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

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended March 31, 2018
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 001-03970

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

Delaware	**23-1483991**
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification number)
350 Poplar Church Road, Camp Hill, Pennsylvania	**17011**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **717-763-7064**

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 o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES ☒ NO o

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 o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o
	Emerging growth company o

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

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

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding at April 30, 2018
Common stock, par value $1.25 per share	80,574,856

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PART I — FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

HARSCO CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)

(In thousands)	March 31 2018	December 31 2017
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 64,780**	$ 62,098
Restricted cash	**2,747**	4,111
Trade accounts receivable, net	**292,966**	288,034
Other receivables	**24,813**	20,224
Inventories	**132,352**	178,293
Current portion of contract assets	**23,871**	—
Other current assets	**41,227**	39,332
Total current assets	**582,756**	592,092
Property, plant and equipment, net	**482,837**	479,747
Goodwill	**406,706**	401,758
Intangible assets, net	**37,756**	38,251
Contract assets	**3,566**	—
Deferred income tax assets	**49,900**	51,574
Other assets	**19,100**	15,263
Total assets	**$ 1,582,621**	$ 1,578,685
LIABILITIES		
Current liabilities:		
Short-term borrowings	**$ 5,160**	$ 8,621
Current maturities of long-term debt	**10,065**	11,208
Accounts payable	**137,254**	126,249
Accrued compensation	**35,014**	60,451
Income taxes payable	**7,455**	5,106
Insurance liabilities	**11,061**	11,167
Current portion of advances on contracts	**38,147**	117,958
Other current liabilities	**145,501**	133,368
Total current liabilities	**389,657**	474,128
Long-term debt	**611,695**	566,794
Insurance liabilities	**23,017**	22,385
Retirement plan liabilities	**248,894**	259,367
Advances on contracts	**21,837**	—
Other liabilities	**41,176**	40,846
Total liabilities	**1,336,276**	1,363,520
COMMITMENTS AND CONTINGENCIES		
HARSCO CORPORATION STOCKHOLDERS' EQUITY		
Preferred stock	**—**	—
Common stock	**141,286**	141,110
Additional paid-in capital	**183,310**	180,201
Accumulated other comprehensive loss	**(543,217)**	(546,582)
Retained earnings	**1,179,516**	1,157,801
Treasury stock	**(762,788)**	(762,079)
Total Harsco Corporation stockholders' equity	**198,107**	170,451
Noncontrolling interests	**48,238**	44,714
Total equity	**246,345**	215,165
Total liabilities and equity	**$ 1,582,621**	$ 1,578,685

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(In thousands, except per share amounts)	Three Months Ended March 31 2018	2017
Revenues from continuing operations:		
Service revenues	**$ 254,962**	$ 240,609
Product revenues	**153,076**	131,932
Total revenues	**408,038**	372,541
Costs and expenses from continuing operations:		
Cost of services sold	**199,373**	189,482
Cost of products sold	**111,980**	98,790
Selling, general and administrative expenses	**57,083**	53,937
Research and development expenses	**1,239**	831
Other expenses, net	**1,822**	894
Total costs and expenses	**371,497**	343,934
Operating income from continuing operations	**36,541**	28,607
Interest income	**498**	512
Interest expense	**(9,583)**	(11,653)
Defined benefit pension income (expense)	**839**	(699)
Income from continuing operations before income taxes	**28,295**	16,767
Income tax expense	**(8,266)**	(6,253)
Income from continuing operations	**20,029**	10,514
Discontinued operations:		
Loss on disposal of discontinued business	**(580)**	(588)
Income tax benefit related to discontinued business	**128**	211
Loss from discontinued operations	**(452)**	(377)
Net income	**19,577**	10,137
Less: Net income attributable to noncontrolling interests	**(1,769)**	(1,247)
Net income attributable to Harsco Corporation	**$ 17,808**	$ 8,890
Amounts attributable to Harsco Corporation common stockholders:		
Income from continuing operations, net of tax	**$ 18,260**	$ 9,267
Loss from discontinued operations, net of tax	**(452)**	(377)
Net income attributable to Harsco Corporation common stockholders	**$ 17,808**	$ 8,890
Weighted-average shares of common stock outstanding	**80,650**	80,385
Basic earnings (loss) per common share attributable to Harsco Corporation common stockholders:		
Continuing operations	**$ 0.23**	$ 0.12
Discontinued operations	**(0.01)**	—
Basic earnings per share attributable to Harsco Corporation common stockholders	**$ 0.22**	$ 0.11 (a)
Diluted weighted-average shares of common stock outstanding	**83,544**	82,263
Diluted earnings (loss) per common share attributable to Harsco Corporation common stockholders:		
Continuing operations	**$ 0.22**	$ 0.11
Discontinued operations	**(0.01)**	—
Diluted earnings per share attributable to Harsco Corporation common stockholders	**$ 0.21**	$ 0.11

(a) Does not total due to rounding

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended March 31	
(In thousands)	**2018**	**2017**
Net income	**$ 19,577**	$ 10,137
Other comprehensive income (loss):		
Foreign currency translation adjustments, net of deferred income taxes of $1,627 and $393 in 2018 and 2017, respectively	**12,501**	16,561
Net gain (loss) on cash flow hedging instruments, net of deferred income taxes of $(839) and $256 in 2018 and 2017, respectively	**2,677**	(387)
Pension liability adjustments, net of deferred income taxes of $(325) and $(522) in 2018 and 2017, respectively	**(9,001)**	1,205
Unrealized gain (loss) on marketable securities, net of deferred income taxes of $4 and $(3) in 2018 and 2017, respectively	**(14)**	6
Total other comprehensive income	**6,163**	17,385
Total comprehensive income	**25,740**	27,522
Less: Comprehensive income attributable to noncontrolling interests	**(3,047)**	(1,633)
Comprehensive income attributable to Harsco Corporation	**$ 22,693**	$ 25,889

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(In thousands)	Three Months Ended March 31 2018	2017
Cash flows from operating activities:		
Net income	**$ 19,577**	$ 10,137
Adjustments to reconcile net income to net cash used by operating activities:		
Depreciation	**31,418**	30,207
Amortization	**1,934**	2,021
Deferred income tax expense (benefit)	**4,635**	(221)
Dividends from unconsolidated entities	**—**	19
Other, net	**1,944**	5,131
Changes in assets and liabilities:		
Accounts receivable	**(4,848)**	(27,882)
Inventories	**(11,490)**	(755)
Contract assets	**(5,698)**	—
Accounts payable	**7,340**	(541)
Accrued interest payable	**51**	286
Accrued compensation	**(26,131)**	(12,352)
Advances on contracts	**(7,348)**	(4,998)
Retirement plan liabilities, net	**(12,252)**	(8,381)
Other assets and liabilities	**(7,375)**	1,205
Net cash used by operating activities	**(8,243)**	(6,124)
Cash flows from investing activities:		
Purchases of property, plant and equipment	**(26,897)**	(16,989)
Proceeds from sales of assets	**377**	1,006
Net proceeds (payments) from settlement of foreign currency forward exchange contracts	**(3,822)**	33
Net cash used by investing activities	**(30,342)**	(15,950)
Cash flows from financing activities:		
Short-term borrowings, net	**(3,659)**	3,655
Current maturities and long-term debt:		
Additions	**46,000**	24,000
Reductions	**(2,944)**	(14,345)
Sale of noncontrolling interests	**477**	—
Stock-based compensation - Employee taxes paid	**(709)**	(53)
Deferred financing costs	**—**	(36)
Net cash provided by financing activities	**39,165**	13,221
Effect of exchange rate changes on cash and cash equivalents, including restricted cash	**738**	1,403
Net increase (decrease) in cash and cash equivalents, including restricted cash	**1,318**	(7,450)
Cash and cash equivalents, including restricted cash, at beginning of period	**66,209**	71,879
Cash and cash equivalents, including restricted cash, at end of period	**$ 67,527**	$ 64,429

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY (Unaudited)

	Harsco Corporation Stockholders' Equity						
	Common Stock						
(In thousands, except share amounts)	Issued	Treasury	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total
Balances, January 1, 2017	$ 140,625	$ (760,391)	$ 172,101	$ 1,150,688	$ (606,722)	$ 41,262	$ 137,563
Adoption of new accounting standard			1,106	(709)			397
Net income				8,890		1,247	10,137
Total other comprehensive income, net of deferred income taxes of $124					16,999	386	17,385
Vesting of restricted stock units and other stock grants, net 7,254 shares	14	(53)	(14)				(53)
Amortization of unearned portion of stock-based compensation, net of forfeitures			3,104				3,104
Balances, March 31, 2017	$ 140,639	$ (760,444)	$ 176,297	$ 1,158,869	$ (589,723)	$ 42,895	$ 168,533

	Harsco Corporation Stockholders' Equity						
	Common Stock						
(In thousands)	Issued	Treasury	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total
Balances, January 1, 2018	$ 141,110	$ (762,079)	$ 180,201	$ 1,157,801	$ (546,582)	$ 44,714	$ 215,165
Adoption of new accounting standards (See Note 2)				3,907	(1,520)		2,387
Net income				17,808		1,769	19,577
Sale of subsidiary shares to noncontrolling interest						477	477
Total other comprehensive income, net of deferred income taxes of $467					4,885	1,278	6,163
Stock Appreciation Rights exercised, net 2,560 shares	5	(26)	(5)				(26)
Vesting of restricted stock units and other stock grants, net 102,695 shares	171	(683)	(171)				(683)
Amortization of unearned portion of stock-based compensation, net of forfeitures			3,285				3,285
Balances, March 31, 2018	**$ 141,286**	**$ (762,788)**	**$ 183,310**	**$ 1,179,516**	**$ (543,217)**	**$ 48,238**	**$ 246,345**

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Basis of Presentation

Harsco Corporation (the "Company") has prepared these unaudited condensed consolidated financial statements based on Securities and Exchange Commission (the "SEC") rules that permit reduced disclosure for interim periods. In the opinion of management, all adjustments (all of which are of a normal recurring nature) that are necessary for a fair statement are reflected in the unaudited condensed consolidated financial statements. The December 31, 2017 Condensed Consolidated Balance Sheet information contained in this Quarterly Report on Form 10-Q was derived from the 2017 audited consolidated financial statements, but does not include all disclosures required by accounting principles generally accepted in the U.S. ("U.S. GAAP") for an annual report. The unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements, including the notes thereto, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

Operating results and cash flows for the three months ended March 31, 2018 are not indicative of the results that may be expected for the year ending December 31, 2018.

Reclassifications
Certain reclassifications have been made to prior year amounts to conform with current year classifications.

2. Recently Adopted and Recently Issued Accounting Standards

The following accounting standards have been adopted in 2018:

On January 1, 2018, the Company adopted changes, with subsequent amendments, issued by the Financial Accounting Standards Board ("FASB") related to the recognition of revenue from contracts with customers. The changes clarify the principles for recognizing revenue and develop a common revenue standard. The core principle of the changes is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The adoption of these changes resulted in the following modifications to the Company's revenue recognition process:

- *Harsco Industrial Segment - Air-X-Changers* - The timing of revenue recognition for air-cooled heat exchanger sales, which the Company historically recognized upon the completion of the efforts associated with these arrangements, is now recognized over time with the impact of increasing revenue in earlier periods. This change also impacted the Company's Condensed Consolidated Balance Sheets by decreasing both Inventories and Advances on contracts; and creating a new caption and establishing a balance related to Contract assets.
- *Harsco Rail Segment* - The timing of revenue recognition for certain railway track maintenance equipment sales, which the Company historically recognized upon the completion of the efforts associated with these arrangements, is now recognized over time with the impact of increasing revenue in earlier periods. This change also impacted the Company's Condensed Consolidated Balance Sheets by decreasing both Inventories and Advances on contracts; and creating a new caption and establishing a balance related to Contract assets. In addition, certain advance payments received from customers, which provide a significant benefit of financing and are expected to be outstanding longer than twelve months, are treated as significant financing components to the related transactions and the Company will increase the overall transaction price with a corresponding increase in interest expense.

Additionally, the Company's disclosure related to revenue recognition has been expanded in accordance with the FASB changes. Please refer to Note 12, Revenue Recognition for additional information.

