

**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 JUNE 30, 2019

Commission File Number 001-16407

ZIMMER BIOMET HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

13-4151777
(IRS Employer
Identification No.)

345 East Main Street, Warsaw, IN 46580
(Address of principal executive offices)
Telephone: (574) 267-6131

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value	ZBH	New York Stock Exchange
1.414% Notes due 2022	ZBH 22A	New York Stock Exchange
2.425% Notes due 2026	ZBH 26	New York Stock Exchange

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

As of August 1, 2019, 205,314,527 shares of the registrant's \$.01 par value common stock were outstanding.

ZIMMER BIOMET HOLDINGS, INC.
INDEX TO FORM 10-Q
June 30, 2019

	<u>Page</u>
<u>Part I - Financial Information</u>	
Item 1.	
<u>Financial Statements (unaudited)</u>	3
<u>Condensed Consolidated Statements of Earnings for the Three and Six Months Ended June 30, 2019 and 2018</u>	3
<u>Condensed Consolidated Statements of Comprehensive Income for the Three and Six Months Ended June 30, 2019 and 2018</u>	4
<u>Condensed Consolidated Balance Sheets as of June 30, 2019 and December 31, 2018</u>	5
<u>Condensed Consolidated Statements of Stockholders' Equity for the Three and Six Months Ended June 30, 2019 and 2018</u>	6
<u>Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2019 and 2018</u>	7
<u>Notes to Interim Condensed Consolidated Financial Statements</u>	8
Item 2.	
<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	29
Item 3.	
<u>Quantitative and Qualitative Disclosures About Market Risk</u>	40
Item 4.	
<u>Controls and Procedures</u>	40
<u>Part II - Other Information</u>	
Item 1.	
<u>Legal Proceedings</u>	42
Item 1A.	
<u>Risk Factors</u>	42
Item 2.	
<u>Unregistered Sales of Equity Securities and Use of Proceeds</u>	42
Item 3.	
<u>Defaults Upon Senior Securities</u>	42
Item 4.	
<u>Mine Safety Disclosures</u>	43
Item 5.	
<u>Other Information</u>	43
Item 6.	
<u>Exhibits</u>	44
<u>Signatures</u>	45

Part I – Financial Information

Item 1. Financial Statements

ZIMMER BIOMET HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF EARNINGS
(in millions, except per share amounts, unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net Sales	\$ 1,988.6	\$ 2,007.6	\$ 3,964.1	\$ 4,025.2
Cost of products sold, excluding intangible asset amortization	581.3	583.7	1,134.7	1,159.5
Intangible asset amortization	146.9	149.5	290.3	300.3
Research and development	112.1	99.1	213.8	194.8
Selling, general and administrative	840.3	791.3	1,636.7	1,593.0
Intangible asset impairment	70.1	-	70.1	-
Acquisition, integration and related	10.5	50.5	21.2	96.5
Quality remediation	22.7	37.5	42.4	80.1
Operating expenses	1,783.9	1,711.6	3,409.2	3,424.2
Operating Profit	204.7	296.0	554.9	601.0
Other expense, net	(4.7)	(2.9)	(5.2)	(6.5)
Interest expense, net	(59.7)	(75.3)	(117.7)	(153.3)
Earnings before income taxes	140.3	217.8	432.0	441.2
Provision for income taxes	8.4	32.9	53.9	80.1
Net Earnings	131.9	184.9	378.1	361.1
Less: Net (loss) earnings attributable to noncontrolling interest	(1.8)	(0.1)	(1.7)	1.4
Net Earnings of Zimmer Biomet Holdings, Inc.	<u>\$ 133.7</u>	<u>\$ 185.0</u>	<u>\$ 379.8</u>	<u>\$ 359.7</u>
Earnings Per Common Share				
Basic	\$ 0.65	\$ 0.91	\$ 1.86	\$ 1.77
Diluted	\$ 0.65	\$ 0.90	\$ 1.84	\$ 1.76
Weighted Average Common Shares Outstanding				
Basic	204.8	203.3	204.6	203.2
Diluted	206.2	204.6	206.0	204.6

The accompanying notes are an integral part of these condensed consolidated financial statements.

