a decrease in international steel demand and negatively impact demand for our products, which would adversely impact our business. Given the uncertainty regarding the scope and duration of these trade actions by the U.S. or other countries, the impact of the trade actions on our operations or results remains uncertain.

Changes in the availability or price of inputs such as raw materials and end-of-life vehicles could reduce our sales

Our businesses require certain materials that are sourced from third-party suppliers. Although the synergies from our integrated operations allow us to be our own source for some raw materials, particularly with respect to scrap metal for our steel manufacturing operations, we rely on other suppliers for most of our raw material and other input needs, including inputs to steel production such as graphite electrodes and other required consumables. Industry supply conditions generally involve risks, including the possibility of shortages of raw materials, increases in raw material and other input costs, and reduced control over delivery schedules. We procure our scrap inventory from numerous sources. These suppliers generally are not bound by long-term contracts and have no obligation to sell scrap metal to us. In periods of declining or lower scrap metal prices, such as the declining price environment we experienced in fiscal 2015 and the first half of fiscal 2016, suppliers may elect to hold scrap metal to wait for higher prices or intentionally slow their metal collection activities, tightening supply. If a substantial number of suppliers cease selling scrap metal to us, we will be unable to recycle metal at desired levels, and our results of operations and financial condition could be materially adversely affected. A slowdown of industrial production in the U.S. may also reduce the supply of industrial grades of metal to the metals recycling industry, resulting in less recyclable metal available to process and market. Increased competition for domestic scrap metal, including as a result of overcapacity in the scrap recycling industry in the U.S. and Canada, may also reduce the supply of scrap metal available to us. Failure to obtain a steady supply of scrap material could both adversely impact our ability to meet sales commitments and reduce our operating margins. Failure to obtain an adequate supply of end-of-life vehicles could adversely impact our ability to attract customers and charge admission fees and reduce our parts sales. Failure to obtain raw materials and other inputs to steel production such as alloys, graphite electrodes and other required consumables, could adversely impact our ability to make steel to the specifications of our customers.

Significant decreases in scrap metal prices may adversely impact our operating results

The timing and magnitude of the cycles in the industries in which we operate are difficult to predict and are influenced by different economic conditions in the domestic market, where we typically acquire our raw materials, and foreign markets, where we typically sell the majority of our products. Purchase prices for scrap metal including end-of-life vehicles and selling prices for recycled scrap metal are subject to market forces beyond our control. For instance, in fiscal 2015 and in the first half of fiscal 2016, scrap metal prices experienced a significant downward trend caused primarily by the weak macroeconomic conditions and global steel-making overcapacity, which was further exacerbated by the impact of lower iron ore prices, a raw material used in steel-making in blast furnaces which compete with EAF steel-making production that uses ferrous scrap as its primary feedstock. While we attempt to respond to changing recycled scrap metal selling prices through adjustments to our metal purchase prices, our ability

to do so is limited by competitive and other market factors. As a result, we may not be able to reduce our metal purchase prices to fully offset a sharp reduction in recycled scrap metal sales prices, which may adversely impact our operating income and cash flows. In fiscal 2015 and the first half of fiscal 2016, lower demand for recycled scrap metal relative to demand and competition for supply of unprocessed scrap metal in the domestic market compressed operating margins due to selling prices decreasing at a faster rate than purchase prices for unprocessed scrap metal. In addition, a rapid decrease in selling prices may compress our operating margins due to the impact of average inventory cost accounting, which causes cost of goods sold recognized in the Consolidated Statements of Operations to decrease at a slower rate than metal purchase prices and net selling prices.