The Company chose to implement the impact of the FASB changes utilizing the modified retrospective transition method, using the following practical expedients:

- The Company has elected to apply the changes only to revenue arrangements that were not completed as of January 1, 2018; and
- The Company has elected to reflect the aggregate effect of all contract modifications that occurred prior to the beginning of the earliest reported period when (i) identifying the satisfied and unsatisfied performance obligations;
  (ii) determining the transaction price; and (iii) allocating the transaction price to the satisfied and unsatisfied performance obligations.

Comparative information has not been restated and continues to be reported under U.S. GAAP in effect for those periods.

The cumulative effect of the changes made to the Condensed Consolidated Balance Sheet at January 1, 2018 was as follows:

(In thousands)	Balance at December 31, 2017	Impact of Adoption	Balance at January 1, 2018
ASSETS			
Current assets:			
Trade accounts receivable, net	$ 288,034	$ 532	$ 288,566
Inventories	178,293	(59,793)	118,500
Current portion of contract assets	—	18,248	18,248
Other current assets	39,332	179	39,511
Total current assets	592,092	(40,834)	551,258
Contract assets	—	3,566	3,566
Other assets	15,263	1,337	16,600
Total assets	1,578,685	(35,931)	1,542,754
LIABILITIES			
Current liabilities:			
Current portion of advances on contracts	117,958	(78,507)	39,451
Other current liabilities	133,368	13,995	147,363
Total current liabilities	474,128	(64,512)	409,616
Advances on contracts	—	24,564	24,564
Other liabilities	40,846	1,580	42,426
Total liabilities	1,363,520	(38,368)	1,325,152
HARSCO CORPORATION STOCKHOLDERS' EQUITY			
Accumulated other comprehensive loss	(546,582)	(1,520)	(548,102)
Retained earnings	1,157,801	3,957	1,161,758
Total Harsco Corporation stockholders' equity	170,451	2,437	172,888
Total equity	215,165	2,437	217,602
Total liabilities and equity	1,578,685	(35,931)	1,542,754

The impact of modifying the Company's Condensed Consolidated Balance Sheet at March 31, 2018 and the Condensed Consolidated Statements of Operations and Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2018 are as follows:

	March 31, 2018		
(In thousands)	**As Reported**	**Impact of Adoption**	**As Reported - Less Impact of Adoption**
ASSETS			
Current assets:			
Trade accounts receivable, net	$ 292,966	$ (668)	$ 292,298
Inventories	132,352	71,195	203,547
Current portion of contract assets	23,871	(23,871)	—
Other current assets	41,227	(177)	41,050
Total current assets	582,756	46,479	629,235
Contract assets	3,566	(3,566)	—
Deferred income tax assets	49,900	947	50,847
Other assets	19,100	(1,285)	17,815
Total assets	1,582,621	42,575	1,625,196
LIABILITIES			
Current liabilities:			
Current portion of advances on contracts	38,147	78,809	116,956
Other current liabilities	145,501	(11,801)	133,700
Total current liabilities	389,657	67,008	456,665
Advances on contracts	21,837	(21,837)	—
Other liabilities	41,176	(381)	40,795
Total liabilities	1,336,276	44,790	1,381,066
HARSCO CORPORATION STOCKHOLDERS' EQUITY			
Accumulated other comprehensive loss	(543,217)	1,827	(541,390)
Retained earnings	1,179,516	(4,042)	1,175,474
Total Harsco Corporation stockholders' equity	198,107	(2,215)	195,892
Total equity	246,345	(2,215)	244,130
Total liabilities and equity	1,582,621	42,575	1,625,196

(In thousands, except per share amounts)	Three Months Ended March 31, 2018 As Reported	Impact of Adoption	As Reported - Less Impact of Adoption
Revenues from continuing operations:			
Services revenues	$ 254,962	$ 1,350	$ 256,312
Product revenues	153,076	(10,452)	142,624
Total revenues	408,038	(9,102)	398,936
Costs and expenses from continuing operations:			
Costs of services sold	199,373	1,358	200,731
Costs of products sold	111,980	(9,930)	102,050
Selling, general and administrative costs	57,083	16	57,099
Total costs and expenses	371,497	(8,556)	362,941
Operating income from continuing operations	36,541	(546)	35,995
Interest expense	(9,583)	452	(9,131)
Income from continuing operations before income taxes	28,295	(94)	28,201
Income tax expense	(8,266)	(8)	(8,274)
Income from continuing operations	20,029	(102)	19,927
Net income	19,577	(102)	19,475
Amounts attributable to Harsco Corporation common stockholders:			
Income from continuing operations, net of tax	18,260	(102)	18,158
Net income attributable to Harsco Corporation common stockholders	17,808	(102)	17,706
Basic earnings per share attributable to Harsco Corporation common stockholders:			
Continuing operations	0.23	—	0.23
Basic earnings per share attributable to Harsco Corporation common stockholders	0.22	—	0.22
Diluted earnings per share attributable to Harsco Corporation common stockholders:			
Continuing operations	0.22	—	0.22
Diluted earnings per share attributable to Harsco Corporation common stockholders	0.21	—	0.21

(In thousands)	Three Months Ended March 31, 2018 As Reported	Impact of Adoption	As Reported - Less Impact of Adoption
Cash flows from operating activities:			
Net income	$ 19,577	$ (102)	$ 19,475
Adjustments to reconcile net income to net cash used by operating activities:			
Deferred income tax expense (benefit)	4,635	8	4,643
Changes in assets and liabilities:			
Accounts receivable	(4,848)	136	(4,712)
Inventories	(11,490)	(11,402)	(22,892)
Contract assets	(5,698)	5,698	—
Advances on contracts	(7,348)	3,028	(4,320)
Other assets and liabilities	(7,375)	2,634	(4,741)
Net cash used by operating activities	(8,243)	—	(8,243)

On January 1, 2018, the Company adopted changes issued by the FASB related to how employers that sponsor defined benefit pension plans and other postretirement plans present the net periodic pension cost ("NPPC") in the statement of operations. Employers are required to report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Other components of NPPC are required to be presented in the statement of operations separately from the service cost component and outside of the subtotal of income from operations. The changes also allow only the service cost component to be eligible for capitalization. The adoption of these changes resulted in the Company reclassifying $0.7 million of NPPC expense for the three months ended March 31, 2017 from the captions Cost of services sold; Cost of products sold; and Selling, general and administrative expenses to the new caption, Defined benefit pension income (expense) on the Company's Condensed Consolidated Statement of Operations.

On January 1, 2018, the Company adopted changes issued by the FASB clarifying when revisions to the terms or conditions of a share-based payment award require an entity to apply modification accounting. The changes require modification accounting only in circumstances when the terms or conditions result in changes to the fair value, vesting conditions or classification of the award as an equity instrument or a liability. The adoption of these changes did not have an impact on the Company's condensed consolidated financial statements.

On January 1, 2018, the Company adopted changes issued by FASB which eliminate the requirement to defer the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. Under the new guidance, an entity should recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The changes resulted in an adjustment to opening retained earnings of less than
$0.1 million.

The following accounting standards have been issued and become effective for the Company at a future date:

In February 2016, the FASB issued changes in accounting for leases. The changes introduce a lessee model that brings most leases onto the balance sheet. The changes also align many of the underlying principles of the new lessor model with those in the FASB's new revenue recognition standard. Furthermore, the changes address other concerns related to the current leases model such as eliminating the requirement in current guidance for an entity to use bright-line tests in determining lease classification. The changes also require lessors to increase the transparency of their exposure to changes in value of their residual assets and how they manage that exposure. The changes become effective for the Company on January 1, 2019. Management is currently evaluating the impact of these changes on its condensed consolidated financial statements.

In January 2017, the FASB issued changes that remove the second step of the annual goodwill impairment test, which requires a hypothetical purchase price allocation. The changes provide that the amount of goodwill impairment will be equal to the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. All other goodwill impairment guidance remains largely unchanged. The same one-step impairment test will be applied to goodwill at all reporting units, even those with zero or negative carrying amounts. Entities will be required to disclose the amount of goodwill at reporting units with zero or negative carrying amounts. The changes become effective for the Company on January 1, 2020. Management has determined that these changes will not have a material impact on the Company's condensed consolidated financial statements. However, should the Company be required to record a goodwill impairment charge in future periods, the amount recorded may differ compared to any amounts that might be recorded under current practice.

In August 2017, the FASB issued changes which expand and refine hedge accounting for both financial and non-financial risk components, aligns the recognition and presentation of the effects of hedging instruments and hedged items in the financial statements, and includes certain targeted improvements to ease the application of current guidance related to the assessment of hedge effectiveness. The amendments in this update should be applied to hedging relationships existing on the date of adoption, which includes a cumulative-effect adjustment to eliminate any ineffectiveness recorded to accumulated other comprehensive income or loss with a corresponding adjustment to the opening balance of retained earnings as of the beginning of the fiscal year in which adoption occurred. Presentation and disclosure amendments are required to be applied prospectively. The changes become effective for the Company on January 1, 2019. Management is currently evaluating the impact of these changes on its condensed consolidated financial statements.

In February 2018, the FASB issued changes which allow entities to reclassify stranded income tax effects resulting from the Tax Cuts and Jobs Act (the "Act") from accumulated other comprehensive income to retained earnings in their consolidated financial statements. Under the Act, deferred taxes were adjusted to reflect the reduction of the historical corporate income
tax rate to the newly enacted corporate income tax rate, which left the tax effects on items within accumulated other comprehensive income stranded at historical tax rates. The changes become effective for the Company on January 1, 2019. The Company had approximately $21 million of stranded income tax effects in accumulated other comprehensive income at December 31, 2017 resulting from the Act.

3. Accounts Receivable and Inventories

Accounts receivable consist of the following:

(In thousands)	March 31 2018	December 31 2017
Trade accounts receivable	**$ 297,515**	$ 292,765
Less: Allowance for doubtful accounts	**(4,549)**	(4,731)
Trade accounts receivable, net	**$ 292,966**	$ 288,034
Other receivables (a)	**$ 24,813**	$ 20,224

(a) Other receivables include insurance claim receivables, employee receivables, tax claim receivables and other miscellaneous receivables not included in Trade accounts receivable, net.

The provision (benefit) for doubtful accounts related to trade accounts receivable was as follows:

	Three Months Ended March 31	
(In thousands)	2018	2017
Provision (benefit) for doubtful accounts related to trade accounts receivable	**$ (46)**	$ (22)

Inventories consist of the following:

(In thousands)	March 31 2018	December 31 2017
Finished goods	**$ 18,747**	$ 26,415
Work-in-process	**20,967**	24,367
Contracts-in-process (b)	**—**	45,599
Raw materials and purchased parts	**68,531**	58,943
Stores and supplies	**24,107**	22,969
Total inventories	**$ 132,352**	$ 178,293

Contracts-in-process consist of the following:

(In thousands)	December 31 2017
Contract costs accumulated to date	$ 73,740
Estimated forward loss provisions for contracts-in-process (c)	(28,141)
Contracts-in-process (b) (d)	$ 45,599

(b) The Company has adopted the new revenue recognition standard utilizing the modified retrospective transition method, including use of practical expedients. Amounts previously reported as Contracts-in-progress have been recognized through the related cumulative catch-up adjustment. See Note 2, Recently Adopted and Recently Issued Accounting Standards for additional information.

(c) For periods prior to January 1, 2018, to the extent that the estimated forward loss provision exceeds accumulated contract costs it is included in the caption Other current liabilities on the Condensed Consolidated Balance Sheets and amounted to $3.0 million at December 31, 2017. At March 31, 2018, due to the implementation of the new revenue standard, the entire remaining estimated forward loss provision is included in the caption Other current liabilities on the Condensed Consolidated Balance Sheets and amounted to $10.4 million.

(d) At March 31, 2018 and December 31, 2017, the Company has $49.9 million and $97.9 million, respectively, of net customer advances related to SBB contracts. These amounts are included in the caption Current portion of advances on contracts and Advances on contracts, representing the non-current portion, on the Condensed Consolidated Balance Sheets.

