UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended August 31, 2019
or
☐ 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 000-22496

SCHNITZER STEEL INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

OREGON	**93-0341923**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
299 SW Clay Street, Suite 350, Portland, Oregon	**97201**
(Address of principal executive offices)	*(Zip Code)*

(503) 224-9900
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, $1.00 par value	SCHN	NASDAQ Global Select Market

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 ☐ No ☒

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

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

Indicate by check mark whether the registrant has submitted electronically 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 ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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 ☒ Accelerated filer ☐ Non-accelerated filer ☐
Smaller reporting company ☐ Emerging growth company ☐

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. ☐

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

The aggregate market value of the registrant's outstanding common stock held by non-affiliates on February 28, 2019 was $624,206,925.

The registrant had 26,465,063 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, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement for the January 2020 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. 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," "the Company" and "SSI" refer to Schnitzer Steel Industries, Inc. 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 sanctions and tariffs, quotas and other trade actions and import restrictions; the realization of deferred tax assets; planned capital expenditures; liquidity positions; our 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," "may," "will," "should," "could," "opinions," "forecasts," "projects," "plans," "future," "forward," "potential," "probable," and similar expressions. 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 sanctions and tariffs, quotas and other trade actions and import restrictions; 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 equity investment impairment charges; inability to achieve or sustain the benefits from productivity, cost savings and restructuring initiatives; inability to realize or delays in realizing expected benefits from investments in technology; inability to renew facility leases; 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; 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; 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 ferrous recycled scrap metal. Specialty steelmakers, foundries, refineries, smelters, wholesalers, and other recycled metal processors globally are the primary end markets for our nonferrous 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 auto bodies, 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 auto bodies is our own network of 51 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 customers.

We utilize a variety of systems and technologies to process recycled metals ranging from iron and steel to aluminum, copper, brass, lead, stainless steel, zinc and other nonferrous metals 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 2019, we sold our products to customers located in 27 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 667 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 78% of our total revenues from sales to external customers in fiscal 2019. AMR generated 92% of its revenues in fiscal 2019 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 72% ferrous scrap metal and 28% nonferrous scrap metal in fiscal 2019. 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 2019, CSS sold 478 thousand short tons of finished steel products.

In fiscal 2019, we implemented productivity initiatives aimed at delivering $35 million in annual benefits in order to mitigate the weaker price environment in the ferrous and nonferrous markets. We expect these benefits to be achieved through a combination of production cost efficiencies, reductions in selling, general and administrative expenses and increases in retail auto parts sales. We achieved approximately $30 million of the total targeted benefits in fiscal 2019, with the full $35 million in annual benefits expected to be achieved in fiscal 2020.

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.

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 (AR, IL, IN, OH, MO, KS, TX)	14	—	14	—	—	—	AMR
Northeast (MA, ME, NH, RI)	2	10	12	1	2	—	AMR
Southeast and Puerto Rico (GA, AL, TN, FL, VA, PR)	2	16	18	1	1	—	AMR
Western Canada (BC, AB)	4	4	8	—	—	—	AMR
Total	51	45	96	6	7	2	

(1) Excludes joint venture facilities.
(2) All large-scale shredding operations employ nonferrous extraction and separation equipment.
(3) Includes one steel mini-mill in Oregon and one distribution center in California.

AMR

Business

AMR sells ferrous and nonferrous recycled scrap metal in both foreign and domestic markets. AMR acquires, processes and recycles auto bodies, 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 auto bodies 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 51 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 metals, which are primarily sold to wholesalers. The remaining auto bodies are crushed and shipped to our metals recycling facilities to be shredded, or sold to third parties where geographically more economical.

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 used by our 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 and 4,000 horsepower, respectively. 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 auto bodies 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 mixed nonferrous scrap metal and other residue, resulting in a consistent and high-quality shredded ferrous product. The mixed 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 mixed nonferrous metal is then further sorted by product and size grade before being sold as joint products, which include zorba (primarily aluminum), zurik (primarily stainless steel) and shredded insulated wire (primarily copper and aluminum). 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 aggregates 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 mixed metal joint products recovered from the shredding process, such as zorba, zurik and shredded insulated wire, as well as aluminum, copper, stainless steel, nickel, brass, titanium, lead, and high temperature alloys. We also sell catalytic converters to specialty processors that extract the nonferrous precious metals including platinum, palladium and rhodium.

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 and purchase 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, refineries, smelters, wholesalers and other 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):

	2019	% of Revenue	2018	% of Revenue	2017	% of Revenue
North America(1)	$ 664,308	40%	$ 736,494	39%	$ 571,620	42%
Asia	767,670	46%	834,038	44%	593,332	44%
Europe(2)	206,851	12%	298,725	16%	167,576	12%
South America	42,084	3%	25,277	1%	19,158	1%
Africa	4,064	0%	14,432	1%	11,932	1%
Intercompany sales to CSS	(11,612)	(1)%	(24,892)	(1)%	(15,647)	(1)%
Total (net of intercompany)	$ 1,673,365		$ 1,884,074		$ 1,347,971	

(1) Includes intercompany sales to CSS.
(2) Includes sales to customers in Turkey.

In fiscal 2019, the five countries from which AMR derived its largest revenues from external customers were the United States, Bangladesh, Turkey, Vietnam, and South Korea which collectively accounted for 76% of total AMR external revenues. In fiscal 2018 and 2017, the five countries from which AMR derived its largest revenues from external customers accounted for 75% and 81%, respectively, of total AMR external revenues. We generally attribute revenues from external customers to individual countries based on the country in which the customer is located.

AMR's five largest external ferrous scrap metal customers accounted for 37% of external recycled ferrous metal revenues in fiscal 2019, compared to 33% and 31% in fiscal 2018 and 2017, respectively. AMR had no external customers that accounted for 10% or more of consolidated revenues in fiscal 2019, 2018 or 2017.

Total sales volumes of ferrous scrap metal vary from year-to-year due to the level of demand, availability of supply, general economic conditions, 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	**2019**		**2018**		**2017**	
	Revenues(1)	**Volume(2)**	**Revenues(1)**	**Volume(2)**	**Revenues(1)**	**Volume(2)**
Foreign	$ 824,596	2,475	$ 959,001	2,623	$ 608,339	2,197
Domestic	298,584	1,265	329,286	1,085	234,883	948
Total	$ 1,123,180	3,740	$ 1,288,287	3,708	$ 843,222	3,145

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

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	**2019**		**2018**		**2017**	
	Revenues(1)	**Volume(2)**	**Revenues(1)**	**Volume(2)**	**Revenues(1)**	**Volume(2)**
Foreign	$ 222,752	363,096	$ 264,628	357,389	$ 216,362	319,629
Domestic	207,609	245,198	217,149	214,316	178,615	221,162
Total	$ 430,361	608,294	$ 481,777	571,705	$ 394,977	540,791

(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 accounted for less than 10% of SSI’s consolidated revenues in each 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. Sanctions and trade actions, including tariffs, quotas and restrictions or bans on access to certain markets and licensing and inspection requirements can also impact pricing for the affected products. Ferrous and nonferrous scrap metal sales contracts generally provide for shipment within 30 to 60 days after the price is agreed to which, in most cases, 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 stable or rising recycled scrap 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, particularly 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 auto bodies 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 precious metals including platinum, palladium and rhodium. By consolidating shipments of auto bodies 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 66%, 71% and 70% of AMR's total ferrous sales volume in fiscal 2019, 2018 and 2017, respectively. 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 60%, 63% and 59% of AMR's total nonferrous sales volumes in fiscal 2019, 2018 and 2017, respectively. The substantial majority of AMR's nonferrous joint products recovered from the shredding process are sold to the export market and comprise in the range of 40% to 45% of AMR's total nonferrous sales volumes. China has historically been the primary destination for our nonferrous exports, representing 39%, 64% and 76% of AMR's total nonferrous export sales volumes in fiscal 2019, 2018 and 2017, respectively. The concentration of AMR's combined nonferrous exports to countries in Asia other than China and to Europe increased in fiscal 2019 and 2018 primarily in response to new regulations, increased inspection and licensing requirements, import quotas and tariffs on U.S. scrap imports put in place by China beginning in fiscal 2018.

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 20- to 30-ton capacity containers from 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. Both before and after retail customers have removed desired parts from acquired salvaged vehicles, we extract and consolidate certain valuable ferrous and nonferrous components from auto bodies for shipment by truck primarily to wholesale customers. We also remove and collect catalytic converters from salvaged vehicles for shipment by truck to specialty processers which extract the nonferrous precious metals. The salvaged auto bodies 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, 2019, AMR had a backlog of orders to sell $104 million of export ferrous metal compared to $86 million at the same time in the prior year primarily due to the timing of sales. Additionally, as of September 30, 2019, AMR had a backlog of orders to sell $28 million of export nonferrous metal compared to $34 million at the same time in the prior year primarily reflecting lower average selling prices. We expect to fill the entirety of the backlog of orders for export ferrous and nonferrous metal during fiscal 2020.

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 and end-of-life vehicles are the price offered by the purchaser, the proximity of the purchaser to the source of scrap metal and end-of-life vehicles, and the purchaser's ability to efficiently collect the scrap metal and end-of-life vehicles from certain suppliers' locations. AMR also competes with brokers that buy scrap metal on behalf of domestic and foreign steel mills.

Demand for AMR's products is cyclical in nature and sensitive to general economic conditions and other factors. 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 sanctions and trade actions, such as tariffs, quotas and other import restrictions, and by licensing and inspection requirements. Such restrictions may require us to perform additional processing and packaging 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.

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 primarily 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 537 thousand, 561 thousand and 489 thousand short tons of steel in the form of billets during fiscal 2019, 2018 and 2017, respectively. The substantial majority of these billets are reheated in a natural gas-fueled furnace and are then hot-rolled through the rolling mill to produce finished steel products. The rolling mill has an effective annual production capacity under current conditions of approximately 580 thousand tons of finished steel products.

Our steel mill has an operating permit issued under Title V of the Clean Air Act Amendments of 1990, which governs certain air quality standards. The permit is based on an annual production capacity of approximately 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. CSS monitors the market for new products in order to identify opportunities to expand its product lines and sales.

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

	2019		2018		2017	
	Revenues(1)	**Volume(2)**	**Revenues(1)**	**Volume(2)**	**Revenues(1)**	**Volume(2)**
Finished steel products	$ 358,851	477,511	$ 363,849	519,162	$ 280,206	495,516

(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 2019, CSS sold its finished steel products to customers located primarily in the Western U.S. and Western Canada. Customers in California accounted for 54%, 48%, and 53% of CSS's steel revenues in fiscal 2019, 2018 and 2017, respectively. CSS's ten largest steel customers accounted for 49%, 46% and 51% of its steel revenues during fiscal 2019, 2018 and 2017, respectively. No CSS steel customer accounted for 10% or more of SSI's consolidated revenues in fiscal 2019, 2018 or 2017.

The metals recycling operations within CSS also sell ferrous and nonferrous recycled metal products to external customers comprising primarily steel mills, foundries, refineries, smelters and other 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 and alloys, as well as regional demand in the West Coast market. Selling prices for our finished steel products may also be affected by the price and availability of 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. 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 5%, 4%, and 5% of CSS's cost of goods sold in fiscal 2019, 2018 and 2017, respectively.

Backlog

As of September 30, 2019 and 2018, CSS had a backlog of finished steel orders of $14 million and $33 million, respectively. We expect to fill the entirety of the backlog of orders for finished steel products during fiscal 2020.

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, and Commercial Metals Company's manufacturing facilities in Arizona and California. 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.

For more than a decade, CSS's steel manufacturing operation, as part of a U.S. industry coalition, 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. During fiscal 2019, 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 Belarus, Brazil, China, Indonesia, Italy, Korea, Mexico, Moldova, Russia, South Africa, Spain, Ukraine, United Arab Emirates, the United Kingdom, and Trinidad and Tobago; and countervailing duty orders were in effect related to imports of wire rod from Brazil, China, 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 sunset decision in October 2018, orders covering these countries remain in place for another five years. The third sunset review covering wire rod from Brazil, Indonesia, Mexico, Moldova and Trinidad and Tobago, was initiated in June 2019 and is pending. The first sunset review covering rebar from Mexico and Turkey (from the 2014 investigation) will commence in October 2019.

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 that 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.

In March 2018, the President of the United States imposed tariffs in the amount of 25 percent and 10 percent on imports of certain steel and aluminum products, 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. In May 2019, the President announced an agreement with Canada and Mexico that eliminated the Section 232 tariffs on steel from those countries. As part of the agreement, Mexico and Canada also suspended their retaliatory duties on U.S. imports. The elimination of the 25% duty on U.S.-origin steel imports into Canada has allowed CSS to resume shipping steel to Western Canada. Sales of finished steel products to customers in Canada represented 3%, 7%, and 6% of our steel mill's external sales in fiscal 2019, 2018, and 2017, respectively. The European Union continues to impose retaliatory duties on U.S.-origin steel imports. The Department of Commerce also implemented an exclusion process whereby U.S. entities can request that certain products be excluded from the Section 232 tariffs. CSS reviews any exclusion requests relevant to its product line to determine whether an objection might be appropriate.

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:

- 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 United States Environmental Protection Agency (“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 2019, capital expenditures related to environmental projects were $36 million, and we expect to spend in the range of $15 million on capital expenditures related to environmental projects in fiscal 2020.

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 requirements. 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 which is not subject to GHG legislation and regulation, 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, the EAF at our steel mill 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. Potential adverse impacts from climate change, including rising temperatures and extreme weather conditions, may create health and safety issues for employees operating at our facilities and may lead to an inability to maintain standard operating hours.

Employees

As of September 30, 2019, we had 3,363 full-time employees, consisting of 2,581 employees at AMR, 595 employees at CSS and 187 corporate administrative and shared services employees. Of these employees, 735 were covered by collective bargaining agreements. The Cascade Steel Rolling Mills contract with the United Steelworkers of America, which covers 279 of these employees, was renewed and ratified in October 2019 and will expire on March 31, 2022. 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*).

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 owns or operates 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 $155 million in investigation-related costs over an approximately 18 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. The parties have filed various motions to dismiss or stay this suit, and in August 2019, the court issued an order denying the motions to dismiss and staying the action. A number of parties have filed to appeal the court's denial of the motions to dismiss, which filing we joined in part. We intend to defend against the claims in this suit 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 estimated that our share of the costs of performing such work would 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. As of August 31, 2019 and 2018, our loss contingencies include $1 million and $2 million, respectively, for our estimated share of the costs of the investigation, including pre-remedial design investigative activities.

The pre-remedial design investigation and baseline sampling work has been completed, and the report evaluating the data was submitted to EPA on June 17, 2019. The evaluation report concludes that Site conditions have improved substantially since the data forming the basis of the ROD was collected over a decade ago. The analysis contained in the report has significant implications for remedial design and remedial action at the Site. EPA has reviewed the report, finding with a few limited corrections that the data is of suitable quality and generally acceptable and stating that such data will be used, in addition to existing and forthcoming design-level data, to inform implementation of the ROD. However, EPA did not agree that the data or the analysis support the conclusions presented in the report. We and other PRPs disagree with EPA's position on use of the more recent data and are reviewing EPA's comments and our options.

EPA has stated that it wants PRPs to step forward (individually or in groups) to enter into consent agreements to perform remedial design covering the entire Site and has proposed dividing the Site into eight to ten subareas for remedial design. EPA has indicated that it may pursue enforcement or other actions against PRPs who have not entered into consent agreements to perform remedial design by the end of 2019. We have engaged in good-faith negotiations with EPA with respect to potentially performing remedial design; but it is unclear whether we will reach agreement with EPA, and the timing for completion of remedial design is uncertain but could take three to four years.

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, which is on-going. We would expect the next major stage of the allocation process to proceed in parallel with the remedial design process.

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), remedial design, remedial action 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 nonresidential and infrastructure 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 sanctions and tariffs, quotas and other trade actions and import restrictions may adversely affect our operating results, financial condition and cash flows

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 66 to 71 percent of AMR's ferrous sales volumes and 60 to 63 percent of AMR's nonferrous sales volumes. Further, in certain recent years prior to fiscal 2019, 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, sanctions, 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 operating results, financial condition and cash flows.

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. 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. Commencing July 1, 2019, China imposed further restrictions in the form of import license requirements and quotas on certain scrap products, including certain nonferrous products we sell. We have continued to sell our recycled metal products into China; however, additional or modified license requirements and quotas, as well as additional product quality requirements, may be issued in the future. We believe that the potential impact on our recycling operations of the Chinese regulatory actions described above could include requirements that would necessitate additional processing and packaging of certain nonferrous recycled scrap metal products, 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 delays in the issuance of licenses, restrictive quotas or 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 beyond existing planned investments 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 beyond that already experienced and further 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, but this impact could be material.

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, alloys 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 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 graphite electrodes, alloys 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. In fiscal 2019, weaker market conditions for recycled metals, primarily due to slower global economic growth and the effects of tariffs and other regulatory measures, resulted in lower average net selling prices for our ferrous and nonferrous recycled metal products compared to fiscal 2018. Average net selling prices for ferrous recycled metal have trended downwards since the third quarter of fiscal 2018. 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. Operating results at AMR in fiscal 2019 decreased significantly compared to fiscal 2018 as a result of operating margin compression from the decline in average net selling prices for our recycled metal products which outpaced the reduction in purchase costs for raw materials. 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 Income 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 the past, 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, 2019. 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 with allocated goodwill 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.

Impairment of long-lived assets and equity 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 equity method, a loss in value of an investment is recognized when the decline is other than temporary. With respect to our $6 million equity investment in a privately-held waste and recycling entity that does not have a readily determinable fair value, we would recognize an impairment charge if our qualitative assessment indicates that the investment is impaired and the fair value of the investment is less than its carrying value. Impairment of our equity investments could have a material adverse effect on our results of operations. 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 achieve or sustain the benefits from productivity, cost savings and restructuring initiatives may adversely impact our operating results

During the past several years, we implemented a number of productivity improvement, cost savings 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. In fiscal 2017, we substantially completed a multi-year program of these initiatives. In fiscal 2019, we implemented productivity initiatives targeted to achieve $35 million in annual benefits through a combination of production cost efficiencies, reductions in selling, general and administrative expenses and increases in retail sales. We may undertake similar or additional productivity initiatives in the future in the normal course or in response to market conditions. Our ability to achieve or sustain the anticipated cost reductions and other benefits from these initiatives within the expected time frame is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, some of which are beyond our control.

We incurred restructuring charges and other exit-related activities in fiscal 2019, 2018 and 2017 as a result of these initiatives and may incur such charges in the future. Failure to achieve or sustain the expected cost reductions and other benefits related to these productivity improvements, cost savings and restructuring initiatives could have a material adverse effect on our results of operations and cash flows.

Failure to realize or delays in realizing 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. Such investments may be subject to permitting, construction or other delays, and commissioning and technology performance risks, some of which are outside our control. Failure to realize or delays in realizing 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.

We may be unable to renew facility leases, thus restricting our ability to operate

We lease a significant portion of our facilities, including the substantial majority of our auto parts facilities. The cost to renew such leases may increase significantly, and we may not be able to renew such leases on commercially reasonable terms or at all. Failure to renew these leases or locate desirable alternatives for our facilities 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.

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

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

- Difficulty integrating the acquired businesses' personnel and operations;
- Challenges in obtaining permits or meeting other regulatory requirements;
- Potential loss of key employees, customers or suppliers 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;
- Disruption to existing businesses; and
- Difficulty in managing growth.

If we do not successfully execute on acquisitions or expansions and the acquired or expanded 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, 2019 and 2018, 32% and 33%, respectively, of our 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, the Mediterranean region and North, Central and South America. A strengthening U.S. dollar, as experienced during recent years including fiscal 2019, 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 risks associated with fluctuations in foreign currency exchange rates

Our operations in Canada expose us to translation 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.

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 also 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.

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

We significantly 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, rail cars, barges 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 business operations and recycling and manufacturing processes depend on critical pieces of equipment, including information technology equipment, 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 and contingencies, see “Legal Proceedings” in Part I, Item 3 and “Contingencies – Other” within Note 8 – Commitments and Contingencies in Part II, Item 8 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. Increased frequency and duration of 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. Potential adverse impacts from climate change, including rising temperatures and extreme weather conditions, may create health and safety issues for employees operating at our facilities and may lead to an inability to maintain standard operating hours.

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 the past, we have recorded significant valuation allowances against our deferred tax assets, and our low annual effective tax rate in fiscal 2017 was primarily the result of our full valuation allowance positions at the time. 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. federal and state and Canadian deferred tax assets resulting in recognition of discrete tax benefits. The release of the valuation allowances was the result of sufficient positive evidence at the time, 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”). The effects of the Tax Act have been incorporated into our financial results beginning in the second quarter of fiscal 2018. 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 and 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. We have seen an increased focus by federal, state and local regulators on metals recycling and auto dismantling facilities and new or expanding regulatory requirements.

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 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. 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 and “Contingencies – Environmental” in Note 8 – Commitments and Contingencies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

Governmental agencies may refuse to grant or renew our licenses and permits, 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. Changes in zoning and increased residential and mixed-use development near our facilities are reducing the buffer zones and creating land use conflicts with heavy industrial uses such as ours. This could result in increased complaints, increased inspections and enforcement including fines and penalties, operating restrictions, the need for additional capital expenditures and increased opposition to maintaining or renewing required approvals, licenses and permits. 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.

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 requirements. 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 22% 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.

ITEM 2. PROPERTIES

Our facilities and administrative offices by division, type and location were as follows as of August 31, 2019:

			Number of Facilities			
Division	Type	Location	Owned(1)		Leased	
AMR:	Administrative Offices	California	—		2	
		New York	—		1	
		Rhode Island	—		1	
	Auto Parts Stores	Alberta, Canada	—		3	
		Arkansas	—		1	
		British Columbia, Canada	—		1	
		California(2)	3		16	
		Florida	—		1	
		Illinois	—		1	
		Indiana	1		—	
		Kansas	—		1	
		Missouri	1		3	
		Nevada	—		2	
		Ohio	—		1	
		Oregon	—		2	
		Rhode Island	2		—	
		Texas	—		5	
		Utah	—		1	
		Virginia	—		1	
		Washington	1		4	
	Metals Recycling	Alabama	3		—	
		British Columbia, Canada	—		4	
		California	4	[A][B]	—	
		Georgia	8		—	
		Hawaii	1	[A][B]	1	
		Maine	2		—	
		Massachusetts	2	[A][B]	2	
		Montana	1		—	
		Nevada	—		1	
		New Hampshire	2		—	
		Puerto Rico	1	[A][B]	3	
		Rhode Island	1		1	[A]
		Tennessee	1		—	
		Washington	1	[A][B]	1	
CSS:	Steel Mill	Oregon	1		—	
	Steel Distribution	California	1		—	
	Metals Recycling	Oregon	4	[A][B]	—	
		Washington	1		—	
Corporate:	Administrative Offices	Oregon	—		1	
		Total Operating Facilities and Administrative Offices	42		61	
		Non-Operating(3)	11		13	
		Total Facility and Administrative Offices	53		74	

[A] Operation includes a deep water port. Puerto Rico and Hawaii operations access deep water ports through public docks.
[B] Includes large-scale shredding operations.
(1) Includes 5 primarily owned facilities where an adjacent or supplementary parcel of the site is leased.
(2) Three sites are jointly owned with minority interest partners.
(3) Non-operating sites consist of owned and leased real properties, some of which are sublet to external parties.

We consider all operating properties, both owned and leased, to be well-maintained, in good operating condition and suitable and adequate to carry on our business. For further discussion of our operating properties, see “AMR-Business,” “AMR-Distribution,” “CSS-Business” and “CSS-Distribution” in Part I, Item 1 of this report

ITEM 3. LEGAL PROCEEDINGS

From time to time, we are involved in various litigation matters that arise in the ordinary course of business involving normal and routine claims, including environmental compliance matters. Such proceedings include, but are not limited to, proceedings relating to our status as a potentially responsible party with respect to the Portland Harbor Superfund Site, proceedings relating to other legacy environmental issues, and proceedings arising from accidents involving Company-owned vehicles, including Company tractor trailers. For additional information regarding such matters, see Note 8 – Commitments and Contingencies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report. Except as described in such Note, we currently believe that the ultimate outcome of these proceedings, individually or in the aggregate, will not have a material adverse effect on our consolidated financial position, results of operations, cash flows or business.

In fiscal 2013, the Commonwealth of Massachusetts advised us of alleged violations of environmental requirements, including but not limited to those related to air emissions and hazardous waste management, at our operations in the Commonwealth. We actively engaged in discussions with the Commonwealth's representatives, which resulted in a settlement agreement to resolve the alleged violations. A consent judgment was jointly filed with and entered by the Superior Court for the County of Suffolk, Commonwealth of Massachusetts on September 24, 2015. The settlement involved a $450 thousand cash payment, an additional $450 thousand in suspended payments to be waived upon completion of a shredder emission control system and certain other specified milestones, and $350 thousand in supplemental environmental projects that we have completed.

We are continuing settlement discussions with the Alameda County District Attorney and the California Office of the Attorney General (COAG), the latter on behalf of certain state agencies, regarding alleged violations of environmental requirements, including but not limited to those related to hazardous waste management and water quality, at one of our operations in California stemming from investigations initiated in 2013 and inspections conducted in 2015. In conjunction with the on-going settlement discussions, we have completed or have underway various facility upgrades and remedial activities that are included in our capital expenditure budget and that we believe will resolve the underlying environmental concerns identified by the agencies. We have also continued to dispute certain of the allegations that have been raised and maintain that the operational practices giving rise to those allegations were in compliance with applicable laws. To date, no complaint has been filed by the District Attorney or the State of California although we anticipate that the settlement of this matter will ultimately involve the simultaneous filing of a complaint and a stipulation (settlement). We expect the final settlement will include a civil penalty, some amount of which may be satisfied through performance of a Supplemental Environmental Project, and reimbursement of the agencies’ enforcement costs. We do not expect to enter into settlement until after completion of the agreed-upon facility upgrades, but based on the discussion to date and the government’s positive response to the facility improvements that have been completed or are underway, we do not believe that the potential penalty or agencies’ enforcement costs associated with resolution of this enforcement proceeding will be material to our financial position, results of operations, cash flows or liquidity.

The COAG has also received a formal enforcement referral relating to another facility that we operate in California. This matter grew out of an agency inspection of the facility in 2014 and subsequent issuance of a Summary of Violations in 2015 setting forth a number of alleged violations relating to hazardous waste management requirements. We disputed the allegations in our response to the Summary of Violations, and the state agency referred the matter to COAG. COAG and Schnitzer Fresno, Inc., a wholly-owned subsidiary, which operates the facility, have agreed to settle the matter for $490 thousand, of which $368 thousand shall be paid as a civil penalty and $122 thousand shall be paid for agency investigation and enforcement costs. We are in the process of negotiating the settlement documentation and we do not believe the resolution of this threatened enforcement proceeding will be material to our financial position, results of operations, cash flows or liquidity.

In addition, we were informed in late July 2017 that the New Hampshire Office of the Attorney General (NHOAG) is contemplating bringing a civil action in connection with a legacy environmental issue at a closed facility in New Hampshire owned and previously operated by New England Metal Recycling LLC (NEMR), an indirectly wholly-owned subsidiary. This matter had been formally referred to the NHOAG and relates to subsurface automotive shredder residue (ASR) located at the site that we discovered and self-reported in response to findings from a routine inspection of the site by the New Hampshire Department of Environmental Services (NHDES) in May 2015. It appears that this subsurface ASR dates back to 2006 or before and may have resulted from the failure to complete a corrective action plan in 2006, although a former NEMR employee reported at the time that the work had been completed. In April 2017, NEMR received a letter of deficiency alleging violations of environmental requirements relating to the characterization and disposal of hazardous waste in connection with the subsurface ASR. We have commenced removal of a portion of the material and are finalizing agreement with the NHDES on a remedial action plan for the remainder of the material. On June 15, 2018, the NHOAG sent a letter indicating their intent to file a petition seeking civil penalties and injunctive relief in this matter. The letter included a draft petition and stated the NHOAG’s interest in beginning negotiations which may lead to a resolution of this matter. The Company had previously entered into a tolling agreement with the NHOAG and has entered into negotiations with the NHOAG to settle this matter. Based on the nature of the specific allegations and the fact that the activities in question were conducted more than ten years ago, as well as our self-reporting of the matter and cooperation to date in proactively pursuing a remediation action plan, we do not believe the resolution of this threatened enforcement proceeding will be material to our financial position, results of operations, cash flows or liquidity.