ZIMMER BIOMET HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions, unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net Earnings	\$ 131.9	\$ 184.9	\$ 378.1	\$ 361.1
Other Comprehensive Income (Loss):				
Foreign currency cumulative translation adjustments, net of tax	15.1	(177.8)	10.7	(83.0)
Unrealized cash flow hedge gains, net of tax	0.4	51.6	14.9	25.2
Reclassification adjustments on hedges, net of tax	(6.2)	9.2	(14.4)	18.9
Adjustments to prior service cost and unrecognized actuarial assumptions, net of tax	2.4	5.3	4.4	2.0
Total Other Comprehensive Income (Loss)	11.7	(111.7)	15.6	(36.9)
Comprehensive Income	143.6	73.2	393.7	324.2
Comprehensive (loss) income attributable to the noncontrolling interest	(1.8)	-	(1.7)	1.4
Comprehensive Income Attributable to Zimmer Biomet Holdings, Inc.	<u>\$ 145.4</u>	<u>\$ 73.2</u>	<u>\$ 395.4</u>	<u>\$ 322.8</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

ZIMMER BIOMET HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in millions, except share amounts, unaudited)

	June 30, 2019	December 31, 2018
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 403.1	\$ 542.8
Accounts receivable, less allowance for doubtful accounts	1,247.1	1,275.8
Inventories	2,344.5	2,256.5
Prepaid expenses and other current assets	396.5	352.3
Total Current Assets	4,391.2	4,427.4
Property, plant and equipment, net	2,035.8	2,015.4
Goodwill	9,593.7	9,594.4
Intangible assets, net	7,524.2	7,684.6
Other assets	660.8	405.0
Total Assets	\$ 24,205.7	\$ 24,126.8
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	\$ 347.5	\$ 362.6
Income taxes payable	144.7	142.4
Other current liabilities	1,185.6	1,391.3
Current portion of long-term debt	2,000.0	525.0
Total Current Liabilities	3,677.8	2,421.3
Deferred income taxes, net	949.9	999.5
Long-term income tax payable	677.9	666.2
Other long-term liabilities	518.6	350.0
Long-term debt	6,719.3	8,413.7
Total Liabilities	12,543.5	12,850.7
Commitments and Contingencies (Note 17)		
Stockholders' Equity:		
Zimmer Biomet Holdings, Inc. Stockholders' Equity:		
Common stock, \$0.01 par value, one billion shares authorized, 308.8 million shares in 2019 (307.9 million in 2018) issued	3.1	3.1
Paid-in capital	8,776.5	8,686.1
Retained earnings	9,772.7	9,491.2
Accumulated other comprehensive loss	(171.8)	(187.4)
Treasury stock, 103.9 million shares in 2019 (103.9 million shares in 2018)	(6,721.4)	(6,721.7)
Total Zimmer Biomet Holdings, Inc. stockholders' equity	11,659.1	11,271.3
Noncontrolling interest	3.1	4.8
Total Stockholders' Equity	11,662.2	11,276.1
Total Liabilities and Stockholders' Equity	\$ 24,205.7	\$ 24,126.8

The accompanying notes are an integral part of these condensed consolidated financial statements.

ZIMMER BIOMET HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions, except per share amounts, unaudited)