The Company recognized an initial estimated forward loss provision related to the contracts with the federal railway system of Switzerland ("SBB") of $45.1 million for the year ended December 31, 2016. The Company recorded an additional forward loss provision of $1.8 million for the three months ended March 31, 2018. The estimated forward loss provision represents the Company's best estimate based on currently available information. It is possible that the Company's overall estimate of costs to complete these contracts may increase, which would result in an additional estimated forward loss provision at such time, but the Company is unable to estimate any further possible loss or range of loss at this time.

The Company recognized $7.9 million of revenues for the contracts with SBB, on an over time basis, utilizing an input method based on costs incurred for the three months ended March 31, 2018. The Company did not recognize any revenue for the contracts with SBB for the three months ended March 31, 2017. For three months ended March 31, 2018, product revenue gross margins were not significantly impacted by the revenue recognized under the SBB contracts. The Company is approximately 98% complete on the first contract and 15% completed on the second contract with SBB as of March 31, 2018.

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4. Property, Plant and Equipment

Property, plant and equipment consists of the following:

(In thousands)	March 31 2018	December 31 2017
Land	**$ 10,828**	$ 10,840
Land improvements	**14,866**	14,996
Buildings and improvements	**202,273**	198,582
Machinery and equipment	**1,643,743**	1,599,713
Uncompleted construction	**23,095**	24,387
Gross property, plant and equipment	**1,894,805**	1,848,518
Less: Accumulated depreciation	**(1,411,968)**	(1,368,771)
Property, plant and equipment, net	**$ 482,837**	$ 479,747

5. Goodwill and Other Intangible Assets

The following table reflects the changes in carrying amounts of goodwill by segment for the three months ended March 31, 2018:

(In thousands)	Harsco Metals & Minerals Segment	Harsco Industrial Segment	Harsco Rail Segment	Consolidated Totals
Balance at December 31, 2017	$ 381,893	$ 6,839	$ 13,026	$ 401,758
Foreign currency translation	4,948	—	—	4,948
Balance at March 31, 2018	**$ 386,841**	**$ 6,839**	**$ 13,026**	**$ 406,706**

The Company tests for goodwill impairment annually or more frequently if indicators of impairment exist, or if a decision is made to dispose of a business. The Company performs the annual goodwill impairment test as of October 1 and monitors for triggering events on an ongoing basis. The Company determined that, as of March 31, 2018, no interim goodwill impairment testing was necessary.

Intangible assets included in the caption, Intangible assets, net, on the Condensed Consolidated Balance Sheets consist of the following:

	March 31, 2018		December 31, 2017	
(In thousands)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer related	**$ 154,949**	**$ 123,676**	$ 153,014	$ 121,385
Patents	**5,874**	**5,752**	5,825	5,700
Technology related	**26,035**	**26,035**	26,131	26,131
Trade names	**8,316**	**4,921**	8,317	4,845
Other	**8,966**	**6,000**	8,875	5,850
Total	**$ 204,140**	**$ 166,384**	$ 202,162	$ 163,911

Amortization expense for intangible assets was as follows:

	Three Months Ended March 31	
(In thousands)	2018	2017
Amortization expense for intangible assets	**$ 1,282**	$ 1,318

The estimated amortization expense for the next five fiscal years based on current intangible assets is as follows:

(In thousands)	2018	2019	2020	2021	2022
Estimated amortization expense (a)	$ 5,000	$ 4,750	$ 4,500	$ 4,250	$ 4,000

(a) These estimated amortization expense amounts do not reflect the potential effect of future foreign currency exchange fluctuations.

6. Employee Benefit Plans

Defined Benefit Pension Plans Net Periodic Pension Cost (In thousands)	Three Months Ended March 31 U.S. Plans 2018	U.S. Plans 2017	International Plans 2018	International Plans 2017
Service costs	**$ 10**	$ 11	**$ 386**	$ 411
Interest costs	**2,391**	2,469	**5,672**	5,734
Expected return on plan assets	**(3,017)**	(2,621)	**(11,145)**	(10,424)
Recognized prior service costs	**—**	8	**(39)**	45
Recognized loss	**1,302**	1,425	**3,840**	4,042
Settlement/curtailment losses	**166**	—	**—**	—
Defined benefit pension plans net periodic pension cost (benefit)	**$ 852**	$ 1,292	**$ (1,286)**	$ (192)

On January 1, 2018, the Company adopted changes issued by the FASB related to how employers that sponsor defined benefit pension plans and other postretirement plans present NPPC in the statement of operations. Employers are required to report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Other components of NPPC are required to be presented in the statement of operations separately from the service cost component and outside of the subtotal of income from operations. See Note 2, Recently Adopted and Recently Issued Accounting Standards, for additional details.

Company Contributions (In thousands)	Three Months Ended March 31 2018	2017
Defined benefit pension plans (U.S.)	**$ 1,284**	$ 471
Defined benefit pension plans (International)	**9,734**	8,337
Multiemployer pension plans	**501**	485
Defined contribution pension plans	**2,835**	2,560

The Company's estimate of expected contributions to be paid during the remainder of 2018 for the U.S. and international defined benefit pension plans are $8.6 million and $10.2 million, respectively.

7. Income Taxes

Income tax expense related to continuing operations for the three months ended March 31, 2018 and March 31, 2017 was $8.3 million and $6.3 million, respectively.

An income tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, based on technical merits, including resolutions of any related appeals or litigation processes. The reserve for uncertain tax positions at March 31, 2018 was $4.9 million, including interest and penalties. Within the next twelve months, it is reasonably possible that $1.2 million of unrecognized income tax benefits will be recognized upon settlement of tax examinations and the expiration of various statutes of limitations.

8. Commitments and Contingencies

Environmental

The Company is involved in a number of environmental remediation investigations and cleanups and, along with other companies, has been identified as a "potentially responsible party" for certain waste disposal sites. While each of these matters is subject to various uncertainties, it is probable that the Company will agree to make payments toward funding certain of these activities, and it is possible that some of these matters will be decided unfavorably to the Company. The Company has evaluated its potential liability, and its financial exposure is dependent upon such factors as the continuing evolution of environmental laws and regulatory requirements, the availability and application of technology, the allocation of cost among potentially responsible parties, the years of remedial activity required and the remediation methods selected. The Company did not have any material accruals or record any material expenses related to environmental matters during the periods presented.

The Company evaluates its liability for future environmental remediation costs on a quarterly basis. Although actual costs to be incurred at identified sites in future periods may vary from the estimates (given inherent uncertainties in evaluating environmental exposures), the Company does not expect that any costs that are reasonably possible to be incurred by the Company in connection with environmental matters in excess of the amounts accrued would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Brazilian Tax Disputes

The Company is involved in a number of tax disputes with federal, state and municipal tax authorities in Brazil. These disputes are at various stages of the legal process, including the administrative review phase and the collection action phase, and include assessments of fixed amounts of principal and penalties, plus interest charges that increase at statutorily determined amounts per month and are assessed on the aggregate amount of the principal and penalties. In addition, the losing party at the collection action or court of appeals phase could be subject to a charge to cover statutorily mandated legal fees, which are generally calculated as a percentage of the total assessed amounts due, inclusive of penalty and interest. A large number of the claims relate to value-added ("ICMS"), services and social security tax disputes. The largest proportion of the assessed amounts relate to ICMS claims filed by the State Revenue Authorities from the State of São Paulo, Brazil (the "SPRA"), encompassing the period from January 2002 to May 2005.

In October 2009, the Company received notification of the SPRA’s final administrative decision regarding the levying of ICMS in the State of São Paulo in relation to services provided to a customer in the State between January 2004 and May 2005. As of March 31, 2018, the principal amount of the tax assessment from the SPRA with regard to this case is approximately $2 million, with penalty, interest and fees assessed to date increasing such amount by an additional $24 million. Any change in the aggregate amount since the Company’s last Annual Report on Form 10-K for the year ended December 31, 2017 is due to an increase in assessed interest and statutorily mandated legal fees for the period, as well as foreign currency translation.

Another ICMS tax case involving the SPRA refers to the tax period from January 2002 to December 2003, and has not yet reached the judicial phase. The aggregate amount assessed by the tax authorities in August 2005 was $7.6 million (the amounts with regard to this claim are valued as of the date of the assessment since it has not yet reached the collection phase), composed of a principal amount of $1.8 million, with penalty and interest assessed through that date increasing such amount by an additional $5.8 million. All such amounts include the effect of foreign currency translation.

The Company continues to believe that it is not probable it will incur a loss for these assessments by the SPRA. The Company also continues to believe that sufficient coverage for these claims exists as a result of the indemnification obligations of the Company's customer and such customer’s pledge of assets in connection with the October 2009 notice, as required by Brazilian law.

The Company intends to continue its practice of vigorously defending itself against these tax claims under various alternatives, including judicial appeal. The Company will continue to evaluate its potential liability with regard to these claims on a quarterly basis; however, it is not possible to predict the ultimate outcome of these tax-related disputes in Brazil. No loss provision has been recorded in the Company's condensed consolidated financial statements for the disputes described above because the loss contingency is not deemed probable, and the Company does not expect that any costs that are reasonably possible to be incurred by the Company in connection with Brazilian tax disputes would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Brazilian Labor Disputes

The Company is subject to ongoing collective bargaining and individual labor claims in Brazil through the Harsco Metals & Minerals Segment which allege, among other things, the Company's failure to pay required amounts for overtime and vacation at certain sites. The Company is vigorously defending itself against these claims; however, litigation is inherently unpredictable, particularly in foreign jurisdictions. While the Company does not currently expect that the ultimate resolution of these claims will have a material adverse effect on the Company’s financial condition, results of operations or cash flows, it is not possible to predict the ultimate outcome of these labor-related disputes.

The Company is continuing to review all known labor claims and as of March 31, 2018 and December 31, 2017, the Company has established reserves of $9.9 million and $9.6 million, respectively, on the Company's Condensed Consolidated Balance Sheets for amounts considered to be probable and estimable. As the Company continues to evaluate these claims and takes actions to address them, the amount of established reserves may be impacted.

Customer Disputes
The Company may, in the normal course of business, become involved in commercial disputes with subcontractors or customers. Although results of operations and cash flows for a given period could be adversely affected by a negative outcome in these or other lawsuits, claims or proceedings, management believes that the ultimate outcome of any on going matters will not have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Lima Refinery Litigation
On April 8, 2016, Lima Refining Company filed a lawsuit against the Company in the District Court of Harris County, Texas related to a January 2015 explosion at an oil refinery operated by Lima Refining Company. The action seeks approximately $106 million in property damages and approximately $289 million in lost profits and business interruption damages. The action alleges the explosion occurred because of a defect in a heat exchange cooler manufactured by Hammco Corporation ("Hammco") in 2009, prior to the Company's acquisition of Hammco in 2014. The Company is vigorously contesting the allegations against it, both as to liability for the accident and the amount of the claimed damages. As a result, the Company believes the situation will not result in a probable loss. The Company has both an indemnity right from the sellers of Hammco and liability insurance coverage under various primary and excess policies that the Company believes will be available, if necessary, to cover substantially all of any such liability that might ultimately be incurred in the above action.

Compliance Matter
As previously disclosed, in 2017, the Company undertook an internal investigation, with the assistance of outside counsel, after it became aware of allegations involving an employee and an agent of the Harsco Rail subsidiary in China ("Harsco Rail China"). During this investigation the Company learned about certain payments that potentially violate the Foreign Corrupt Practices Act. Revenues attributed to Harsco Rail China were approximately 2% of the Company's consolidated revenues for each of the prior three years.

The Company has voluntarily self-reported its initial findings to the SEC and the U.S. Department of Justice (the "DOJ") and intends to fully cooperate with these agencies in their review. Based on information known to date, the Company believes the amount of the potential improper payments are not material to the condensed consolidated financial statements. Any determination that the Company's operations or activities were not in compliance with existing laws or regulations could result in the imposition of fines and penalties. No provision with respect to this matter has been made in the Company's condensed consolidated financial statements. At this time, the Company cannot predict the outcome or impact of the investigation or the reviews by the SEC and the DOJ. However, based on information available at this time, the Company does not believe any potential liability would be material to the Company's condensed consolidated financial position, although an amount recorded, if any, could be material to the results of operations for the period in which it may be recorded.

Other
The Company is named as one of many defendants (approximately 90 or more in most cases) in legal actions in the U.S. alleging personal injury from exposure to airborne asbestos over the past several decades. In their suits, the plaintiffs have named as defendants, among others, many manufacturers, distributors and installers of numerous types of equipment or products that allegedly contained asbestos.