In January 2018, the Company received a finding of violation letter from EPA with respect to alleged violations of environmental requirements stemming from refrigerant recovery management program inspections at 12 of our facilities in the New England and Pacific Northwest regions in July 2017 and November 2017. Except with respect to a minor and now corrected non-compliance matter at one facility, we believe that we have fully complied with the relevant regulations. Nevertheless, in December 2017 and prior to receipt of the EPA letter, we implemented improvements to our refrigerant recovery management program to further strengthen that program, including improvements to address concerns raised by EPA during the inspections. We have conferred with EPA regarding the alleged violations and are in negotiations with EPA to settle this matter. Based on the settlement discussions to date and the program improvements we have implemented or have proposed to implement, we do not believe that the outcome of this matter will be material to our financial position, results of operations, cash flows or liquidity.

In February 2019, the Company received a letter sent on behalf of the District Attorneys for six counties in California notifying the Company of a joint investigation into the alleged mishandling of hazardous materials and hazardous waste and into the Company’s disposal practices, as well as alleged water pollution violations, at various Pick-n-Pull locations within California and requesting a meeting to discuss the alleged violations. Due to the Company’s commitment to compliance with environmental requirements we are implementing additional compliance measures. Based on these additional actions and the initial discussions with the District Attorneys’ offices, we expect to negotiate a settlement of this matter that will address the concerns raised in this joint investigation. There has been no discussion to date of potential monetary sanctions.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Information about our executive officers is incorporated by reference from Part III, Item 10 of this annual report.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our Class A common stock is listed on the NASDAQ Global Select Market ("NASDAQ") under the symbol SCHN. There were 168 holders of record of Class A common stock on October 22, 2019. Our Class A common stock has been trading since November 16, 1993. Our Class B common stock is not publicly traded. There was one holder of record of Class B common stock on October 22, 2019.

We declared our 102nd consecutive quarterly dividend in the fourth quarter of fiscal 2019. The payment of future dividends is subject to approval by our Board of Directors and continued compliance with the terms of our credit agreement. 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 our credit agreement.

Issuer Purchases of Equity Securities

Pursuant to a share repurchase program as amended in 2001, 2006 and 2008, we were authorized to repurchase up to nine million shares of our Class A common stock when management deems such repurchases to be appropriate. We may repurchase our common stock for a variety of reasons, such as to optimize our capital structure and to offset dilution related to share-based compensation arrangements. We consider several factors in determining whether to make share repurchases including, among other factors, our cash needs, the availability of funding, our future business plans and the market price of our stock. We repurchased approximately 516 thousand shares for a total of $17 million in open-market transactions in fiscal 2018, and approximately 527 thousand shares for a total of $13 million in open-market transactions in fiscal 2019. As of August 31, 2019, there were approximately 759 thousand shares available for repurchase under the program.

The share repurchase program does not require us to acquire any specific number of shares, and we may suspend, extend or terminate the program at any time without prior notice and the program may be executed through open-market purchases, privately negotiated transactions or utilizing Rule 10b5-1 programs.

The table presents a summary of our share repurchases during the quarter ended August 31, 2019:

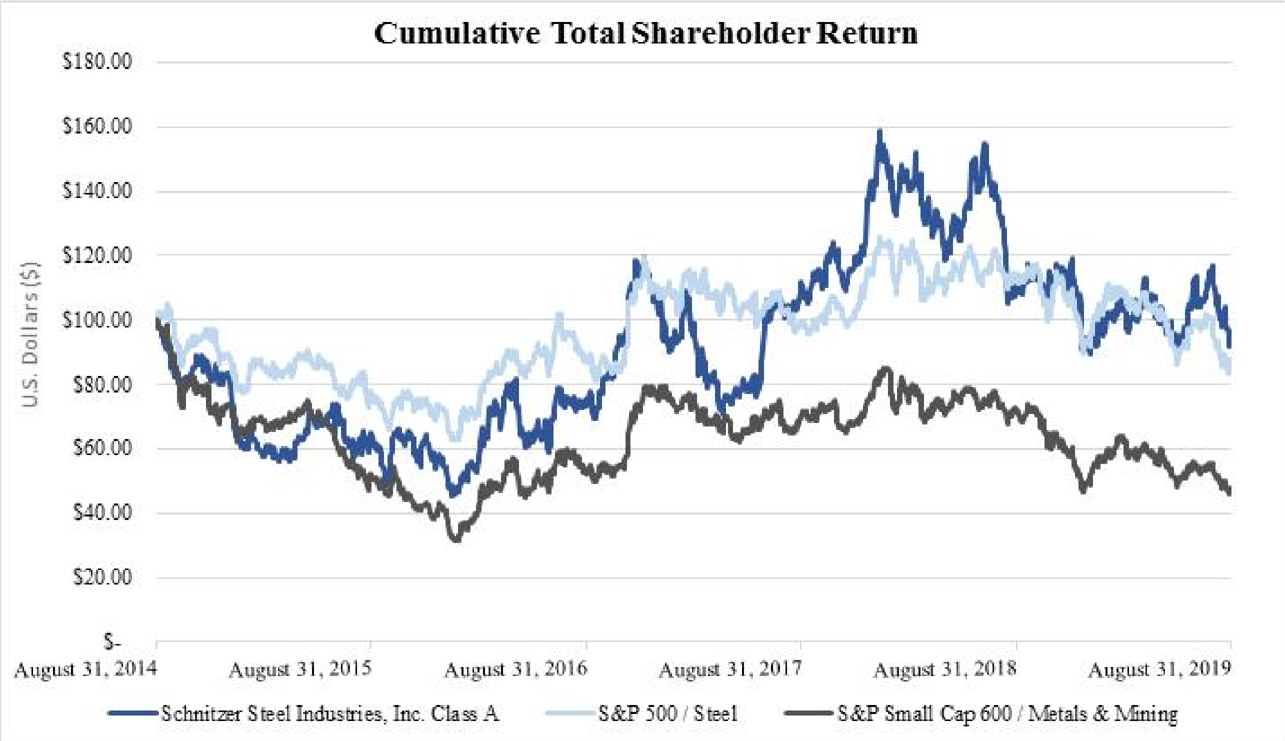
Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that may yet be Purchased Under the Plans or Programs
June 1 – June 30, 2019	—	$ —	—	873,680
July 1 – July 31, 2019	114,740	$ 26.12	114,740	758,940
August 1 – August 31, 2019	—	$ —	—	758,940
Total fourth quarter 2019	114,740		114,740	

Securities Authorized for Issuance under Equity Compensation Plans

See Note 12 - Share-Based Compensation in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report for information regarding securities authorized for issuance under share-based compensation plans.

Performance Graph

The following graph and related information compares cumulative total shareholder return on our Class A common stock for the five-year period from September 1, 2014 through August 31, 2019, with the cumulative total return for the same period of (i) the S&P 500 Steel Index and (ii) the S&P 600 Metals & Mining Index. These comparisons assume an investment of $100 at the commencement of the five-year period and that all dividends are reinvested. The stock performance outlined in the performance graph below is not necessarily indicative of our future performance, and we do not endorse any predictions as to future stock performance.



	Year Ended August 31,					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
Schnitzer Steel Industries(1)	$ 100	$ 65	$ 74	$ 109	$ 110	$ 95
S&P 500 Steel	$ 100	$ 78	$ 87	$ 99	$ 112	$ 88
S&P 600 Metals & Mining	$ 100	$ 52	$ 52	$ 70	$ 72	$ 47

(1) Because we operate in two distinct but related businesses, we have no direct market peer issuers.

ITEM 6. SELECTED FINANCIAL DATA

The following table sets forth selected consolidated financial and other data for each of the five years ended August 31, 2019. The selected consolidated financial and other data presented below should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations set forth in Part II, Item 7 of this Annual Report on Form 10-K and the consolidated financial statements and the accompanying notes set forth in Part II, Item 8 of this Annual Report on Form 10-K.

	Year ended August 31,				
	2019	2018	2017	2016	2015
STATEMENT OF OPERATIONS DATA:					
(in thousands, except per share amounts)					
Revenues	$ 2,132,781	$ 2,364,715	$ 1,687,591	$ 1,352,543	$ 1,915,399
Operating income (loss)(1)	$ 83,865	$ 148,988	$ 56,013	$ (7,842)	$ (195,529)
Income (loss) from continuing operations	$ 58,570	$ 159,443	$ 47,368	$ (16,240)	$ (187,849)
(Loss) income from discontinued operations, net of tax(2)	$ (248)	$ 346	$ (390)	$ (1,348)	$ (7,227)
Net income (loss) attributable to SSI shareholders	$ 56,345	$ 156,451	$ 44,511	$ (19,409)	$ (197,009)
Income (loss) per share from continuing operations attributable to SSI shareholders (diluted)	$ 2.01	$ 5.46	$ 1.60	$ (0.66)	$ (7.03)
Net income (loss) per share attributable to SSI shareholders (diluted)	$ 2.00	$ 5.47	$ 1.58	$ (0.71)	$ (7.29)
Dividends declared per common share	$ 0.75	$ 0.75	$ 0.75	$ 0.75	$ 0.75
OTHER DATA:					
Sales volumes (in thousands)(3):					
AMR recycled ferrous metal (LT)(4)	3,740	3,708	3,145	2,899	3,186
AMR recycled nonferrous metal (pounds)	608,294	571,705	540,791	473,737	539,850
CSS finished steel products (ST)	478	519	496	488	540
Average net selling price(3)(5):					
AMR recycled ferrous metal (per LT)	$ 289	$ 317	$ 242	$ 193	$ 264
AMR recycled nonferrous metal (per pound)	$ 0.59	$ 0.72	$ 0.63	$ 0.60	$ 0.74
CSS finished steel products (per ST)	$ 713	$ 666	$ 534	$ 522	$ 639

	August 31,				
	2019	2018	2017	2016	2015
BALANCE SHEET DATA (in thousands):					
Total assets	$ 1,160,746	$ 1,104,817	$ 933,755	$ 891,429	$ 962,299
Long-term debt, net of current maturities	$ 103,775	$ 106,237	$ 144,403	$ 184,144	$ 227,572

(1) Operating loss in fiscal 2016 includes a goodwill impairment charge of $9 million, asset impairment charges of $21 million, and restructuring charges and other exit-related activities of $7 million. Operating loss in fiscal 2015 includes a goodwill impairment charge of $141 million, asset impairment charges of $45 million, and restructuring charges and other exit-related activities of $13 million.

(2) In fiscal 2015, the Company ceased operations at seven auto parts stores, six of which qualified for discontinued operations reporting and whose results have been removed from other data on continuing operations for all periods presented, as applicable.

(3) Tons for recycled ferrous metal are LT (Long Ton, which is equivalent to 2,240 pounds) and for finished steel products are ST (Short Ton, which is equivalent to 2,000 pounds).

(4) The Company sold to external customers or delivered to its steel mill an aggregate of 4,319 thousand, 4,299 thousand, 3,628 thousand, 3,289 thousand, and 3,708 thousand tons of ferrous recycled scrap metal in fiscal 2019, 2018, 2017, 2016, and 2015, respectively. Company-wide ferrous volumes include total ferrous sales volumes for AMR, ferrous tons sold externally by CSS, and ferrous tons delivered by CSS's metals recycling operations to its steel mill, net of inter-segment eliminations.

(5) In accordance with generally accepted accounting principles, the Company's revenues include amounts billed to customers for freight; however, average net selling prices are shown net of amounts billed for freight.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This section includes a discussion of our operations for the fiscal years ended August 31, 2019 and 2018. The following discussion and analysis provides information which management believes is relevant to an assessment and understanding of our financial condition and results of operations. The discussion should be read in conjunction with the Consolidated Financial Statements and the related notes thereto in Part II, Item 8 of this report and the Selected Financial Data contained in Part II, Item 6 of this report.

For discussion of our results of operations for fiscal year 2017 including comparison to fiscal 2018 refer to Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations in our Annual Report on Form 10-K for the year ended August 31, 2018, which was filed with the Securities and Exchange Commission on October 24, 2018.

Business

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.

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.

We use segment operating income to measure our segment performance. We do not allocate corporate interest income and expense, income taxes, and other income and expense to our reportable segments. Certain expenses related to shared services that support operational activities and transactions are allocated from Corporate to the segments. Unallocated Corporate expense consists primarily of expense for management and certain administrative services that benefit both reportable segments. In addition, we do not allocate certain items to segment operating income because management does not include the information in its measurement of the performance of the operating segments. Such unallocated items include restructuring charges and other exit-related activities, charges (net of recoveries) related to legacy environmental matters, and provisions for certain legal matters. Because of the unallocated income and expense, the operating income of each reportable segment does not reflect the operating income the reportable segment would report as a stand-alone business. The results of discontinued operations are excluded from segment operating income and are presented separately, net of tax, from the results of ongoing operations for all periods presented. 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.

Our results of operations depend in large part on the demand and prices for recycled metal in foreign and domestic markets and on the supply of raw materials, including end-of-life vehicles, available to be processed at our facilities. We respond 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 our operating income. We believe we generally benefit from sustained periods of rising recycled scrap metal selling prices, which allow us to better maintain or increase both operating income and unprocessed scrap metal flow into our facilities. When recycled scrap metal selling prices decline, particularly for a sustained period, our operating margins typically compress.

Our deep water port facilities on both the East and West Coasts of the U.S. (in Everett, Massachusetts; Providence, Rhode Island; Oakland, California; Tacoma, Washington; and Portland, Oregon) and access to public deep water port facilities (in Kapolei, Hawaii and Salinas, Puerto Rico) allow us to efficiently meet the global demand for recycled ferrous metal by enabling us to ship bulk cargoes to steel manufacturers located in Europe, Africa, the Middle East, Asia, North America, Central America, and South America. Our exports of nonferrous recycled metal are shipped in containers through various public docks to specialty steelmakers, foundries, aluminum sheet and ingot manufacturers, copper refineries and smelters, brass and bronze ingot manufacturers, wire and cable producers, wholesalers, and other recycled metal processors globally. We also transport both ferrous and nonferrous metals by truck, rail and barge in order to transfer scrap metal between our facilities for further processing, to load shipments at our export facilities, and to meet regional domestic demand.

Our results of operations also depend on the demand and prices for our finished steel products, the manufacture of which uses internally sourced ferrous recycled scrap metal as the primary feedstock, as well as other raw materials. Our steel mill in Oregon sells to industrial customers primarily in North America.

Our quarterly operating results fluctuate based on a variety of factors including, but not limited to, changes in market conditions for ferrous and nonferrous recycled metal and finished steel products, the supply of scrap metal in our domestic markets, and varying demand for used auto parts from our self-service retail stores. Certain of these factors are influenced, to a degree, by the impact of seasonal changes including severe weather conditions, which can impact the timing of shipments and inhibit construction activity utilizing our products, scrap metal collection at our facilities and production levels in our yards, and retail admissions and parts sales at our auto parts stores. Further, trade actions, including tariffs and any retaliation by affected countries, and licensing and inspection requirements can impact the level of profitability on sales of our products and, in certain cases, impede or restrict our ability to sell to certain export markets or require us to direct our sales to alternative market destinations, which can cause our quarterly operating results to fluctuate. For further information regarding the potential impact of changing conditions in global markets including the impact of tariffs, quotas and other trade actions and import restrictions on our business and results of operations, see Part I, Item 1A. Risk Factors of this report.

Strategic Priorities

As we continue to closely monitor economic conditions, we remain focused on the following core strategies and plans to meet our business goals and objectives:

- Long-term expansion of ferrous and nonferrous scrap metal supply and processing, sales volumes and operating margins;
- Technology investments and process improvements to increase the separation and recovery of recycled materials from our shredding process and to expand product optionality;
- Productivity and continuous improvement initiatives to ensure the safety of our employees, increase operating efficiency and effectiveness, advance sustainable business practices, improve natural resource stewardship, and reduce operating expense;
- Use of our seven deep water ports and ground-based logistics network to directly access customers domestically and internationally to meet demand for our products wherever it is greatest;
- Further optimization of our integrated recycling and steel manufacturing operating platforms to maximize opportunities for synergies, cost efficiencies and volumes; and
- Increase market share through initiatives to maximize volumes and through selective partnerships, alliances and acquisitions.

Key economic factors and trends affecting the industries in which we operate

We sell recycled metals to the global steel industry for the production of finished steel. Our financial results largely depend on supply of raw materials in the U.S. and Western Canada and demand for recycled metal in foreign and domestic markets and for finished steel products in the Western U.S. Demand for most of our products is cyclical in nature and sensitive to changes in general economic conditions. The timing and magnitude of the economic cycles in the industries in which our products are used, including global steel manufacturing and nonresidential and infrastructure construction in the U.S., are difficult to predict. Global economic conditions, changes in supply and demand conditions, the strength of the U.S. dollar, the availability and price of raw material alternatives, and trade actions such as tariffs affect market prices for and sales volumes of recycled ferrous and nonferrous metal in global markets and steel products in the Western U.S. and can have a significant impact on the results of operations for our reportable segments.

Beginning in the second half of fiscal 2016 through fiscal 2018, the combination of improved U.S. and global economic growth, lower Chinese steel exports, and increased use of EAFs by steel manufacturers in other export markets contributed to improved demand and prices for ferrous recycled scrap metal, positively impacting our operating results. In fiscal 2018, selling prices for ferrous recycled metal rose during the first three quarters followed by a modest decrease in the fourth quarter. The higher price environment for scrap metal during fiscal 2018 together with benefits from increased sales diversification, commercial initiatives to improve supply channels and a strong U.S. economy led to an increase in scrap supply flows into our facilities, including end-of-life vehicles, resulting in higher processed volumes compared to recent prior years. The higher average selling prices supported an expansion of the spread between direct purchase costs and selling prices of ferrous recycled metal compared to the prior year. Our operating margins also benefited from improved volumes of nonferrous material from end-of-life vehicles and the shredding process, partially offset by operating margin compression experienced near the end of fiscal 2018 as a result of a decrease in average net selling prices for certain nonferrous products driven primarily by the global impact of new regulations and measures put into place by China during the year, including import regulations and tariffs on U.S. scrap imports.

In fiscal 2018, our CSS business benefited from reduced price pressure from steel imports, the impact of U.S. tariffs on steel imports, and steady demand for finished steel products in the West Coast markets which contributed to higher selling prices for our finished steel products. CSS experienced improved metal margins in fiscal 2018 from selling prices increasing faster than raw material purchase prices which, in combination with operational synergies gained following the integration of our steel manufacturing and Oregon metals recycling operations in the fourth quarter of fiscal 2017, led to significantly improved results compared to the prior year.

In fiscal 2019, weaker market conditions for recycled metals, primarily due to slower global economic growth and the effects of tariffs and other regulatory measures, resulted in lower average net selling prices for our ferrous and nonferrous recycled metal products and lower ferrous export sales volumes compared to fiscal 2018. Operating results at AMR in fiscal 2019 decreased significantly compared to fiscal 2018 as a result of operating margin compression from the decline in average net selling prices for our recycled metal products which outpaced the reduction in purchase costs for raw materials. Average net selling prices for ferrous recycled metal have trended downwards since the third quarter of fiscal 2018. Domestic ferrous sales volumes in fiscal 2019 increased compared to the prior year, reflecting strong demand in the U.S. market particularly during the first half of fiscal 2019, partially offsetting the adverse impact of the weaker ferrous export market conditions and lower average net selling prices. Nonferrous average net selling prices in fiscal 2019 decreased significantly compared to fiscal 2018 primarily reflecting reduced demand for nonferrous products globally, as well as the continued impact of Chinese import restrictions and tariffs on certain nonferrous products put into place starting in the second half of fiscal 2018.

In fiscal 2019, CSS benefited from reduced pressure from steel imports and higher net selling prices for finished steel products particularly during the first quarter of fiscal 2019, resulting in higher finished steel margins in fiscal 2019 compared to the prior year. However, these benefits were more than offset by lower finished steel and recycled metal sales volumes and increased steelmaking consumables costs compared to fiscal 2018, resulting in lower operating results at CSS year-over-year.

Executive Overview of Financial Results

We generated consolidated revenues of $2.1 billion in fiscal 2019, a decrease of 10% from the $2.4 billion of consolidated revenues generated in fiscal 2018, primarily reflecting weaker market conditions for recycled metals globally resulting in lower average net selling prices for our ferrous and nonferrous products compared to the prior year. In fiscal 2019, the average net selling prices for ferrous and nonferrous recycled metal at AMR were 9% and 18% lower, respectively, compared to the prior year. Steel revenues in fiscal 2019 were flat compared to the prior year reflecting the impact of higher average net selling prices for our finished steel products offset by lower finished steel sales volumes compared to the prior year.

Consolidated operating income was $84 million in fiscal 2019, compared to $149 million in fiscal 2018. AMR reported operating income in fiscal 2019 of $96 million, compared to $169 million in the prior year. The decrease in AMR operating results in fiscal 2019 was primarily the result of operating margin compression from the decline in average net selling prices for our ferrous and nonferrous products which outpaced the reduction in purchase costs for raw materials, partially offset by the benefits from productivity initiatives and higher nonferrous sales volumes compared to the prior year. The lower average ferrous selling prices in fiscal 2019 primarily reflected the weaker price environment for recycled metals in our domestic markets and the effects of tariffs and other regulatory measures on demand for recycled metals in our export markets. The lower average nonferrous selling prices in fiscal 2019 primarily resulted from reduced demand for nonferrous products globally, as well as the continued effects of Chinese import restrictions and tariffs on certain nonferrous products put into place starting in the second half of fiscal 2018. The spread between direct purchase costs and selling prices of ferrous recycled metal at AMR in fiscal 2019 contracted by approximately 4% compared to the prior year and average net selling prices for AMR's nonferrous joint products recovered from the shredding process, comprising primarily zorba, decreased by 26% in fiscal 2019 compared to the prior year, contributing significantly to the operating margin compression at AMR in fiscal 2019. CSS reported operating income of $32 million in fiscal 2019, compared to $38 million in the prior year, reflecting lower sales of recycled scrap metal and lower finished steel sales volumes partially offset by higher finished steel margins driven by the effects of the higher price environment, and the benefits from productivity initiatives.

Consolidated selling, general and administrative ("SG&A") expense in fiscal 2019 decreased by $17 million, or 8%, compared to the prior year primarily due to decreased employee-related expenses, including from lower incentive compensation accruals, and decreased environmental-related and legal and professional services expenses.

In fiscal 2019, we undertook productivity initiatives aimed at delivering $35 million in annual benefits in order to mitigate the weaker price environment in the ferrous and nonferrous markets. We expect these benefits will be achieved through a combination of production cost efficiencies, reductions in SG&A expense and increases in retail sales. Of the total, approximately 75% of the targeted benefits are in AMR with the remainder split between CSS and Corporate. We achieved over 80% of the total targeted benefits in fiscal 2019 with the full amount expected to be achieved in fiscal 2020. For fiscal 2019, we achieved approximately $30 million in benefits as a result of these initiatives.

Net income from continuing operations attributable to SSI shareholders in fiscal 2019 was $57 million, or $2.01 per diluted share, compared to $156 million, or $5.46 per diluted share, in the prior year. Adjusted net income from continuing operations attributable to SSI shareholders in fiscal 2019 was $61 million, or $2.16 per diluted share, compared to $161 million, or $5.64 per diluted share, in the prior year. Reported and adjusted net income from continuing operations attributable to SSI shareholders in fiscal 2018 included discrete income tax benefits totaling $37 million, or $1.30 per diluted share, related to the release of valuation allowances against certain deferred tax assets, and an income tax benefit of $7 million, or $0.24 per diluted share, related to the impacts of U.S. federal tax legislation enacted during the year. See the reconciliation of adjusted net income from continuing operations attributable to SSI shareholders in Non-GAAP Financial Measures at the end of this Item 7.

The following items further highlight selected liquidity and capital structure metrics:

- Net cash provided by operating activities of $145 million in fiscal 2019, compared to $160 million in the prior year;
- Debt of $105 million as of August 31, 2019, compared to $107 million as of the prior year-end;
- Debt, net of cash, of $93 million as of August 31, 2019, compared to $103 million as of the prior year-end (see the reconciliation of debt, net of cash, in Non-GAAP Financial Measures at the end of this Item 7).
- Share repurchases totaling $13 million in fiscal 2019, compared to $17 million in the prior year.

Results of Operations

($ in thousands)	For the Year Ended August 31, 2019	2018	2017	% Increase / (Decrease) 2019 vs 2018	2018 vs 2017
Revenues:					
Auto and Metals Recycling	$ 1,684,977	$ 1,908,966	$ 1,363,618	(12)%	40%
Cascade Steel and Scrap	459,416	480,641	339,620	(4)%	42%
Intercompany revenue eliminations(1)	(11,612)	(24,892)	(15,647)	(53)%	59%
Total revenues	2,132,781	2,364,715	1,687,591	(10)%	40%
Cost of goods sold:					
Auto and Metals Recycling	1,458,212	1,607,628	1,158,154	(9)%	39%
Cascade Steel and Scrap	412,209	427,459	322,013	(4)%	33%
Intercompany cost of goods sold eliminations(1)	(11,886)	(24,602)	(15,659)	(52)%	57%
Total cost of goods sold	1,858,535	2,010,485	1,464,508	(8)%	37%
Selling, general and administrative expense:					
Auto and Metals Recycling	130,920	133,044	116,461	(2)%	14%
Cascade Steel and Scrap	16,499	17,044	14,321	(3)%	19%
Corporate(2)	43,986	58,789	40,788	(25)%	44%
Total selling, general and administrative expense	191,405	208,877	171,570	(8)%	22%
(Income) loss from joint ventures:					
Auto and Metals Recycling	(209)	107	(2,218)	NM	NM
Cascade Steel and Scrap	(1,243)	(2,060)	(1,456)	(40)%	41%
Total (income) loss from joint ventures	(1,452)	(1,953)	(3,674)	(26)%	(47)%
Asset impairment charges (recoveries), net:					
Auto and Metals Recycling	63	(933)	(184)	NM	407%
Cascade Steel and Scrap	—	(88)	(533)	NM	(83)%
Total asset impairment charges (recoveries), net	63	(1,021)	(717)	NM	42%
Operating income:					
Auto and Metals Recycling	95,991	169,120	91,405	(43)%	85%
Cascade Steel and Scrap	31,951	38,286	5,275	(17)%	626%
Segment operating income	127,942	207,406	96,680	(38)%	115%
Restructuring charges and other exit-related activities(3)	(365)	661	109	NM	506%
Corporate expense(2)	(43,986)	(58,789)	(40,788)	(25)%	44%
Change in intercompany profit elimination(4)	274	(290)	12	NM	NM
Total operating income	$ 83,865	$ 148,988	$ 56,013	(44)%	166%

NM = Not Meaningful

(1) AMR sells a small portion of its recycled ferrous metal to CSS at prices that approximate local market rates. These intercompany revenues and cost of goods sold are eliminated in consolidation.

(2) Corporate expense consists primarily of unallocated expenses for management and certain administrative services that benefit both reportable segments.

(3) Restructuring charges consist of expense for severance, contract termination and other restructuring costs that management does not include in its measurement of the performance of the reportable segments. Other exit-related activities consist of asset impairments and accelerated depreciation, net of gains on exit-related disposals, related to site closures.

(4) Intercompany profits are not recognized until the finished products are sold to third parties; therefore, intercompany profit is eliminated while the products remain in inventory.

We operate our business across two reportable segments: AMR and CSS. Additional financial information relating to these reportable segments is contained in Note 16 - Segment Information in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

Auto and Metals Recycling (AMR)

	For the Year Ended August 31,				
				% Increase / (Decrease)	
($ in thousands, except for prices)	**2019**	**2018**	**2017**	**2019 vs 2018**	**2018 vs 2017**
Ferrous revenues	$ 1,123,180	$ 1,288,287	$ 843,222	(13)%	53%
Nonferrous revenues	430,361	481,777	394,977	(11)%	22%
Retail and other revenues	131,436	138,902	125,419	(5)%	11%
Total segment revenues	1,684,977	1,908,966	1,363,618	(12)%	40%
Cost of goods sold	1,458,212	1,607,628	1,158,154	(9)%	39%
Selling, general and administrative expense	130,920	133,044	116,461	(2)%	14%
(Income) loss from joint ventures	(209)	107	(2,218)	(295)%	(105)%
Asset impairment charges (recoveries), net	63	(933)	(184)	(107)%	NM
Segment operating income	$ 95,991	$ 169,120	$ 91,405	(43)%	85%
Average recycled ferrous metal sales prices ($/LT):(1)					
Domestic	$ 272	$ 291	$ 236	(7)%	23%
Foreign	$ 295	$ 328	$ 244	(10)%	34%
Average	$ 289	$ 317	$ 242	(9)%	31%
Ferrous sales volume (LT, in thousands):					
Domestic	1,265	1,085	948	17%	14%
Foreign	2,475	2,623	2,197	(6)%	19%
Total ferrous sales volume (LT, in thousands)	3,740	3,708	3,145	1%	18%
Average nonferrous sales price ($/pound)(1)(2)	$ 0.59	$ 0.72	$ 0.63	(18)%	14%
Nonferrous sales volumes (pounds, in thousands)(2)	608,294	571,705	540,791	6%	6%
Cars purchased (in thousands)(3)	386	424	411	(9)%	3%
Number of auto parts stores at period end	51	52	53	(2)%	(2)%

LT = Long Ton, which is equivalent to 2,240 pounds

NM = Not meaningful

(1) Price information is shown after netting the cost of freight incurred to deliver the product to the customer.