Imbalances in supply and demand conditions in the global steel industry may reduce demand for our products
Economic expansions and contractions in global economies can result in supply and demand imbalances in the global steel industry that can significantly affect the price of commodities used and sold by our business, as well as the price of and demand for finished steel products. In a number of foreign countries, such as China, steel producers are generally government-owned and may therefore make production decisions based on political or other factors that do not reflect free market conditions. In recent years, overcapacity and excess steel production in these foreign countries resulted in the export of aggressively priced semi-finished and finished steel products. This led to disruptions in steel-making operations within other countries, negatively impacting demand for our recycled scrap metal products used by EAF mills globally as their primary feedstock. Further, the import of foreign steel products into the U.S. at similarly aggressive prices have in the past adversely impacted finished steel sales prices and sales volumes at CSS. Existing or new trade laws and regulations may cause or be inadequate to prevent disadvantageous trade practices, which could have a material adverse effect on our financial condition and results of operations. Although trade regulations restrict or impose duties on the importation of certain products, if foreign steel production significantly exceeds consumption in those countries, global demand for our recycled scrap metal products could decline and imports of steel products into the U.S. could increase, resulting in lower volumes and selling prices for our recycled metal products and finished steel products.
Goodwill impairment charges may adversely affect our operating results
Goodwill represents the excess purchase price over the net amount of identifiable assets acquired and liabilities assumed in a business combination measured at fair value. We have a substantial amount of goodwill on our balance sheet, almost all of which was carried by a single reporting unit within AMR as of August 31, 2018. We test the goodwill balances allocated to our reporting units for impairment on an annual basis and when events occur or circumstances change that indicate that the fair value of one or more of our reporting units may be below its carrying amount. When testing goodwill for impairment, we may be required to measure the fair value of the reporting units in order to determine the amount of impairment, if any. Fair value determinations require considerable judgment and are sensitive to inherent uncertainties and changes in estimates and assumptions regarding revenue growth rates, operating margins, capital expenditures, working capital requirements, tax rates, terminal growth rates, discount rates, benefits associated with a taxable transaction and synergistic benefits available to market participants. Declines in market conditions, a trend of weaker than anticipated financial performance for one of our reporting units with allocated goodwill, a decline in our share price for a sustained period of time, or an increase in the market-based weighted average cost of capital, among other factors, are indicators that the carrying value of our goodwill may not be recoverable. We may be required to record a goodwill impairment charge that, if incurred, could have a material adverse effect on our financial condition and results of operations. For example, in the second quarter of fiscal 2015, management identified a triggering event requiring an interim impairment test of goodwill, which resulted in impairment of a reporting unit's goodwill totaling $141 million, and in the second quarter of fiscal 2016, management identified a triggering event requiring an interim impairment test of goodwill, which resulted in impairment of a different reporting unit’s goodwill totaling $9 million.
Impairment of long-lived assets and cost and equity method investments may adversely affect our operating results
Our long-lived asset groups are subject to an impairment assessment when certain triggering events or circumstances indicate that their carrying value may be impaired. If the carrying value exceeds our estimate of future undiscounted cash flows of the operations related to the asset group, an impairment is recorded for the difference between the carrying amount and the fair value of the asset group. The results of these tests for potential impairment may be adversely affected by unfavorable market conditions, our financial performance trends, or an increase in interest rates, among other factors. If as a result of the impairment test we determine that the fair value of any of our long-lived asset groups is less than its carrying amount, we may incur an impairment charge that could have a material adverse effect on our financial condition and results of operations. We recorded impairment charges on long-lived tangible and intangible assets associated with certain regional metals recycling operations and used auto parts store locations in the amount of $8 million and $44 million during fiscal 2016 and 2015, respectively. With respect to our investments in unconsolidated entities accounted for under the cost and equity methods, a loss in value of an investment that is other

than a temporary decline is recognized. Once we determine that an other-than-temporary impairment exists, we may incur an impairment charge that could have a material adverse effect on our results of operations. We recorded impairment charges of $1 million and $2 million during fiscal 2017 and 2016, respectively, related to investments in joint ventures accounted for under the equity method. See Note 2 - Summary of Significant Accounting Policies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report for further detail on long-lived asset and joint venture investment impairment charges.

Inability to sustain the benefits from productivity and restructuring initiatives may adversely impact our operating results

We have undertaken a number of productivity improvement and restructuring initiatives designed to reduce operating expenses and improve profitability and to achieve further integration and synergistic cost efficiencies in our operating platform. These initiatives included idling underutilized assets and closing facilities to more closely align our business to market conditions, implementing productivity initiatives to increase production efficiency and material recovery, and further reducing our annual operating expenses through headcount reductions, reducing organizational layers, consolidating shared service functions, savings from procurement activities, streamlining of administrative and supporting services functions, and other non-headcount measures.