The Company believes that the claims against it are without merit. The Company has never been a producer, manufacturer or processor of asbestos fibers. Any asbestos-containing part of a Company product used in the past was purchased from a supplier and the asbestos encapsulated in other materials such that airborne exposure, if it occurred, was not harmful and is not associated with the types of injuries alleged in the pending actions.

At March 31, 2018, there were 17,251 pending asbestos personal injury actions filed against the Company. Of those actions, 16,737 were filed in the New York Supreme Court (New York County), 111 were filed in other New York State Supreme Court Counties and 403 were filed in courts located in other states.

The complaints in most of those actions generally follow a form that contains a standard damages demand of $20 million or $25 million, regardless of the individual plaintiff's alleged medical condition, and without identifying any specific Company product.

At March 31, 2018, 16,712 of the actions filed in New York Supreme Court (New York County) were on the Deferred/Inactive Docket created by the court in December 2002 for all pending and future asbestos actions filed by persons who cannot demonstrate that they have a malignant condition or discernible physical impairment. The remaining 25 cases in New York County are pending on the Active or In Extremis Docket created for plaintiffs who can demonstrate a malignant condition or physical impairment.

The Company has liability insurance coverage under various primary and excess policies that the Company believes will be available, if necessary, to substantially cover any liability that might ultimately be incurred in the asbestos actions referred to above. The costs and expenses of the asbestos actions are being paid by the Company's insurers.

In view of the persistence of asbestos litigation in the U.S., the Company expects to continue to receive additional claims in the future. The Company intends to continue its practice of vigorously defending these claims and cases. At March 31, 2018, the Company has obtained dismissal in 27,971 cases by stipulation or summary judgment prior to trial.

It is not possible to predict the ultimate outcome of asbestos-related actions in the U.S. due to the unpredictable nature of this litigation, and no loss provision has been recorded in the Company's condensed consolidated financial statements because a loss contingency is not deemed probable or estimable. Despite this uncertainty, and although results of operations and cash flows for a given period could be adversely affected by asbestos-related actions, the Company does not expect that any costs that are reasonably possible to be incurred by the Company in connection with asbestos litigation would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

As previously disclosed, the Company has had ongoing meetings with the Supreme Council for Environment in Bahrain (“SCE”) over processing a byproduct (“salt cakes”) stored at the Al Hafeerah site. The Company’s Bahrain operations that produced the salt cakes has ceased operations and are owned under a strategic venture for which its strategic venture partner owns a 35% minority interest. An Environmental Impact Assessment and Technical Feasibility Study was approved by the SCE during the first quarter of 2018. The Company has previously established a reserve of $7.0 million, payable over several years, related to the estimated cost of processing and disposal of the salt cakes. This reserve represents the Company’s best estimate of ultimate costs to be incurred. The Company continues to evaluate this reserve and any future change in estimated costs could be material to the Company’s results of operations in any one period.

The Company is subject to various other claims and legal proceedings covering a wide range of matters that arose in the ordinary course of business. In the opinion of management, all such matters are adequately covered by insurance or by established reserves, and, if not so covered, are without merit or are of such kind, or involve such amounts, as would not have a material adverse effect on the financial position, results of operations or cash flows of the Company.

Insurance liabilities are recorded when it is probable that a liability has been incurred for a particular event and the amount of loss associated with the event can be reasonably estimated. Insurance reserves have been estimated based primarily upon actuarial calculations and reflect the undiscounted estimated liabilities for ultimate losses, including claims incurred but not reported. Inherent in these estimates are assumptions that are based on the Company's history of claims and losses, a detailed analysis of existing claims with respect to potential value, and current legal and legislative trends. If actual claims differ from those projected by management, changes (either increases or decreases) to insurance reserves may be required and would be recorded through income in the period the change was determined. When a recognized liability is covered by third-party insurance, the Company records an insurance claim receivable to reflect the covered liability. Insurance claim receivables are included in Other receivables on the Company's Condensed Consolidated Balance Sheets. See Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017 for additional information on Accrued insurance and loss reserves.

9. Reconciliation of Basic and Diluted Shares

	Three Months Ended March 31	
(In thousands, except per share amounts)	**2018**	**2017**
Income from continuing operations attributable to Harsco Corporation common stockholders	**$ 18,260**	$ 9,267
Weighted-average shares outstanding - basic	**80,650**	80,385
Dilutive effect of stock-based compensation	**2,894**	1,878
Weighted-average shares outstanding - diluted	**83,544**	82,263
Earnings from continuing operations per common share, attributable to Harsco Corporation common stockholders:		
Basic	**$ 0.23**	$ 0.12
Diluted	**$ 0.22**	$ 0.11

The following average outstanding stock-based compensation units were not included in the computation of diluted earnings per share because the effect was antidilutive:

	Three Months Ended March 31	
(In thousands)	2018	2017
Restricted stock units	**—**	—
Stock options	**—**	55
Stock appreciation rights	**696**	1,263
Performance share units	**—**	467

10. Derivative Instruments, Hedging Activities and Fair Value

Derivative Instruments and Hedging Activities

The Company uses derivative instruments, including foreign currency exchange forward contracts, interest rate swaps and cross-currency interest rate swaps ("CCIRs"), to manage certain foreign currency and interest rate exposures. Derivative instruments are viewed as risk management tools by the Company and are not used for trading or speculative purposes.

All derivative instruments are recorded on the Condensed Consolidated Balance Sheets at fair value. Changes in the fair value of derivatives used to hedge foreign currency denominated balance sheet items are reported directly in earnings, along with offsetting transaction gains and losses on the items being hedged. Derivatives used to hedge forecasted cash flows associated with foreign currency commitments may be accounted for as cash flow hedges, as deemed appropriate if the criteria for hedge accounting are met. Gains and losses on derivatives designated as cash flow hedges are deferred in Accumulated other comprehensive loss, a separate component of equity, and reclassified to earnings in a manner that matches the timing of the earnings impact of the hedged transactions. The ineffective portion of all hedges, if any, is recognized currently in earnings.

The fair value of outstanding derivative contracts recorded as assets and liabilities on the Condensed Consolidated Balance Sheets was as follows:

	Asset Derivatives		Liability Derivatives	
(In thousands)	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
March 31, 2018				
Derivatives designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	**$ 1,755**		
Interest rate swaps	Other current assets	**1,198**		
Interest rate swaps	Other assets	**1,991**	Other liabilities	**$ 612**
Total derivatives designated as hedging instruments		**$ 4,944**		**$ 612**
Derivatives not designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	**$ 3,528**	Other current liabilities	**$ 9,227**

	Asset Derivatives		Liability Derivatives	
(In thousands)	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
December 31, 2017				
Derivatives designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	$ 2,329	Other current liabilities	$ 153
Interest rate swaps	Other current assets	464		
Interest rate swaps	Other assets	170	Other liabilities	1,368
Total derivatives designated as hedging instruments		$ 2,963		$ 1,521
Derivatives not designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	$ 2,915	Other current liabilities	$ 6,970

All of the Company's derivatives are recorded in the Condensed Consolidated Balance Sheets at gross amounts and not offset. All of the Company's interest rate swaps, CCIRs and certain foreign currency exchange forward contracts are transacted under International Swaps and Derivatives Association ("ISDA") documentation. Each ISDA master agreement permits the net settlement of amounts owed in the event of default. The Company's derivative assets and liabilities subject to enforceable master netting arrangements resulted in a net asset of $0.6 million and a net liability of $0.2 million at March 31, 2018 and December 31, 2017, respectively.

The effect of derivative instruments on the Condensed Consolidated Statements of Operations and the Condensed Consolidated Statements of Comprehensive Income, was as follows:

Derivatives Designated as Hedging Instruments

(In thousands)	Amount Recognized in Other Comprehensive Income ("OCI") on Derivative - Effective Portion	Location of Amount Reclassified from Accumulated OCI into Income - Effective Portion	Amount Reclassified from Accumulated OCI into Income - Effective Portion or Equity	Location of Amount Recognized in Income on Derivative - Ineffective Portion and Amount Excluded from Effectiveness Testing	Amount Recognized in Income on Derivative - Ineffective Portion and Amount Excluded from Effectiveness Testing
Three Months Ended March 31, 2018:					
Foreign currency exchange forward contracts	**$ 240**	Product revenues	**$ (212)**		**$ —**
Foreign currency exchange forward contracts	**—**	Retained earnings (b)	**(1,520)**		**—**
Interest rate swaps	**3,310**		**—**		**—**
Cross-currency interest rate swaps	**(93)** (c)	Interest expense	**271**		**—**
	$ 3,457		**$ (1,461)**		**$ —**
Three Months Ended March 31, 2017:					
Foreign currency exchange forward contracts	$ (236)	Cost of services and products sold	$ 1		$ —
Interest rate swaps	(522)		—		—
Cross-currency interest rate swaps	(128)	Interest Expense	242	Cost of services and products sold	(210) (a)
	$ (886)		$ 243		$ (210)

(a) These gains (losses) offset foreign currency fluctuation effects on the debt principal.
(b) The Company has adopted the new revenue recognition standard utilizing the modified retrospective transition method, including use of practical expedients. See Note 2, Recently Adopted and Recently Issued Accounting Standards for additional information.
(c) Amounts represent changes in foreign currency translation related to balances in Accumulated other comprehensive loss.

Derivatives Not Designated as Hedging Instruments

(In thousands)	Location of Gain (Loss) Recognized in Income on Derivative	Amount of Gain (Loss) Recognized in Income on Derivative for the Three Months Ended March 31 (d) 2018	2017
Foreign currency exchange forward contracts	Cost of services and products sold	**$ (5,466)**	$ 1,550

(d) These gains (losses) offset amounts recognized in cost of services and products sold principally as a result of intercompany or third party foreign currency exposures.

Foreign Currency Exchange Forward Contracts

The Company conducts business in multiple currencies and, accordingly, is subject to the inherent risks associated with foreign exchange rate movements. The financial position and results of operations of substantially all of the Company's foreign subsidiaries are measured using the local currency as the functional currency. Foreign currency-denominated assets and liabilities are translated into U.S. dollars at the exchange rates existing at the respective balance sheet dates, and income and expense items are translated at the average exchange rates during the respective periods. The aggregate effects of translating the balance sheets of these subsidiaries are deferred and recorded in Accumulated other comprehensive loss, which is a separate component of equity.

The Company uses derivative instruments to hedge cash flows related to foreign currency fluctuations. Foreign currency exchange forward contracts outstanding are part of a worldwide program to minimize foreign currency exchange operating income and balance sheet exposure by offsetting foreign currency exposures of certain future payments between the Company and various subsidiaries, suppliers or customers. The unsecured contracts are with major financial institutions. The Company may be exposed to credit loss in the event of non-performance by the contract counterparties. The Company evaluates the creditworthiness of the counterparties and does not expect default by them. Foreign currency exchange forward contracts are used to hedge commitments, such as foreign currency debt, firm purchase commitments and foreign currency cash flows for certain export sales transactions.

The following tables summarize, by major currency, the contractual amounts of the Company's foreign currency exchange forward contracts in U.S. dollars. The "Buy" amounts represent the U.S. dollar equivalent of commitments to purchase foreign currencies, and the "Sell" amounts represent the U.S. dollar equivalent of commitments to sell foreign currencies. The recognized gains and losses offset amounts recognized in cost of services and products sold principally as a result of intercompany or third party foreign currency exposures.