(2) Average sales price and volume information excludes platinum group metals (“PGMs”) in catalytic converters.

(3) Cars purchased by auto parts stores only.

AMR Segment Revenues

Revenues in fiscal 2019 decreased by 12% compared to fiscal 2018 primarily due to weaker market conditions for recycled metal globally, resulting in lower average net selling prices for our ferrous and nonferrous products compared to fiscal 2018. Despite the lower price environment, domestic ferrous sales volumes in fiscal 2019 increased by 17% compared to the prior year due to increased U.S. steel mill utilization, partially offsetting the adverse impact of the weaker ferrous export market conditions in the year. Nonferrous revenues in fiscal 2019 decreased by 11% compared to the prior year, as average net selling prices decreased by 18% compared to fiscal 2018, primarily reflecting reduced demand for nonferrous products globally, as well as the continued impact of Chinese import restrictions and tariffs on certain nonferrous products put into place starting in the second half of fiscal 2018.

AMR Segment Operating Income

Operating income for fiscal 2019 was $96 million, compared to $169 million in fiscal 2018. The decrease in AMR operating results in fiscal 2019 was primarily the result of operating margin compression from the decline in average net selling prices for our ferrous and nonferrous products which outpaced the reduction in purchase costs for raw materials. The lower average ferrous and nonferrous selling prices in fiscal 2019 reflect the effects of tariffs and other regulatory measures on demand for recycled metals in our export markets, the weaker price environment for recycled metals in our domestic markets, and reduced demand for nonferrous products globally. The spread between direct purchase costs and selling prices of ferrous recycled metal at AMR in fiscal 2019 contracted by approximately 4% compared to the prior year and average net selling prices for AMR's nonferrous joint products recovered from the shredding process, comprising primarily zorba, decreased by 26% in fiscal 2019 compared to the prior year, contributing significantly to the operating margin compression at AMR in fiscal 2019. The adverse effects of lower average net selling prices for recycled metals were partially offset by benefits from productivity initiatives, higher nonferrous sales volumes compared to the prior year, and positive contributions from a limited-duration contract. This contract, which was substantially complete at the end of fiscal 2019, provided a high margin source of supply and benefited AMR operating income by $20 million for fiscal 2019, compared to $23 million for the prior year. AMR SG&A expense in fiscal 2019 decreased by $2 million, or 2%, compared to the prior year primarily due to lower employee-related expenses, including from reduced incentive compensation accruals.

Cascade Steel and Scrap (CSS)

	For the Year Ended August 31,				
				% Increase / (Decrease)	
($ in thousands, except price)	**2019**	**2018**	**2017**	**2019 vs 2018**	**2018 vs 2017**
Steel revenues[1]	$ 367,956	$ 367,560	$ 280,767	0%	31%
Recycling revenues[2]	91,460	113,081	58,853	(19)%	92%
Total segment revenues	459,416	480,641	339,620	(4)%	42%
Cost of goods sold	412,209	427,459	322,013	(4)%	33%
Selling, general and administrative expense	16,499	17,044	14,321	(3)%	19%
(Income) from joint ventures	(1,243)	(2,060)	(1,456)	(40)%	41%
Asset impairment charges (recoveries), net	—	(88)	(533)	(100)%	(83)%
Segment operating income	$ 31,951	$ 38,286	$ 5,275	(17)%	626%
Finished steel average sales price ($/ST)[3]	$ 713	$ 666	$ 534	7%	25%
Finished steel products sold (ST, in thousands)	478	519	496	(8)%	5%
Rolling mill utilization[4]	88%	88%	83%	—%	6%

ST = Short Ton, which is equivalent to 2,000 pounds

(1) Steel revenues include primarily sales of finished steel products, semi-finished goods (billets) and manufacturing scrap.

(2) Recycling revenues include primarily sales of ferrous and nonferrous recycled scrap metal to export markets.

(3) Price information is shown after netting the cost of freight incurred to deliver the product to the customer.

(4) Rolling mill utilization is based on effective annual production capacity under current conditions of 580 thousand tons of finished steel products.

CSS Segment Revenues

Revenues in fiscal 2019 decreased by $21 million, or 4%, compared to fiscal 2018 primarily due to significantly lower sales of ferrous recycled scrap metal. Steel revenues were flat compared to the prior year reflecting the impact of higher average net selling prices for our finished steel products offset by lower finished steel sales volumes compared to the prior year.

CSS Segment Operating Income

Operating income for fiscal 2019 was $32 million, compared to operating income of $38 million in the prior year. Decreased operating results in fiscal 2019 primarily reflect the impact of lower finished steel sales volumes and recycled scrap metal sales, partially offset by higher finished steel margins driven by the effects of the higher price environment, and the benefits from productivity initiatives.

Corporate

Corporate SG&A expense decreased by $15 million or 25%, compared to the prior year primarily due to decreased employee-related expenses, including from lower incentive compensation accruals, and decreased environmental-related and legal and professional services expenses, partially offset by a $2 million charge related to the settlement of a wage and hour class action lawsuit.

Productivity Initiatives

In fiscal 2019, we undertook productivity initiatives aimed at delivering $35 million in annual benefits in order to mitigate the weaker price environment in the ferrous and nonferrous markets. We expect these benefits will be achieved through a combination of production cost efficiencies, reductions in SG&A expense and increases in retail sales. Of the total, approximately 75% of the targeted benefits are in AMR with the remainder split between CSS and Corporate. We achieved over 80% of the total targeted benefits in fiscal 2019 with the full amount expected to be achieved in fiscal 2020. For fiscal 2019, we achieved approximately $30 million in benefits as a result of these initiatives.

Income Tax

	Year Ended August 31,		
	2019	**2018**	**2017**
Income from continuing operations before income taxes	$ 76,240	$ 141,853	$ 48,690
Income tax (expense) benefit	$ (17,670)	$ 17,590	$ (1,322)
Effective tax rate	23.2%	(12.4)%	2.7%

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"), which, except for certain provisions, is effective for tax years beginning on or after January 1, 2018. The Tax Act's primary change is a reduction in the federal statutory corporate tax rate from 35% to 21%, resulting in a pro rata reduction for the Company from 35% to 25.7% for fiscal 2018 and a full reduction to 21% for fiscal 2019. As a change in tax law is accounted for in the period of enactment, we recognized a discrete benefit of $7 million in the second quarter of fiscal 2018 due to the revaluation of U.S. net deferred tax liabilities to reflect the lower statutory rate. Our effective tax rate in fiscal 2018 also reflected application of the Tax Act's lower federal statutory corporate tax rate to fiscal 2018 taxable income. The accounting for the impacts of the Tax Act was complete as of November 30, 2018, and we have not recorded any material adjustments to the provisional amounts recorded in the second quarter of fiscal 2018 related to the Tax Act.

Our effective tax rate from continuing operations in fiscal 2018 was a benefit of 12.4%. We reported a tax benefit on pre-tax income for fiscal 2018 primarily due to the release of valuation allowances against certain deferred tax assets, resulting in recognition of discrete tax benefits totaling $37 million in fiscal 2018, and the impact of the Tax Act. The release of valuation allowances in fiscal 2018 was the result of sufficient positive evidence at the time, including cumulative income in our U.S. and Canadian tax jurisdictions in recent years and projections of future taxable income based primarily on our improved financial performance, that it is more-likely-than-not that the deferred tax assets will be realized.

We assess the realizability of our deferred tax assets on a quarterly basis through an analysis of potential sources of future taxable income, including prior year taxable income available to absorb a carryback of tax losses, reversals of existing taxable temporary differences, tax planning strategies, and forecasts of taxable income. We consider all negative and positive evidence, including the weight of the evidence, to determine if valuation allowances against deferred tax assets are required.

We continue to maintain valuation allowances against certain deferred tax assets related to certain jurisdictions as a result of negative objective evidence, including the effects of historical losses in these tax jurisdictions, outweighing positive objective and subjective evidence, indicating that it is more-likely-than-not that the associated tax benefit will not be realized. Realization of the deferred tax assets is dependent upon generating sufficient taxable income in the associated tax jurisdictions in future years to benefit from the reversal of net deductible temporary differences and from the utilization of net operating losses. We will continue to regularly assess the realizability of deferred tax assets. Changes in historical earnings performance and future earnings projections, among other factors, may cause us to adjust our valuation allowance on deferred tax assets, which would impact our results of operations in the period we determine that these factors have changed.

See Note 13 - Income Taxes in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report for further discussion.

Liquidity and Capital Resources

We rely on cash provided by operating activities as a primary source of liquidity, supplemented by current cash on hand and borrowings under our existing credit facilities.

Sources and Uses of Cash

We had cash balances of $12 million and $5 million as of August 31, 2019 and 2018, respectively. Cash balances are intended to be used primarily for working capital, capital expenditures, dividends, share repurchases, investments and acquisitions. We use excess cash on hand to reduce amounts outstanding under our credit facilities. As of August 31, 2019, debt was $105 million, compared to $107 million as of August 31, 2018, and debt, net of cash, was $93 million as of August 31, 2019 compared to $103 million as of August 31, 2018 (see the reconciliation of debt, net of cash, in Non-GAAP Financial Measures at the end of this Item 7).

Operating Activities

Net cash provided by operating activities in fiscal 2019 was $145 million, compared to $160 million in fiscal 2018.

Sources of cash other than from earnings in fiscal 2019 included a $33 million decrease in inventories due to lower raw material purchase prices and timing of payments and sales and a $9 million decrease in accounts receivable due to lower selling prices and the timing of sales and collections. Uses of cash in fiscal 2019 included a $19 million decrease in accrued payroll and related liabilities primarily due to incentive compensation payments made in the first quarter of fiscal 2019, and a $17 million decrease in accounts payable primarily due to lower raw material purchase prices and the timing of payments.

Sources of cash other than from earnings in fiscal 2018 included a $26 million increase in accounts payable due to higher raw material purchase prices and timing of payments, and a $11 million combined increase in other accrued liabilities and accrued payroll and related liabilities primarily due to increased incentive compensation liabilities and higher legal accruals. Uses of cash in fiscal 2018 included a $45 million increase in accounts receivable primarily due to increases in recycled metal and finished steel selling prices and sales volumes, as well as the timing of sales and collections, and a $24 million increase in inventories due to higher raw material purchase prices, higher volumes on hand, and the timing of purchases and sales.

Investing Activities

Net cash used in investing activities in fiscal 2019 was $90 million, compared to $73 million in fiscal 2018.

Cash used in investing activities in fiscal 2019 included capital expenditures of $95 million to upgrade our equipment and infrastructure and for additional investments in nonferrous processing technologies and environmental and safety-related assets, compared to $78 million in the prior year. The significant majority of capital expenditures were associated with projects at AMR.

Financing Activities

Net cash used in financing activities for fiscal 2019 was $47 million, compared with $88 million in fiscal 2018.

Uses of cash in both fiscal 2019 and 2018 included $21 million for the payment of dividends and $13 million and $17 million, respectively, for share repurchases. Uses of cash in fiscal 2019 also included $4 million in net repayments of debt, compared to $41 million in the prior year (refer to Non-GAAP Financial Measures at the end of this Item 7).

Debt

Following is a summary of our outstanding balances and availability on credit facilities and long-term debt, exclusive of capital lease obligations (in thousands):

	Outstanding as of August 31, 2019	Remaining Availability
Bank secured revolving credit facilities(1)	$ 96,835	$ 604,365
Other debt obligations	$ 487	N/A

(1) Remaining availability is net of $10 million of outstanding stand-by letters of credit as of August 31, 2019.

Our senior secured revolving credit facilities, which provide for revolving loans of $700 million and C$15 million, mature in August 2023 pursuant to a credit agreement with Bank of America, N.A., as administrative agent, and other lenders party thereto. The $700 million credit facility includes a $50 million sublimit for letters of credit, a $25 million sublimit for swingline loans and a $50 million sublimit for multicurrency borrowings. Interest rates on outstanding indebtedness under the credit agreement are based, at our option, on either the London Interbank Offered Rate ("LIBOR"), or the Canadian equivalent for C$ loans, plus a spread of between 1.25% and 2.75%, with the amount of the spread based on a pricing grid tied to our consolidated funded debt to EBITDA ratio, or the greater of (a) the prime rate, (b) the federal funds rate plus 0.50%, or (c) the daily rate equal to one-month LIBOR plus 1.75%, in each case plus a spread of between zero and 1.50% based on a pricing grid tied to our consolidated funded debt to EBITDA ratio. In addition, commitment fees are payable on the unused portion of the credit facilities at rates between 0.15% and 0.45% based on a pricing grid tied to our consolidated funded debt to EBITDA ratio.

We had borrowings outstanding under our credit facilities of $97 million and $100 million as of August 31, 2019 and 2018, respectively. The weighted average interest rate on amounts outstanding under our credit facilities was 3.78% and 3.57% as of August 31, 2019 and 2018, respectively.

We use the credit facilities to fund working capital, capital expenditures, dividends, share repurchases, investments and acquisitions. Our credit agreement contains various representations and warranties, events of default and financial and other customary covenants 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. The financial covenants under the credit agreement include (a) a consolidated fixed charge coverage ratio, defined as the four-quarter rolling sum of consolidated adjusted EBITDA less defined maintenance capital expenditures and certain environmental expenditures divided by consolidated fixed charges and (b) a consolidated leverage ratio, defined as consolidated funded indebtedness divided by the sum of consolidated net worth and consolidated funded indebtedness.

As of August 31, 2019, we were in compliance with the financial covenants under our credit agreement. The consolidated fixed charge coverage ratio was required to be no less than 1.50 to 1.00 and was 3.65 to 1.00 as of August 31, 2019. The consolidated leverage ratio was required to be no more than 0.55 to 1.00 and was 0.14 to 1.00 as of August 31, 2019.

Our obligations under our credit agreement are guaranteed by substantially all of our subsidiaries. The credit facilities and the related guarantees are secured by senior first priority liens on certain of our and our subsidiaries' assets, including equipment, inventory and accounts receivable.

While we expect to remain in compliance with the financial covenants under our credit agreement, there can be no assurances that we will be able to do so in the event market conditions or other negative factors which adversely impact our results of operations and financial position lead to a trend of consolidated net losses. If we do not maintain compliance with our financial covenants and are unable to obtain an amendment or waiver from our lenders, a breach of a financial covenant would constitute an event of default and allow the lenders to exercise remedies under the agreements, the most severe of which is the termination of the credit facility under our committed bank credit agreement and acceleration of the amounts owed under the agreement. In such case, we would be required to evaluate available alternatives and take appropriate steps to obtain alternative funds. There can be no assurances that any such alternative funds, if sought, could be obtained or, if obtained, would be adequate or on acceptable terms.

Capital Expenditures

Capital expenditures totaled $95 million for fiscal 2019, compared to $78 million for fiscal 2018. Capital expenditures in each of fiscal 2019 and 2018 were primarily to upgrade our equipment, facilities and infrastructure, and for additional investments in nonferrous processing technologies and environmental and safety-related assets. We currently plan to invest up to $125 million in capital expenditures in fiscal 2020, including $60 million for investments in growth, including new nonferrous processing technology and to support volume initiatives and other growth projects, using cash generated from operations and available credit facilities.

Environmental Compliance

Building on our commitment to recycling and operating our business in an environmentally responsible manner, we continue to invest in facilities that improve our environmental presence in the communities in which we operate. As part of our capital expenditures discussed in the prior paragraph, we invested $36 million and $20 million for environmental projects in fiscal 2019 and 2018, respectively. We plan to invest in the range of $15 million of our planned capital expenditures for environmental projects in fiscal 2020. These projects include investments in storm water systems and equipment to ensure ongoing compliance with air quality and other environmental regulations.

We have been identified by the United States Environmental Protection Agency ("EPA") as one of the potentially responsible parties that own or operate or formerly owned or operated sites which are part of or adjacent to the Portland Harbor Superfund site (the "Site"). See Note 8 – Commitments and Contingencies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report for a discussion of this matter, as well as other legacy environmental loss contingencies. 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. We have insurance policies that we believe will provide reimbursement for costs we incur for defense, remediation and mitigation for natural resource damages claims in connection with the Site, although there are no assurances 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 amounts available for borrowing that could otherwise be used for working capital, capital expenditures, dividends, share repurchases, investments and acquisitions and could result in our failure to maintain compliance with certain covenants in our debt agreements, and could adversely impact our liquidity.

Dividends

On August 2, 2019, our Board of Directors declared a dividend for the fourth quarter of fiscal 2019 of $0.1875 per common share, which equates to an annual cash dividend of $0.75 per common share. Dividends of $0.75 per common share, totaling $21 million, were declared and paid during fiscal 2019.

Share Repurchase Program

Pursuant to our amended share repurchase program, as of August 31, 2019, we have authorization to repurchase up to a remaining 759 thousand shares of our Class A common stock when we deem such repurchases to be appropriate. We may repurchase our common stock for a variety of reasons, such as to optimize our capital structure and to offset dilution related to share-based compensation arrangements. We consider several factors in determining whether to make share repurchases including, among other factors, our cash needs, the availability of funding, our future business plans and the market price of our stock. As of the beginning of fiscal 2018, we had repurchased approximately 7.2 million shares of our Class A common stock under the program. We repurchased approximately 516 thousand shares for a total of $17 million in open-market transactions in fiscal 2018, and approximately 527 thousand shares for a total of $13 million in open-market transactions in fiscal 2019.

Assessment of Liquidity and Capital Resources

Historically, our available cash resources, internally generated funds, credit facilities and equity offerings have financed our acquisitions, capital expenditures, working capital and other financing needs.

We generally believe our current cash resources, internally generated funds, existing credit facilities and access to the capital markets will provide adequate short-term and long-term liquidity needs for working capital, capital expenditures, dividends, share repurchases, investments and acquisitions, joint ventures, debt service requirements, environmental obligations and other contingencies. However, in the event of a sustained market deterioration, we may need additional liquidity, which would require us to evaluate available alternatives and take appropriate steps to obtain sufficient additional funds. There can be no assurances that any such supplemental funding, if sought, could be obtained or, if obtained, would be adequate or on acceptable terms.

Off-Balance Sheet Arrangements

None requiring disclosure pursuant to Item 303 of Regulation S-K under the Securities Exchange Act of 1934.

Contractual Obligations and Commitments

We have certain contractual obligations to make future payments. The following table summarizes these future obligations as of August 31, 2019 (in thousands):

	Payment Due by Period						
	2020	2021	2022	2023	2024	Thereafter	Totals
Contractual Obligations							
Long-term debt[1]	$ 94	$ 47	$ 49	$ 96,887	$ 56	$ 189	$ 97,322
Interest payments on long-term debt[2]	3,315	3,311	3,308	3,242	15	24	13,215
Capital leases, including interest	1,917	1,799	1,751	1,622	1,346	1,694	10,129
Operating leases	21,286	15,301	12,488	10,419	5,035	16,095	80,624
Purchase obligations[3]	88,989	7,096	5,767	4,448	4,130	3,469	113,899
Other[4]	220	332	329	325	321	6,149	7,676
Total	$ 115,821	$ 27,886	$ 23,692	$ 116,943	$ 10,903	$ 27,620	$ 322,865

(1) Long-term debt represents the principal amounts of all outstanding long-term debt, maturities of which extend to 2027.

(2) Interest payments on long-term debt are based on interest rates in effect as of August 31, 2019. As contractual interest rates and the amount of debt outstanding is variable in certain cases, actual cash payments may differ from the estimates provided.

(3) Purchase obligations include all enforceable, legally binding agreements to purchase goods or services that specify all significant terms, regardless of the duration of the agreement.

(4) Other contractual obligations consist of pension funding obligations and other accrued liabilities.

We maintain stand-by letters of credit to provide support for certain obligations, including workers' compensation and performance bonds. At August 31, 2019, we had $10 million outstanding under these arrangements.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires us to make certain judgments, estimates, and assumptions regarding uncertainties that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions and judgments about matters that are inherently uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably likely to occur could materially impact our consolidated financial statements. We deem critical accounting policies to be those that are most important to the portrayal of our financial condition and results of operations. Because of the uncertainty inherent in these matters, actual results could differ from the estimates we use in applying the critical accounting policies. We are not currently aware of any reasonably likely events or circumstances that would result in materially different amounts being reported.

Our critical accounting estimates include those related to inventories, long-lived assets, goodwill, environmental costs, revenue recognition, and income taxes.

Inventories

Our inventories consist of processed and unprocessed scrap metal (ferrous, nonferrous, and mixed nonferrous recovered joint products arising from the manufacturing process), semi-finished steel products (billets), finished steel products (primarily rebar, wire rod, and merchant bar), used and salvaged vehicles, and supplies. Inventories are stated at the lower of cost and net realizable value. We consider estimated future selling prices when determining the estimated net realizable value of our inventory. As we generally sell our recycled ferrous metal under contracts that provide for shipment within 30 to 60 days after the price is agreed, we utilize the selling prices under committed contracts and sales orders for determining the estimated net realizable value of quantities on hand that will be shipped under these contracts and sales orders.

The accounting process we use to record ferrous scrap metal quantities relies on significant estimates. With respect to estimating the quantities of unprocessed ferrous scrap metal inventory that are moved into production, we rely on weighed quantities of the processed ferrous material, adjusted for estimated metal recoveries and yields that are based on historical trends and other judgments by management. Actual recoveries and yields can vary depending on product quality, moisture content and source of the unprocessed metal. The Company's estimates are intended to reasonably reflect the quantities of unprocessed ferrous scrap metal that are used in the production of processed ferrous metal. To assist in validating the reasonableness of these estimates, we periodically review shrink factors and perform monthly physical inventories. Due to the inherent nature of our scrap metal inventories, including variations in product density, holding period and production processes utilized to manufacture the products, physical inventories will not necessarily detect all variances for scrap metal inventory such that estimates of quantities are required. To mitigate this risk, we further adjust our ferrous physical inventories when the volume of a commodity is low and a physical inventory count is deemed to more accurately estimate the remaining volume.

Long-Lived Assets

We test long-lived tangible and intangible assets for impairment at the asset group level, which is determined based on the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities. For our metals recycling operations reported within AMR, an asset group generally consists of the regional shredding and export operation along with surrounding feeder yards. For regions with no shredding and export operations, each metals recycling yard is an asset group. For our auto parts operations, generally each auto parts store is an asset group. The combined steel manufacturing and metals recycling operations within CSS are a single asset group. We test our asset groups for impairment when certain triggering events or changes in circumstances indicate that the carrying value of the asset group may be impaired. If the carrying value of the asset group is not recoverable because it exceeds the estimate of future undiscounted cash flows from the use and eventual disposition of the asset group, an impairment loss is recognized by the amount the carrying value exceeds its fair value, if any. The impairment loss is allocated to the long-lived assets of the group on a pro rata basis using the relative carrying amounts of those assets, except that the loss allocated to an individual long-lived asset of the group shall not reduce the carrying amount of that asset below its fair value. Fair value is determined primarily using the cost and market approaches.

With respect to individual long-lived assets, changes in circumstances may merit a change in the estimated useful lives or salvage values of the assets, which are accounted for prospectively in the period of change. For such assets, the useful life is shortened based on our plans to dispose of or abandon the asset before the end of its original useful life and depreciation is accelerated beginning when that determination is made.

Goodwill

We evaluate goodwill for impairment annually and upon the occurrence of certain triggering events or substantive changes in circumstances that indicate that the fair value of goodwill may be impaired. Impairment of goodwill is tested at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment (referred to as a 'component').

When testing goodwill for impairment, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more-likely-than-not that the estimated fair value of a reporting unit is less than its carrying amount. If we elect to perform a qualitative assessment and determine that an impairment is more-likely-than-not, we are then required to perform the quantitative impairment test, otherwise no further analysis is required. We also may elect not to perform the qualitative assessment and, instead, proceed directly to the quantitative impairment test. When performing the quantitative impairment test, we apply a one-step quantitative test and record the amount of goodwill impairment as the excess of a reporting unit's carrying amount over its fair value, not to exceed the total amount of goodwill allocated to that reporting unit.

We estimate the fair value of the reporting units using an income approach based on the present value of expected future cash flows utilizing a market-based weighted average cost of capital ("WACC") determined separately for each reporting unit. To estimate the present value of the cash flows that extend beyond the final year of the discounted cash flow model, we employ a terminal value technique, whereby we use estimated operating cash flows minus capital expenditures, adjust for changes in working capital requirements in the final year of the model, and then discount these estimated cash flows by the WACC to establish the terminal value.

The determination of fair value using the income approach requires judgment and involves the use of significant estimates and assumptions about expected future cash flows derived from internal forecasts and the impact of market conditions on those assumptions. Critical assumptions primarily include revenue growth rates driven by future commodity prices and volume expectations, 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.

We also use a market approach based on earnings multiple data and our Company's market capitalization to corroborate our reporting units' valuations. We reconcile the Company's market capitalization to the aggregated estimated fair value of our reporting units, including consideration of a control premium representing the estimated amount a market participant would pay to obtain a controlling interest.

As a result of the inherent uncertainty associated with forming the estimates described above, actual results could differ from those estimates. Future events and changing market conditions may impact our assumptions as to future revenue and operating margin growth rates, market-based WACC, and other factors that may result in changes in our estimates of the reporting units' fair value. Although we believe the assumptions used in testing our reporting units' goodwill for impairment are reasonable, declines in market conditions from current levels, a trend of weaker than anticipated financial performance for the reporting unit with allocated goodwill, a decline in our share price from current levels for a sustained period of time, or an increase in the market-based WACC, among other factors, could significantly impact our impairment analysis and may result in future goodwill impairment charges that, if incurred, could have a material adverse effect on our financial condition and results of operations.

In the fourth quarter of fiscal 2019, we performed the annual goodwill impairment test as of July 1, 2019. As of the testing date, the balance of the Company's goodwill was $170 million, and all but $1 million of such balance was carried by a single reporting unit within AMR. We elected to first assess qualitative factors to determine whether the existence of events or circumstances led to a determination that it is more-likely-than-not that the estimated fair value of each reporting unit carrying goodwill is less than its carrying amount. As a result of the qualitative assessment, we concluded that it is not more-likely-than-not that the fair value of each reporting unit carrying goodwill is less than its carrying value as of the testing date and, therefore, no further impairment testing was required.

Environmental Costs

We operate in industries that inherently possess environmental risks. To manage these risks, we employ both our own environmental staff and outside consultants. Environmental staff and finance personnel meet regularly to discuss environmental risks. We estimate future costs for known environmental remediation requirements and accrue for them on an undiscounted basis when it is probable that we have incurred a liability and the related costs can be reasonably estimated but the timing of incurring the estimated costs is unknown. The regulatory and government management of these projects is complex, which is one of the primary factors that make it difficult to assess the cost of potential and future remediation. When only a wide range of estimated amounts can be reasonably established and no other amount within the range is better than any other, the low end of the range is recorded in the financial statements. If further developments or resolution of an environmental matter result in facts and circumstances that are significantly different than the assumptions used to develop these liabilities, the accrual for environmental remediation could be materially understated or overstated. Adjustments to these liabilities are made when additional information becomes available that affects the estimated costs to study or remediate any environmental issues or when expenditures for which accruals are established are made. The factors we consider in the recognition and measurement of environmental liabilities include:

- Current regulations, both at the time the liability is established and during the course of the investigation or remediation process, which specify standards for acceptable remediation;
- Information about the site which becomes available as the site is studied and remediated;
- The professional judgment of senior level internal staff, who take into account similar, recent instances of environmental remediation issues, and studies of our sites, among other considerations;
- Available technologies that can be used for remediation; and
- The number and financial condition of other potentially responsible parties and the extent of their responsibility for the costs of study and remediation.

Our accrued environmental liabilities as of August 31, 2019 included $1 million related to third party investigation costs for the Portland Harbor Superfund site. 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 or which it is reasonably possible that we may incur in connection with the Site, although such costs could be material to our financial position, results of operations, cash flows and liquidity. Therefore, no additional amounts have been accrued. Further, we have been notified that we are or may be a potentially responsible party at sites other than Portland Harbor which are 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 "Contingencies – Environmental" in Note 8 – Commitments and Contingencies in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

Revenue Recognition

We recognize revenue upon satisfying our promises to transfer goods or services to customers under the terms of a contract. Nearly all of these promises, referred to as performance obligations, consist of the transfer of physical goods, including ferrous and nonferrous recycled scrap metal, auto bodies, auto parts, and finished steel products, to customers. These performance obligations are satisfied at the point in time the we transfer control of the goods to the customer, which in nearly all cases is when title to and risk of loss of the goods transfer to the customer. The timing of transfer of title and risk of loss is dictated by customary or explicitly stated contract terms. For example, we recognize revenue on partially loaded bulk shipments of ferrous recycled scrap metal when contractual terms support revenue recognition based on transfer of title and risk of loss. The significant majority of our sales involve transfer of control to the customer, and thus revenue recognition, before delivery to the customer's destination; for example, upon release of the goods to the shipper. Our bill-and-hold arrangements involve transfer of control to the customer when the goods have been segregated from other inventory at our facility and are ready for physical transfer to the customer. Shipping and handling activities that occur after a customer has obtained control of a good are accounted for as fulfillment costs rather than an additional promise in a contract. As such, shipping and handling consideration (freight revenue) is recognized when control of the goods transfers to the customer, and freight expense is accrued to cost of goods sold when the related revenue is recognized.