We incurred restructuring charges and other exit-related activities in fiscal 2018, 2017 and 2016 as a result of these initiatives. Failure to sustain the expected cost reductions and other benefits related to these productivity and restructuring initiatives could have a material adverse effect on our results of operations and cash flows.

Acquisitions and integration of acquired businesses may result in operating difficulties and other unintended consequences

We may make acquisitions of complementary businesses to enable us to enhance our customer base and grow our revenues. Execution of any past or potential future acquisition involves a number of risks, including:

- Difficulty integrating the acquired businesses' personnel and operations;
- Potential loss of key employees or customers of the acquired business;
- Difficulties in realizing anticipated cost savings, efficiencies and synergies;
- Unexpected costs;
- Inaccurate assessment of or undisclosed liabilities;
- Inability to maintain uniform standards, controls and procedures; and
- Difficulty in managing growth.

If we do not successfully execute on acquisitions and the acquired businesses do not perform as projected, our financial condition and results of operations could be materially adversely affected.

Changing economic conditions may result in customers not fulfilling their contractual obligations

We enter into export ferrous sales contracts preceded by negotiations that include fixing price, quantity, shipping terms and other contractual terms. Upon finalization of these terms and satisfactory completion of other contractual contingencies, the customer typically opens a letter of credit to satisfy its payment obligation under the contract prior to our shipment of the cargo. Although not considered normal course of business, in times of changing economic conditions, including during periods of sharply falling scrap metal prices such as those experienced in fiscal 2015 and the first half of fiscal 2016, there is an increased risk that customers may not be willing or able to fulfill their contractual obligations or open letters of credit. For example, in fiscal 2015, the resale or modification of the terms, each at significantly lower prices, of certain previously contracted bulk shipments had a $7 million negative impact on our operating results. As of August 31, 2018 and 2017, 33% of our trade accounts receivable balance were covered by letters of credit.

Increases in the value of the U.S. dollar relative to other currencies may reduce the demand for our products

A significant portion of our recycled scrap metal revenues is generated from sales to foreign customers, which are denominated in U.S. dollars, including customers located in Asia, Africa and Europe. A strengthening U.S. dollar, as experienced during recent years including fiscal 2018, makes our products more expensive for non-U.S. customers, which may negatively impact export sales. A strengthening U.S. dollar also makes imported metal products less expensive, which may result in an increase in imports of steel products into the U.S. As a result, our finished steel products, which are made in the U.S., may become more expensive for our U.S. customers relative to imported steel products thereby reducing demand for our products.

We are exposed to translation and transaction risks associated with fluctuations in foreign currency exchange rates Hedging instruments may not be effective in mitigating such risks and may expose us to losses or limit our potential gains

Our operations in Canada expose us to translation and transaction risks associated with fluctuations in foreign currency exchange rates as compared to the U.S. dollar, our reporting currency. As a result, we are subject to foreign currency exchange risks due to exchange rate movements in connection with the translation of the operating costs and the assets and liabilities of our foreign operations into our functional currency for inclusion in our Consolidated Financial Statements.

We are also exposed to foreign currency exchange transaction risk. As part of our risk management program, we may use financial instruments, including foreign currency exchange forward contracts. While intended to reduce the effects of fluctuations in foreign currency exchange rates, these instruments may not be effective in reducing all risks related to such fluctuations and may limit our potential gains or expose us to losses. Although we do not enter into these instruments for trading purposes or speculation, and we believe all such instruments are entered into as hedges of

underlying physical transactions, these instruments are dependent on timely performance by our counterparties. Should our counterparties to such instruments or the sponsors of the exchanges through which these transactions are offered fail to honor their obligations due to financial distress or otherwise, we would be exposed to potential losses or the inability to recover anticipated gains from the transactions covered by these instruments.