Contracted Amounts of Foreign Currency Exchange Forward Contracts Outstanding at March 31, 2018:

(In thousands)	Type	U.S. Dollar Equivalent	Maturity	Recognized Gain (Loss)
British pounds sterling	Sell	**$ 77,579**	April 2018	**$ (202)**
British pounds sterling	Buy	**10,789**	April 2018 through May 2018	**134**
Euros	Sell	**311,405**	April 2018 through December 2018	**(6,322)**
Euros	Buy	**203,648**	April 2018 through November 2018	**3,613**
Other currencies	Sell	**41,660**	April 2018 through August 2018	**(1,148)**
Other currencies	Buy	**2,901**	April 2018	**(19)**
Total		**$ 647,982**		**$ (3,944)**

Contracted Amounts of Foreign Currency Exchange Forward Contracts Outstanding at December 31, 2017:

(In thousands)	Type	U.S. Dollar Equivalent	Maturity	Recognized Gain (Loss)
British pounds sterling	Sell	$ 76,761	January 2018	$ (769)
British pounds sterling	Buy	5,960	January 2018	72
Euros	Sell	314,649	January 2018 through December 2018	(4,916)
Euros	Buy	223,111	January 2018 through November 2018	4,564
Other currencies	Sell	39,889	January 2018 through June 2018	(1,049)
Other currencies	Buy	11,487	January 2018	219
Total		$ 671,857		$ (1,879)

In addition to foreign currency exchange forward contracts, the Company designates certain loans as hedges of net investments in international subsidiaries. The Company recorded pre-tax net gains of $9.5 million and $1.9 million during the three months ended March 31, 2018 and March 31, 2017, respectively, in Accumulated other comprehensive loss.

Interest Rate Swaps

The Company uses interest rate swaps in conjunction with certain debt issuances in order to secure a fixed interest rate. The interest rate swaps are recorded on the Condensed Consolidated Balance Sheets at fair value, with changes in value attributed to the effect of the swaps' interest spread and changes in the credit worthiness of the counter-parties recorded in Accumulated other comprehensive loss.

In January 2017 and February 2018, the Company entered into a series of interest rate swaps that cover the period from 2018 through 2022, and had the effect of converting $300.0 million of the Term Loan Facility from floating-rate to fixed-rate beginning in 2018. The fixed rates provided by the swaps replace the adjusted LIBOR rate in the interest calculation, ranging from 1.65% for 2018 to 3.124% for 2022.

The following table indicates the notional amounts of the Company's interest rate swaps at March 31, 2018:

		Interest Rates	
(In millions)	Annual Notional Amount	Receive	Pay
Maturing 2018 through 2022	$ 300.0	Floating U.S. dollar rate	Fixed U.S. dollar rate

Cross-Currency Interest Rate Swaps

The Company may use CCIRs in conjunction with certain debt issuances in order to secure a fixed local currency interest rate. Under these CCIRs, the Company receives interest based on a fixed or floating U.S. dollar rate and pays interest on a fixed local currency rate based on the contractual amounts in dollars and the local currency, respectively. At maturity, there is also the payment of principal amounts between currencies. The CCIRs are recorded on the Condensed Consolidated Balance Sheets at fair value, with changes in value attributed to the effect of the swaps' interest spread and changes in the credit worthiness of the counter-parties recorded in Accumulated other comprehensive loss. Changes in value attributed to the effect of foreign currency fluctuations are recorded on the Condensed Consolidated Statements of Operations and offset currency fluctuation effects on the debt principal. The Company had no outstanding CCIRs at March 31, 2018.

Fair Value of Derivative Assets and Liabilities and Other Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). The Company utilizes market data or assumptions that the Company believes market participants would use in valuing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique.

The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs), and (2) an entity's own assumptions about market participant assumptions based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3).

The three levels of the fair value hierarchy are described below:

- Level 1—Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates); and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3—Inputs that are both significant to the fair value measurement and unobservable.

In instances in which multiple levels of inputs are used to measure fair value, hierarchy classification is based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and considers factors specific to the asset or liability. The following table indicates the fair value hierarchy of the financial instruments of the Company:

Level 2 Fair Value Measurements (In thousands)	**March 31 2018**	**December 31 2017**
Assets		
Foreign currency exchange forward contracts	**$ 5,283**	$ 5,244
Interest rate swaps	**3,189**	634
Liabilities		
Foreign currency exchange forward contracts	**9,227**	7,123
Interest rate swaps	**612**	1,368

The Company primarily applies the market approach for recurring fair value measurements and endeavors to utilize the best available information. Accordingly, the Company utilizes valuation techniques that maximize the use of observable inputs, such as forward rates, interest rates, the Company's credit risk and counterparties' credit risks, and which minimize the use of unobservable inputs. The Company is able to classify fair value balances based on the ability to observe those inputs. Foreign currency exchange forward contracts, interest rate swaps and CCIRs are based upon pricing models using market-based inputs (Level 2). Model inputs can be verified, and valuation techniques do not involve significant management judgment.

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities and short-term borrowings approximate fair value due to the short-term maturities of these assets and liabilities. At March 31, 2018 and December 31, 2017, the total fair value of long-term debt (excluding deferred financing costs), including current maturities, was $643.5 million and $599.1 million, respectively, compared with a carrying value of $636.8 million and $593.7 million, respectively. Fair values for debt are based on pricing models using market based inputs (Level 2) for similar issues or on the current rates offered to the Company for debt of the same remaining maturities.

11. Review of Operations by Segment

(In thousands)	Three Months Ended March 31 2018	Three Months Ended March 31 2017
Revenues From Continuing Operations		
Harsco Metals & Minerals	**$ 264,723**	$ 247,034
Harsco Industrial	**83,598**	65,885
Harsco Rail	**59,678**	59,588
Corporate	**39**	34
Total Revenues From Continuing Operations	**$ 408,038**	$ 372,541
Operating Income (loss) From Continuing Operations		
Harsco Metals & Minerals	**$ 27,735**	$ 25,757
Harsco Industrial	**12,421**	2,894
Harsco Rail	**1,952**	6,217
Corporate	**(5,567)**	(6,261)
Total Operating Income From Continuing Operations	**$ 36,541**	$ 28,607
Depreciation and Amortization		
Harsco Metals & Minerals	**$ 29,085**	$ 27,880
Harsco Industrial	**1,855**	1,840
Harsco Rail	**1,064**	1,037
Corporate	**1,348**	1,471
Total Depreciation and Amortization	**$ 33,352**	$ 32,228
Capital Expenditures		
Harsco Metals & Minerals	**$ 25,176**	$ 15,472
Harsco Industrial	**1,087**	752
Harsco Rail	**430**	220
Corporate	**204**	545
Total Capital Expenditures	**$ 26,897**	$ 16,989

Reconciliation of Segment Operating Income to Income From Continuing Operations Before Income Taxes

(In thousands)	Three Months Ended March 31 2018	Three Months Ended March 31 2017
Segment operating income	**$ 42,108**	$ 34,868
General Corporate expense	**(5,567)**	(6,261)
Operating income from continuing operations	**36,541**	28,607
Interest income	**498**	512
Interest expense	**(9,583)**	(11,653)
Defined benefit pension income (expense)	**839**	(699)
Income from continuing operations before income taxes	**$ 28,295**	$ 16,767

12. Revenue Recognition

Service revenues and product revenues are recognized to depict the transfer of promised services and products to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for transferring those services or products. Service revenues include the service components of the Harsco Metals & Minerals and Harsco Rail Segments. Product revenues include the Harsco Industrial Segment and the product revenues of the Harsco Metals & Minerals and Harsco Rail Segments.

Harsco Metals & Minerals - This Segment provides on-site services, under long-term contracts, for material logistics; product quality improvement and resource recovery from iron, steel and metals manufacturing; and also manufactures and sells industrial abrasives and roofing granule products.

- Service revenues are recognized over time because the customer simultaneously receives and consumes the benefits provided by the Company's performance. The Company utilizes an appropriate output method based on work performed (liquid steel tons processed, weight of material handled, etc.) to measure progress, which is deemed to best depict the transfer of value to the customer and revenue earned by the Company at any given point. Transaction prices are determined based on the terms of the contract, which may include both fixed and variable portions. The fixed fee portion is recognized periodically as earned (normally monthly) over the contractual period. The variable fee portion is recognized as services are performed and differs from period to period based upon the actual performance of services. Additionally, given the long-term nature of these arrangements, most contracts permit periodic adjustment of either the variable or both the fixed and variable fee portions based on the changes in macroeconomic indicators, including changes in commodity prices. Transaction prices, when the standalone selling price is not directly observable, are allocated to performance obligations utilizing an expected cost plus a margin approach. Amounts are typically billed and payable on a monthly basis as services are performed.
- Product revenues are recognized at the point in time when control transfers to the customer. Control generally transfers to the customer at the point of shipment for domestic orders and in accordance with the international commercial terms included in specific customer contracts for export sales. Transaction prices are determined based on the terms of the contract, which are generally fixed and when the standalone selling price is not directly observable, allocated to performance obligations utilizing an adjusted market assessment approach. Amounts are billed and payable upon completion of each transaction.

At March 31, 2018, the Harsco Metals & Minerals Segment had remaining, fixed, unsatisfied performance obligations, where the expected contract duration exceeds one year totaling $86.5 million. Of this amount, $32.4 million is expected to be fulfilled by March 31, 2019, $24.3 million by March 31, 2020, $16.4 million by March 31, 2021, $7.3 million by March 31, 2022,
$5.5 million by March 31, 2023 and the remainder thereafter. These amounts exclude any variable fees, fixed fees subject to indexation and any performance obligations expected to be satisfied within one year.

Harsco Industrial - Air-X-Changers - This business unit sells air-cooled heat exchangers with revenue recognized over time as control is transferred to the customer. Control transfers to the customer over time because the air-cooled heat exchangers are customized, have no alternate use and the Company has an enforceable right to payment for performance completed. The Company utilizes an input method based on costs incurred to measure progress, which is deemed to best depict the transfer of value to the customer and revenue earned by the Company at any given point. Transaction prices are determined based on the terms of the contract, which are generally fixed, and when the standalone selling price is not directly observable, allocated to performance obligations utilizing an adjusted market assessment approach. Depending on product type, the Company may receive periodic payments associated with key milestones with any remaining consideration billed and payable upon successful completion of the transaction.

Harsco Industrial - IKG - This business unit sells metal bar grating configurations with revenue recognized at the point in time when control transfers to the customer. Control generally transfers to the customer at the point of shipment for domestic orders and in accordance with the international commercial terms included in specific customer contracts for export sales. Transaction prices are determined based on the terms of the contract, which are generally fixed, and when the standalone selling price is not directly observable, allocated to performance obligations utilizing an adjusted market assessment approach. Amounts are billed and payable upon completion of each transaction though advance payments are required in limited circumstances when credit concerns exist.

Harsco Industrial - Patterson-Kelley - This business unit sells energy-efficient heat transfer products with revenue recognized at the point in time when control transfers to the customer. Control generally transfers to the customer at the point of shipment. Transaction prices are determined based on the terms of the contract, which are generally fixed, and when the standalone selling price is not directly observable, allocated to performance obligations utilizing an adjusted market assessment approach. Amounts are billed and payable upon completion of each transaction.

Harsco Rail - This Segment sells railway track maintenance equipment, after-market parts and provides railway track maintenance services.

- For the majority of railway track maintenance equipment sales, revenue is recognized at the point in time when control transfers to the customer. Control generally transfers to the customer at the point of shipment for domestic orders and in accordance with the international commercial terms included in specific customer contracts for export sales. In certain railway track maintenance equipment sales, revenue is recognized over time as control is transferred to the customer because such equipment is highly customized, has no alternate use and the Company has an enforceable right to payment for performance completed. In such instances, the Company utilizes an input method based on costs incurred to measure progress, which is deemed to best depict the transfer of value to the customer and revenue earned by the Company at any given point. Transaction prices are determined based on the terms of the contract, which are generally fixed, and when the standalone selling price is not directly observable, allocated to performance obligations utilizing either the adjusted market assessment or expected cost plus a margin approach. For certain transactions for railway track maintenance equipment with long lead times, the Company receives periodic payments associated with key milestones. In limited instances, the Company may receive payment in advance of related performance with the intent to provide financing with such transactions being treated as including a significant financing component. Any remaining consideration is billed and payable upon successful completion of the transaction.
- For after-market parts sales, revenue is recognized at the point in time when control transfers to the customer. Control generally transfer to the customer at the point of shipment for domestic orders and in accordance with the international commercial terms included in specific customer contracts for export sales. Transaction prices are determined based on the terms of the contract, which are generally fixed, and when the standalone selling price is not directly observable, allocated to performance obligations utilizing an adjusted market assessment approach. Amounts are billed and payable upon completion of each contract.
- For railway track maintenance services, revenue is recognized over time because the customer simultaneously receives and consumes the benefits provided by the Company's performance. In such instances, the Company utilizes an appropriate output method based on work performed (feet, miles, shifts worked, etc.) to measure progress, which is deemed to best depict the transfer of value to the customer and revenue earned by the Company at any given point. Transaction prices are determined based on the terms of the contract, which are generally variable. The variable fee portion is recognized as services are performed and differs from period to period based upon the actual provision of services. Additionally, given the long-term nature of these arrangements, most contracts permit periodic adjustment based on the changes in macroeconomic indicators. Transaction prices, when the standalone selling price is not directly observable, allocated to performance obligations utilizing an expected cost plus a margin approach. Amounts are typically billed and payable on a monthly basis as services are performed.