In certain regional markets, we enter into contracts whereby we arrange for, or broker, the transfer of scrap material between scrap suppliers and end customers. For transactions in which we obtain substantive control of the scrap material before the goods are transferred to the end customer, for example by arranging for the processing or warehousing of the material, we recognize revenue equal to the gross amount of the consideration we expect to receive from the customer (as principal). Alternatively, for transactions in which we do not obtain substantive control of the scrap material before the product is transferred to the end customer, we recognize revenue equal to the net amount of the consideration we expect to retain after paying the supplier for the purchase of the scrap metal (as agent). We are the agent in the transaction for the substantial majority of brokerage arrangements.

Nearly all of our sales contracts reflect market pricing at the time the contract is executed, are one year or less, and generally provide for shipment within 30 to 60 days after the price has been agreed upon with the customer. Our retail auto parts sales are at listed prices and are recognized at the point of sale.

We recognize revenue based on contractually stated selling prices and quantities shipped, net of sales tax, and adjusted for estimated claims and discounts. Claims are customary in the recycled scrap metal industry and arise from variances in the quantity or quality of delivered products. Revenue adjustments may be required if the settlement of claims exceeds original estimates. Discounts offered to certain finished steel customers qualify as variable consideration as the discounts are contingent upon future events. Variable consideration arising from discounts is recognized upon the transfer of finished steel products to customers based upon either the expected value or the most likely amount. We experience very few sales returns and, therefore, no material provisions for returns have been made when sales are recognized.

Income Taxes

Tax Cuts and Jobs Act

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"), which, except for certain provisions, is effective for tax years beginning on or after January 1, 2018. The Tax Act's primary change is a reduction in the federal statutory corporate tax rate from 35% to 21%, resulting in a pro rata reduction of the Company's tax rate from 35% to 25.7% for fiscal 2018 and a full reduction to 21% for fiscal 2019. Other pertinent changes in the Tax Act include, but are not limited to, the acceleration of deductions for qualified property placed in service after September 27, 2017, limitations to the deductibility of some executive compensation, and the elimination of the deduction for qualified domestic production activities. Changes in the Tax Act that did not significantly impact us upon enactment include the implementation of a modified territorial tax system and other modifications to how foreign earnings are subject to U.S. tax, including a tax on Global Intangible Low-Taxed Income which we have elected to treat as period costs if and when incurred.

As a change in tax law is accounted for in the period of enactment, we recognized a discrete benefit in the second quarter of fiscal 2018 due to the revaluation of U.S. net deferred tax liabilities to reflect the lower statutory rate. We also recorded a benefit in the second quarter of fiscal 2018 resulting from application of the lower federal statutory corporate tax rate to fiscal 2018 projected taxable income at that time. The accounting for the impacts of the Tax Act was complete as of November 30, 2018, and we did not record any material adjustments to the provisional amounts recorded in the second quarter of fiscal 2018 related to the Tax Act.

Valuation Allowances

We assess the realizability of our deferred tax assets on a quarterly basis through an analysis of potential sources of future taxable income, including prior year taxable income available to absorb a carryback of tax losses, reversals of existing taxable temporary differences, tax planning strategies, and forecasts of taxable income. We consider all negative and positive evidence, including the weight of the evidence, to determine if valuation allowances against deferred tax assets are required. In fiscal 2018, we released valuation allowances against certain U.S. federal and state and Canadian deferred tax assets resulting in discrete tax benefits totaling $37 million. The release of these valuation allowances was the result of sufficient positive evidence at the time, including cumulative income in recent years and projections of future taxable income based primarily on our improved financial performance, that it is more-likely-than-not that the deferred tax assets will be realized. We continue to maintain valuation allowances against certain U.S. federal, state, Canadian and all Puerto Rican deferred tax assets.

Recently Issued Accounting Standards

For a description of recent accounting pronouncements that may have an impact on our financial condition, results of operations or cash flows, see Note 3 – Recent Accounting Pronouncements in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

Non-GAAP Financial Measures

Debt, net of cash

Debt, net of cash is the difference between (i) the sum of long-term debt and short-term borrowings (i.e., total debt) and (ii) cash and cash equivalents. We believe that debt, net of cash is a useful measure for investors because, as cash and cash equivalents can be used, among other things, to repay indebtedness, netting this against total debt is a useful measure of our leverage.

The following is a reconciliation of debt, net of cash (in thousands):

	August 31, 2019	August 31, 2018	August 31, 2017
Short-term borrowings	$ 1,321	$ 1,139	$ 721
Long-term debt, net of current maturities	103,775	106,237	144,403
Total debt	105,096	107,376	145,124
Less cash and cash equivalents	12,377	4,723	7,287
Total debt, net of cash	$ 92,719	$ 102,653	$ 137,837

Net borrowings (repayments) of debt

Net borrowings (repayments) of debt is the sum of borrowings from long-term debt and repayments of long-term debt. We present this amount as the net change in our borrowings (repayments) for the period because we believe it is useful for investors as a meaningful presentation of the change in debt.

The following is a reconciliation of net borrowings (repayments) of debt (in thousands):

	Fiscal 2019	Fiscal 2018	Fiscal 2017
Borrowings from long-term debt	$ 431,048	$ 515,480	$ 433,336
Repayments of long-term debt	(435,353)	(556,456)	(481,757)
Net borrowings (repayments) of debt	$ (4,305)	$ (40,976)	$ (48,421)

Adjusted consolidated operating income, adjusted AMR operating income, adjusted CSS operating income, adjusted net income from continuing operations attributable to SSI shareholders, and adjusted diluted earnings per share from continuing operations attributable to SSI shareholders

Management believes that providing these non-GAAP financial measures adds a meaningful presentation of our results from business operations excluding adjustments for a charge related to the settlement of a wage and hour class action lawsuit, charges for legacy environmental matters net of recoveries, restructuring charges and other exit-related activities, asset impairment charges net of recoveries, recoveries related to the resale or modification of previously contracted shipments, and income tax expense (benefit) allocated to these adjustments, items which are not related to underlying business operational performance, and improves the period-to-period comparability of our results from business operations. Adjusted operating results in fiscal 2015 excluded the impact from the resale or modification of the terms, each at significantly lower prices due to sharp declines in selling prices, of certain previously contracted bulk shipments for delivery during fiscal 2015. Recoveries resulting from settlements with the original contract parties, which began in fiscal 2016 and concluded in fiscal 2018, are reported within SG&A expense in the Consolidated Statements of Income and are also excluded from the measures.

The following is a reconciliation of adjusted consolidated operating income, adjusted AMR operating income, and adjusted CSS operating income (in thousands):

	Fiscal 2019	Fiscal 2018	Fiscal 2017
Consolidated operating income:			
As reported	$ 83,865	$ 148,988	$ 56,013
Charge related to the settlement of a wage and hour class action lawsuit	2,330	—	—
Charges for legacy environmental matters, net(1)	2,419	7,268	2,648
Restructuring charges and other exit-related activities	365	(661)	(109)
Asset impairment charges (recoveries), net	63	(1,021)	(717)
Recoveries related to the resale or modification of previously contracted shipments	—	(417)	(1,144)
Adjusted	$ 89,042	$ 154,157	$ 56,691
AMR operating income:			
As reported	$ 95,991	$ 169,120	$ 91,405
Charges for legacy environmental matters, net(1)	—	1,586	2,340
Asset impairment charges (recoveries), net	63	(933)	(184)
Recoveries related to the resale or modification of previously contracted shipments	—	(417)	(1,144)
Adjusted	$ 96,054	$ 169,356	$ 92,417
CSS operating income:			
As reported	$ 31,951	$ 38,286	$ 5,275
Asset impairment charges (recoveries), net	—	(88)	(533)
Adjusted	$ 31,951	$ 38,198	$ 4,742

(1) Legal and environmental charges for legacy environmental matters, net of recoveries. Fiscal years 2018 and 2017 have been recast for comparability. Legacy environmental matters include charges (net of recoveries) related to the Portland Harbor Superfund site and to other legacy environmental loss contingencies. See Note 8 – Commitments and Contingencies, 'Portland Harbor' and 'Other Legacy Environmental Loss Contingencies' in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

The following is a reconciliation of adjusted net income from continuing operations attributable to SSI shareholders and adjusted diluted earnings per share from continuing operations attributable to SSI shareholders (in thousands, except per share data):

	Fiscal 2019	Fiscal 2018	Fiscal 2017
Net income from continuing operations attributable to SSI shareholders:			
As reported	$ 56,593	$ 156,105	$ 44,901
Charge related to the settlement of a wage and hour class action lawsuit	2,330	—	—
Charges for legacy environmental matters, net(1)	2,419	7,268	2,648
Restructuring charges and other exit-related activities	365	(661)	(109)
Asset impairment charges (recoveries), net	63	(1,021)	(717)
Recoveries related to the resale or modification of previously contracted shipments	—	(417)	(1,144)
Income tax (benefit) expense allocated to adjustments(2)	(794)	34	(25)
Adjusted	$ 60,976	$ 161,308	$ 45,554
Diluted earnings per share from continuing operations attributable to SSI shareholders:			
As reported	$ 2.01	$ 5.46	$ 1.60
Charge related to the settlement of a wage and hour class action lawsuit, per share	0.08	—	—
Charges for legacy environmental matters, net, per share(1)	0.09	0.25	0.09
Restructuring charges and other exit-related activities, per share	0.01	(0.02)	—
Asset impairment charges (recoveries), net, per share	—	(0.04)	(0.03)
Recoveries related to the resale or modification of certain previously contracted shipments, per share	—	(0.01)	(0.04)
Income tax (benefit) expense allocated to adjustments, per share(2)	(0.03)	—	—
Adjusted	$ 2.16	$ 5.64	$ 1.62

(1) Legal and environmental charges for legacy environmental matters, net of recoveries. Fiscal years 2018 and 2017 have been recast for comparability. Legacy environmental matters include charges (net of recoveries) related to the Portland Harbor Superfund site and to other legacy environmental loss contingencies. See Note 8 – Commitments and Contingencies, 'Portland Harbor' and 'Other Legacy Environmental Loss Contingencies' in the Notes to the Consolidated Financial Statements in Part II, Item 8 of this report.

(2) The income tax allocated to the aggregate adjustments reconciling reported and adjusted net income from continuing operations attributable to SSI shareholders and diluted earnings per share from continuing operations attributable to SSI shareholders is determined based on a tax provision calculated with and without the adjustments.

We believe that these non-GAAP financial measures allow for a better understanding of our operating and financial performance. These non-GAAP financial measures should be considered in addition to, but not as a substitute for, the most directly comparable U.S. GAAP measures. Although we find these non-GAAP financial measures useful in evaluating the performance of our business, our reliance on these measures is limited because the adjustments often have a material impact on our consolidated financial statements presented in accordance with U.S. GAAP. Therefore, we typically use these adjusted amounts in conjunction with our U.S. GAAP results to address these limitations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Commodity Price Risk

We are exposed to commodity price risk, mainly associated with variations in the market price for ferrous and nonferrous metals, including scrap metal, finished steel products, auto bodies and other commodities. The timing and magnitude of industry cycles are difficult to predict and are impacted by general economic conditions. We respond to increases and decreases in forward selling prices by adjusting purchase prices. We actively manage our exposure to commodity price risk and monitor the actual and expected spread between forward selling prices and purchase costs and processing and shipping expense. Sales contracts are based on prices negotiated with our customers, and generally orders are placed 30 to 60 days ahead of shipment date. However, financial results may be negatively impacted when forward selling prices fall more quickly than we can adjust purchase prices or when customers fail to meet their contractual obligations. We assess the net realizable value of inventory (“NRV”) each quarter based upon committed contracts and sales orders and estimated future selling prices. For our uncommitted inventories, a 10% decrease in the selling price of inventory would not have had a material NRV impact on any of our reportable segments as of August 31, 2019 and 2018.

Interest Rate Risk

We are exposed to market risk associated with changes in interest rates related to our debt obligations. Our revolving credit facility is subject to variable interest rates and therefore have exposure to changes in interest rates. If market interest rates had changed 10% from actual interest rate levels in fiscal 2019 or 2018, the effect on our interest expense and net income would not have been material.

Credit Risk

Credit risk relates to the risk of loss that might occur as a result of non-performance by counterparties of their contractual obligations to take delivery of scrap metal and finished steel products and to make financial settlements of these obligations, or to provide sufficient quantities of scrap metal or payment to settle advances, loans and other contractual receivables in connection with demolition and scrap extraction projects. We manage our exposure to credit risk through a variety of methods, including shipping ferrous scrap metal exports under letters of credit, collection of deposits prior to shipment for certain nonferrous export customers, establishment of credit limits for certain sales on open terms, credit insurance and designation of collateral and financial guarantees securing advances, loans and other contractual receivables.

Historically, we have shipped almost all of our large shipments of ferrous scrap metal to foreign customers under contracts supported by letters of credit issued or confirmed by banks deemed creditworthy. The letters of credit ensure payment by the customer. As we generally sell export recycled ferrous metal under contracts or orders that generally provide for shipment within 30 to 60 days after the price is agreed, our customers typically do not have difficulty obtaining letters of credit from their banks in periods of rising ferrous prices, as the value of the letters of credit are collateralized by the value of the inventory on the ship. However, in periods of significantly declining prices, our customers may not be able to obtain letters of credit for the full sales value of the inventory to be shipped.

As of August 31, 2019 and 2018, 32% and 33%, respectively, of our accounts receivable balance were covered by letters of credit. Of the remaining balance, 96% and 99% was less than 60 days past due as of August 31, 2019 and 2018, respectively.

Foreign Currency Exchange Rate Risk

We are exposed to foreign currency exchange rate risk, mainly associated with sales transactions and related accounts receivable denominated in the U.S. Dollar by our Canadian subsidiary with a functional currency of the Canadian Dollar. In certain instances, we may use derivatives to manage some portion of this risk. As of August 31, 2019 and 2018, we did not have any derivative contracts.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Management's Annual Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and effected by the Company's Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

The Company's internal control over financial reporting includes policies and procedures that relate to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of assets of the Company; provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company's consolidated financial statements in accordance with generally accepted accounting principles and that the receipts and expenditures of the Company are being made only in accordance with authorization of the Company's management and directors; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the Company's consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projection of any evaluation of effectiveness to future periods is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies and procedures may deteriorate.

Management of the Company assessed the effectiveness of the Company's internal control over financial reporting using the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on its assessment, management determined that the Company's internal control over financial reporting was effective as of August 31, 2019.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the Company's consolidated financial statements included in this Annual Report, also audited the effectiveness of the Company's internal control over financial reporting as of August 31, 2019, as stated in their report included herein.

Tamara L. Lundgren	Richard D. Peach
President and Chief Executive Officer	Senior Vice President, Chief Financial Officer and Chief of Corporate Operations
October 24, 2019	October 24, 2019

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Schnitzer Steel Industries, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Schnitzer Steel Industries, Inc. and its subsidiaries (the “Company”) as of August 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income, equity and cash flows for each of the three years in the period ended August 31, 2019, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the “consolidated financial statements”). We also have audited the Company's internal control over financial reporting as of August 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of August 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended August 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of August 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers as of September 1, 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Volume of Ferrous Metal Inventory

As described in Notes 2 and 4 to the consolidated financial statements, the Company's processed and unprocessed scrap metal inventory was $81.3 million as of August 31, 2019, which includes processed and unprocessed ferrous metal inventory, among other types of inventory. The accounting process the Company uses to record ferrous scrap metal quantities relies on significant estimates. With respect to estimating the quantities of unprocessed ferrous scrap metal inventory that are moved into production, management relies on weighed quantities of the processed ferrous material, adjusted for estimated metal recoveries and yields that are based on historical trends and other judgments by management. Actual recoveries and yields can vary depending on product quality, moisture content and the source of the unprocessed metal. The Company's estimates are intended to reasonably reflect the quantities of unprocessed ferrous scrap metal that are used in the production of processed ferrous metal. To assist in validating the reasonableness of these estimates, management periodically reviews shrink factors and performs monthly physical inventories. Due to the inherent nature of the Company's scrap metal inventories, including variations in product density, holding period and production processes utilized to manufacture the products, physical inventories will not necessarily detect all variances for scrap metal inventory such that estimates of quantities are required. To mitigate this risk, the Company further adjusts its ferrous physical inventories when the volume of a commodity is low and a physical inventory count is deemed to more accurately estimate the remaining volume.

The principal considerations for our determination that performing procedures relating to the volume of ferrous metal inventory is a critical audit matter are there was significant judgment by management in the estimation of metal recoveries and yields specific to ferrous metal inventory volumes, which, in turn, resulted in significant audit effort and a high degree of subjectivity in performing our audit procedures and in evaluating audit evidence related to estimates made by management.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the estimation of metal recoveries and yields specific to ferrous metal inventory volumes. These procedures also included, among others, testing inventory quantities received, assessing the reasonableness of management's estimated yields by comparing them to actual yields of ultimate inventory recoveries, testing ferrous metal inventory shipments including the volume ultimately recovered, observing management's physical inventory counts, and assessing rollforward activity between the time of the inventory counts and year-end. We also considered whether evidence obtained in other areas of the audit is consistent with management's estimates related to ferrous metal inventory volumes.

/s/ PricewaterhouseCoopers LLP
Portland, Oregon
October 24, 2019

We have served as the Company's auditor since 1976, which includes periods before the Company became subject to SEC reporting requirements.

SCHNITZER STEEL INDUSTRIES, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)
(Currency – U.S. Dollar)

	August 31, 2019	August 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 12,377	$ 4,723
Accounts receivable, net	145,617	169,418
Inventories	187,320	205,877
Refundable income taxes	5,867	4,668
Prepaid expenses and other current assets	115,107	63,673
Total current assets	466,288	448,359
Property, plant and equipment, net	456,400	415,711
Investments in joint ventures	10,276	11,532
Goodwill	169,237	168,065
Intangibles, net	4,482	4,358
Deferred income taxes	28,850	30,333
Other assets	25,213	26,459
Total assets	$ 1,160,746	$ 1,104,817
Liabilities and Equity		
Current liabilities:		
Short-term borrowings	$ 1,321	$ 1,139
Accounts payable	110,297	128,495
Accrued payroll and related liabilities	27,547	46,410
Environmental liabilities	6,030	6,682
Other accrued liabilities	123,035	71,951
Total current liabilities	268,230	254,677
Deferred income taxes	25,466	11,742
Long-term debt, net of current maturities	103,775	106,237
Environmental liabilities, net of current portion	45,769	47,150
Other long-term liabilities	16,210	14,901
Total liabilities	459,450	434,707
Commitments and contingencies (Note 8)		
Schnitzer Steel Industries, Inc. (“SSI”) shareholders’ equity:		
Preferred stock – 20,000 shares $1.00 par value authorized, none issued	—	—
Class A common stock – 75,000 shares $1.00 par value authorized, 26,464 and 26,502 shares issued and outstanding	26,464	26,502
Class B common stock – 25,000 shares $1.00 par value authorized, 200 and 200 shares issued and outstanding	200	200
Additional paid-in capital	33,700	36,929
Retained earnings	675,363	639,684
Accumulated other comprehensive loss	(38,763)	(37,237)
Total SSI shareholders’ equity	696,964	666,078
Noncontrolling interests	4,332	4,032
Total equity	701,296	670,110
Total liabilities and equity	$ 1,160,746	$ 1,104,817

See Notes to the Consolidated Financial Statements.

SCHNITZER STEEL INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In thousands, except per share amounts)
(Currency – U.S. Dollar)

	Year Ended August 31, 2019	2018	2017
Revenues	$ 2,132,781	$ 2,364,715	$ 1,687,591
Operating expense:			
Cost of goods sold	1,858,535	2,010,485	1,464,508
Selling, general and administrative	191,405	208,877	171,570
(Income) from joint ventures	(1,452)	(1,953)	(3,674)
Asset impairment charges (recoveries), net	63	(1,021)	(717)
Restructuring charges and other exit-related activities	365	(661)	(109)
Operating income	83,865	148,988	56,013
Interest expense	(8,266)	(8,983)	(8,081)
Other income, net	641	1,848	758
Income from continuing operations before income taxes	76,240	141,853	48,690
Income tax (expense) benefit	(17,670)	17,590	(1,322)
Income from continuing operations	58,570	159,443	47,368
(Loss) income from discontinued operations, net of tax	(248)	346	(390)
Net income	58,322	159,789	46,978
Net income attributable to noncontrolling interests	(1,977)	(3,338)	(2,467)
Net income attributable to SSI shareholders	$ 56,345	$ 156,451	$ 44,511
Net income per share attributable to SSI shareholders:			
Basic:			
Income per share from continuing operations	$ 2.06	$ 5.65	$ 1.63
(Loss) income per share from discontinued operations	(0.01)	0.01	(0.01)
Net income per share	$ 2.05	$ 5.66	$ 1.62
Diluted:			
Income per share from continuing operations	$ 2.01	$ 5.46	$ 1.60
(Loss) income per share from discontinued operations	(0.01)	0.01	(0.01)
Net income per share(1)	$ 2.00	$ 5.47	$ 1.58
Weighted average number of common shares:			
Basic	27,527	27,645	27,537
Diluted	28,222	28,589	28,141

(1) May not foot due to rounding.

See Notes to the Consolidated Financial Statements.

SCHNITZER STEEL INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)
(Currency – U.S. Dollar)

	Year Ended August 31,		
	2019	2018	2017
Net income	$ 58,322	$ 159,789	$ 46,978
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(1,560)	(2,301)	2,711
Pension obligations, net	34	357	2,111
Total other comprehensive (loss) income, net of tax	(1,526)	(1,944)	4,822
Comprehensive income	56,796	157,845	51,800
Less comprehensive income attributable to noncontrolling interests	(1,977)	(3,338)	(2,467)
Comprehensive income attributable to SSI shareholders	$ 54,819	$ 154,507	$ 49,333

See Notes to the Consolidated Financial Statements.

SCHNITZER STEEL INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands, except per share amounts)
(Currency – U.S. Dollar)

	Common Stock				Additional		Accumulated	Total SSI		
	Class A		Class B		Paid-in	Retained	Other Comprehensive	Shareholders'	Noncontrolling	Total
	Shares	Amount	Shares	Amount	Capital	Earnings	Loss	Equity	Interests	Equity
Balance as of September 1, 2016	26,482	$ 26,482	306	$ 306	$ 30,948	$ 480,100	$ (40,115)	$ 497,721	$ 3,711	$ 501,432
Net income	—	—	—	—	—	44,511	—	44,511	2,467	46,978
Other comprehensive income, net of tax	—	—	—	—	—	—	4,822	4,822	—	4,822
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	(2,271)	(2,271)
Conversion of common stock	106	106	(106)	(106)	—	—	—	—	—	—
Restricted stock withheld for taxes	(148)	(148)	—	—	(3,326)	—	—	(3,474)	—	(3,474)
Issuance of restricted stock	419	419	—	—	(419)	—	—	—	—	—
Share-based compensation expense	—	—	—	—	10,847	—	—	10,847	—	10,847
Dividends ($0.75 per common share)	—	—	—	—	—	(20,841)	—	(20,841)	—	(20,841)
Balance as of August 31, 2017	26,859	26,859	200	200	38,050	503,770	(35,293)	533,586	3,907	537,493
Net income	—	—	—	—	—	156,451	—	156,451	3,338	159,789
Other comprehensive loss, net of tax	—	—	—	—	—	—	(1,944)	(1,944)	—	(1,944)
Reclassification of stranded tax effects of the Tax Act	—	—	—	—	—	517	—	517	—	517
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	(2,796)	(2,796)
Purchase of noncontrolling interest	—	—	—	—	—	(183)	—	(183)	(417)	(600)
Share repurchases	(516)	(516)	—	—	(16,845)	—	—	(17,361)	—	(17,361)
Restricted stock withheld for taxes	(103)	(103)	—	—	(2,979)	—	—	(3,082)	—	(3,082)
Issuance of restricted stock	262	262	—	—	(262)	—	—	—	—	—
Share-based compensation expense	—	—	—	—	18,965	—	—	18,965	—	18,965
Dividends ($0.75 per common share)	—	—	—	—	—	(20,871)	—	(20,871)	—	(20,871)
Balance as of August 31, 2018	26,502	26,502	200	200	36,929	639,684	(37,237)	666,078	4,032	670,110
Net income	—	—	—	—	—	56,345	—	56,345	1,977	58,322
Other comprehensive loss, net of tax	—	—	—	—	—	—	(1,526)	(1,526)	—	(1,526)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	(1,677)	(1,677)
Share repurchases	(527)	(527)	—	—	(12,556)	—	—	(13,083)	—	(13,083)
Restricted stock withheld for taxes	(278)	(278)	—	—	(7,206)	—	—	(7,484)	—	(7,484)
Issuance of restricted stock	767	767	—	—	(767)	—	—	—	—	—
Share-based compensation expense	—	—	—	—	17,300	—	—	17,300	—	17,300
Dividends ($0.75 per common share)	—	—	—	—	—	(20,666)	—	(20,666)	—	(20,666)
Balance as of August 31, 2019	26,464	$ 26,464	200	$ 200	$ 33,700	$ 675,363	$ (38,763)	$ 696,964	$ 4,332	$ 701,296

See Notes to the Consolidated Financial Statements.

SCHNITZER STEEL INDUSTRIES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Currency – U.S. Dollar)

	Year Ended August 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income	$ 58,322	$ 159,789	$ 46,978
Adjustments to reconcile net income to cash provided by operating activities:			
Asset impairment charges (recoveries), net	63	(1,021)	(717)
Exit-related (gains), asset impairments and accelerated depreciation, net	23	(1,000)	(407)
Depreciation and amortization	53,336	49,672	49,840
Inventory write-downs	775	38	—
Deferred income taxes	14,613	(37,995)	2,278
Undistributed equity in earnings of joint ventures	(1,452)	(1,953)	(3,674)
Share-based compensation expense	17,300	18,965	10,847
(Gain) loss on the disposal of assets, net	(1,545)	56	448
Unrealized foreign exchange loss (gain), net	148	(104)	361
Bad debt expense, net	74	323	126
Changes in assets and liabilities, net of acquisitions:			
Accounts receivable	9,478	(44,941)	(36,195)
Inventories	33,466	(24,280)	(22,207)
Income taxes	(1,158)	(1,755)	(1,086)
Prepaid expenses and other current assets	(859)	(109)	(1,704)
Other long-term assets	1,167	(1,620)	537
Accounts payable	(17,068)	26,049	33,062
Accrued payroll and related liabilities	(19,117)	4,889	12,389
Other accrued liabilities	(3,560)	6,066	5,073
Environmental liabilities	(2,476)	3,053	1,884
Other long-term liabilities	518	4,404	(1,101)
Distributed equity in earnings of joint ventures	2,692	1,150	3,638
Net cash provided by operating activities	144,740	159,676	100,370
Cash flows from investing activities:			
Capital expenditures	(94,613)	(77,626)	(44,940)
Purchase of cost method investment	—	—	(6,017)
Acquisitions	(1,553)	(2,300)	—
Joint venture receipts, net	641	11	405
Proceeds from sale of assets	4,070	6,517	5,158
Deposit on land option	1,890	—	—
Net cash used in investing activities	(89,565)	(73,398)	(45,394)
Cash flows from financing activities:			
Borrowings from long-term debt	431,048	515,480	433,336
Repayment of long-term debt	(435,353)	(556,456)	(481,757)
Payment of debt issuance costs	(102)	(2,590)	(112)
Repurchase of Class A common stock	(13,083)	(17,361)	—
Taxes paid related to net share settlement of share-based payment awards	(7,484)	(3,082)	(3,474)
Distributions to noncontrolling interests	(1,677)	(2,796)	(2,271)
Purchase of noncontrolling interest	—	(600)	—
Dividends paid	(20,615)	(20,736)	(20,396)
Net cash used in financing activities	(47,266)	(88,141)	(74,674)
Effect of exchange rate changes on cash	(255)	(701)	166
Net increase (decrease) in cash and cash equivalents	7,654	(2,564)	(19,532)
Cash and cash equivalents as of beginning of year	4,723	7,287	26,819
Cash and cash equivalents as of end of year	$ 12,377	$ 4,723	$ 7,287

See Notes to the Consolidated Financial Statements.