Potential limitations on our ability to access capital resources may restrict our ability to operate

Our operations are capital intensive. Our business also requires substantial expenditures for routine maintenance. While we expect that our cash requirements, including the funding of capital expenditures, debt service, dividends, share repurchases and investments, will be financed by internally generated funds or from borrowings under our secured committed bank credit facilities,

there can be no assurance that this will be the case. Additional acquisitions could require financing from external sources. Although we believe we have adequate access to contractually committed borrowings, we could be adversely affected if our banks were unable to honor their contractual commitments or ceased lending. Failure to access our credit facilities could restrict our ability to fund operations, make capital expenditures or execute acquisitions.

The agreement governing our bank credit facilities imposes certain restrictions on our business and contains financial covenants

Our secured bank credit facilities contain certain restrictions on our business which limit (subject to certain exceptions) our ability to, among other things, incur or suffer to exist certain liens, make investments, incur or guaranty additional indebtedness, enter into consolidations, mergers, acquisitions, and sales of assets, make distributions and other restricted payments, change the nature of our business, engage in transactions with affiliates and enter into restrictive agreements, including agreements that restrict the ability of our subsidiaries to make distributions. These restrictions may affect our ability to operate our business or execute our strategy and may limit our ability to take advantage of potential business opportunities as they arise. Our bank credit agreement also requires that we maintain certain financial and other covenants, including a consolidated fixed charge coverage ratio and a consolidated leverage ratio. Our ability to comply with these covenants may be affected by events beyond our control, including prevailing economic, financial and industry conditions. Our failure to comply with any of these restrictions or financial covenants could result in an event of default under the bank credit agreement, and permit our lenders to cease lending to us and declare all amounts borrowed from them to be due and payable, together with accrued and unpaid interest. This could require us to refinance our bank facilities, which we may not be able to do at terms acceptable to us, or at all.

Consolidation in the steel industry may reduce demand for our products

There has been a significant amount of consolidation in the steel industry in recent years that has included steel mills acquiring steel fabricators to ensure demand for their products. If any of our steel mill’s significant remaining customers were to be acquired by competing steel mills, this could reduce the demand for our products and force us to lower our prices, reducing our revenues, or to reduce production, which could increase our unit costs and have a material adverse effect on our financial condition and results of operations.

Failure to realize expected benefits from investments in processing and manufacturing technology may impact our operating results and cash flows

We make significant investments in processing and manufacturing technology improvements aimed at increasing the efficiency and capabilities of our businesses and to maximize our economies of scale. Failure to realize the anticipated benefits and generate adequate returns on such capital improvement projects may have a material adverse effect on our results of operations and cash flows.

Reliance on third party shipping companies may restrict our ability to ship our products

We generally rely on third parties to handle and transport raw materials to our production facilities and products to customers. Despite our practice of utilizing a diversified group of suppliers of transportation, factors beyond our control, including changes in fuel prices, political events, governmental regulation of transportation, changes in market rates, carrier availability, carrier bankruptcy, shipping industry consolidation and disruptions in transportation infrastructure, may adversely impact our ability to ship our products. These impacts could include delays or other disruptions in shipments in transit or third party shipping companies increasing their charges for transportation services or otherwise reducing or eliminating the availability of their vehicles or ships. As a result, we may not be able to transport our products in a timely and cost-effective manner, which could have a material adverse effect on our financial condition and results of operations and may harm our reputation.

Equipment upgrades, equipment failures and facility damage may lead to production curtailments or shutdowns

Our recycling and manufacturing processes depend on critical pieces of equipment, including shredders, nonferrous sorting technology, furnaces and a rolling mill, which may be out of service occasionally for scheduled upgrades or maintenance or as a result of unanticipated failures. Our facilities are subject to equipment failures and the risk of catastrophic loss due to unanticipated events such as fires, earthquakes, accidents or violent weather conditions. For instance, our metals recycling operations in Puerto Rico were briefly interrupted in September 2017 as a result of

Hurricane Maria, although the damages to and losses incurred by the operations were not material. We have insurance to cover certain of the risks associated with equipment damage and resulting business interruption, but there are certain events that would not be covered by insurance and there can be no assurance that insurance will continue to be available on acceptable terms. Interruptions in our processing and production capabilities and shutdowns resulting from unanticipated events could have a material adverse effect on our financial condition, results of operations and cash flows.