At March 31, 2018, the Harsco Rail Segment had remaining, fixed, unsatisfied performance obligations, where the expected contract duration exceeds one year totaling $170.2 million. Of this amount, $48.3 million is expected to be fulfilled by March 31, 2019, $39.3 million by March 31, 2020, $49.2 million by March 31, 2021, $24.3 million by March 31, 2022, and $9.1 million by March 31, 2023. These amounts exclude any variable fees, fixed fees subject to indexation and any performance obligations expected to be satisfied within one year.

A summary of the Company's revenues by primary geographical markets as well as by key product and service groups is as follows:

	Three Months Ended March 31, 2018				
(In thousands)	Harsco Metals & Minerals Segment	Harsco Industrial Segment	Harsco Rail Segment	Corporate	Consolidated Totals
Primary Geographical Markets (a):					
Western Europe	**$ 96,921**	**$ —**	**$ 14,720**	**$ —**	**$ 111,641**
North America	**71,065**	**78,858**	**40,405**	**39**	**190,367**
Latin America (b)	**41,458**	**4,740**	**833**	**—**	**47,031**
Asia-Pacific	**36,221**	**—**	**3,720**	**—**	**39,941**
Middle East and Africa	**11,553**	**—**	**—**	**—**	**11,553**
Eastern Europe	**7,505**	**—**	**—**	**—**	**7,505**
Total Revenues (c)	**$ 264,723**	**$ 83,598**	**$ 59,678**	**$ 39**	**$ 408,038**
Key Product and Service Groups:					
On-site services and material logistics, product quality improvement and resource recovery for iron, steel and metals manufacturing; as well as value- added environmental solutions for industrial co-products.	**$ 264,723**	**$ —**	**$ —**	**$ —**	**$ 264,723**
Railway track maintenance services and equipment	**—**	**—**	**59,678**	**—**	**59,678**
Industrial grating and fencing products	**—**	**30,097**	**—**	**—**	**30,097**
Air-cooled heat exchangers	**—**	**44,267**	**—**	**—**	**44,267**
Heat transfer products	**—**	**9,234**	**—**	**—**	**9,234**
General Corporate	**—**	**—**	**—**	**39**	**39**
Total Revenues (c)	**$ 264,723**	**$ 83,598**	**$ 59,678**	**$ 39**	**$ 408,038**

	Three Months Ended March 31, 2017				
(In thousands)	Harsco Metals & Minerals Segment	Harsco Industrial Segment	Harsco Rail Segment	Corporate	Consolidated Totals
Primary Geographical Markets (a):					
Western Europe	$ 91,720	$ —	$ 9,539	$ —	$ 101,259
North America	67,233	58,351	45,150	34	170,768
Latin America (b)	38,020	6,582	476	—	45,078
Asia-Pacific	32,557	952	4,423	—	37,932
Middle East and Africa	10,556	—	—	—	10,556
Eastern Europe	6,948	—	—	—	6,948
Total Revenues (c)	$ 247,034	$ 65,885	$ 59,588	$ 34	$ 372,541
Key Product and Service Groups:					
On-site services and material logistics, product quality improvement and resource recovery for iron, steel and metals manufacturing; as well as value- added environmental solutions for industrial co-products.	$ 247,034	$ —	$ —	$ —	$ 247,034
Railway track maintenance services and equipment	—	—	59,588	—	59,588
Industrial grating and fencing products	—	28,159	—	—	28,159
Air-cooled heat exchangers	—	30,461	—	—	30,461
Heat transfer products	—	7,265	—	—	7,265
General Corporate	—	—	—	34	34
Total Revenues (c)	$ 247,034	$ 65,885	$ 59,588	$ 34	$ 372,541

(a) Revenues are attributed to individual countries based on the location of the facility generating the revenue.
(b) Includes Mexico.
(c) The Company has adopted the new revenue recognition standard utilizing the modified retrospective transition method, including use of practical expedients. Comparative information has not been restated and continues to be reported under U.S. GAAP in effect for those periods. See Note 2, Recently Adopted and Recently Issued Accounting Standards for additional information.

In certain instances, the Company may receive payments in advance of earning revenue, in such instances these amounts are treated as Advances on contracts and other customer advances on the Condensed Consolidated Balance Sheets. In other instances, the Company may recognize revenue in advance of being able to contractually invoice the customer, in such instances these amounts are treated as Contract assets on the Condensed Consolidated Balance Sheet. Contract assets are transferred to Trade accounts receivable, net when right to payment becomes unconditional. Contract assets and Contract liabilities are reported as a net position on a contract-by-contract basis at the end of each reporting period. These instances are primarily related to the Harsco Rail Segment and air-cooled heat exchangers business of the Harsco Industrial Segment. The following table reflects Contract assets and Advances on contracts:

(In thousands)	March 31, 2018	December 31, 2017
Contract assets:		
Current portion of contract assets	**$ 23,871**	$ —
Contract assets	**3,566**	—
Total contract assets	**$ 27,437**	$ —
Advances on contracts:		
Current portion of advances on contracts	**$ 38,147**	$ 117,958
Advances on contracts	**21,837**	—
Total advances on contracts	**$ 59,984**	$ 117,958

The increase in Contract assets and decrease in Advances on contracts is primarily attributable to initial adoption of the FASB issued changes related to revenue recognition. See Note 2, Recently Adopted and Recently Issued Accounting Standards for additional information.

The Company provides assurance type warranties associated primarily with product sales in the Harsco Industrial and Harsco Rail Segments. These assurance type warranties are typically not priced or negotiated separately (there is no option to separately purchase the warranty) or the warranty does not provide customers with a service in addition to the assurance that the product complies with agreed-upon specifications. Accordingly, such assurance type warranties do not represent separate performance obligations. See Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 for additional information on warranties.

The Company has elected to utilize the following practical expedients on an ongoing basis as part of the adoption of the new revenue standard:

- The Company has not adjusted the promised amount of consideration for the effects of a significant financing component if the Company expects, at contract inception, that the period between when the Company transfers the promised good or services to the customer and when the customer pays for that good or service will be one year or less; and
- The Company has elected to exclude disclosures related to unsatisfied performance obligations where the related contract has a duration of one year or less; or where the consideration allocated to a wholly unsatisfied performance obligation or to a distinct good or service that forms part of a single performance obligation is entirely variable. Accordingly, the Company's disclosure related to unsatisfied performance obligations is limited to the railway track maintenance equipment in the Harsco Rail Segment and the fixed portion of fees related to metals services in the Harsco Metals & Minerals Segment.

Taxes assessed by governmental authorities that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from revenue. Additionally, in certain contracts, the Company facilitates shipping and handling activities after control has transferred to the customer. The Company has elected to record all shipping and handling activities as costs to fulfill a contract. In situations where the shipping and handling costs have not been incurred at the time revenue is recognized, the respective shipping and handling costs are accrued.

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13. Other Expenses, Net

The major components of this Condensed Consolidated Statements of Operations caption are as follows:

(In thousands)	Three Months Ended March 31 2018	2017
Employee termination benefit costs	**$ 1,443**	$ 753
Net gains (a)	**—**	(122)
Other costs to exit activities	**364**	100
Impaired asset write-downs	**9**	—
Other	**6**	163
Other expenses, net	**$ 1,822**	$ 894

(a) Net gains result from the sales of redundant properties (primarily land, buildings and related equipment) and non-core assets.

14. Components of Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss is included on the Condensed Consolidated Statements of Equity. The components of Accumulated other comprehensive loss, net of the effect of income taxes, and activity for the three months ended March 31, 2017 and 2018 was as follows:

	Components of Accumulated Other Comprehensive Income (Loss) - Net of Tax				
(In thousands)	Cumulative Foreign Exchange Translation Adjustments	Effective Portion of Derivatives Designated as Hedging Instruments	Cumulative Unrecognized Actuarial Losses on Pension Obligations	Unrealized Gain (Loss) on Marketable Securities	Total
Balance at December 31, 2016	$ (144,534)	$ (1,089)	$ (461,094)	$ (5)	$ (606,722)
Other comprehensive income (loss) before reclassifications	16,561 (a)	(536) (b)	(3,793) (a)	6	12,238
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	149	4,998	—	5,147
Total other comprehensive income (loss)	16,561	(387)	1,205	6	17,385
Other comprehensive loss attributable to noncontrolling interests	(386)	—	—	—	(386)
Other comprehensive income (loss) attributable to Harsco Corporation	16,175	(387)	1,205	6	16,999
Balance at March 31, 2017	$ (128,359)	$ (1,476)	$ (459,889)	$ 1	$ (589,723)

	Components of Accumulated Other Comprehensive Income (Loss) - Net of Tax				
(In thousands)	Cumulative Foreign Exchange Translation Adjustments	Effective Portion of Derivatives Designated as Hedging Instruments	Cumulative Unrecognized Actuarial Losses on Pension Obligations	Unrealized Gain (Loss) on Marketable Securities	Total
Balance at December 31, 2017	$ (111,567)	$ 808	$ (435,840)	$ 17	$ (546,582)
Adoption of new accounting standard (a)	—	(1,520)	—	—	(1,520)
Balance at January 1, 2018	(111,567)	(712)	(435,840)	17	(548,102)
Other comprehensive income (loss) before reclassifications	12,501 (b)	2,768 (c)	(13,945) (b)	(14)	1,310
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	(91)	4,944	—	4,853
Total other comprehensive income (loss)	12,501	2,677	(9,001)	(14)	6,163
Other comprehensive income attributable to noncontrolling interests	(1,278)	—	—	—	(1,278)
Other comprehensive income (loss) attributable to Harsco Corporation	11,223	2,677	(9,001)	(14)	4,885
Balance at March 31, 2018	**$ (100,344)**	**$ 1,965**	**$ (444,841)**	**$ 3**	**$ (543,217)**

(a) Represents the opening balance sheet adjustment to retained earnings related to the adoption of the revenue recognition standard adopted by the Company on January 1, 2018. See Note 2, Recently Adopted and Recently Issued Accounting Standards, for additional details.
(b) Principally foreign currency fluctuation.
(c) Net change from periodic revaluations.

Amounts reclassified from accumulated other comprehensive loss are as follows:

(In thousands)	Three Months Ended March 31 2018	Three Months Ended March 31 2017	Affected Caption in the Condensed Consolidated Statements of Operations
Amortization of cash flow hedging instruments:			
Foreign currency exchange forward contracts	**$ (212)**	$ —	Product revenues
Foreign currency exchange forward contracts	**—**	1	Cost of services and products sold
Cross-currency interest rate swaps	**271**	242	Interest expense
Total before tax	**59**	243	
Tax expense	**(150)**	(94)	
Total reclassification of cash flow hedging instruments, net of tax	**$ (91)**	$ 149	
Amortization of defined benefit pension items (d)**:**			
Recognized losses	**$ 5,142**	$ 5,467	Defined benefit pension income (expense)
Recognized prior-service costs	**(39)**	53	Defined benefit pension income (expense)
Settlement/curtailment losses	**166**	—	Defined benefit pension income (expense)
Total before tax	**5,269**	5,520	
Tax benefit	**(325)**	(522)	
Total reclassification of defined benefit pension items, net of tax	**$ 4,944**	$ 4,998	

(d) These accumulated other comprehensive loss components are included in the computation of net periodic pension costs. See Note 7, Employee Benefit Plans, for additional details.

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the accompanying unaudited condensed consolidated financial statements as well as the audited consolidated financial statements of Harsco Corporation (the "Company"), including the notes thereto, included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017 which includes additional information about the Company’s critical accounting policies, contractual obligations, practices and the transactions that support the financial results, and provides a more comprehensive summary of the Company’s outlook, trends and strategies for 2018 and beyond.