	Year Ended August 31,		
	2019	2018	2017
SUPPLEMENTAL DISCLOSURES:			
Cash paid during the year for:			
Interest	$ 6,191	$ 8,113	$ 7,016
Income taxes, net	$ 3,527	$ 17,203	$ 148
Schedule of noncash investing and financing transactions:			
Purchases of property, plant and equipment included in current liabilities	$ 17,191	$ 18,768	$ 11,082

See Notes to the Consolidated Financial Statements.

Note 1 – Nature of Operations

Founded in 1906, Schnitzer Steel Industries, Inc., 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. Schnitzer Steel Industries, Inc. and its consolidated subsidiaries, together, are referred to as the Company.

The Company's 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 acquires and recycles ferrous and nonferrous scrap metal for sale to foreign and domestic metal producers, processors and brokers, and procures salvaged vehicles and sells serviceable used auto parts from these vehicles through a network of self-service auto parts stores. These auto parts stores also supply the Company's shredding facilities with auto bodies that are processed into saleable recycled scrap metal.

CSS operates a steel mini-mill that produces a range of finished steel long products using ferrous recycled scrap metal and other raw materials. 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 also sell recycled metal to external customers primarily in export markets.

As of August 31, 2019, all of the Company's facilities were located in the United States ("U.S.") and its territories and Canada.

Note 2 – Summary of Significant Accounting Policies

Principles of Consolidation

The Consolidated Financial Statements include the accounts of Schnitzer Steel Industries, Inc. and its majority-owned and wholly-owned subsidiaries. The equity method of accounting is used for investments in joint ventures over which the Company has significant influence but does not have effective control. All significant intercompany account balances, transactions, profits and losses have been eliminated. All transactions and relationships with potential variable interest entities are evaluated to determine whether the Company is the primary beneficiary of the entities, therefore requiring consolidation. The Company does not have any variable interest entities requiring consolidation.

Accounting Changes

As of the beginning of the first quarter of fiscal 2019, the Company adopted an accounting standards update initially issued in May 2014 that clarifies the principles for recognizing revenue from contracts with customers. The core principle of the new guidance is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration the entity expects to be entitled to in exchange for those goods or services. The Company adopted the new revenue accounting standard using the modified retrospective approach, which requires recognition of the cumulative effect of initially applying the new requirements as an adjustment to the opening balance of retained earnings in the period of initial application. Adoption of the new requirements did not change the timing of revenue recognition for the Company compared to the previous guidance, and the Company recorded no cumulative-effect adjustment to the opening balance of retained earnings as of September 1, 2018. The Company identified certain scrap purchase and sale arrangements for which it recognized revenue for the gross amount of consideration it expected to be entitled to from the customer (as principal) under the previous revenue guidance, but for which under the new revenue standard it recognizes revenue as the net amount of consideration that it expects to retain after paying the scrap metal supplier (as agent). The foregoing change in the classification of the cost of scrap metal purchased under such arrangements has the effect of reducing the amount of revenue and cost of goods sold reported in the financial statements, while having no impact on net income. If the Company had continued using the accounting guidance in effect before the adoption of the new revenue accounting standard, its consolidated revenues for fiscal 2019 would have been higher by approximately $28 million, or 1%, and its consolidated cost of goods sold would have been higher by the same amount. No other line items in the consolidated financial statements were materially impacted by adoption of the new requirements. Comparative prior period amounts and disclosures continue to be reported in accordance with guidance in effect prior to the date of adoption. See Note 10 - Revenue for the disclosures required under the new standard.

As of the beginning of the first quarter of fiscal 2019, the Company adopted an accounting standards update that amends certain aspects of the reporting model for financial instruments. The most pertinent amendment to the Company is that an entity may choose to measure certain equity investments that do not have readily determinable fair values at cost minus impairment, plus or minus changes resulting from observable price changes. The amendments also require a qualitative assessment to identify impairment of equity investments without readily determinable fair values. Adoption of the requirements had no impact on the Company's consolidated financial position, results of operations and cash flows.

Discontinued Operations

The results of discontinued operations are presented separately, net of tax, from the results of ongoing operations for all periods presented. The disposed components reflected in the results of discontinued operations during the periods presented consist of six auto parts stores for which the Company ceased operations in fiscal 2015. The expenses included in the results of discontinued operations are the direct operating expenses incurred by the disposed components that may be reasonably segregated from the costs of the ongoing operations of the Company.

Cash and Cash Equivalents

Cash and cash equivalents include short-term securities that are not restricted by third parties and have an original maturity date of 90 days or less. Included in accounts payable are book overdrafts representing outstanding checks in excess of funds on deposit of $27 million and $28 million as of August 31, 2019 and 2018, respectively.

Accounts Receivable, net

Accounts receivable represent amounts primarily due from customers on product and other sales. These accounts receivable, which are reduced by an allowance for doubtful accounts, are recorded at the invoiced amount and do not bear interest. The Company extends credit to customers under contracts containing customary and explicit payment terms, and payment is generally required within 30 to 60 days of shipment. Nonferrous export sales typically require a deposit prior to shipment. Historically, almost all of the Company's ferrous export sales have been made with letters of credit. Domestic ferrous metal sales, nonferrous metal sales and finished steel sales are generally made on open account, and the majority of these sales are covered by credit insurance.

The Company evaluates the collectibility of its accounts receivable based on a combination of factors, including whether sales were made pursuant to letters of credit or credit insurance is in place. In cases where management is aware of circumstances that may impair a customer's ability to meet its financial obligations, management records a specific allowance against amounts due and reduces the receivable to the amount the Company believes will be collected. For all other customers, the Company maintains an allowance that considers the total receivables outstanding, historical collection rates and economic trends. Accounts are written off when all efforts to collect have been exhausted. The allowance for doubtful accounts was $2 million and $3 million as of August 31, 2019 and 2018, respectively.

Also included in accounts receivable are short-term advances to scrap metal suppliers used as a mechanism to acquire unprocessed scrap metal. The advances are generally repaid with scrap metal, as opposed to cash. Repayments of advances with scrap metal are treated as noncash operating activities in the Consolidated Statements of Cash Flows and totaled $15 million, $15 million and $12 million for the fiscal years ended August 31, 2019, 2018 and 2017, respectively.

Inventories

The Company’s inventories consist of processed and unprocessed scrap metal (ferrous, nonferrous, and mixed nonferrous recovered joint products arising from the manufacturing process), semi-finished steel products (billets), finished steel products (primarily rebar, wire rod, and merchant bar), used and salvaged vehicles, and supplies. Inventories are stated at the lower of cost and net realizable value. The Company determines the cost of ferrous and nonferrous scrap metal inventories using the average cost method and capitalizes substantially all direct processing costs and yard costs into inventory. The Company allocates material and production costs to joint products using the gross margin method. AMR determines the cost of used and salvaged vehicle inventory at its auto parts stores, which is reported within finished goods, based on the average price the Company pays for a vehicle and capitalizes the vehicle cost and substantially all production costs into inventory. CSS determines the cost of its semi-finished and finished steel product inventories based on average costs and capitalizes all direct and indirect costs of manufacturing into inventory. Indirect costs of manufacturing include general plant costs, maintenance and yard costs. The Company determines the cost of the substantial majority of its supplies inventory using the average cost method and reduces the carrying value for losses due to obsolescence. The Company considers estimated future selling prices when determining the estimated net realizable value of its inventory. As the Company generally sells its recycled ferrous metal under contracts that provide for shipment within 30 to 60 days after the price is agreed, it utilizes the selling prices under committed contracts and sales orders for determining the estimated net realizable value of quantities on hand that will be shipped under these contracts and sales orders.

The accounting process the Company uses to record ferrous scrap metal quantities relies on significant estimates. With respect to estimating the quantities of unprocessed ferrous scrap metal inventory that are moved into production, management relies on weighed quantities of the processed ferrous material, adjusted for estimated metal recoveries and yields that are based on historical trends and other judgments by management. Actual recoveries and yields can vary depending on product quality, moisture content and the source of the unprocessed metal. The Company’s estimates are intended to reasonably reflect the quantities of unprocessed ferrous scrap metal that are used in the production of processed ferrous metal. To assist in validating the reasonableness of these estimates, management periodically reviews shrink factors and performs monthly physical inventories. Due to the inherent nature of the Company’s scrap metal inventories, including variations in product density, holding period and production processes utilized to manufacture the products, physical inventories will not necessarily detect all variances for scrap metal inventory such that estimates of quantities are required. To mitigate this risk, the Company further adjusts its ferrous physical inventories when the volume of a commodity is low and a physical inventory count is deemed to more accurately estimate the remaining volume.

Property, Plant and Equipment, net

Property, plant and equipment are recorded at cost. Expenditures for major additions and improvements are capitalized, while routine repair and maintenance costs are expensed as incurred. Interest related to the construction of qualifying assets is capitalized as part of the construction costs and was not material to any of the periods presented. When assets are retired or sold, the related cost and accumulated depreciation are removed from the accounts and resulting gains or losses are generally included in operating expense. Gains and losses from sales of assets related to an exit activity are reported within restructuring charges and other exit-related activities in the Consolidated Statements of Income. Depreciation is recorded on a straight-line basis over the estimated useful lives of the assets. Upon idling an asset, depreciation continues to be recorded. Leasehold improvements are amortized over the shorter of their estimated useful lives or the remaining lease term.

As of August 31, 2019, the useful lives used for depreciation and amortization were as follows:

	Useful Life (in years)
Machinery and equipment	3 to 40
Land improvements	3 to 35
Buildings and leasehold improvements	5 to 40
Office equipment and other software licenses	3 to 10
Enterprise Resource Planning (“ERP”) systems	6 to 17

Prepaid Expenses

The Company’s prepaid expenses, reported within prepaid expenses and other current assets in the Consolidated Balance Sheets, totaled $23 million and $22 million as of August 31, 2019 and 2018, respectively, and consisted primarily of deposits on capital purchases, prepaid insurance, prepaid rent and prepaid services.

Other Assets

The Company's other assets, exclusive of prepaid expenses, consist primarily of receivables from insurers, spare parts, an equity investment, debt issuance costs, and notes and other contractual receivables. Other assets are reported within either prepaid expenses and other current assets or other assets in the Consolidated Balance Sheets based on their expected use either during or beyond the current operating cycle of one year from the reporting date.

Receivables from insurers represent the portion of insured losses expected to be recovered from the Company's insurance carriers. The receivable is recorded at an amount not to exceed the recorded loss and only if the terms of legally enforceable insurance contracts support that the insurance recovery will not be disputed and is deemed collectible. Receivables from insurers totaled $89 million and $36 million as of August 31, 2019 and 2018, respectively, with the increase in fiscal 2019 relating primarily to adjustment of a contingent loss originally recorded in fiscal 2018 in connection with lawsuits arising from a 2016 motor vehicle collision for which the Company had insurance coverage. The foregoing lawsuits were settled and full payment of the settlements was made within the Company's insurance policy limits in the first quarter of fiscal 2020. See "Contingencies – Other" in Note 8 – Commitments and Contingencies for further discussion of the contingent loss.

The Company invested $6 million in the equity of a privately-held waste and recycling entity in fiscal 2017. The equity investment does not have a readily determinable fair value and, therefore, is carried at cost and adjusted for impairments and observable price changes. The investment is presented as part of AMR and reported within other assets in the Consolidated Balance Sheets. The carrying value of the investment was $6 million as of August 31, 2019 and 2018. The Company has not recorded any impairments or upward or downward adjustments to the carrying value of the investment since acquisition.

Debt issuance costs consist primarily of costs incurred by the Company to enter into or modify its credit facilities. The Company reports deferred debt issuance costs within other assets in the Consolidated Balance Sheets and amortizes them to interest expense on a straight-line basis over the contractual term of the arrangement.

Notes and other contractual receivables consist primarily of advances to entities in the business of extracting scrap metal through demolition and other activities, as well as receivables from counterparties to sales of equipment assets and to legal settlements. Repayment of these advances to suppliers is in either cash or scrap metal. The Company performs periodic reviews of its notes and other contractual receivables to identify credit risks and to assess the overall collectibility of the receivables, which typically involves consideration of the value of collateral which in the case of advances to suppliers is generally in the form of scrap metal extracted from demolition and construction projects. A note or other contractual receivable is considered impaired when, based on current information and events, it is probable that the Company will be unable to collect all amounts due in accordance with the contractual terms of the agreement. Once a note or other contractual receivable has been identified as impaired, it is measured based on the present value of payments expected to be received, discounted at the receivable's contractual interest rate, or for arrangements that are solely dependent on collateral for repayment, the estimated fair value of the collateral less estimated costs to sell. If the carrying value of the receivable exceeds its recoverable amount, an impairment is recorded for the difference.

Long-Lived Assets

The Company tests long-lived tangible and intangible assets for impairment at the asset group level, which is determined based on the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities. For the Company's metals recycling operations reported within AMR, an asset group generally consists of the regional shredding and export operation along with surrounding feeder yards. For regions with no shredding and export operations, each metals recycling yard is an asset group. For the Company's auto parts operations, generally each auto parts store is an asset group. The combined steel manufacturing and metals recycling operations within CSS are a single asset group. The Company tests its asset groups for impairment when certain triggering events or changes in circumstances indicate that the carrying value of the asset group may be impaired. If the carrying value of the asset group is not recoverable because it exceeds the Company's estimate of future undiscounted cash flows from the use and eventual disposition of the asset group, an impairment loss is recognized by the amount the carrying value exceeds its fair value, if any. The impairment loss is allocated to the long-lived assets of the group on a pro rata basis using the relative carrying amounts of those assets, except that the loss allocated to an individual long-lived asset of the group shall not reduce the carrying amount of that asset below its fair value. Fair value is determined primarily using the cost and market approaches.

With respect to individual long-lived assets, changes in circumstances may merit a change in the estimated useful lives or salvage values of the assets, which are accounted for prospectively in the period of change. For such assets, the useful life is shortened based on the Company's plans to dispose of or abandon the asset before the end of its original useful life and depreciation is accelerated beginning when that determination is made.

Investments in Joint Ventures

As of August 31, 2019, the Company had two 50%-owned joint venture interests which were accounted for under the equity method of accounting. One of the joint venture interests is presented as part of AMR operations, and one interest is presented as part of CSS operations. The joint venture within CSS sells recycled scrap metal to other operations within CSS at prices that approximate local market rates, which produces intercompany profit. This intercompany profit is eliminated while the products remain in inventory and is not recognized until the finished products are sold to third parties. As of August 31, 2019, the Company's investments in equity method joint ventures have generated $8 million in cumulative undistributed earnings.

A loss in value of an investment in a joint venture is recognized when the decline is other than temporary. Management considers all available evidence to evaluate the realizable value of its investments including the length of time and the extent to which the fair value has been less than cost, the financial condition and near-term prospects of the joint venture business, and the Company's intent and ability to retain the investment for a period of time sufficient to allow for any anticipated recovery in fair value. Once management determines that an other-than-temporary impairment exists, the investment is written down to its fair value, which establishes a new cost basis. The Company determines fair value using Level 3 inputs under the fair value hierarchy using an income approach based on a discounted cash flow analysis.

During fiscal 2018, the Company declassified two of its 50% joint venture interests from equity method classification as a result of the agreed-upon dissolution of the joint venture entities. The joint venture interests had previously been presented as part of AMR operations. During fiscal 2017, the Company sold one of its 50% joint venture interests, which had previously been presented as part of CSS operations. The Company recorded immaterial gains as a result of these transactions. During fiscal 2017, one of the Company's joint venture interests sold real estate resulting in recognition of a $6 million gain by the joint venture, $3 million of which was attributable to the Company's investment. The Company's share of the gain is reported within (income) from joint ventures in the Consolidated Statements of Income. See Note 15 - Related Party Transactions for further detail on transactions with joint ventures.

Goodwill and Other Intangible Assets, net

Goodwill represents the excess of the purchase price over the net amount of identifiable assets acquired and liabilities assumed in a business combination measured at fair value. The Company evaluates goodwill for impairment annually on July 1 and upon the occurrence of certain triggering events or substantive changes in circumstances that indicate that the fair value of goodwill may be impaired. Impairment of goodwill is tested at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment (referred to as a 'component'). A component of an operating segment is required to be identified as a reporting unit if the component is a business for which discrete financial information is available and segment management regularly reviews its operating results.

When testing goodwill for impairment, the Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more-likely-than-not that the estimated fair value of a reporting unit is less than its carrying amount. If the Company elects to perform a qualitative assessment and determines that an impairment is more-likely-than-not, the Company is then required to perform the quantitative impairment test, otherwise no further analysis is required. The Company also may elect not to perform the qualitative assessment and, instead, proceed directly to the quantitative impairment test. When performing the quantitative impairment test, the Company applies a one-step quantitative test and records the amount of goodwill impairment as the excess of a reporting unit's carrying amount over its fair value, not to exceed the total amount of goodwill allocated to that reporting unit.

When the Company is required to perform a quantitative goodwill impairment test, it estimates the fair value of its reporting units using an income approach based on the present value of expected future cash flows, including terminal value, utilizing a market-based weighted average cost of capital determined separately for each reporting unit. The determination of fair value involves the use of significant estimates and assumptions, including revenue growth rates driven by future commodity prices and volume expectations, 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. In addition, to corroborate the reporting units' valuation, the Company uses a market approach based on earnings multiple data and a reconciliation of the Company's estimate of the aggregate fair value of the reporting units to the Company's market capitalization, including consideration of a control premium. The Company did not record goodwill impairment charges in any of the periods presented.

The Company tests indefinite-lived intangible assets for impairment by first assessing qualitative factors to determine whether it is necessary to perform a quantitative impairment test. If the Company believes, as a result of its qualitative assessment, that it is more-likely-than-not that the fair value of the indefinite-lived intangible asset is less than its carrying amount, the quantitative impairment test is required. Otherwise, no further testing is required. The Company did not record impairment charges on indefinite-lived intangible assets in any of the periods presented.

Acquisitions

The Company recognizes the assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at the acquisition date, measured at their fair values as of that date. Contingent purchase consideration is recorded at fair value at the date of acquisition. Any excess purchase price over the fair value of the net assets acquired is recorded as goodwill. Within one year from the date of acquisition, the Company may update the value allocated to the assets acquired and liabilities assumed and the resulting goodwill balance as a result of information received regarding the valuation of such assets and liabilities that was not available at the time of purchase. Measuring assets and liabilities at fair value requires the Company to determine the price that would be paid by a third party market participant based on the highest and best use of the assets or interests acquired. Acquisition costs are expensed as incurred.

The Company acquired certain assets of an auto recycling business in northern California in fiscal 2019 and certain assets of a metals recycling business in Columbus, Georgia in fiscal 2018. These acquisitions were not material to the Company’s financial position or results of operations. Pro forma operating results for these acquisitions are not presented, since the aggregate results would not be significantly different than reported results. See Note 6 - Goodwill and Other Intangible Assets, net for further details.

Restructuring Charges

Restructuring charges consist of severance, contract termination and other restructuring-related costs. A liability for severance costs is typically recognized when the plan of termination has been communicated to the affected employees and is measured at its fair value at the communication date. Contract termination costs consist primarily of costs that will continue to be incurred under operating leases for their remaining terms without economic benefit to the Company. A liability for contract termination costs is recognized at the date the Company ceases using the rights conveyed by the lease contract and is measured at its fair value, which is determined based on the remaining contractual lease rentals reduced by estimated sublease rentals. A liability for other restructuring-related costs is measured at its fair value in the period in which the liability is incurred.

Accrued Workers’ Compensation Costs

The Company is self-insured for the significant majority of workers’ compensation claims with exposure limited by various stop-loss insurance policies. The Company estimates the costs of workers’ compensation claims based on the nature of the injury incurred and on guidelines established by the applicable state. An accrual is recorded based upon the amount of unpaid claims as of the balance sheet date. Accrued amounts recorded for individual claims are reviewed periodically as treatment progresses and adjusted to reflect additional information that becomes available. The estimated cost of claims incurred but not reported is included in the accrual. The Company accrued $8 million for the estimated cost of unpaid workers’ compensation claims as of August 31, 2019 and 2018, which are included in other accrued liabilities in the Consolidated Balance Sheets, with corresponding workers’ compensation insurance receivables of $4 million as of August 31, 2019 and 2018 included in other current assets.

Environmental Liabilities

The Company estimates future costs for known environmental remediation requirements and accrues for them on an undiscounted basis when it is probable that the Company has incurred a liability and the related costs can be reasonably estimated but the timing of incurring the estimated costs is unknown. The Company considers various factors when estimating its environmental liabilities. Adjustments to the liabilities are recorded to selling, general and administrative expense in the Consolidated Statements of Income when additional information becomes available that affects the estimated costs to study or remediate any environmental issues or when expenditures are made for which liabilities were established. Legal costs incurred in connection with environmental contingencies are expensed as incurred.

When only a wide range of estimated amounts can be reasonably established and no other amount within the range is a better estimate than another, the low end of the range is recorded in the financial statements. In a number of cases, it is possible that the Company may receive reimbursement through insurance or from other potentially responsible parties for a site or matter. In these situations, recoveries of environmental remediation costs from other parties are recognized when the claim for recovery is either realized or realizable. The amounts recorded for environmental liabilities are reviewed periodically as assessment and remediation progresses at individual sites or for particular matters and adjusted to reflect additional information that becomes available. Due to evolving remediation technology, changing regulations, possible third party contributions, the subjective nature of the assumptions used and other factors, amounts accrued could vary significantly from amounts paid. See “Contingencies – Environmental” in Note 8 – Commitments and Contingencies for further detail.

Loss Contingencies

The Company is subject to certain legal proceedings and contingencies in addition to those related to environmental liabilities discussed above in this Note, the outcomes of which are subject to significant uncertainty. The Company accrues for estimated losses if it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Legal costs incurred in connection with loss contingencies are expensed as incurred. The Company uses judgment and evaluates whether a loss contingency arising from litigation or an unasserted claim should be disclosed or recorded. The outcome of legal proceedings and other contingencies is inherently uncertain and often difficult to estimate. Accrued legal contingencies are reported within other accrued liabilities in the Consolidated Balance Sheets. See “Contingencies – Other” in Note 8 – Commitments and Contingencies for further detail.

Financial Instruments

The Company’s financial instruments include cash and cash equivalents, accounts receivable, accounts payable, and debt. The Company uses the market approach to value its financial assets and liabilities, determined using available market information. The net carrying amounts of cash and cash equivalents, accounts receivable and accounts payable approximate fair value due to the short-term nature of these instruments. For long-term debt, which is primarily at variable interest rates, fair value is estimated using observable inputs (Level 2) and approximates its carrying value.

Fair Value Measurements

Fair value is measured using inputs from the three levels of the fair value hierarchy. Classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement. The three levels are described as follows:

- Level 1 – Unadjusted quoted prices in active markets for identical assets and liabilities.
- Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the determination of the fair value of the asset or liability, either directly or indirectly.
- Level 3 – Unobservable inputs that are significant to the determination of the fair value of the asset or liability.

When developing the fair value measurements, the Company uses quoted market prices whenever available or seeks to maximize the use of observable inputs and minimize the use of unobservable inputs when quoted market prices are not available.

Derivatives

Derivative contracts for commodities used in normal business operations that are settled by physical delivery, among other criteria, are eligible for and may be designated as normal purchases and normal sales. Contracts that qualify as normal purchases or normal sales are not marked-to-market. The Company does not use derivative instruments for trading or speculative purposes.

Foreign Currency Translation and Transactions

Assets and liabilities of the Company’s operations in Canada are translated into U.S. dollars at the period-end exchange rate, revenues and expenses of these operations are translated into U.S. dollars at the average exchange rate for the period, and cash flows of these operations are translated into U.S. dollars using the exchange rates in effect at the time of the cash flows. Translation adjustments are not included in determining net income for the period, but are recorded in accumulated other comprehensive income, a separate component of shareholders’ equity. Foreign currency transaction gains and losses are generated from the effects of exchange rate changes on transactions denominated in a currency other than the functional currency. Gains and losses on foreign currency transactions are generally included in determining net income for the period. The Company reports these gains and losses within other income, net in the Consolidated Statements of Income. Net realized and unrealized foreign currency transaction gains and losses were not material for fiscal 2019, 2018 or 2017.

Common Stock

Each share of Class A and Class B common stock is entitled to one vote. Additionally, each share of Class B common stock may be converted to one share of Class A common stock. As such, the Company reserves one share of Class A common stock for each share of Class B common stock outstanding. There are currently no meaningful distinctions between the rights of holders of Class A shares and Class B shares.

Share Repurchases

The Company accounts for the repurchase of stock at par value. All shares repurchased are deemed retired. Upon retirement of the shares, the Company records the difference between the weighted average cost of such shares and the par value of the stock as an adjustment to additional paid-in capital, with the excess recorded to retained earnings when additional paid-in capital is not sufficient.

Revenue Recognition

The Company recognizes revenue upon satisfying its promises to transfer goods or services to customers under the terms of its contracts. Nearly all of these promises, referred to as performance obligations, consist of the transfer of physical goods, including ferrous and nonferrous recycled scrap metal, auto bodies, auto parts, and finished steel products, to customers. These performance obligations are satisfied at the point in time the Company transfers control of the goods to the customer, which in nearly all cases is when title to and risk of loss of the goods transfer to the customer. The timing of transfer of title and risk of loss is dictated by customary or explicitly stated contract terms. For example, the Company recognizes revenue on partially loaded bulk shipments of ferrous recycled scrap metal when contractual terms support revenue recognition based on transfer of title and risk of loss. The significant majority of the Company's sales involve transfer of control to the customer, and thus revenue recognition, before delivery to the customer's destination; for example, upon release of the goods to the shipper. The Company's bill-and-hold arrangements involve transfer of control to the customer when the goods have been segregated from other inventory at the Company's facility and are ready for physical transfer to the customer. Shipping and handling activities that occur after a customer has obtained control of a good are accounted for as fulfillment costs rather than an additional promise in a contract. As such, shipping and handling consideration (freight revenue) is recognized when control of the goods transfers to the customer, and freight expense is accrued to cost of goods sold when the related revenue is recognized.

In certain regional markets, the Company enters into contracts whereby it arranges for, or brokers, the transfer of scrap material between scrap suppliers and end customers. For transactions in which the Company obtains substantive control of the scrap material before the goods are transferred to the end customer, for example by arranging for the processing or warehousing of the material, the Company recognizes revenue equal to the gross amount of the consideration it expects to receive from the customer (as principal). Alternatively, for transactions in which the Company does not obtain substantive control of the scrap material before the product is transferred to the end customer, the Company recognizes revenue equal to the net amount of the consideration it expects to retain after paying the supplier for the purchase of the scrap metal (as agent). The Company is the agent in the transaction for the substantial majority of brokerage arrangements.

Nearly all of the Company's sales contracts reflect market pricing at the time the contract is executed, are one year or less, and generally provide for shipment within 30 to 60 days after the price has been agreed upon with the customer. The Company's retail auto parts sales are at listed prices and are recognized at the point of sale.

The Company recognizes revenue based on contractually stated selling prices and quantities shipped, net of sales tax, and adjusted for estimated claims and discounts. Claims are customary in the recycled scrap metal industry and arise from variances in the quantity or quality of delivered products. Revenue adjustments may be required if the settlement of claims exceeds original estimates. Discounts offered to certain finished steel customers qualify as variable consideration as the discounts are contingent upon future events. Variable consideration arising from discounts is recognized upon the transfer of finished steel products to customers based upon either the expected value or the most likely amount and was not material for the fiscal year ended August 31, 2019. The Company experiences very few sales returns and, therefore, no material provisions for returns have been made when sales are recognized. During the fiscal year ended August 31, 2019, revenue adjustments related to performance obligations that were satisfied in previous periods were not material.

Advertising Costs

The Company expenses advertising costs when incurred. Advertising expense was $6 million in fiscal 2019, 2018 and 2017, respectively.

Share-Based Compensation

The Company estimates grant-date fair value of stock-based compensation awards based on the market closing price of the underlying Class A common stock on the date of grant, except for performance share awards with a total shareholder return ("TSR") market performance metric for which the Company estimates fair value using a Monte-Carlo simulation model. The Company recognizes compensation expense for all awards, net of estimated forfeitures, over the requisite service period. Compensation expense is based on the grant-date fair value as described above, except for performance share awards with non-market (return on capital employed ("ROCE") or cash flow return on investment ("CFROI")) performance metrics. For these awards compensation expense is based on the probable outcome of achieving the specified performance conditions. The Company reassesses whether achievement of the ROCE and CFROI performance metrics is probable at each reporting date. See Note 12 – Share-Based Compensation for further detail.