Product liability claims may adversely impact our operating results

We could inadvertently acquire radioactive scrap metal that could potentially be included in mixed scrap metal shipped to consumers worldwide. Although we have invested in radiation detection equipment in the majority of our locations, including the facilities from which we ship directly to customers, failure to detect radioactive scrap metal remains a possibility. Even though we maintain insurance to address the risk of this failure in detection, there can be no assurance that the insurance coverage would be adequate or will continue to be available on acceptable terms. In addition, if we fail to meet contractual requirements for a product, we may be subject to product warranty costs and claims. These costs and claims could both have a material adverse effect on our financial condition and results of operations and harm our reputation.

We are subject to legal proceedings and legal compliance risks that may adversely impact our financial condition, results of operations and liquidity

We spend substantial resources ensuring that we comply with domestic and foreign regulations, contractual obligations and other legal standards. Notwithstanding this, we are subject to a variety of legal proceedings and compliance risks in respect of various matters, including regulatory, safety, environmental, employment, transportation, intellectual property, contractual, import/export, international trade and governmental matters that arise in the course of our business and in our industry. For example, legal proceedings can include those arising from accidents involving Company-owned vehicles, including Company tractor trailers. In some instances, such accidents and the related litigation involve accidents that have resulted in third party fatalities. An outcome in an unusual or significant legal proceeding or compliance investigation in excess of insurance recoveries could adversely affect our financial condition and results of operations. For information regarding our current significant legal proceedings, see “Legal Proceedings” in Part I, Item 3 of this report.

Climate change may adversely impact our facilities and our ongoing operations

The potential physical impacts of climate change on our operations are highly uncertain and depend upon the unique geographic and environmental factors present, for example rising sea levels at our deep water port facilities, changing storm patterns and intensities, and changing temperature levels. As many of our recycling facilities are located near deep water ports, rising sea levels may disrupt our ability to receive scrap metal, process the scrap metal through our shredders and ship products to our customers. Periods of extended adverse weather conditions may inhibit construction activity utilizing our products, scrap metal inflows to our recycling facilities, and retail admissions and parts sales at our auto parts stores.

We may not realize our deferred tax assets in the future

The assessment of recoverability of our deferred tax assets is based on an evaluation of existing positive and negative evidence as to whether it is more likely than not that they will be realized. If negative evidence outweighs positive evidence, a valuation allowance is required. Impairment of deferred tax assets may result from significant negative industry or economic trends, a decrease in earnings performance and projections of future taxable income, adverse changes in laws or regulations, and a variety of other factors. Impairment of deferred tax assets could have a material adverse impact on our results of operations and financial condition and could result in not realizing the deferred tax assets. In recent years, we have recorded significant valuation allowances against our deferred tax assets, and our low annual effective tax rates in the fiscal years presented in this report are primarily the result of our full valuation allowance positions. Deferred tax assets may require further valuation allowances if it is not more likely than not that the deferred tax assets will be realized.

In fiscal 2018, we released valuation allowances against certain U.S., Canadian and state deferred tax assets resulting in recognition of discrete tax benefits. The release of the valuation allowances was the result of sufficient positive evidence, including cumulative income in recent years and projections of future taxable income from operations, that it is more likely than not that the deferred tax assets will be realized. In the event that actual results differ from our projections or we adjust our estimates in future periods, we may need to establish a valuation allowance, which could materially impact our financial position and results of operations.

Tax increases and changes in tax rules may adversely affect our financial results

As a company conducting business on a global basis with physical operations throughout North America, we are exposed, both directly and indirectly, to the effects of changes in U.S., state, local and foreign tax rules. Taxes for financial reporting purposes and cash tax liabilities in the future may be adversely affected by changes in such tax rules. In many cases, such changes put us at a competitive disadvantage compared to some of our major competitors, to the extent we are unable to pass the tax costs through to our customers.

On December 22, 2017, the President of the United States signed and enacted into law comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act ("Tax Act"). Known and certain estimated effects based upon current interpretation of the Tax Act have been incorporated into our financial results beginning in the second quarter of fiscal 2018. As additional clarification and implementation guidance is issued on the Tax Act, it may be necessary to adjust the provisional amounts. Adjustments to provisional amounts could be material to our results of operations and cash flows. In addition, there is a risk that

states or foreign jurisdictions may amend their tax laws in response to the Tax Act, which could have a material impact on our future results of operations and cash flows.