Certain amounts included in Item 2 of this Quarterly Report on Form 10-Q are rounded in millions and all percentages are calculated based on actual amounts. As a result, minor differences may exist due to rounding.

Forward-Looking Statements

The nature of the Company's business and the many countries in which it operates subject it to changing economic, competitive, regulatory and technological conditions, risks and uncertainties. In accordance with the "safe harbor" provisions of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, the Company provides the following cautionary remarks regarding important factors that, among others, could cause future results to differ materially from the results contemplated by forward-looking statements, including the expectations and assumptions expressed or implied herein. Forward-looking statements contained herein could include, among other things, statements about management's confidence in and strategies for performance; expectations for new and existing products, technologies and opportunities; and expectations regarding growth, sales, cash flows, and earnings. Forward-looking statements can be identified by the use of such terms as "may," "could," "expect," "anticipate," "intend," "believe," "likely," "estimate," "plan" or other comparable terms.

Factors that could cause actual results to differ, perhaps materially, from those implied by forward-looking statements include, but are not limited to: (1) changes in the worldwide business environment in which the Company operates, including general economic conditions; (2) changes in currency exchange rates, interest rates, commodity and fuel costs and capital costs;(3) changes in the performance of equity and bond markets that could affect, among other things, the valuation of the assets in the Company's pension plans and the accounting for pension assets, liabilities and expenses; (4) changes in governmental laws and regulations, including environmental, occupational health and safety, tax and import tariff standards; (5) market and competitive changes, including pricing pressures, market demand and acceptance for new products, services and technologies; (6) the Company's inability or failure to protect its intellectual property rights from infringement in one or more of the many countries in which the Company operates; (7) failure to effectively prevent, detect or recover from breaches in the Company's cybersecurity infrastructure; (8) unforeseen business disruptions in one or more of the many countries in which the Company operates due to political instability, civil disobedience, armed hostilities, public health issues or other calamities; (9) disruptions associated with labor disputes and increased operating costs associated with union organization; (10) the seasonal nature of the Company's business; (11) the Company's ability to successfully enter into new contracts and complete new acquisitions or strategic ventures in the time-frame contemplated, or at all; (12) the integration of the Company's strategic acquisitions; (13) the amount and timing of repurchases of the Company's common stock, if any; (14) the outcome of any disputes with customers, contractors and subcontractors; (15) the financial condition of the Company's customers, including the ability of customers (especially those that may be highly leveraged and those with inadequate liquidity) to maintain their credit availability; (16) implementation of environmental remediation matters; (17) risk and uncertainty associated with intangible assets; and (18) other risk factors listed from time to time in the Company's SEC reports. A further discussion of these, along with other potential risk factors, can be found in Part I, Item 1A, "Risk Factors," of the Company's Annual Report on Form 10-K for the year ended December 31, 2017 and Part II, Item 1A, Risk Factors herein. The Company cautions that these factors may not be exhaustive and that many of these factors are beyond the Company's ability to control or predict. Accordingly, forward-looking statements should not be relied upon as a prediction of actual results. The Company undertakes no duty to update forward-looking statements except as may be required by law.

Executive Overview

The Company is a diversified, multinational provider of industrial services and engineered products serving global industries that are fundamental to worldwide economic growth and infrastructure development. The Company's operations consist of three reportable segments: Harsco Metals & Minerals, Harsco Industrial and Harsco Rail. In general, each of the Company’s segments are among the market leaders in their respective sectors. The Harsco Metals & Minerals Segment operates under primarily long-term contracts, providing critical services and support to the steelmaking process; and environmental and zero waste solutions for manufacturing by-products within the metals industry. The Harsco Industrial Segment is a supplier of custom-engineered and manufactured air-cooled heat exchangers that support the processing and distribution of natural gas and downstream refined products; manufactures a full range of metal bar grating configurations, used mainly in industrial flooring, as well as safety and security applications; and also manufactures energy-efficient heat transfer products such as boilers and water heaters, for various commercial and industrial applications. The Harsco Rail Segment is a provider of highly engineered maintenance equipment, after-market parts and safety and diagnostic systems which support railroad and transit customers worldwide. The Company has locations in approximately 30 countries, including the U.S. The Company was incorporated in 1956.

Highlights from the first quarter of 2018 included (Refer to the discussion of segment and consolidated results included within Results of Operations below, as well as Liquidity and Capital Resources, for additional information pertaining to the key drivers impacting these highlights):

- Revenues and Operating income from continuing operations for the first quarter of 2018 increased approximately 10% and 28%, respectively, compared with the first quarter of 2017. The primary drivers for these increases were improved demand in the Harsco Industrial Segment and the Harsco Metals & Minerals Segment as well as the effect of foreign currency translation.
- Diluted earnings per share common share from continuing operations attributable to Harsco Corporation for the first quarter of 2018 were $0.22, an increase of approximately 100% compared with the first quarter of 2017. The primary drivers for the increase were improved operating results and a decrease in interest expense.
- Cash used by operating activities for the first quarter of 2018 increased by $2.1 million compared with the first quarter of 2017. The primary driver for the increase was an overall increase in working capital partially offset by higher net income.

Looking forward, the Company maintains a positive outlook across all businesses. The Company’s view for the remainder of 2018 and beyond is supported by the below factors, which should be considered in the context of other risks, trends and strategies in the Company's Annual Report on Form 10-K for the year ended December 31, 2017:

- Markets served by the Harsco Metals & Minerals Segment continued to demonstrate improvement through increased customer steel production and higher commodity volumes and prices. Additionally, the impact of new sites (or contracts), lower operating costs achieved through improvement initiatives and increased contributions from the Company’s industrial abrasive and roofing granules business are expected to positively impact results in 2018.
- The Harsco Industrial Segment’s air-cooled heat exchangers business is expected to be positively impacted by fundamental improvements within the energy markets. Bookings for this business have increased significantly in recent quarters. Additionally, increased demand for metal grating and heat transfer products, new product innovations and manufacturing efficiencies are also anticipated to have a positive impact within this segment during 2018.
- Continued growth, market penetration and investment within after-market parts and Protran Technology are expected to support improved results in the Harsco Rail Segment. The Company is also anticipating an improvement in demand for original equipment from international customers, as well as from domestic railroads following a period of decreased demand in recent years.
- Corporate spending is expected to increase modestly compared with 2017, while interest expense is forecasted to decline meaningfully following the repricing of the Company’s Senior Secured Credit Facility in 2017.
- The Company expects its operational effective income tax rate to approximate 26% to 28% in 2018, representing a significant decline relative to 2017 as a result of recent U.S. tax reform.
- The Company is also focused on future growth opportunities, such as organic growth through higher-return service contract opportunities in attractive markets and investments to strengthen the technical and applied product capabilities for the Harsco Metals & Minerals Segment, and strategic investments or possible acquisitions, including in the Harsco Rail and Harsco Industrial Segments, that improve competitive positioning in core growth and technology applications and adjacent markets.

Results of Operations

Segment Results

(In millions, except percentages)	Three Months Ended March 31 2018	2017
Revenues:		
Harsco Metals & Minerals	$ 264.7	$ 247.0
Harsco Industrial	83.6	65.9
Harsco Rail	59.7	59.6
Total Revenues	$ 408.0	$ 372.5
Operating Income (Loss):		
Harsco Metals & Minerals	$ 27.7	$ 25.8
Harsco Industrial	12.4	2.9
Harsco Rail	2.0	6.2
Corporate	(5.6)	(6.3)
Total Operating Income:	$ 36.5	$ 28.6
Operating Margins:		
Harsco Metals & Minerals	10.5%	10.4%
Harsco Industrial	14.9	4.4
Harsco Rail	3.3	10.4
	9.0%	7.7%

Harsco Metals & Minerals Segment:

Significant Effects on Revenues (In millions)	Three Months Ended March 31, 2018
Revenues — 2017	$ 247.0
Impact of foreign currency translation.	17.0
Net effects of price/volume changes, primarily attributable to volume changes.	6.3
Net impact of new and lost contracts (including exited underperforming contracts).	(5.6)
Revenues — 2018	**$ 264.7**

Factors Positively Affecting Operating Income:

- Increased global steel production. Overall, steel production by customers under services contracts, including the impact of new and exited contracts, increased by 2% for the first quarter of 2018 compared with the same period in the prior year.
- New contracts increased operating income during the first quarter of 2018 compared with the same period in prior year.
- Foreign currency translation increased operating income by approximately $2 million in the first quarter of 2018 compared with the same period in the prior year.

Factors Negatively Impacting Operating Income:

- Reduced nickel and scrap demand, partially offset by higher nickel prices.
- Moderately higher selling, general and administrative costs due to compensation costs and higher professional fees to support and execute the Company's growth strategies.

Harsco Industrial Segment:

Significant Effects on Revenues (In millions)	Three Months Ended March 31, 2018
Revenues — 2017	$ 65.9
Net effects of price/volume changes, primarily attributable to volume changes.	17.2
Impact of foreign currency translation.	0.5
Revenues — 2018	**$ 83.6**

Factors Positively Affecting Operating Income:

- Higher overall volumes in the air-cooled heat exchanger business and a favorable product mix, resulting in increased operating income during the first quarter of 2018 compared with the comparable period in 2017.
- Improved demand and a favorable sales mix led to increased operating income in the industrial grating and heat transfer product businesses.

Harsco Rail Segment:

Significant Effects on Revenues (In millions)		Three Months Ended March 31, 2018
Revenues — 2017	$	59.6
Impact of foreign currency translation.		1.6
Net effect (impacts) of price/volume changes, primarily attributable to volume changes.		(1.6)
Other.		0.1
Revenues — 2018	**$**	**59.7**

Factors Positively Affecting Operating Income:

- A more favorable mix of after-market part sales increased operating income during the first quarter of 2018 compared with the same period in the prior year.

Factors Negatively Impacting Operating Income:

- As expected, a less favorable mix of machine sales and lower contract service volumes decreased operating income in the first quarter of 2018 compared with the first quarter of 2017.
- Additional forward contract loss provision related to the Company's first of two contracts, which is nearing completion, with the federal railway system of Switzerland of $1.8 million resulting from incurring actual costs to complete in excess of originally estimated costs.

Consolidated Results

	Three Months Ended March 31			
(In millions, except per share amounts)		2018		2017
Total revenues	**$**	**408.0**	$	372.5
Cost of services and products sold		**311.4**		288.3
Selling, general and administrative expenses		**57.1**		53.9
Research and development expenses		**1.2**		0.8
Other expenses, net		**1.8**		0.9
Operating income from continuing operations		**36.5**		28.6
Interest income		**0.5**		0.5
Interest expense		**(9.6)**		(11.7)
Defined benefit pension income (expense)		**0.8**		(0.7)
Income tax expense		**(8.3)**		(6.3)
Income from continuing operations		**20.0**		10.5
Loss from discontinued operations		**(0.5)**		(0.4)
Net income		**19.6**		10.1
Total other comprehensive income		**6.2**		17.4
Total comprehensive income		**25.7**		27.5
Diluted earnings per common share from continuing operations attributable to Harsco Corporation common stockholders		**0.22**		0.11
Effective income tax rate for continuing operations		**29.2%**		37.3%

Comparative Analysis of Consolidated Results

Revenues

Revenues for the first quarter of 2018 increased $35.5 million or 9.5% from the first quarter of 2017. Foreign currency translation increased revenues by approximately $19 million for the first quarter of 2018 compared with the same period in the prior year. Refer to the segment results discussion above for information pertaining to factors positively affecting and negatively impacting revenues.

Cost of Services and Products Sold

Cost of services and products sold for the first quarter of 2018 increased $23.1 million or 8.0% from the first quarter of 2017. Changes in cost of services and products sold for the periods presented were attributable to the following significant items:

Change in Cost of Services and Products Sold — 2018 vs. 2017 (In millions)	Three Months Ended March 31, 2018
Impact of foreign currency translation.	$ 15.2
Increased costs due to changes in revenues (exclusive of the effects of foreign currency translation and including fluctuations in commodity costs included in selling prices).	8.3
Other.	(0.4)
Total change in cost of services and products sold — 2018 vs. 2017	$ 23.1

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the first quarter of 2018 increased $3.1 million or 5.8% from the first quarter of 2017. This increase was primarily related to increased compensation and professional fees needed to support and execute the Company's growth strategy; and the impact of foreign currency translation.