Income Taxes

Income taxes are accounted for using the asset and liability method. This requires the recognition of taxes currently payable or refundable and the recognition of deferred tax assets and liabilities for the future tax consequences of events that are recognized in one reporting period on the Consolidated Financial Statements but in a different reporting period on the tax returns. Tax credits are recognized as a reduction of income tax expense in the year the credit arises. Valuation allowances are recorded to reduce deferred tax assets when it is more-likely-than-not that a tax benefit will not be realized. The Company assesses the realizability of its deferred tax assets on a quarterly basis through an analysis of potential sources of future taxable income, including prior year taxable income available to absorb a carryback of tax losses, reversals of existing taxable temporary differences, tax planning strategies, and forecasts of taxable income. The Company considers all negative and positive evidence, including the weight of the evidence, to determine if valuation allowances against deferred tax assets are required. Tax benefits arising from uncertain tax positions are recognized when it is more-likely-than-not that the position will be sustained upon examination by the relevant tax authorities. The amount recognized in the financial statements is the largest amount of tax benefit that is greater than 50 percent likely of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. The Company recognizes interest and penalties, if any, related to uncertain tax positions in income tax expense. See Note 13 – Income Taxes for further detail.

Net Income Per Share

Basic net income per share attributable to SSI shareholders is computed by dividing net income attributable to SSI shareholders by the weighted average number of outstanding common shares during the period presented including vested deferred stock units ("DSUs") and restricted stock units ("RSUs") meeting certain criteria. Diluted net income per share attributable to SSI shareholders is computed by dividing net income attributable to SSI shareholders by the weighted average number of common shares outstanding, assuming dilution. Potentially dilutive common shares include the assumed vesting of performance share, RSU and DSU awards using the treasury stock method. Certain of the Company's performance share and RSU awards were excluded from the calculation of diluted net income per share attributable to SSI shareholders because they were antidilutive; however, certain of these performance share and RSU awards could be dilutive in the future. Net income attributable to noncontrolling interests is deducted from income from continuing operations to arrive at income from continuing operations attributable to SSI shareholders for the purpose of calculating income per share from continuing operations attributable to SSI shareholders. Income (loss) per share from discontinued operations attributable to SSI shareholders is presented separately in the Consolidated Statements of Income. See Note 14 – Net Income Per Share for further detail.

Use of Estimates

The preparation of the Company's Consolidated Financial Statements in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the Consolidated Financial Statements and reported amounts of revenue and expenses during the reporting period. Examples include revenue recognition; the allowance for doubtful accounts; estimates of contingencies, including environmental liabilities and other legal liabilities; goodwill, long-lived asset and indefinite-lived intangible asset valuation; valuation of equity investments; valuation of certain share-based awards; other asset valuation; inventory measurement and valuation; pension plan assumptions; and the assessment of the valuation of deferred income taxes and income tax contingencies. Actual results may differ from estimated amounts.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of cash and cash equivalents, accounts receivable, and notes and other contractual receivables. The majority of cash and cash equivalents is maintained with major financial institutions. Balances with these and certain other institutions exceeded the Federal Deposit Insurance Corporation insured amount of $250 thousand as of August 31, 2019. Concentration of credit risk with respect to accounts receivable is limited because a large number of geographically diverse customers make up the Company's customer base. The Company controls credit risk through credit approvals, credit limits, credit insurance, letters of credit or other collateral, cash deposits and monitoring procedures. The Company is exposed to a residual credit risk with respect to open letters of credit by virtue of the possibility of the failure of a bank providing a letter of credit. The Company had $49 million and $58 million of open letters of credit as of August 31, 2019 and 2018, respectively.

Note 3 – Recent Accounting Pronouncements

In February 2016, an accounting standard was issued that supersedes the lease standard existing at the time and requires a lessee to recognize a lease liability and a lease asset on its balance sheet for all leases greater than 12 months, including those classified as operating leases. The standard also expands the required quantitative and qualitative disclosures surrounding leases. Updates have been issued since February 2016 amending aspects of the initial standard, including providing an additional and optional transition method for adoption. The new lease accounting standard becomes effective for the Company on September 1, 2019. The Company expects to adopt the new guidance using the modified retrospective method, whereby it applies the new requirements by recognizing a cumulative-effect adjustment to the opening balance of retained earnings as of September 1, 2019. The Company does not expect such cumulative-effect adjustment to be material. Adoption using the modified retrospective method does not have an impact on any prior period earnings of the Company, and no comparative prior periods will be adjusted for the new guidance. The Company expects to elect a package of practical expedients permitted under the transition guidance within the new lease accounting standard, which among other things, permit carrying forward the historical lease classification. The Company also expects to elect practical expedients exempting short-term leases from balance sheet recognition and permitting entities to not separate lease and non-lease components. Adoption of the new standard is expected to result in recognition of approximately $126 million and $128 million of operating lease right-of-use assets and liabilities, respectively, as of September 1, 2019. Payments for short-term leases will continue to be recognized in the income statement on a straight-line basis over the lease term. The new lease standard is not expected to materially impact the Company’s consolidated net income, and it will have no impact on its cash flows. The Company has assessed and will implement changes to its processes, systems (including implementing a software solution), and internal controls as a result of the new guidance.

Note 4 – Inventories

Inventories consisted of the following as of August 31 (in thousands):

	2019	2018
Processed and unprocessed scrap metal	$ 81,313	$ 111,658
Semi-finished goods	8,712	15,551
Finished goods	53,796	39,809
Supplies	43,499	38,859
Inventories	$ 187,320	$ 205,877

Note 5 – Property, Plant and Equipment, net

Property, plant and equipment, net consisted of the following as of August 31 (in thousands):

	2019	2018
Machinery and equipment	$ 697,746	$ 679,520
Land and improvements	283,348	269,382
Buildings and leasehold improvements	112,244	108,882
ERP systems	17,760	17,760
Office equipment and other software licenses	43,960	43,175
Construction in progress	67,375	28,553
Property, plant and equipment, gross	1,222,433	1,147,272
Less accumulated depreciation	(766,033)	(731,561)
Property, plant and equipment, net	$ 456,400	$ 415,711

Depreciation expense for property, plant and equipment, which includes amortization expense for assets under capital leases, was $53 million, $49 million and $49 million for the years ended August 31, 2019, 2018, and 2017, respectively.

Note 6 – Goodwill and Other Intangible Assets, net

The Company evaluates goodwill for impairment annually on July 1 and upon the occurrence of certain triggering events or substantive changes in circumstances that indicate that the fair value of goodwill may be impaired.

In the second quarter of fiscal 2018, the Company acquired certain assets of a metals recycling business in Columbus, Georgia for $2 million. The acquisition qualified as a business combination under the accounting rules and resulted in the recognition of $1 million of goodwill during the second quarter of fiscal 2018. The Company allocated the acquired goodwill to a reporting unit within the AMR operating segment. The reporting unit did not carry any goodwill immediately prior to the acquisition.

In the second quarter of fiscal 2019, the Company acquired certain assets of an auto recycling business in northern California for $2 million. The acquisition qualified as a business combination under the accounting guidance and resulted in the recognition of $2 million of goodwill during the second quarter of fiscal 2019. The Company allocated the acquired goodwill to the reporting unit within the AMR operating segment which carries nearly all of the Company's goodwill.

In the fourth quarter of fiscal 2019, the Company performed the annual goodwill impairment test as of July 1, 2019. As of the testing date, the balance of the Company's goodwill was $170 million, and all but $1 million of such balance was carried by a single reporting unit within AMR. The Company elected to first assess qualitative factors to determine whether the existence of events or circumstances led to a determination that it is more-likely-than-not that the estimated fair value of each reporting unit carrying goodwill is less than its carrying amount. As a result of the qualitative assessment, the Company concluded that it is not more-likely-than-not that the fair value of each reporting unit carrying goodwill is less than its carrying value as of the testing date and, therefore, no further impairment testing was required.

The gross change in the carrying amount of goodwill for the years ended August 31, 2019 and 2018 was as follows (in thousands):

	Goodwill
Balance as of September 1, 2017	$ 167,835
Acquisition	1,118
Foreign currency translation adjustment	(888)
Balance as of August 31, 2018	168,065
Acquisition	1,575
Foreign currency translation adjustment	(403)
Balance as of August 31, 2019	$ 169,237

Accumulated goodwill impairment charges were $471 million as of August 31, 2019 and 2018.

The following table presents the Company's intangible assets as of August 31 (in thousands):

	2019			2018		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Covenants not to compete	$ 5,746	$ (2,862)	$ 2,884	$ 5,591	$ (2,596)	$ 2,995
Other intangible assets subject to amortization (1)	771	(254)	517	1,162	(880)	282
Indefinite-lived intangibles (2)	1,081	—	1,081	1,081	—	1,081
Total	$ 7,598	$ (3,116)	$ 4,482	$ 7,834	$ (3,476)	$ 4,358

(1) Other intangible assets subject to amortization include leasehold interests, permits and licenses.
(2) Indefinite-lived intangibles include trade names, permits and licenses, and real property options.

Total intangible asset amortization expense was $1 million in each of the years ended August 31, 2019, 2018 and 2017. Impairments of intangible assets were immaterial for all periods presented.

The estimated amortization expense, based on current intangible asset balances, during the next five fiscal years and thereafter is as follows (in thousands):

Years Ending August 31,	Estimated Amortization Expense
2020	$ 624
2021	389
2022	387
2023	332
2024	307
Thereafter	1,362
Total	$ 3,401

Note 7 – Debt

Debt consisted of the following as of August 31 (in thousands):

	2019	2018
Bank revolving credit facilities, interest primarily at LIBOR plus a spread	$ 96,835	$ 100,000
Capital lease obligations due through July 2029	7,774	6,787
Other debt obligations	487	589
Total debt	105,096	107,376
Less current maturities	(1,321)	(1,139)
Debt, net of current maturities	$ 103,775	$ 106,237

On August 24, 2018, the Company and certain of its subsidiaries entered into the First Amendment to the Third Amended and Restated Credit Agreement (the “Amended Credit Agreement”) with Bank of America, N.A., as administrative agent, and the other lenders party thereto, which amended and restated the Company’s existing credit agreement. The Amended Credit Agreement provides for $700 million and C$15 million in senior secured revolving credit facilities maturing in August 2023. Prior to its amendment and renewal, the credit agreement provided for $335 million and C$15 million in senior secured revolving credit facilities. The Company incurred $3 million in debt issuance costs in connection with the Amended Credit Agreement, which are amortized to interest expense over the five-year term of the arrangement. As of August 31, 2019 and 2018, borrowings outstanding under the credit facilities were $97 million and $100 million, respectively. The weighted average interest rate on amounts outstanding under the credit facilities was 3.78% and 3.57% as of August 31, 2019 and 2018, respectively.

Interest rates on outstanding indebtedness under the Amended Credit Agreement are based, at the Company’s option, on either the London Interbank Offered Rate (“LIBOR”), or the Canadian equivalent, plus a spread of between 1.25% and 2.75%, with the amount of the spread based on a pricing grid tied to the Company’s consolidated funded debt to EBITDA ratio, or the greater of the prime rate, the federal funds rate plus 0.50% or the daily rate equal to one-month LIBOR plus 1.75%, in each case plus a spread of between zero and 1.50% based on a pricing grid tied to the Company’s consolidated funded debt to EBITDA ratio. In addition, commitment fees are payable on the unused portion of the credit facilities at rates between 0.15% and 0.45% based on a pricing grid tied to the Company’s consolidated funded debt to EBITDA ratio.

The Amended Credit Agreement contains certain customary covenants, including covenants that limit the ability of the Company and its subsidiaries to enter into certain types of transactions. Financial covenants include covenants requiring maintenance of a minimum fixed charge coverage ratio and a maximum leverage ratio. The Company’s obligations under the Amended Credit Agreement are guaranteed by substantially all of its subsidiaries. The credit facilities and the related guarantees are secured by senior first priority liens on certain of the Company’s and its subsidiaries’ assets, including equipment, inventory and accounts receivable.

As of August 31, 2016, the Company had $8 million of tax-exempt economic development revenue bonds outstanding with the State of Oregon and scheduled to mature in January 2021. In August 2016, the Company exercised its option to redeem the bonds prior to maturity. The Company repaid the bonds in full in September 2016. The $8 million repayment is reported as a cash outflow from financing activities for the fiscal year ended August 31, 2017 on the Consolidated Statement of Cash Flows.

Principal payments on long-term debt and capital lease obligations during the next five fiscal years and thereafter are as follows (in thousands):

Year Ending August 31,	Long-Term Debt	Capital Lease Obligations	Total
2020	$ 94	$ 1,917	$ 2,011
2021	47	1,799	1,846
2022	49	1,751	1,800
2023	96,887	1,622	98,509
2024	56	1,346	1,402
Thereafter	189	1,694	1,883
Total	97,322	10,129	107,451
Amounts representing interest	—	(2,355)	(2,355)
Total less interest	$ 97,322	$ 7,774	$ 105,096

The Company maintains stand-by letters of credit to provide for certain obligations including workers' compensation and performance bonds. The Company had $10 million outstanding under these arrangements as of August 31, 2019 and 2018.

Note 8 – Commitments and Contingencies

Commitments

The Company leases a portion of its capital equipment and certain of its facilities under leases that expire at various dates through fiscal 2047. The majority of the Company's facility lease agreements include renewal options and rent escalation clauses. Rent expense was $27 million, $27 million and $25 million for fiscal 2019, 2018 and 2017, respectively.

The table below sets forth the Company's future minimum obligations under non-cancelable operating leases as of August 31, 2019 (in thousands):

Year Ending August 31,	Operating Leases
2020	$ 21,286
2021	15,301
2022	12,488
2023	10,419
2024	5,035
Thereafter	16,095
Total	$ 80,624

Contingencies – Environmental

Changes in the Company's environmental liabilities for the years ended August 31, 2019 and 2018 were as follows (in thousands):

Balance 9/1/2017	Liabilities Established (Released), Net	Payments and Other	Ending Balance 8/31/2018	Liabilities Established (Released), Net	Payments and Other	Ending Balance 8/31/2019	Short-Term	Long-Term
$ 48,398	$ 9,172	$ (3,738)	$ 53,832	$ 1,302	$ (3,335)	$ 51,799	$ 6,030	$ 45,769

Recycling Operations

As of August 31, 2019 and 2018, the Company's recycling operations had environmental liabilities of $52 million and $54 million, respectively, for the potential remediation of locations where it has conducted business or has environmental liabilities from historical or recent activities. The liabilities relate to the investigation and potential future remediation of contaminated sediments and riverbanks, soil contamination, groundwater contamination, storm water runoff issues and other natural resource damages. Except for Portland Harbor and certain liabilities discussed under Other Legacy Environmental Loss Contingencies immediately below, such liabilities were not individually material at any site.

Portland Harbor

In December 2000, the Company was notified by the United States Environmental Protection Agency ("EPA") under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") that it is 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 the Company will be liable for environmental costs or natural resource damage claims or third party contribution or damage claims with respect to the Site.

While the Company participated in certain preliminary Site study efforts, it was 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, the Company and certain other parties agreed to an interim settlement with the LWG under which the Company made a cash contribution to the LWG RI/FS. The LWG has indicated that it had incurred over $155 million in investigation-related costs over an approximately 18 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.

The Company has 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 the Company 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 the Company, 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, the Company 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. The Company is proceeding with the process established by the Trustee Council regarding early settlements under Phase 2. It is uncertain whether the Company will enter into an early settlement for natural resource damages or what costs it 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 the Company, 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. The parties have filed various motions to dismiss or stay this suit, and in August 2019, the court issued an order denying the motions to dismiss and staying the action. A number of parties have filed to appeal the court's denial of the motions to dismiss, which filing the Company joined in part. The Company intends to defend against the claims in this suit and does 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 the Company.

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, the Company 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. The Company has 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, the Company 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. The Company estimated that its share of the costs of performing such work would be approximately $2 million, which it recorded to environmental liabilities and selling, general and administrative expense in the consolidated financial statements in fiscal 2018. The Company believes 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 the Company's consolidated results of operations. The Company's loss contingencies as of August 31, 2019 and 2018 included $1 million and $2 million, respectively, for its estimated share of the costs of the investigation, including pre-remedial design investigative activities.

The pre-remedial design investigation and baseline sampling work has been completed, and the report evaluating the data was submitted to EPA on June 17, 2019. The evaluation report concludes that Site conditions have improved substantially since the data forming the basis of the ROD was collected over a decade ago. The analysis contained in the report has significant implications for remedial design and remedial action at the Site. EPA has reviewed the report, finding with a few limited corrections that the data is of suitable quality and generally acceptable and stating that such data will be used, in addition to existing and forthcoming design-level data, to inform implementation of the ROD. However, EPA did not agree that the data or the analysis support the conclusions presented in the report. The Company and other PRPs disagree with EPA's position on use of the more recent data and are reviewing EPA's comments and the Company's options.

EPA has stated that it wants PRPs to step forward (individually or in groups) to enter into consent agreements to perform remedial design covering the entire Site and has proposed dividing the Site into eight to ten subareas for remedial design. EPA has indicated that it may pursue enforcement or other actions against PRPs who have not entered into consent agreements to perform remedial design by the end of 2019. The Company has engaged in good-faith negotiations with EPA with respect to potentially performing remedial design; but it is unclear whether the Company will reach agreement with EPA, and the timing for completion of remedial design is uncertain but could take three to four years.

Except for certain early action projects in which the Company is 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, which is on-going. The Company would expect the next major stage of the allocation process to proceed in parallel with the remedial design process.

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, the Company believes it is not possible to reasonably estimate the amount or range of costs which it is likely to or which it is reasonably possible that it will incur in connection with the Site, although such costs could be material to the Company's 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. The Company has insurance policies that it believes will provide reimbursement for costs it incurs for defense (including the pre-remedial design investigative activities), remedial design, remedial action 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 the Company may incur.

The Oregon Department of Environmental Quality is separately providing oversight of voluntary investigations and source control activities by the Company involving the Company's sites adjacent to the Portland Harbor which are focused on controlling any current "uplands" releases of contaminants into the Willamette River. No liabilities have been established in connection with these investigations because the extent of contamination (if any) and the Company's responsibility for the contamination (if any) have not yet been determined.

Other Legacy Environmental Loss Contingencies

The Company's environmental loss contingencies as of August 31, 2019 and August 31, 2018, other than Portland Harbor, include actual or possible investigation and cleanup costs from historical contamination at sites currently or formerly owned or formerly operated by the Company or at other sites where the Company may have responsibility for such costs due to past disposal or other activities ("legacy environmental loss contingencies"). These legacy environmental loss contingencies relate to the potential remediation of waterways and soil and groundwater contamination and may also involve natural resource damages, governmental fines and penalties and claims by third parties for personal injury and property damage. The Company has been notified that it is or may be a potentially responsible party at certain of these sites, and investigation and cleanup activities are ongoing or may be required in the future. The Company recognizes a liability for such matters when the loss is probable and can be reasonably estimated. When investigation and cleanup activities are ongoing or where the Company has not yet been identified as having responsibility or the contamination has not yet been identified, it is reasonably possible that the Company may need to recognize additional liabilities in connection with such sites but the Company cannot currently reasonably estimate the possible loss or range of loss absent additional information or developments. Such additional liabilities, individually or in the aggregate, may have a material adverse effect on the Company's results of operations, financial condition or cash flows.

During fiscal 2018, the Company accrued $4 million in expense at its Corporate division for the estimated costs related to remediation of shredder residue disposed of in or around the 1970s at third-party sites located near each other. Investigation activities have been conducted under oversight of the applicable state regulatory agency. As of August 31, 2019 and August 31, 2018, the Company had $4 million accrued for this matter. It is reasonably possible that the Company may recognize additional liabilities in connection with this matter at the time such losses are probable and can be reasonably estimated. The Company currently estimates a range of reasonably possible losses related to this matter in excess of current accruals at between zero and $28 million based on a range of remedial alternatives and subject to development and approval by regulators of a specific remedy implementation plan. The Company is investigating whether a portion or all of the current and future losses related to this matter, if incurred, are covered by existing insurance coverage or may be offset by contributions from other responsible parties.

In addition, the Company's loss contingencies as of each of August 31, 2019 and August 31, 2018 include $6 million for the estimated costs related to remediation of soil and groundwater conditions, including penalties, in connection with a closed facility owned and previously operated by an indirect, wholly-owned subsidiary. Investigation activities have been conducted under the oversight of the applicable state regulatory agency, and the Company has also been working with local officials with respect to the protection of public water supplies. It is reasonably possible that the Company may recognize additional liabilities, including penalties, in connection with this matter at the time such additional losses are probable and can be reasonably estimated. However, the Company cannot reasonably estimate at this time the possible additional loss or range of possible additional losses associated with this matter pending completion of on-going studies and determination of remediation plans and pending further negotiations to settle the related enforcement matter.

Steel Manufacturing Operations

The Company’s steel manufacturing operations had no known environmental liabilities as of August 31, 2019 and 2018.

The steel mill’s electric arc furnace generates dust (“EAF dust”) that is classified as hazardous waste by the EPA because of its zinc and lead content. As a result, the Company captures the EAF dust and ships it in specialized rail cars to firms that apply treatments that allow for the ultimate disposal of the EAF dust.

The Company’s steel mill has an operating permit issued under Title V of the Clean Air Act Amendments of 1990, which governs certain air quality standards. The permit is based on an annual production capacity of approximately 950 thousand tons. The Company’s 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.

Summary - Environmental Contingencies

With respect to environmental contingencies other than the Portland Harbor Superfund site and the Other Legacy Environmental Loss Contingencies, which are discussed separately above, management currently believes that adequate provision has been made for the potential impact of its environmental contingencies. Historically, the amounts the Company has ultimately paid for such remediation activities have not been material in any given period, but there can be no assurance that such amounts paid will not be material in the future.

Contingencies - Other

Schnitzer Southeast, LLC (a wholly-owned subsidiary of the Company, “SSE”), an SSE employee, the Company and one of the Company’s insurance carriers had been named as defendants in five separate wrongful death lawsuits filed in the State of Georgia arising from an accident in 2016 in Alabama involving a tractor trailer driven by the SSE employee and owned by SSE. In fiscal 2019, the Company settled three of the five lawsuits for a total of $35 million. Subsequent to the Company’s fiscal 2019 year end, it settled the two remaining lawsuits for a total of $68 million. The aggregate settlement amount of $103 million was substantially covered by insurance, resulting in no net impact to the Company’s consolidated results of operations. As of August 31, 2019 and 2018, the Company had accrued loss contingencies and offsetting insurance receivables related to the lawsuits totaling $83 million and $30 million, respectively. The full amount accrued as of August 31, 2019 was paid in the first quarter of fiscal 2020.

In addition to legal proceedings relating to the contingencies described above, the Company is a party to various legal proceedings arising in the normal course of business. The Company recognizes a liability for such matters when the loss is probable and can be reasonably estimated. The Company does not anticipate that the resolution of such legal proceedings arising in the normal course of business, after taking into consideration expected insurance recoveries, will have a material adverse effect on its results of operations, financial condition, or cash flows.

Note 9 – Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss, net of tax, are as follows as of August 31, 2019, 2018 and 2017 (in thousands):

	Foreign Currency Translation Adjustments	Pension Obligations, net	Total
Balance as of September 1, 2016	$ (34,539)	$ (5,576)	$ (40,115)
Other comprehensive income before reclassifications	2,711	1,477	4,188
Income tax expense	—	(194)	(194)
Other comprehensive income before reclassifications, net of tax	2,711	1,283	3,994
Amounts reclassified from accumulated other comprehensive loss	—	851	851
Income tax benefit	—	(23)	(23)
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	828	828
Net periodic other comprehensive income	2,711	2,111	4,822
Balance as of August 31, 2017	(31,828)	(3,465)	(35,293)
Other comprehensive (loss) income before reclassifications	(2,301)	64	(2,237)
Income tax benefit	—	172	172
Other comprehensive (loss) income before reclassifications, net of tax	(2,301)	236	(2,065)
Amounts reclassified from accumulated other comprehensive loss	—	536	536
Income tax benefit	—	(415)	(415)
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	121	121
Net periodic other comprehensive (loss) income	(2,301)	357	(1,944)
Balance as of August 31, 2018	(34,129)	(3,108)	(37,237)
Other comprehensive loss before reclassifications	(1,560)	(326)	(1,886)
Income tax benefit	—	65	65
Other comprehensive loss before reclassifications, net of tax	(1,560)	(261)	(1,821)
Amounts reclassified from accumulated other comprehensive loss	—	369	369
Income tax benefit	—	(74)	(74)
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	295	295
Net periodic other comprehensive (loss) income	(1,560)	34	(1,526)
Balance as of August 31, 2019	$ (35,689)	$ (3,074)	$ (38,763)

In the second quarter of fiscal 2018, the Company adopted an accounting standard update that allowed for a reclassification from accumulated other comprehensive income (AOCI) to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act ("Tax Act") enacted on December 22, 2017. Reclassifications from AOCI to retained earnings for stranded tax effects during the year ended August 31, 2018, both individually and in the aggregate, were not material.

Reclassifications from AOCI to earnings, both individually and in the aggregate, were not material to the impacted captions in the Consolidated Statements of Income in all periods presented.

Note 10 - Revenue

Disaggregation of Revenues

The table below illustrates the Company’s revenues disaggregated by major product and sales destination for each reportable segment (in thousands):

	Year Ended August 31, 2019			
	AMR	CSS	Intercompany Revenue Eliminations	Total
Major product information:				
Ferrous revenues	$ 1,123,180	$ 51,963	$ (10,424)	$ 1,164,719
Nonferrous revenues	430,361	38,809	(1,147)	468,023
Steel revenues(1)	—	367,956	—	367,956
Retail and other revenues	131,436	688	(41)	132,083
Total revenues	$ 1,684,977	$ 459,416	$ (11,612)	$ 2,132,781
Revenues based on sales destination:				
Foreign	$ 1,047,546	$ 93,531	$ —	$ 1,141,077
Domestic	637,431	365,885	(11,612)	991,704
Total revenues	$ 1,684,977	$ 459,416	$ (11,612)	$ 2,132,781

(1) Steel revenues include primarily sales of finished steel products, semi-finished goods (billets) and manufacturing scrap.

Receivables from Contracts with Customers

The revenue accounting standard defines a receivable as an entity’s right to consideration that is unconditional, meaning that only the passage of time is required before payment is due. As of August 31, 2019 and August 31, 2018, receivables from contracts with customers, net of an allowance for doubtful accounts, totaled $142 million and $164 million representing 97% of total accounts receivable reported on the Consolidated Balance Sheets.

Contract Liabilities

Contract consideration received from a customer prior to revenue recognition is recorded as a contract liability and is recognized as revenue when the Company satisfies the related performance obligation under the terms of the contract. The Company’s contract liabilities consist almost entirely of customer deposits for recycled scrap metal sales contracts, which are reported within accounts payable on the Consolidated Balance Sheets and totaled $3 million and $9 million as of August 31, 2019 and August 31, 2018, respectively. Unsatisfied performance obligations reflected in these contract liabilities relate to contracts with original expected durations of one year or less and, therefore, are not disclosed. During the fiscal year ended August 31, 2019, the Company reclassified $8 million in customer deposits as of August 31, 2018 to revenues as a result of satisfying performance obligations during the year.

Note 11 – Employee Benefits

The Company and certain of its subsidiaries have or contribute to qualified and nonqualified retirement plans covering substantially all employees. These plans include a defined benefit pension plan, a supplemental executive retirement benefit plan (“SERBP”), multiemployer pension plans and defined contribution plans.

Defined Benefit Pension Plan and Supplemental Executive Retirement Benefit Plan

The Company maintains a qualified defined benefit pension plan for certain nonunion employees. Effective June 30, 2006, the Company froze this plan and ceased accruing further benefits for employee service. The Company reflects the funded status of the defined benefit pension plan as a net asset or liability in its Consolidated Balance Sheets. Changes in its funded status are recognized in comprehensive income. The Company amortizes as a component of net periodic pension benefit cost a portion of the net gain or loss reported within accumulated other comprehensive loss if the beginning-of-year net gain or loss exceeds 5% of the greater of the benefit obligation or the market value of plan assets. Net periodic pension benefit cost was not material for all periods presented in this report. The fair value of plan assets was $20 million and $17 million as of August 31, 2019 and 2018, respectively, and the projected benefit obligation was $17 million and $15 million as of August 31, 2019 and 2018, respectively. The plan was fully funded with the plan assets exceeding the projected benefit obligation by $3 million and $2 million as of August 31, 2019 and 2018, respectively. Plan assets comprised entirely Level 1 investments as of August 31, 2019 and 2018. Level 1 investments are valued based on quoted market prices of identical securities in the principal market. No contributions are expected to be made to the defined benefit pension plan in the future; however, changes in the discount rate or actual investment returns that are lower than the long-term expected return on plan assets could result in the need for the Company to make additional contributions. The assumed discount rate used to calculate the projected benefit obligation was 2.83% and 4.01% as of August 31, 2019 and 2018, respectively. The Company estimates future annual benefit payments to be between $1 million and $4 million per year.