One or more cybersecurity incidents may adversely impact our financial condition, results of operations and reputation

Our operations involve the use of multiple systems that process, store and transmit sensitive information about our customers, suppliers, employees, financial position, operating results and strategies. We face global cybersecurity risks and threats on a continual and ongoing basis, which include, but are not limited to, attempts to access systems and information, computer viruses, or denial-of-service attacks. These risks and threats range from uncoordinated individual attempts to sophisticated and targeted measures. While we are not aware of any material cyber-attacks or breaches of our systems to date, we have and continue to implement measures to safeguard our systems and information and mitigate potential risks, including employee training around phishing, malware and other cyber risks, but there is no assurance that such actions will be sufficient to prevent cyber-attacks or security breaches that manipulate or improperly use our systems, compromise sensitive information, destroy or corrupt data, or otherwise disrupt our operations. The occurrence of such events, including breaches of our security measures or those of our third-party service providers, could negatively impact our reputation and our competitive position and could result in litigation with third parties, regulatory action, loss of business due to disruption of operations and/or reputational damage, potential liability and increased remediation and protection costs, any of which could have a material adverse effect on our financial condition and results of operations. Additionally, as cybersecurity risks become more sophisticated, we may need to increase our investments in security measures which could have a material adverse effect on our financial condition and results of operations.

Risk Factors Relating to the Regulatory Environment

Environmental compliance costs and potential environmental liabilities may have a material adverse effect on our financial condition and results of operations

Compliance with environmental laws and regulations is a significant factor in our business. We are subject to local, state and federal environmental laws and regulations in the U.S. and other countries relating to, among other matters:

- Waste disposal;
- Air emissions;
- Waste water and storm water management, treatment and discharge;
- The use and treatment of groundwater;
- Soil and groundwater contamination remediation;
- Climate change;
- Generation, discharge, storage, handling and disposal of hazardous materials and secondary materials; and
- Employee health and safety.

We are also required to obtain environmental permits from governmental authorities for certain operations. Violation of or failure to obtain permits or comply with these laws or regulations could result in our business being fined or otherwise sanctioned by regulators or becoming subject to litigation by private parties. In recent years, capital expenditures for environmental projects have increased and have represented a significant share of our total capital expenditures. Future environmental compliance costs, including capital expenditures for environmental projects, may increase because of new laws and regulations, changing interpretations and stricter enforcement of current laws and regulations by regulatory authorities, uncertainty regarding adequate pollution control levels, the future costs of pollution control technology and issues related to climate change.

Our operations use, handle and generate hazardous substances. In addition, previous operations by others at facilities that we currently or formerly owned, operated or otherwise used may have caused contamination from hazardous substances. As a result, we are exposed to possible claims, including government fines and penalties, costs for investigation and clean-up activities, claims for natural resources damages and claims by third parties for personal injury and property damage, under environmental laws and regulations, especially for the remediation of waterways and soil or groundwater contamination. These laws can impose liability for the cleanup of hazardous substances even if the owner or operator was neither aware of nor responsible for the release of the hazardous substances. We have, in

the past, been found not to be in compliance with certain of these laws and regulations, and have incurred liabilities, expenditures, fines and penalties associated with such violations. In addition, we have been notified that we are or may be a potentially responsible party for actual or possible investigation and cleanup costs from historical contamination at sites currently or formerly owned or operated by us or at other sites where we may have responsibility for such costs due to past disposal or other activities. Environmental compliance costs and potential environmental liabilities could have a material adverse effect on our financial condition, results of operations and cash flows. See also the risk factor “Potential costs related to the environmental cleanup of Portland Harbor may be material to our financial position and liquidity” in this Item 1A.