Other Expenses, Net

This income statement classification includes: certain gains, employee termination benefit costs and other costs to exit activities. Additional information on Other expenses, net is included in Note 13, Other Expenses, Net in Part I, Item 1, Financial Statements.

	Three Months Ended March 31	
(In thousands)	2018	2017
Employee termination benefit costs	**$ 1,443**	$ 753
Net gains (a)	**—**	(122)
Other costs to exit activities	**364**	100
Impaired asset write-downs	**9**	—
Other	**6**	163
Other expenses, net	**$ 1,822**	$ 894

(a) Net gains result from the sales of redundant properties (primarily land, buildings and related equipment) and non-core assets.

Interest Expense

Interest expense during the first quarter of 2018 decreased $2.1 million or 17.8%, compared with the first quarter 2017. The decrease primarily relates to reduced interest rates per the Company's Senior Secured Credit Facility, which was amended in December 2017, and lower year-over-year debt outstanding.

Defined Benefit Pension Income (Expense)

Defined benefit pension income for the first quarter of 2018 was $0.8 million, compared with defined benefit pension expense of $0.7 million for the first quarter of 2017. The change primarily relates to improved returns on plan assets.

Income Tax Expense

Income tax expense related to continuing operations for the first quarter of 2018 was $8.3 million, compared with $6.3 million for the first quarter of 2017. Income tax expense increased primarily due to the increase in income in profitable jurisdictions and was partially offset by the changes in U.S. tax law.

Income from Continuing Operations

Income from continuing operations was $20.0 million in the first quarter of 2018 compared with $10.5 million in the first quarter of 2017. This change is primarily related to improved demand for air-cooled heat exchangers in the Harsco Industrial Segment; increased global steel production and demand for mill services in the Harsco Metals & Minerals Segment; and the effect of foreign currency translation.

Total Other Comprehensive Income

Total other comprehensive income was $6.2 million in first quarter of 2018, compared with total other comprehensive income of $17.4 million first quarter of 2017. The primary driver of this change was unfavorable foreign currency translation of cumulative unrecognized actuarial losses on the Company's pension obligations.

Liquidity and Capital Resources

Cash Flow Summary

The Company has sufficient financial liquidity and borrowing capacity to support the strategies within each of its businesses. The Company currently expects operational and business needs to be met by cash provided by operations supplemented with borrowings from time to time due to historical patterns of seasonal cash flow and for the funding of various projects. The Company regularly assesses capital needs in the context of operational trends and strategic initiatives.

The Company’s cash flows from operating, investing and financing activities, as reflected in the Condensed Consolidated Statements of Cash Flows, are summarized in the following table:

	Three Months Ended March 31	
(In millions)	**2018**	**2017**
Net cash provided (used) by:		
Operating activities	**$ (8.2)**	$ (6.1)
Investing activities	**(30.3)**	(16.0)
Financing activities	**39.2**	13.2
Effect of exchange rate changes on cash and cash equivalents, including restricted cash	**0.7**	1.4
Net change in cash and cash equivalents, including restricted cash	**$ 1.3**	$ (7.5)

Cash used by operating activities — Net cash used by operating activities in the first three months of 2018 was $8.2 million, an increase of $2.1 million from cash used by operating activities in the first three months of 2017. The increase is primarily attributable to an increase in working capital resulting from the payment of accrued incentive compensation; higher inventories partially offset by the timing of sales and collections of accounts receivable primarily in the Harsco Rail Segment; and an increase in cash net income.

Cash used by investing activities — Net cash used by investing activities in the first three months of 2018 was $30.3 million, an increase of $14.4 million from the cash used by investing activities in the first three months of 2017. The increase was primarily due to an increase in capital expenditures, primarily in the Company's Harsco Metals & Minerals Segment and net foreign currency hedge settlement payments in the three months ended March 31, 2018, compared with the three months ended March 31, 2017.

Cash provided by financing activities — Net cash provided by financing activities in the first three months of 2018 was $39.2 million, an increase of $25.9 million from cash provided by financing activities in the first three months of 2017. The change was primarily due to net cash borrowings of $39.4 million in the first three months of 2018 compared with $13.3 million in the first three months of 2017.

Sources and Uses of Cash

The Company’s principal sources of liquidity are cash provided by operations and borrowings under the Senior Secured Credit Facility, augmented by cash proceeds from asset sales. In addition, the Company has other bank credit facilities available throughout the world. The Company expects to continue to utilize all of these sources to meet future cash requirements for operations and growth initiatives.

Summary of Senior Secured Credit Facility Borrowings: **(In millions)**	**March 31 2018**	**December 31 2017**
By type:		
Revolving Credit Facility	**$ 87.0**	$ 41.0
Term Loan Facility	**544.5**	545.9
Total	**$ 631.5**	$ 586.9
By classification:		
Current	**$ 5.5**	$ 5.5
Long-term	**626.0**	581.4
Total	**$ 631.5**	$ 586.9

	March 31, 2018			
(In millions)	**Facility Limit**	**Outstanding Balance**	**Outstanding Letters of Credit**	**Available Credit**
Multi-year revolving credit facility	**$ 400.0**	**$ 87.0**	**$ 31.4**	**$ 281.6**

The Company plans to redeploy discretionary cash on a disciplined basis for potential growth opportunities, such as organic growth through higher-return service contract opportunities in attractive markets and investments to strengthen the technical and applied product capabilities for the Harsco Metals & Minerals Segment, and strategic investments or possible acquisitions including in the Harsco Rail and Harsco Industrial Segments that improve competitive positioning in core growth and technology applications and adjacent markets.

On May 2, 2018 the Company announced that the Board of Directors authorized a stock repurchase program pursuant to which the Company could repurchase shares in an amount up to $75 million. The extent to which the Company repurchases shares, and the timing of such repurchases, will depend upon a variety of factors including market conditions and other corporate considerations as determined by the Company’s management. The repurchase program may be suspended or discontinued at any time.

Debt Covenants

The Senior Secured Credit Facility contains a consolidated net debt to consolidated adjusted earnings before interest, tax depreciation and amortization ("EBITDA") ratio covenant, which is not to exceed 3.75 to 1.0, and a minimum consolidated adjusted EBITDA to consolidated interest charges ratio covenant, which is not to be less than 3.0 to 1.0. The consolidated net debt to consolidated adjusted EBITDA ratio covenant is reduced to 3.5 to 1.0 after December 31, 2018. At March 31, 2018, the Company was in compliance with these covenants, as the total net leverage ratio was 1.9 to 1.0 and total interest coverage ratio was 6.6 to 1.0. Based on balances and covenants in effect at March 31, 2018, the Company could increase net debt by $550.1 million, and still be in compliance with these debt covenants. Alternatively, keeping all other factors constant, the Company's adjusted EBITDA could decrease by $146.7 million and the Company would still be within these debt covenants. The Company expects to continue to be in compliance with these debt covenants for at least the next twelve months. In addition, the Senior Secured Credit Facility imposes certain restrictions including, but not limited to, restrictions as to the types and amounts of debt or liens that may be incurred by the Company, limitations on dividend payments and certain acquisitions by the Company.

Cash Management

The Company has various cash management systems throughout the world that centralize cash in various bank accounts where it is economically justifiable and legally permissible to do so. These centralized cash balances are then redeployed to other operations to reduce short-term borrowings and to finance working capital needs or capital expenditures. Due to the transitory nature of cash balances, they are normally invested in bank deposits that can be withdrawn at will or in very liquid short-term bank time deposits and government obligations. The Company's policy is to use the largest banks in the various countries in which the Company operates. The Company monitors the creditworthiness of banks and when appropriate will adjust banking operations to reduce or eliminate exposure to less creditworthy banks. The Company plans to continue the strategy of targeted, prudent investing for strategic purposes for the foreseeable future, and to make more efficient use of existing investments.

At March 31, 2018, the Company's consolidated cash and cash equivalents included $63.3 million held by non-U.S. subsidiaries. At March 31, 2018, approximately 1.1% of the Company's consolidated cash and cash equivalents had regulatory restrictions that would preclude the transfer of funds with and among subsidiaries. Non-U.S. subsidiaries also held $17.6 million of cash and cash equivalents in consolidated strategic ventures. The strategic venture agreements may require strategic venture partner approval to transfer funds with and among subsidiaries. While the Company's remaining non-U.S. cash and cash equivalents can be transferred with and among subsidiaries, the majority of these non-U.S. cash balances will be used to support the ongoing working capital needs and continued growth of the Company's non-U.S. operations.

Recently Adopted and Recently Issued Accounting Standards

Information on recently adopted and recently issued accounting standards is included in Note 2, Recently Adopted and Recently Issued Accounting Standards, in Part I, Item 1, Financial Statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risks have not changed significantly from those disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

ITEM 4. CONTROLS AND PROCEDURES

The Company’s adoption of ASC 606, Revenue from Contracts with Customers, required the implementation of new accounting processes, which changed the Company's internal controls over revenue recognition. The Company has completed the design of these controls and they have been implemented as of March 31, 2018. Other than these changes, there have been no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting during the first quarter of 2018.

Based on the evaluation required by Securities Exchange Act Rules 13a-15(b) and 15d-15(b), the Company’s management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of disclosure controls and procedures, as defined in Securities Exchange Act Rules 13a-15(e) and 15d-15(e), at March 31, 2018. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective at March 31, 2018.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Information on legal proceedings is included in Note 8, Commitments and Contingencies, in Part I, Item 1, Financial Statements.

ITEM 1A. RISK FACTORS

The Company's risk factors as of March 31, 2018 have not changed materially from those described in Part 1, Item 1A, “Risk Factors,” of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017.

ITEM 6. EXHIBITS

The following exhibits are included as part of this report by reference:

Exhibit Number	Description
10	Form of PSU Award Agreement (for awards granted on or after March 2, 2018) (incorporated by reference to the Company's Current Report on Form 8-K dated March 8, 2018).
31.1	Certification Pursuant to Rule 13a-14(a) or 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer).
31.2	Certification Pursuant to Rule 13a-14(a) or 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Chief Financial Officer).
32	Certifications Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer and Chief Financial Officer).
101	The following financial statements from Harsco Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 filed with the Securities and Exchange Commission on May 2, 2018, formatted in XBRL (Extensible Business Reporting Language): (i) the Condensed Consolidated Balance Sheets; (ii) the Condensed Consolidated Statements of Operations; (iii) the Condensed Consolidated Statements of Comprehensive Income; (iv) the Condensed Consolidated Statements of Cash Flows; (v) the Condensed Consolidated Statements of Equity; and (vi) the Notes to Condensed Consolidated Financial Statements.

SIGNATURES

Pursuant to the requirements 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.

		HARSCO CORPORATION
		(Registrant)
DATE	May 2, 2018	/s/ PETER F. MINAN
		Peter F. Minan
		Senior Vice President and Chief Financial Officer
		(On behalf of the registrant and as Principal Financial Officer)
DATE	May 2, 2018	/s/ SAMUEL C. FENICE
		Samuel C. Fenice
		Vice President and Corporate Controller
		(Principal Accounting Officer)

Exhibit 31.1

HARSCO CORPORATION
CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, F. Nicholas Grasberger, III, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Harsco Corporation;

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(s) 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(s) 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.

May 2, 2018

/s/ F. NICHOLAS GRASBERGER, III

F. Nicholas Grasberger, III

President and Chief Executive Officer

Exhibit 31.2

HARSCO CORPORATION
CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter F. Minan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Harsco Corporation;

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(s) 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(s) 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.

May 2, 2018

/s/ PETER F. MINAN

Peter F. Minan
Senior Vice President and Chief Financial Officer

Exhibit 32

HARSCO CORPORATION
CERTIFICATIONS 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 Quarterly Report of Harsco Corporation (the "Company") on Form 10-Q for the period ending March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of our 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.

May 2, 2018

/s/ F. NICHOLAS GRASBERGER, III
F. Nicholas Grasberger, III
President and Chief Executive Officer

/s/ PETER F. MINAN
Peter F. Minan
Senior Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Harsco Corporation and will be retained by Harsco Corporation and furnished to the Securities and Exchange Commission or its staff upon request.