The Company also has a nonqualified SERBP for certain executives. A restricted trust fund has been established with assets invested in life insurance policies that can be used for plan benefits, although the fund is subject to claims of the Company’s general creditors. The trust fund is included in other assets, the current portion of the pension liability is included in other accrued liabilities, and the noncurrent portion of the pension liability is included in other long-term liabilities in the Company’s Consolidated Balance Sheets. The trust fund was valued at $4 million as of August 31, 2019 and 2018. The trust fund assets’ gains and losses are included in other income, net in the Company’s Consolidated Statements of Income. The benefit obligation and the unfunded amount were $5 million as of August 31, 2019 and $4 million as of August 31, 2018. Net periodic pension cost under the SERBP was not material for the years ended August 31, 2019, 2018 and 2017.

Because the defined benefit pension plan and the SERBP are not material to the Consolidated Financial Statements, other disclosures required by U.S. GAAP have been omitted.

Multiemployer Pension Plans

The Company contributes to 14 multiemployer pension plans in accordance with its collective bargaining agreements. Multiemployer pension plans are defined benefit plans sponsored by multiple employers in accordance with one or more collective bargaining agreements. The plans are jointly managed by trustees that include representatives from both management and labor unions. Contributions to the plans are made based upon a fixed rate per hour worked and are agreed to by contributing employers and the unions in collective bargaining. Benefit levels are set by a joint board of trustees based on the advice of an independent actuary regarding the level of benefits that agreed-upon contributions can be expected to support. To the extent that the pension obligation of other participating employers is unfunded, the Company may be required to make additional contributions in the future to fund these obligations.

One of the multiemployer plans that the Company contributes to is the Steelworkers Western Independent Shops Pension Plan (“WISPP,” EIN 90-0169564, Plan No. 001) benefiting the union employees of the Company’s steel manufacturing operations, which are covered by a collective bargaining agreement that will expire on March 31, 2022. As of October 1, 2018, the WISPP was certified by the plan’s actuaries as being in the Green Zone, as defined by the Pension Protection Act of 2006. The Company contributed $3 million to the WISPP for each of the years ended August 31, 2019, 2018 and 2017. These contributions represented more than 5% of total contributions to the WISPP for each year.

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.

Company contributions to all of the multiemployer plans were $6 million, $5 million and $4 million for the years ended August 31, 2019, 2018 and 2017, respectively.

Defined Contribution Plans

The Company has several defined contribution plans covering certain employees. Company contributions to the defined contribution plans totaled $4 million, $4 million and $3 million for the years ended August 31, 2019, 2018 and 2017, respectively.

Note 12 – Share-Based Compensation

The Company's 1993 Stock Incentive Plan, as amended, (the "Plan") was established to provide for the grant of stock-based compensation awards to its employees, consultants and directors. The Plan authorizes the grant of restricted shares, restricted stock units, performance-based awards including performance share awards, stock options, stock appreciation rights and other stock-based awards. The Plan is administered by the Compensation Committee of the Company's Board of Directors ("Compensation Committee"). There are 12.2 million shares of Class A common stock reserved for issuance under the Plan, of which 3.4 million are available for future grants as of August 31, 2019. Share-based compensation expense recognized in cost of goods sold or selling, general and administrative expense, as applicable, was $17 million, $19 million and $11 million for the years ended August 31, 2019, 2018 and 2017, respectively.

Restricted Stock Units ("RSUs")

During the years ended August 31, 2019, 2018 and 2017, the Compensation Committee granted 261,642, 252,865 and 314,862 RSUs, respectively, to the Company's key employees and employee directors under the Plan. RSUs generally vest 20% per year over five years commencing October 31 of the year after grant. Each RSU entitles the recipient to receive one share of Class A common stock upon vesting.

The estimated fair value of an RSU is based on the market closing price of the underlying Class A common stock on the date of grant. The weighted average grant date fair value of RSUs granted was $27.61, $26.60 and $20.95 per unit for the years ended August 31, 2019, 2018 and 2017, respectively. The total estimated fair value of RSUs granted during each of the years ended August 31, 2019, 2018 and 2017 was $7 million. RSU compensation expense is recognized over the requisite service period of the award, net of estimated forfeitures, or to the date retirement eligibility is achieved (if before the end of the service period). RSU compensation expense was $6 million, $7 million and $6 million for the years ended August 31, 2019, 2018 and 2017, respectively.

A summary of the Company's RSU activity for the year ended August 31, 2019 is as follows:

	Number of Units (in thousands)	Weighted Average Grant Date Fair Value
Outstanding as of August 31, 2018	812	$ 22.59
Granted	262	$ 27.61
Vested	(257)	$ 22.75
Forfeited	(19)	$ 24.23
Outstanding as of August 31, 2019	798	$ 24.14

The total fair value of RSUs which vested, based on the market closing price of the underlying Class A common stock on the vesting date, was $7 million, $8 million and $5 million for the years ended August 31, 2019, 2018 and 2017, respectively. As of August 31, 2019, total unrecognized compensation costs related to unvested RSUs amounted to $6 million, which is expected to be recognized over a weighted average period of 2 years.

Performance Share Awards

The Plan authorizes performance-based awards to certain employees subject to certain conditions and restrictions. Vesting is subject to both the continued employment of the participant with the Company and the achievement of certain performance goals established by the Compensation Committee. A participant generally must be employed by the Company on October 31 following the end of the performance period to receive an award payout. However, adjusted awards will be paid if employment terminates earlier on account of a qualifying employment termination event such as death, disability, retirement, termination without cause after the first year of the performance period or a sale of the Company or the reportable segments for which the participant works.

The Compensation Committee determined that performance share awards granted in fiscal years 2019, 2018 and 2017 comprise two separate and distinct awards with different vesting conditions. Awards vest if the threshold level under the specified metric is met at the end of the approximately three-year performance period. For awards granted in fiscal 2019 and fiscal 2018, the performance metrics were the Company's total shareholder return ("TSR") relative to a designated peer group of 16 companies and the Company's return on capital employed ("ROCE"). For awards granted in fiscal 2017, the metrics were TSR and the Company's cash flow return on investment ("CFROI"). In fiscal 2017 only, performance share awards were granted in two stages, the first granted in November 2016 and second granted in April 2017, with a three-year and 2.5-year performance period, respectively. Awards share payouts depend on the extent to which the performance goals have been achieved. The number of shares that a participant receives is equal to the award granted multiplied by a payout factor, which ranges from a threshold of 50% to a maximum of 200%. The TSR award stipulates certain limitations to the payout in the event the payout reaches a defined ceiling level or the Company's TSR is negative.

The Company estimates the fair value of TSR awards using a Monte-Carlo simulation model utilizing several key assumptions, including the following for TSR awards granted during the fiscal years ended August 31:

	2019	2018	2017
Expected share price volatility (SSI)	42.5%	44.3%	40.9 - 43.3%
Expected share price volatility (Peer group)	51.4%	55.4%	52.3 - 55.1%
Expected correlation to peer group companies	35.6%	35.4%	36.2 - 36.5%
Risk-free rate of return	2.89%	1.79%	1.11 - 1.31%

The compensation expense for the TSR awards based on the grant-date fair value, net of estimated forfeitures, is recognized over the requisite service period (or to the date a qualifying employment termination event entitles the recipient to a prorated award, if before the end of the service period), regardless of whether the market condition has been or will be satisfied. Compensation expense for TSR awards was $4 million, $3 million and $2 million for the years ended August 31, 2019, 2018 and 2017, respectively.

The fair value of the ROCE and CFROI awards granted is based on the market closing price of the underlying Class A common stock on the grant date. The Company accrues compensation cost for ROCE and CFROI awards based on the probable outcome of achieving specified performance conditions, net of estimated forfeitures, over the requisite service period (or to the date a qualifying employment termination event entitles the recipient to a prorated award, if before the end of the service period). The Company reassesses whether achievement of the ROCE and CFROI performance conditions is probable at each reporting date. If it is probable that the actual performance results will exceed the stated target performance conditions, the Company accrues additional compensation cost for the additional performance shares to be awarded. If, upon reassessment, it is no longer probable that the actual performance results will exceed the stated target performance conditions, or that it is no longer probable that the target performance conditions will be achieved, the Company reverses any recognized compensation cost for shares no longer probable of being issued. If the performance conditions are not achieved at the end of the service period, all related compensation cost previously recognized is reversed. Compensation expense for ROCE and CFROI awards was $6 million, $8 million and $2 million for the years ended August 31, 2019, 2018 and 2017, respectively.

During the years ended August 31, 2019, 2018 and 2017, the Compensation Committee granted a total of 254,620 (123,812 TSR and 130,808 ROCE), 246,161 (119,763 TSR and 126,398 ROCE), and 302,257 (146,768 TSR and 155,489 CFROI) performance share awards, respectively. The weighted average grant date fair value of performance share awards granted was $28.37, $27.32 and $21.52 for the years ended August 31, 2019, 2018 and 2017, respectively.

A summary of the Company's performance-based awards activity for the year ended August 31, 2019 is as follows:

	Number of Awards (in thousands)	Weighted Average Grant Date Fair Value
Outstanding as of August 31, 2018	880	$ 22.09
Granted	255	$ 28.37
Performance achievement(1)	170	$ 18.54
Vested	(500)	$ 18.78
Forfeited	(32)	$ 22.75
Outstanding as of August 31, 2019	773	$ 25.49

(1) Reflects the net number of awards achieved above target levels based on actual performance measured at the end of the performance period.

The total fair value of performance share awards which vested, based on the market closing price of the Company's Class A common stock on the vesting date, was $13 million and $4 million for the years ended August 31, 2019 and 2017, respectively. No performance shares vested in fiscal year 2018. As of August 31, 2019, total unrecognized compensation costs related to unvested performance share awards amounted to $8 million, which is expected to be recognized over a weighted average period of 2 years.

Deferred Stock Units ("DSUs")

The Deferred Compensation Plan for Non-Employee Directors ("DSU Plan") provides for the issuance of DSUs to non-employee directors to be granted under the DSU Plan. Each DSU gives the director the right to receive one share of Class A common stock at a future date. Immediately following the annual meeting of shareholders, each non-employee director will receive DSUs which will become fully vested on the day before the next annual meeting, subject to continued service on the Board. The compensation expense associated with the DSUs granted is recognized over the requisite service period of the awards.

The Company will issue Class A common stock to a director pursuant to vested DSUs in a lump sum in January of the first year after the director ceases to be a director of the Company, subject to the right of the director to elect an installment payment program under the DSU Plan.

DSUs granted during the years ended August 31, 2019, 2018 and 2017 totaled 31,218 shares, 21,806 shares and 42,771 shares, respectively. The compensation expense associated with DSUs and the total value of shares vested during each of the years ended August 31, 2019, 2018 and 2017, as well as the unrecognized compensation expense as of August 31, 2019, were not material.

Note 13 – Income Taxes

Income from continuing operations before income taxes was as follows for the years ended August 31 (in thousands):

	2019	2018	2017
United States	$ 69,476	$ 131,518	$ 43,871
Foreign	6,764	10,335	4,819
Total	$ 76,240	$ 141,853	$ 48,690

Income tax expense (benefit) from continuing operations consisted of the following for the years ended August 31 (in thousands):

	2019	2018	2017
Current:			
Federal	$ 2,690	$ 19,511	$ (1,130)
State	315	894	190
Foreign	52	—	(16)
Total current tax expense (benefit)	3,057	20,405	(956)
Deferred:			
Federal	12,930	(5,700)	2,046
State	794	(1,962)	232
Foreign	889	(30,333)	—
Total deferred tax expense (benefit)	14,613	(37,995)	2,278
Total income tax expense (benefit)	$ 17,670	$ (17,590)	$ 1,322

A reconciliation of the difference between the federal statutory rate and the Company's effective tax rate for the years ended August 31 is as follows:

	2019	2018	2017
Federal statutory rate	21.0%	25.7%	35.0%
State taxes, net of credits	1.2	0.4	1.8
Foreign income taxed at different rates	(0.2)	(0.5)	(1.9)
Valuation allowance on deferred tax assets	(0.2)	(35.8)	(31.2)
Federal rate change	—	(4.9)	—
Non-deductible officers' compensation	1.8	1.6	2.2
Noncontrolling interests	(0.5)	(0.6)	(1.8)
Research and development credits	(0.5)	(0.6)	(1.5)
Tax return to provision adjustment	0.5	—	—
Unrecognized tax benefits	0.7	3.4	1.3
Realized foreign investment basis	(0.4)	(0.2)	(0.9)
Excess tax benefit from stock-based compensation	(1.2)	(0.3)	—
Other	1.0	(0.6)	(0.3)
Effective tax rate	23.2%	(12.4)%	2.7%

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"), which, except for certain provisions, is effective for tax years beginning on or after January 1, 2018. The Tax Act's primary change is a reduction in the federal statutory corporate tax rate from 35% to 21%, resulting in a pro rata reduction for the Company from 35% to 25.7% for fiscal 2018 and a full reduction to 21% for fiscal 2019. As a change in tax law is accounted for in the period of enactment, the Company recognized a discrete benefit of $7 million in the second quarter of fiscal 2018 due to the revaluation of U.S. net deferred tax liabilities to reflect the lower statutory rate. The Company's effective tax rate in fiscal 2018 also reflected application of the Tax Act's lower federal statutory corporate tax rate to fiscal 2018 taxable income. Other pertinent changes in the Tax Act include, but are not limited to, the acceleration of deductions for qualified property placed in service after September 27, 2017, limitations to the deductibility of some executive compensation, and the elimination of the deduction for qualified domestic production activities. Changes in the Tax Act that did not significantly impact the Company upon enactment include implementation of a modified territorial tax system and other modifications to how foreign earnings are subject to U.S. tax, including a tax on Global Intangible Low-Taxed Income which the Company has elected to treat as period costs if and when incurred. The Company's accounting for the impacts of the Tax Act was complete as of November 30, 2018. The Company did not record any material adjustments to the provisional amounts recorded in the second quarter of fiscal 2018 related to the Tax Act.

Effective Tax Rate

The Company's effective tax rate from continuing operations in fiscal 2019 was an expense of 23.2%, compared to a benefit of 12.4% in the prior year. The Company reported a tax benefit on pre-tax income for fiscal 2018 primarily due to the release of valuation allowances against certain deferred tax assets, resulting in recognition of discrete tax benefits totaling $37 million in fiscal 2018, and the impact of the Tax Act.

The Company's effective tax rate from continuing operations in fiscal 2017 was an expense of 2.7%, which was lower than the U.S. federal statutory corporate rate at the time of 35% primarily due to the Company's full valuation allowance positions and federal income tax refund claims, partially offset by increases in deferred tax liabilities from indefinite-lived assets in all jurisdictions.

Deferred tax assets and liabilities comprised the following as of August 31 (in thousands):

	2019	2018
Deferred tax assets:		
Amortizable goodwill and other intangibles	$ 22,646	$ 27,433
State credit carryforwards	8,202	8,243
Environmental liabilities	7,164	7,853
Net operating loss carryforwards	7,122	7,206
Employee benefit accruals	6,289	10,677
Inventory valuation methods	1,748	944
Other	6,405	6,320
Valuation allowances	(16,436)	(16,484)
Total deferred tax assets	43,140	52,192
Deferred tax liabilities:		
Accelerated depreciation and other basis differences	37,493	31,622
Prepaid expense acceleration	2,263	1,979
Total deferred tax liabilities	39,756	33,601
Net deferred tax asset	$ 3,384	$ 18,591

As of August 31, 2019, foreign operating loss carryforwards were $16 million, which expire if not used between 2024 and 2039. State credit carryforwards will expire if not used between 2019 and 2032.

Valuation Allowances

The Company assesses the realizability of its deferred tax assets on a quarterly basis through an analysis of potential sources of future taxable income, including prior year taxable income available to absorb a carryback of tax losses, reversals of existing taxable temporary differences, tax planning strategies, and forecasts of taxable income. The Company considers all negative and positive evidence, including the weight of the evidence, to determine if valuation allowances against deferred tax assets are required. In fiscal 2018, the Company released valuation allowances against certain U.S. federal and state and Canadian deferred tax assets resulting in discrete tax benefits totaling $37 million. The release of these valuation allowances was the result of sufficient positive evidence at the time, including cumulative income in the Company’s U.S. and Canadian tax jurisdictions in recent years and projections of future taxable income based primarily on the Company's improved financial performance, that it is more-likely-than-not that the deferred tax assets will be realized. The Company continues to maintain valuation allowances against certain U.S. federal, state, Canadian and all Puerto Rican deferred tax assets. Canadian deferred tax assets against which the Company continues to maintain a valuation allowance relate to indefinite-lived assets.

Accounting for Uncertainty in Income Taxes

The following table summarizes the activity related to the Company’s reserve for unrecognized tax benefits, excluding interest and penalties, for the years ended August 31 (in thousands):

	2019	2018	2017
Unrecognized tax benefits, as of the beginning of the year	$ 5,054	$ 5,548	$ 4,724
Additions (reductions) for tax positions of prior years	(151)	171	(120)
Additions for tax positions of the current year	507	596	944
Reduction attributable to federal tax reform	—	(1,261)	—
Unrecognized tax benefits, as of the end of the year	$ 5,410	$ 5,054	$ 5,548

The Company does not anticipate any material changes to the reserve in the next 12 months. The recognized amounts of tax-related penalties and interest were not material for all periods presented.

The Company files federal and state income tax returns in the U.S. and foreign tax returns in Puerto Rico and Canada. For U.S. federal income tax returns, fiscal years 2013 to 2018 remain subject to examination under the statute of limitations.

Note 14 – Net Income Per Share

The following table sets forth the information used to compute basic and diluted net income per share attributable to SSI shareholders for the years ended August 31 (in thousands):

	2019	2018	2017
Income from continuing operations	$ 58,570	$ 159,443	$ 47,368
Net income attributable to noncontrolling interests	(1,977)	(3,338)	(2,467)
Income from continuing operations attributable to SSI shareholders	56,593	156,105	44,901
(Loss) income from discontinued operations, net of tax	(248)	346	(390)
Net income attributable to SSI shareholders	$ 56,345	$ 156,451	$ 44,511
Computation of shares:			
Weighted average common shares outstanding, basic	27,527	27,645	27,537
Incremental common shares attributable to dilutive performance share, RSU and DSU awards	695	944	604
Weighted average common shares outstanding, diluted	28,222	28,589	28,141

Common stock equivalent shares of 92,873, 62,019 and 251,899 were considered antidilutive and were excluded from the calculation of diluted net income per share attributable to SSI shareholders for the years ended August 31, 2019, 2018 and 2017, respectively.

Note 15 – Related Party Transactions

The Company purchases recycled metal from its joint venture operations at prices that approximate fair market value. These purchases totaled $15 million, $16 million and $14 million for the years ended August 31, 2019, 2018 and 2017, respectively.

Note 16 – Segment Information

The accounting standards for reporting information about operating segments define an operating segment as a component of an enterprise that engages in business activities from which it may earn revenues and incur expenses for which discrete financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance.

AMR acquires and recycles ferrous and nonferrous scrap metal for sale to foreign and domestic metal producers, processors and brokers, and procures salvaged vehicles and sells serviceable used auto parts from these vehicles through a network of self-service auto parts stores. These auto parts stores also supply the Company's shredding facilities with auto bodies that are processed into saleable recycled scrap metal.

CSS operates a steel mini-mill that produces a range of finished steel long products using ferrous recycled scrap metal and other raw materials. 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 also sell recycled metal to external customers primarily in export markets.

The Company holds noncontrolling ownership interests in joint ventures, which are either in the metals recycling business or are suppliers of unprocessed metal. The Company's allocable portion of the results of these joint ventures is reported within the segment results. As of August 31, 2019, the Company had two 50%-owned joint venture interests, one presented as part of AMR operations, and one presented as part of CSS operations. The joint venture within CSS sells recycled scrap metal to other operations within CSS at prices that approximate local market rates, which produces intercompany profit. This intercompany profit is eliminated while the products remain in inventory and is not recognized until the finished products are sold to third parties. During fiscal 2018, two of the Company's 50% joint venture interests presented as part of AMR operations dissolved. During fiscal 2017, the Company sold one of its 50% joint venture interests presented as part of CSS operations.

Intersegment sales from AMR to CSS are made at prices that approximate local market rates. These intercompany sales tend to produce intercompany profit which is not recognized until the finished products are ultimately sold to third parties.

The information provided below is obtained from internal information that is provided to the Company's chief operating decision maker for the purpose of corporate management. The Company uses segment operating income to measure segment performance. The Company does not allocate corporate interest income and expense, income taxes and other income to its reportable segments. Certain expenses related to shared services that support operational activities and transactions are allocated from Corporate to the segments. Unallocated Corporate expense consists primarily of expense for management and certain administrative services that benefit both reportable segments. In addition, the Company does not allocate certain items to segment operating income because management does not include the information in its measurement of the performance of the operating segments. Such unallocated items include restructuring charges and other exit-related activities, charges (net of recoveries) related to legacy environmental matters, and provisions for certain legal matters. Because of the unallocated income and expense, the operating income of each reportable segment does not reflect the operating income the reportable segment would report as a stand-alone business. The results of discontinued operations are excluded from segment operating income and are presented separately, net of tax, from the results of ongoing operations for all periods presented.

In the fourth quarter of fiscal 2018, the Company modified its measurement of segment operating income to classify all legacy environmental charges within Corporate in order to align the measures with how the Chief Executive Officer, who is considered the Company's chief operating decision maker, reviews performance and makes decisions on resource allocation. The change has been applied prospectively beginning in the fourth quarter of fiscal 2018, and such legacy environmental charges incurred during the quarter are reported within the Corporate division. In the fourth quarter of fiscal 2018, the Company recorded $1 million of legacy environmental charges to the Corporate division that, prior to the change, would have been classified within AMR. Legacy environmental charges reflected in AMR's operating results prior to the change are not material to the Consolidated Financial Statements either individually or in the aggregate. Environmental charges are reported within selling, general and administrative expense in the Consolidated Statements of Income.

The following is a summary of the Company's total assets as of August 31 (in thousands):

	2019	2018
Total assets:		
Auto and Metals Recycling(1)	$ 1,561,267	$ 1,485,626
Cascade Steel and Scrap	769,930	740,967
Total segment assets	2,331,197	2,226,593
Corporate and eliminations(2)	(1,170,451)	(1,121,776)
Total assets	$ 1,160,746	$ 1,104,817
Property, plant and equipment, net(3)	$ 456,400	$ 415,711

(1) AMR total assets include $3 million and $4 million as of August 31, 2019 and 2018, respectively, for investments in joint ventures. CSS total assets include $7 million and $8 million as of August 31, 2019 and 2018, respectively, for investment in joint ventures.

(2) The substantial majority of Corporate and eliminations total assets consist of Corporate intercompany payables to the Company's operating segments and intercompany eliminations.

(3) Property, plant and equipment, net includes $14 million and $15 million as of August 31, 2019 and 2018, respectively, at the Company's Canadian locations.

The table below illustrates the Company's results from continuing operations by reportable segment for the years ended August 31 (in thousands):

	2019	2018	2017
AMR:			
Revenues	$ 1,684,977	$ 1,908,966	$ 1,363,618
Less: Intersegment revenues	(11,612)	(24,892)	(15,647)
AMR external customer revenues	1,673,365	1,884,074	1,347,971
CSS:			
Revenues	459,416	480,641	339,620
Total revenues	$ 2,132,781	$ 2,364,715	$ 1,687,591
Depreciation and amortization:			
AMR	$ 38,816	$ 35,564	$ 34,853
CSS	11,781	11,724	12,525
Segment depreciation and amortization	50,597	47,288	47,378
Corporate	2,739	2,384	2,462
Total depreciation and amortization	$ 53,336	$ 49,672	$ 49,840
Capital expenditures:			
AMR	$ 78,706	$ 67,099	$ 34,575
CSS	15,345	9,600	10,224
Segment capital expenditures	94,051	76,699	44,799
Corporate	562	927	141
Total capital expenditures	$ 94,613	$ 77,626	$ 44,940
Reconciliation of the Company's segment operating income to income from continuing operations before income taxes:			
AMR(1)	$ 95,991	$ 169,120	$ 91,405
CSS(2)	31,951	38,286	5,275
Segment operating income	127,942	207,406	96,680
Restructuring charges and other exit-related activities	(365)	661	109
Corporate and eliminations	(43,712)	(59,079)	(40,776)
Operating income	83,865	148,988	56,013
Interest expense	(8,266)	(8,983)	(8,081)
Other income, net	641	1,848	758
Income from continuing operations before income taxes	$ 76,240	$ 141,853	$ 48,690

(1) AMR operating income includes less than $1 million, less than $(1) million, and $2 million in income (loss) from joint ventures accounted for by the equity method in fiscal 2019, 2018 and 2017, respectively.

(2) CSS operating income includes $1 million, $2 million, and $1 million in income from joint ventures accounted for by the equity method in fiscal 2019, 2018 and 2017, respectively.

The following revenues from external customers are presented by major product and based on the sales destination for the years ended August 31 (in thousands):

	2019	2018	2017
Major product information:			
Ferrous revenues	$ 1,164,719	$ 1,328,447	$ 855,161
Nonferrous revenues	468,023	529,466	425,989
Steel revenues(1)	367,956	367,560	280,767
Retail and other revenues	132,083	139,242	125,674
Total revenues	$ 2,132,781	$ 2,364,715	$ 1,687,591
Revenues based on sales destination:			
Foreign	$ 1,141,077	$ 1,354,460	$ 894,265
Domestic	991,704	1,010,255	793,326
Total revenues	$ 2,132,781	$ 2,364,715	$ 1,687,591

(1) Steel revenues include primarily sales of finished steel products, semi-finished goods (billets) and manufacturing scrap.
(2) In fiscal 2019, the Company modified its categories of revenues from external customers by major product. The major product revenues for fiscal 2018 and 2017 have been revised to conform to the current presentation, with such revisions being immaterial to each year.

In fiscal 2019, 2018 and 2017, the Company had no external customer that accounted for more than 10% of the Company's consolidated revenues. Sales to customers located in foreign countries are a significant part of the Company's business. The schedule below identifies those foreign countries to which the Company's sales exceeded 10% of consolidated revenues in any of the last three years ended August 31 (in thousands):

	2019	% of Revenue	2018	% of Revenue	2017	% of Revenue
Turkey(1)	N/A	N/A	$ 262,835	11%	N/A	N/A
China(1)	N/A	N/A	$ 255,097	11%	$ 216,231	13%

(1) N/A = Sales were less than the 10% threshold.

Quarterly Financial Data (Unaudited)

In the opinion of management, this unaudited quarterly financial summary includes all adjustments necessary for a fair statement of the results for the periods represented (in thousands, except per share amounts):

	Fiscal 2019			
	First	Second	Third	Fourth
Revenues	$ 564,020	$ 473,565	$ 547,396	$ 547,800
Cost of goods sold	$ 490,132	$ 414,688	$ 474,598	$ 479,117
Operating income	$ 22,689	$ 19,036	$ 24,459	$ 17,681
Income from continuing operations attributable to SSI shareholders	$ 16,260	$ 13,030	$ 15,682	$ 11,621
Basic income per share from continuing operations attributable to SSI shareholders	$ 0.59	$ 0.47	$ 0.57	$ 0.42
Diluted income per share from continuing operations attributable to SSI shareholders	$ 0.57	$ 0.46	$ 0.56	$ 0.41
Net income	$ 16,618	$ 13,297	$ 16,440	$ 11,967
Net income attributable to SSI shareholders	$ 16,188	$ 12,892	$ 15,690	$ 11,575
Basic net income per share attributable to SSI shareholders	$ 0.59	$ 0.47	$ 0.57	$ 0.42
Diluted net income per share attributable to SSI shareholders	$ 0.57	$ 0.46	$ 0.56	$ 0.41

	Fiscal 2018			
	First	Second	Third	Fourth
Revenues	$ 483,279	$ 559,443	$ 652,416	$ 669,577
Cost of goods sold	$ 406,251	$ 472,462	$ 549,164	$ 582,608
Operating income	$ 26,423	$ 33,358	$ 51,234	$ 37,973
Income from continuing operations attributable to SSI shareholders	$ 18,399	$ 40,852	$ 37,458	$ 59,396
Basic income per share from continuing operations attributable to SSI shareholders	$ 0.66	$ 1.47	$ 1.35	$ 2.17
Diluted income per share from continuing operations attributable to SSI shareholders	$ 0.64	$ 1.42	$ 1.31	$ 2.08
Net income	$ 19,221	$ 41,919	$ 38,448	$ 60,201
Net income attributable to SSI shareholders	$ 18,364	$ 41,016	$ 37,402	$ 59,669
Basic net income per share attributable to SSI shareholders	$ 0.66	$ 1.48	$ 1.35	$ 2.18
Diluted net income per share attributable to SSI shareholders	$ 0.64	$ 1.42	$ 1.31	$ 2.09

In the second quarter of fiscal 2018, results included an income tax benefit of $7 million related to the impacts of U.S. federal tax legislation enacted during the quarter, and a discrete income tax benefit of $7 million related to the release of valuation allowances against certain U.S. and state deferred tax assets. In the fourth quarter of fiscal 2018, results included a discrete income tax benefit of $30 million related to the release of valuation allowances against certain deferred tax assets.