Governmental agencies may refuse to grant or renew our licenses and permits, and we may be unable to renew facility leases, thus restricting our ability to operate

We conduct certain of our operations subject to licenses, permits and approvals from state and local governments. Governmental agencies often resist the establishment of certain types of facilities in their communities, including auto parts facilities. In addition, from time to time, both the U.S. and foreign governments impose regulations and restrictions on trade in the markets in which we operate. In some countries, governments require us to apply for certificates or registration before allowing shipment of recycled metal to customers in those countries. There can be no assurance that future approvals, licenses and permits will be granted or that we will be able to maintain and renew the approvals, licenses and permits we currently hold. Failure to obtain these approvals could cause us to limit or discontinue operations in these locations or prevent us from developing or acquiring new facilities, which could have a material adverse effect on our financial condition and results of operations.

We lease a significant portion of our facilities, including the substantial majority of our auto parts facilities. Failure to renew these leases may impact our ability to continue operations within certain geographic areas, which could have a material adverse effect on our financial condition, results of operations and cash flows.

Compliance with existing and future climate change and greenhouse gas emission laws and regulations may adversely impact our operating results

Future legislation or increased regulation regarding climate change and GHG emissions could impose significant costs on our business and our customers and suppliers, including increased energy, capital equipment, emissions controls, environmental monitoring and reporting and other costs in order to comply with laws and regulations concerning and limitations imposed on climate change and GHG emissions. The potential costs of allowances, taxes, fees, offsets or credits that may be part of “cap and trade” programs or similar future legislative or regulatory measures are still uncertain and the future of these programs or measures is unknown. Any adopted future climate change and GHG laws or regulations could negatively impact our ability (and that of our customers and suppliers) to compete with companies situated in areas not subject to such limitations. Until the timing, scope and extent of any future laws or regulations becomes known, we cannot predict the effect on our financial condition, operating performance or ability to compete. Furthermore, even without such laws or regulations, increased awareness and any adverse publicity in the global marketplace about the GHGs emitted by companies in the metals recycling and steel manufacturing industries could harm our reputation and reduce customer demand for our products. See “Business - Environmental Matters” in Part I, Item 1 of this report for further detail.

Risk Factors Relating to Our Employees

Reliance on employees subject to collective bargaining may restrict our ability to operate

Approximately 21% of our full-time employees are represented by unions under collective bargaining agreements, including substantially all of the manufacturing employees at our CSS steel manufacturing facility. As these agreements expire, we may not be able to negotiate extensions or replacements of such agreements on acceptable terms. Any failure to reach an agreement with one or more of our unions may result in strikes, lockouts or other labor actions, including work slowdowns or stoppages, which could have a material adverse effect on our results of operations.

The underfunded status of our multiemployer pension plans may cause us to increase our contributions to the plans

As discussed in Note 11 – Employee Benefits in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report, we contribute to the Steelworkers Western Independent Shops Pension Plan (“WISPP”), a multiemployer plan benefiting union employees of our steel mill. Because we have no current intention of withdrawing from the WISPP, we have not recognized a withdrawal liability in our consolidated financial statements. However, if such a liability were triggered, it could have a material adverse effect on our results of operations, financial position, liquidity and cash flows. Our contributions to the WISPP could also increase as a result of a diminished contribution base due to the insolvency or withdrawal of other employers who currently contribute to it, the inability or failure of withdrawing employers to pay their withdrawal liabilities, or other funding deficiencies, as we would need to fund the retirement obligations of these employers.

In 2004, the Internal Revenue Service ("IRS") approved a seven-year extension of the period over which the WISPP may amortize unfunded liabilities, conditioned upon maintenance of certain minimum funding levels. In 2014, the WISPP obtained relief from the specified funding requirements from the IRS, which requires that the WISPP meet a minimum funded percentage on each valuation date and achieve a funded percentage of 100% as of October 1, 2029. Based on the most recent actuarial valuation for the WISPP, the funded percentage using the valuation method prescribed by the IRS satisfied the minimum funded percentage requirement.

ITEM 1B. UNRESOLVED STAFF COMMENTS
None.

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ITEM 2. PROPERTIES

Our facilities and administrative offices by type, including their total acreage, were as follows as of August 31, 2018:

Division	No. of Facilities	Acreage Leased	Owned	Total
Corporate offices – United States	1	—	—	—
Auto and Metals Recycling:				
United States and Puerto Rico:[1]				