Schedule II – Valuation and Qualifying Accounts

For the Years Ended August 31, 2019, 2018 and 2017
(In thousands)

Column A Description	Column B Balance at Beginning of Period	Column C Charges to Cost and Expenses	Column D Deductions	Column E Balance at End of Period
Fiscal 2019				
Allowance for doubtful accounts	$ 2,586	$ 74	$ (1,091)	$ 1,569
Deferred tax valuation allowance	$ 16,484	$ 472	$ (520)	$ 16,436
Fiscal 2018				
Allowance for doubtful accounts	$ 2,280	$ 323	$ (17)	$ 2,586
Deferred tax valuation allowance	$ 67,348	$ —	$ (50,864)	$ 16,484
Fiscal 2017				
Allowance for doubtful accounts	$ 2,315	$ 126	$ (161)	$ 2,280
Deferred tax valuation allowance	$ 83,891	$ 690	$ (17,233)	$ 67,348

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”)) that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the Securities and Exchange Commission’s rules and forms and that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. Any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives. The Company’s management, with the participation of the Chief Executive Officer and Chief Financial Officer, has completed an evaluation of the effectiveness of the design and operation of the Company’s disclosure controls and procedures as of August 31, 2019. Based on this evaluation, the Company’s Chief Executive Officer and Chief Financial Officer have concluded that, as of August 31, 2019, the Company’s disclosure controls and procedures were effective at the reasonable assurance level.

Management’s Annual Report on Internal Control Over Financial Reporting

Management’s Annual Report on Internal Control Over Financial Reporting is presented within Part II, Item 8 of this report and is incorporated herein by reference.

Changes in Internal Control Over Financial Reporting

There was no change in the Company’s internal control over financial reporting (as that term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by Item 401 of Regulation S-K regarding directors, and information required by Items 407(c)(3), 407(d)(4) and 407(d)(5) of Regulation S-K, will be included under "Election of Directors" and "Corporate Governance" in the Company's Proxy Statement for its 2020 Annual Meeting of Shareholders and is incorporated herein by reference.

Executive Officers of the Registrant

Name	Age	Office
Tamara L. Lundgren	62	President and Chief Executive Officer
Richard D. Peach	56	Senior Vice President, Chief Financial Officer and Chief of Corporate Operations
Michael Henderson	60	Senior Vice President, Co-President, Auto and Metals Recycling, and Co-President, Cascade Steel and Scrap
Steven Heiskell	50	Senior Vice President and Co-President, Auto and Metals Recycling
Jeffrey Dyck	56	Senior Vice President and Co-President, Cascade Steel and Scrap
Peter Saba	58	Senior Vice President, General Counsel and Corporate Secretary
Stefano Gaggini	48	Vice President, Deputy Chief Financial Officer and Chief Accounting Officer

Tamara L. Lundgren has been our President and Chief Executive Officer since December 2008. She joined the Company in September 2005 as Vice President and Chief Strategy Officer and held roles of increasing responsibility, including Executive Vice President and Chief Operating Officer. Prior to joining us, Ms. Lundgren was an investment banker and lawyer with 25 years of experience in the U.S. and Europe. She was a Managing Director in the Investment Banking Division of JPMorgan Chase, which she joined in 2001, and Deutsche Bank, which she joined in 1996. Earlier she was a partner in the Washington, DC law firm of Hogan Lovells (then Hogan & Hartson, LLP). Ms. Lundgren earned a B.A. degree from Wellesley College and a J.D. degree from the Northwestern University School of Law.

Richard D. Peach joined us in March 2007 and was appointed Chief Financial Officer in December 2007. In September 2016, in addition to his responsibilities as Chief Financial Officer, Mr. Peach assumed the role of Chief of Corporate Operations. Prior to joining us, Mr. Peach was the Chief Financial Officer and Senior Vice President with the Western U.S. energy utility, PacifiCorp, from 2003 to 2006. From 1995 to 2002, he served in senior management positions with Scottish Power, the international energy company, including Group Controller, Managing Director of United Kingdom Customer Services and Director of Energy Supply Finance. Prior to joining Scottish Power, Mr. Peach was a senior manager with Coopers & Lybrand. Mr. Peach is a member of the Institute of Chartered Accountants of Scotland.

Michael Henderson joined us in April 2012 and served as Chief Operating Officer and President of the Metals Recycling Business, prior to his promotion to Co-President of the Auto and Metals Recycling business in April 2015, and then Co-President of the Cascade Steel and Scrap business in June 2017. Prior to joining Schnitzer, he was Eastern Region President for Sims Metal Management where he was responsible for 26 facilities, including four shredders and five port locations. He began his career with Naparano Iron & Metal and has more than 30 years in the scrap industry, including expertise in both the ferrous and nonferrous sides of the business.

Steven Heiskell joined us in August 2004 and served in a variety of capacities within our Auto Parts Business, including as Vice President Corporate Development, Chief Development Officer, General Manager and Vice President and Managing Director, prior to his promotion to Co-President of the Auto and Metals Recycling business in April 2015. Prior to joining us, Steven served in a variety of executive positions at Simpata, Inc., a venture capital backed internet startup in San Francisco, Enron, and BP/Amoco Oil.

Jeffrey Dyck joined the Steel Manufacturing Business in February 1994 and served in a variety of positions, including Manager of the Rolling Mills and Director of Operations of the Steel Manufacturing Business, before his promotion to President of SMB in June 2005, and then Co-President of the Cascade Steel and Scrap business in June 2017.

Peter Saba joined us in July 2015 as Senior Vice President, General Counsel and Corporate Secretary. He is a member of the New York State, District of Columbia and U.S. Supreme Court Bar, not admitted in Oregon State. Prior to joining us, Peter was the Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary for Centrus Energy Corp. (formerly, USEC, Inc.), a global energy company that enriches uranium for nuclear fuel, which he joined in 2008. USEC, Inc. filed a voluntary petition for relief under Chapter 11 of the United States Bankruptcy Code in March 2014 and emerged from Chapter 11 as Centrus Energy Corp. on September 30, 2014. Over a 30-year career, Peter has worked in leading international law firms focusing on corporate and project finance, served as Chief Operating Officer and General Counsel at the Export-Import Bank of the United States and as the Principal Deputy Assistant Secretary for Domestic and International Energy Policy at the U.S. Department of Energy, and taught international business transactions as an Adjunct Professor at Georgetown Law School.

Stefano Gaggini joined us in July 2011 as Senior Manager of SEC Reporting and Technical Accounting and became Director of SEC Reporting and Technical Accounting in March 2012. He became Vice President, Corporate Controller and Principal Accounting Officer in December 2013, and in September 2018 he was promoted to Deputy Chief Financial Officer and Chief Accounting Officer. Prior to joining Schnitzer, Mr. Gaggini was a senior manager at KPMG LLP, where he served in various auditing roles since 1998 in the Portland, Oregon and Zurich, Switzerland offices. He is licensed as a Certified Public Accountant in the State of Oregon.

Code of Ethics

On April 26, 2018, the Board of Directors approved a revised Company’s Code of Conduct that is applicable to all of its directors and employees. This document is posted under the caption “Company – About Schnitzer – Ethics & Code of Conduct” on the Company’s internet website (www.schnitzersteel.com) and is available free of charge by calling the Company or submitting a request to ir@schn.com. The Company intends to satisfy its disclosure obligations with respect to any amendments to or waivers of the Code of Conduct for directors, executive officers or Senior Financial Officers by posting such information on its internet website set forth above rather than by filing a Form 8-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Items 402, 407(e)(4) and 407(e)(5) of Regulation S-K will be included under “Compensation of Executive Officers,” “Compensation Discussion and Analysis,” “Non-Employee Director Compensation,” “Corporate Governance – Assessment of Compensation Risk,” “Corporate Governance – Compensation Committee Interlocks and Insider Participation” and “Compensation Committee Report” in the Company’s Proxy Statement to be filed for its 2020 Annual Meeting of Shareholders and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information with respect to security ownership of certain beneficial owners and management, as required by Item 403 of Regulation S-K, will be included under “Voting Securities and Principal Shareholders” in the Company’s Proxy Statement for its 2020 Annual Meeting of Shareholders and is incorporated herein by reference. Information with respect to securities authorized for issuance under equity compensation plans, as required by Item 201(d) of Regulation S-K, will be included under “Compensation Plan Information” in the Company’s Proxy Statement for its 2020 Annual Meeting of Shareholders and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Items 404 and 407(a) of Regulation S-K will be included under “Certain Transactions” and “Corporate Governance – Director Independence” in the Company’s Proxy Statement for its 2020 Annual Meeting of Shareholders and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information regarding the Company’s principal accountant fees and services required by Item 9(e) of Schedule 14A will be included under “Ratification of Selection of Independent Registered Public Accounting Firm” and “Fees Paid to Independent Registered Public Accounting Firm” in the Company’s Proxy Statement for its 2020 Annual Meeting of Shareholders and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

		FORM 10-K PAGE NO.
1.	**Financial Statements:**	
	Report of Independent Registered Public Accounting Firm	49
	Consolidated Balance Sheets as of August 31, 2019 and 2018	51
	Consolidated Statements of Income for each of the three years ended August 31, 2019, 2018 and 2017	52
	Consolidated Statements of Comprehensive Income for each of the three years ended August 31, 2019, 2018 and 2017	53
	Consolidated Statements of Equity for each of the three years ended August 31, 2019, 2018 and 2017	54
	Consolidated Statements of Cash Flows for each of the three years ended August 31, 2019, 2018 and 2017	55
	Notes to the Consolidated Financial Statements	57
2.	**Financial Statement Schedules:**	
	Schedule II - Valuation and Qualifying Accounts for each of the three years ended August 31, 2019, 2018 and 2017	87

All other schedules are omitted as the information is either not applicable or is not required.

3. Exhibits:

3.1	2006 Restated Articles of Incorporation (as corrected December 2, 2011) of the Registrant. Filed as Exhibit 3.1 to the Registrant’s Quarterly Report on Form 10-Q for the quarter ended November 30, 2011, and incorporated herein by reference.
3.2	Restated Bylaws of the Registrant. Filed as Exhibit 3.1 to the Registrant’s Current Report on Form 8-K filed on December 16, 2013, and incorporated herein by reference.
4.1	Description of Registrant’s Securities.
10.1	Lease Agreement, dated September 1, 1988, between Schnitzer Investment Corp. and the Registrant, as amended, relating to the Portland Metals Recycling operation and which has terminated except for surviving indemnity obligations. Filed as Exhibit 10.3 to the Registrant’s Registration Statement on Form S-1 filed on September 24, 1993 (Commission File No. 33-69352), and incorporated herein by reference (P).
10.2	Purchase and Sale Agreement, dated May 4, 2005, between Schnitzer Investment Corp. and the Registrant, relating to purchase by the Registrant of the Portland Metals Recycling operations real estate. Filed as Exhibit 10.1 to the Registrant’s Current Report on Form 8-K filed on May 10, 2005, and incorporated herein by reference.
10.3	Third Amended Shared Services Agreement, dated July 26, 2006, between the Registrant, Schnitzer Investment Corp. and Island Equipment Company, Inc. Filed as Exhibit 10.5 to the Registrant’s Current Report on Form 8-K filed on July 28, 2006, and incorporated herein by reference.
10.4	Third Amended and Restated Credit Agreement dated as of April 6, 2016 among Schnitzer Steel Industries, Inc., as the US Borrower, and Schnitzer Steel Canada Ltd., as a Canadian Borrower, Bank of America, N.A., as Administrative Agent, and the other Lenders party thereto. Filed as Exhibit 10.1 to the Registrant’s Quarterly Report on Form 10-Q for the quarter ended February 29, 2016, and incorporated herein by reference.

10.5	Security Agreement dated as of April 6, 2016 among Schnitzer Steel Industries, Inc., the other Grantor's party thereto and Bank of America, N.A., as Administrative Agent. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended February 29, 2016, and incorporated herein by reference.
10.6	General Security Agreement dated as of April 6, 2016 between Schnitzer Steel Canada Ltd. and Bank of America, N.A., as Collateral Agent. Filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended February 29, 2016, and incorporated herein by reference.
10.7	First Amendment, dated as of August 24, 2018, to Third Amended and Restated Credit Agreement dated as of April 6, 2016 among Schnitzer Steel Industries, Inc., as the US Borrower, and Schnitzer Steel Canada Ltd., as a Canadian Borrower, Bank of America, N.A., as Administrative Agent, and the other Lenders party thereto. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on August 28, 2018, and incorporated herein by reference.
*10.8	Amended Executive Annual Bonus Plan. Filed as Appendix A to the Registrant's Annual Proxy Report on Form DEF 14A filed on December 17, 2014, and incorporated herein by reference.
*10.9	Annual Incentive Compensation Plan, effective September 1, 2006. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended February 28, 2007, and incorporated herein by reference.
*10.10	1993 Stock Incentive Plan of the Registrant as Amended and Restated on November 7, 2013. Filed as Appendix A to the Registrant's Definitive Proxy Statement filed on December 18, 2013, and incorporated herein by reference.
*10.11	Form of Deferred Stock Unit Award Agreement under the 1993 Stock Incentive Plan used for non-employee directors. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on July 28, 2006, and incorporated herein by reference.
*10.12	Deferred Compensation Plan for Non-Employee Directors. Filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on July 28, 2006, and incorporated herein by reference.
*10.13	Summary Sheet for 2019 Non-Employee Director Compensation. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended February 28, 2019, and incorporated herein by reference.
*10.14	Amended and Restated Supplemental Executive Retirement Bonus Plan of the Registrant effective January 1, 2009. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended May 31, 2009, and incorporated herein by reference.
*10.15	Form of Change in Control Severance Agreement between the Registrant and executive officers other than Tamara L. Lundgren and used for agreements entered into prior to 2011. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on May 5, 2008, and incorporated herein by reference.
*10.16	Form of Change in Control Severance Agreement between the Registrant and executive officers and used for agreements entered into between 2011 and 2014. Filed as Exhibit 10.19 to the Registrant's Annual Report on Form 10-K filed October 29, 2013 and incorporated herein by reference.
*10.17	Form of Change in Control Severance Agreement between the Registrant and executive officers and used for agreements entered into after 2014. Filed as Exhibit 10.16 to the Registrant's Annual Report on Form 10-K filed October 27, 2015, and incorporated herein by reference.
*10.18	Amended and Restated Employment Agreement by and between the Registrant and Tamara L. Lundgren dated October 29, 2008. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 4, 2008, and incorporated herein by reference.
*10.19	Amendment No. 1 dated June 29, 2011 to Amended and Restated Employment Agreement by and between the Registrant and Tamara L. Lundgren dated October 29, 2008. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended May 31, 2011 and incorporated herein by reference.
*10.20	Amendment No. 2 dated July 25, 2017 to Amended and Restated Employment Agreement by and between the Registrant and Tamara L. Lundgren dated October 29, 2008. Filed as Exhibit 10.19 to the Registrant's Annual Report on Form 10-K for the year ended August 31, 2017, and incorporated herein by reference.
*10.21	Amended and Restated Change in Control Severance Agreement by and between the Registrant and Tamara L. Lundgren dated October 29, 2008. Filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on November 4, 2008, and incorporated herein by reference.
*10.22	Form of Indemnification Agreement for Directors and certain officers used for agreements entered into prior to 2016. Filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on July 28, 2006, and incorporated herein by reference.

*10.23	Form of Indemnification Agreement for Directors and certain officers used for agreements entered into after 2015. Filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on May 3, 2016, and incorporated herein by reference.
*10.24	Amended and Restated Employment Agreement by and between the Registrant and John D. Carter dated June 29, 2011. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended May 31, 2011 and incorporated herein by reference.
*10.25	Amendment No. 1 dated November 6, 2012 to the Amended and Restated Employment Agreement by and between the Registrant and John D. Carter dated June 29, 2011. Filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended November 30, 2012 and incorporated herein by reference.
*10.26	Amendment No. 2 dated October 29, 2014 to the Amended and Restated Employment Agreement by and between the Registrant and John D. Carter dated June 29, 2011. Filed as Exhibit 10.25 to the Registrant's Annual Report on Form 10-K for the year ended August 31, 2017, and incorporated herein by reference.
*10.27	Amendment No. 3, dated October 25, 2017, to the Amended and Restated Agreement for Services by and between the Registrant and John D. Carter dated June 29, 2011. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2017 and incorporated herein by reference.
*10.28	Form of Restricted Stock Unit Award Agreement under the 1993 Stock Incentive Plan used for awards granted after fiscal 2012 through the first half of fiscal 2016. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2012 and incorporated herein by reference.
*10.29	Form of Restricted Stock Unit Award Agreement under the 1993 Stock Incentive Plan used for awards granted after the first half of fiscal 2016 through fiscal 2018. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended May 31, 2016 and incorporated herein by reference.
*10.30	Form of Restricted Stock Unit Award Agreement under the 1993 Stock Incentive Plan used for awards granted in fiscal 2019. Filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended November 30, 2018 and incorporated herein by reference.
*10.31	Form of Long-Term Incentive Award Agreement under the 1993 Stock Incentive Plan used for awards granted in first half of fiscal 2017. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2016 and incorporated herein by reference.
*10.32	Form of Long-Term Incentive Award Agreement under the 1993 Stock Incentive Plan used for awards granted in second half of fiscal 2017. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended May 31, 2017 and incorporated herein by reference.
*10.33	Form of Long-Term Incentive Award Agreement under the 1993 Stock Incentive Plan used for awards granted in fiscal 2018. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2017 and incorporated herein by reference.
*10.34	Form of Long-Term Incentive Award Agreement under the 1993 Stock Incentive Plan used for awards granted in fiscal 2019. Filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2018 and incorporated herein by reference.
*10.35	Fiscal 2018 Annual Performance Bonus Program for Tamara L. Lundgren. Filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2017 and incorporated herein by reference.
*10.36	Fiscal 2019 Annual Performance Bonus Program for Tamara L. Lundgren. Filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended November 30, 2018 and incorporated herein by reference.
21.1	Subsidiaries of Registrant.
23.1	Consent of Independent Registered Public Accounting Firm.
24.1	Powers of Attorney.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Document
101.PRE	XBRL Taxonomy Definition Presentation Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Management contract or compensatory plan or arrangement.

The agreements and other documents filed as exhibits to this report are not intended to provide factual information or other disclosure other than with respect to the terms of the agreements or other documents themselves, and you should not rely on them for that purpose. In particular, any representations and warranties made by us in these agreements or other documents were made solely within the specific context of the relevant agreement or document as of the date they were made and may not describe the actual state of affairs for any other purpose or at any other time.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

	SCHNITZER STEEL INDUSTRIES, INC.
Dated: October 24, 2019	By: /s/ RICHARD D. PEACH
	Richard D. Peach
	Senior Vice President, Chief Financial Officer and Chief of Corporate Operations

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant on October 24, 2019 in the capacities indicated.

Signature	Title
Principal Executive Officer:	
/s/ TAMARA L. LUNDGREN Tamara L. Lundgren	President and Chief Executive Officer and Director
Principal Financial Officer:	
/s/ RICHARD D. PEACH Richard D. Peach	Senior Vice President, Chief Financial Officer and Chief of Corporate Operations
Principal Accounting Officer:	
/s/ STEFANO GAGGINI Stefano Gaggini	Vice President, Deputy Chief Financial Officer and Chief Accounting Officer
Directors:	
*JOHN D. CARTER John D. Carter	Director
*WAYLAND R. HICKS Wayland R. Hicks	Director
*RHONDA D. HUNTER Rhonda D. Hunter	Director
*DAVID L. JAHNKE David L. Jahnke	Director
*JUDITH A. JOHANSEN Judith A. Johansen	Director
*WILLIAM D. LARSSON William D. Larsson	Director
*MICHAEL SUTHERLIN Michael Sutherlin	Director

*By: /s/ RICHARD D. PEACH
Attorney-in-fact, Richard D. Peach

Exhibit 4.1

**DESCRIPTION OF THE REGISTRANT’S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES
EXCHANGE ACT OF 1934**

Schnitzer Steel Industries, Inc. (“Schnitzer,” “we,” “our,” or “us”) has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: our common stock.

DESCRIPTION OF CAPITAL STOCK

The following summary of the terms of our capital stock is based upon our 2006 Restated Articles of Incorporation (the “Articles of Incorporation”) and our Restated Bylaws (the “Bylaws”). The summary is not complete, and is qualified by reference to our Articles of Incorporation and our Bylaws, which are filed as exhibits to this Annual Report on Form 10-K and are incorporated by reference herein. We encourage you to read our Articles of Incorporation, our Bylaws and the applicable provisions of the Oregon Business Corporation Act for additional information.

Authorized Shares of Capital Stock

Our authorized capital stock consists of 75,000,000 shares of Class A common stock, $1.00 par value, 25,000,000 shares of Class B common stock, $1.00 par value, and 20,000,000 shares of preferred stock, $1.00 par value. As of October 22, 2019, there were 26,465,063 shares of Class A common stock and 200,000 shares of Class B common stock issued and outstanding and no shares of preferred stock issued and outstanding. The outstanding shares of our common stock are duly authorized, validly issued, fully paid, and nonassessable.

Listing

Our Class A common stock is listed and principally traded on the NASDAQ Global Select Market under the symbol “SCHN.”

Voting Rights

If the number of outstanding shares of Class B common stock is less than 20% of the sum of the number of outstanding shares of Class B common stock and Class A common stock, the holders of shares of Class B common stock and Class A common stock vote together as a class and are entitled to one vote per share on all matters submitted to the vote of shareholders. Our common stock does not have cumulative voting rights.

Dividend Rights

Subject to any preferential dividend rights granted to the holders of any shares of our preferred stock that may at the time be outstanding, holders of our common stock are entitled to receive dividends as may be declared from time to time by our Board of Directors in its discretion out of funds legally available for the payment of dividends.

Liquidation Rights

Subject to any preferential rights of outstanding shares of preferred stock, holders of our common stock are entitled to share pro rata, upon any liquidation or dissolution of Schnitzer, in all remaining assets legally available for distribution to shareholders.

Other Rights and Preferences

Holders of Class B common stock have the right at any time to convert each share of Class B common stock into one share of Class A common stock. Other than the Class B common stock conversion right as noted above, our common stock has no sinking fund, redemption provisions, or preemptive, conversion, or exchange rights. Holders of our common stock may act by unanimous written consent.

Classified Board of Directors

Our board of directors is classified into three classes of directors with staggered three-year terms.

Transfer Agent and Registrar

Equiniti is the transfer agent and registrar for our common stock.

EXHIBIT 21.1

SCHNITZER STEEL INDUSTRIES, INC.
List of Subsidiaries

Subsidiary	**State of Incorporation**
Auto Parts Group Southwest, LLC	Delaware
Cascade Steel Rolling Mills, Inc.	Oregon
Crawford Street Corporation	Oregon
Edman Corp.	Oregon
FerMar, LLC	Oregon
Ferrum Bridge, LLC	Delaware
Freetown Self Serve Used Auto Parts, LLC	Massachusetts
Freetown Transfer Facility LLC	Massachusetts
General Metals of Tacoma, Inc.	Washington
Joint Venture Operations, Inc.	Delaware
Karileen, LLC	Washington
Maine Metal Recycling, Inc.	Maine
Manufacturing Management, Inc.	Oregon
Metals Recycling, L.L.C.	Rhode Island
Millis Industries, Inc.	Massachusetts
Millis Used Auto Parts, Inc.	Massachusetts
Mormil Corp.	Oregon
New England Metal Recycling, LLC	Massachusetts
Norprop, Inc.	Oregon
Oregon Rail Marketing Co.	Oregon
Pacific Car Crushing, LLC	Oregon
Pick A Part, Inc.	Washington
Pick and Pull Auto Dismantling, Inc.	California
Pick-N-Pull Auto Dismantlers	California General Partnership
Pick-N-Pull Auto Dismantlers, Chicago, LLC	Delaware
Pick-N-Pull Auto Dismantlers, Columbus, LLC	Delaware
Pick-N-Pull Auto Dismantlers, Kansas City, LLC	Delaware
Pick-N-Pull Auto Dismantlers, LLC	California
Pick-N-Pull Auto Dismantlers, Nevada, LLC	Nevada
Pick-N-Pull Auto Dismantlers, Oakland	California General Partnership
Pick-N-Pull Auto Dismantlers, St. Louis, LLC	Delaware
Pick-N-Pull Auto Dismantlers, Stockton, LLC	California
Pick-N-Pull Auto Dismantlers, Virginia Beach, LLC	Delaware
Pick-N-Pull Northwest, LLC	Oregon
Pick-N-Pull San Jose Auto Dismantlers	California General Partnership
Proleride Transport Systems, Inc.	Delaware
Prolerized New England Company LLC	Delaware
Recycling for a Better Tomorrow, a Schnitzer Steel Industries Charitable Foundation	Oregon
Row52, LLC	Delaware
Schnitzer Fresno, Inc.	Oregon
Schnitzer Puerto Rico, Inc.	Puerto Rico

Schnitzer Southeast, LLC	Georgia
Schnitzer Steel Canada, Ltd.	British Columbia
Schnitzer Steel Canadian Holdings, Inc.	Federally Chartered
Schnitzer Steel Hawaii Corp.	Delaware
Schnitzer Trading Canada, Inc.	Federally Chartered
Schnitzer Trading International, Inc.	Oregon
Scrap Financial Services, LLC	Oregon
Scrap Marketing, Inc.	Oregon
SFS II, LLC	Oregon
SSI Big Sky LLC	Oregon
SSI Burbank LLC	Washington
SSI Nevada LLC	Nevada
SSP Reclamation Company	Oregon
U-PULL-IT, Inc.	California
Western Pick-N-Pull Auto Dismantlers	Utah General Partnership
White Top Properties L.L.C.	Oregon

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-21895, 333-100511, 333-160996) of Schnitzer Steel Industries, Inc. of our report dated October 24, 2019 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Portland, Oregon
October 24, 2019

Exhibit 24.1

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini his true and lawful attorney and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorney and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ John D. Carter

JOHN D. CARTER

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini his true and lawful attorney and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorney and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Wayland R. Hicks

WAYLAND R. HICKS

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini her true and lawful attorney and agent, with full power of substitution and resubstitution, for her and in her name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as she might or could do in person, hereby ratifying and confirming all that the attorney and agent or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Rhonda D. Hunter

RHONDA D. HUNTER

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini his true and lawful attorney and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorney and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ David L. Jahnke

DAVID L. JAHNKE

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini her true and lawful attorney and agent, with full power of substitution and resubstitution, for her and in her name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as she might or could do in person, hereby ratifying and confirming all that the attorney and agent or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Judith A. Johansen
JUDITH A. JOHANSEN

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini his true and lawful attorney and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorney and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ William D. Larsson

WILLIAM D. LARSSON

POWER OF ATTORNEY

(Form 10-K)

The undersigned hereby constitutes and appoints each of Richard D. Peach and Stefano Gaggini his true and lawful attorney and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Schnitzer Steel Industries, Inc. for the year ended August 31, 2019 and any and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each attorney and agent full power and authority to do any and all acts and things necessary or advisable to be done, as fully and to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorney and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

/s/ Michael W. Sutherlin

MICHAEL W. SUTHERLIN

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Tamara L. Lundgren, certify that:

1. I have reviewed this annual report on Form 10-K of Schnitzer Steel Industries, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

October 24, 2019

/s/ Tamara L. Lundgren

Tamara L. Lundgren
President and Chief Executive Officer

CERTIFICATION PURSUANT TO SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002

I, Richard D. Peach, certify that:

1. I have reviewed this annual report on Form 10-K of Schnitzer Steel Industries, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

October 24, 2019

/s/ Richard D. Peach

Richard D. Peach
Senior Vice President, Chief Financial Officer and Chief of Corporate Operations

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Schnitzer Steel Industries, Inc. (the "Company") on Form 10-K for the fiscal year ended August 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

October 24, 2019

/s/ Tamara L. Lundgren
Tamara L. Lundgren
President and Chief Executive Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Schnitzer Steel Industries, Inc. (the “Company”) on Form 10-K for the fiscal year ended August 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Senior Vice President, Chief Financial Officer and Chief of Corporate Operations of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

October 24, 2019

/s/ Richard D. Peach
Richard D. Peach
Senior Vice President, Chief Financial Officer and Chief of
Corporate Operations