Zimmer Biomet Holdings, Inc. Stockholders									
	Common Shares		Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Treasury Shares		Noncontrolling Interest	Total Stockholders' Equity
	Number	Amount				Number	Amount		
Balance April 1, 2019	308.7	\$ 3.1	\$ 8,748.1	\$ 9,688.1	\$ (183.5)	(103.9)	\$ (6,721.4)	\$ 4.9	\$ 11,539.3
Net earnings	-	-	-	133.7	-	-	-	(1.8)	131.9
Other comprehensive income	-	-	-	-	11.7	-	-	-	11.7
Cash dividends declared (\$0.24 per share)	-	-	-	(49.1)	-	-	-	-	(49.1)
Stock compensation plans	0.1	-	28.4	-	-	-	-	-	28.4
Balance June 30, 2019	<u>308.8</u>	<u>\$ 3.1</u>	<u>\$ 8,776.5</u>	<u>\$ 9,772.7</u>	<u>\$ (171.8)</u>	<u>(103.9)</u>	<u>\$ (6,721.4)</u>	<u>\$ 3.1</u>	<u>\$ 11,662.2</u>
Balance April 1, 2018	307.1	\$ 3.1	\$ 8,576.6	\$ 10,191.7	\$ (51.3)	(103.8)	\$ (6,721.7)	\$ 1.1	\$ 11,999.5
Net earnings	-	-	-	185.0	-	-	-	(0.1)	184.9
Other comprehensive income	-	-	-	-	(111.7)	-	-	0.1	(111.6)
Cash dividends declared (\$0.24 per share)	-	-	-	(48.8)	-	-	-	-	(48.8)
Stock compensation plans	0.1	-	20.2	-	-	-	-	-	20.2
Balance June 30, 2018	<u>307.2</u>	<u>\$ 3.1</u>	<u>\$ 8,596.8</u>	<u>\$ 10,327.9</u>	<u>\$ (163.0)</u>	<u>(103.8)</u>	<u>\$ (6,721.7)</u>	<u>\$ 1.1</u>	<u>\$ 12,044.2</u>
Balance January 1, 2019	307.9	\$ 3.1	\$ 8,686.1	\$ 9,491.2	\$ (187.4)	(103.9)	\$ (6,721.7)	\$ 4.8	\$ 11,276.1
Net earnings	-	-	-	379.8	-	-	-	(1.7)	378.1
Other comprehensive income	-	-	-	-	15.6	-	-	-	15.6
Cash dividends declared (\$0.48 per share)	-	-	-	(98.3)	-	-	-	-	(98.3)
Stock compensation plans	0.9	-	90.4	-	-	-	0.3	-	90.7
Balance June 30, 2019	<u>308.8</u>	<u>\$ 3.1</u>	<u>\$ 8,776.5</u>	<u>\$ 9,772.7</u>	<u>\$ (171.8)</u>	<u>(103.9)</u>	<u>\$ (6,721.4)</u>	<u>\$ 3.1</u>	<u>\$ 11,662.2</u>
Balance January 1, 2018	306.5	\$ 3.1	\$ 8,514.9	\$ 10,022.8	\$ (83.2)	(103.9)	\$ (6,721.8)	\$ (0.3)	\$ 11,735.5
Net earnings	-	-	-	359.7	-	-	-	1.4	361.1
Other comprehensive income	-	-	-	-	(36.9)	-	-	-	(36.9)
Cash dividends declared (\$0.48 per share)	-	-	-	(97.5)	-	-	-	-	(97.5)
Adoption of ASU 2018-02	-	-	-	42.9	(42.9)	-	-	-	-
Stock compensation plans	0.7	-	81.9	-	-	0.1	0.1	-	82.0
Balance June 30, 2018	<u>307.2</u>	<u>\$ 3.1</u>	<u>\$ 8,596.8</u>	<u>\$ 10,327.9</u>	<u>\$ (163.0)</u>	<u>(103.8)</u>	<u>\$ (6,721.7)</u>	<u>\$ 1.1</u>	<u>\$ 12,044.2</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

ZIMMER BIOMET HOLDINGS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions, unaudited)

	For the Six Months Ended June 30,	
	2019	2018
Cash flows provided by (used in) operating activities:		
Net earnings	\$ 378.1	\$ 361.1
Adjustments to reconcile net earnings to cash provided by operating activities:		
Depreciation and amortization	500.7	525.1
Share-based compensation	40.0	26.0
Intangible asset impairment	70.1	-
Changes in operating assets and liabilities, net of acquired assets and liabilities		
Income taxes	(44.2)	(42.4)
Receivables	29.3	177.7
Inventories	(83.0)	(99.3)
Accounts payable and accrued liabilities	(269.8)	(27.1)
Other assets and liabilities	(36.6)	(37.3)
Net cash provided by operating activities	<u>584.6</u>	<u>883.8</u>
Cash flows provided by (used in) investing activities:		
Additions to instruments	(144.8)	(126.1)
Additions to other property, plant and equipment	(96.7)	(53.7)
Net investment hedge settlements	21.3	-
Acquisition of intellectual property rights	(197.6)	-
Investments in other assets	(9.9)	(15.5)
Net cash used in investing activities	<u>(427.7)</u>	<u>(195.3)</u>
Cash flows provided by (used in) financing activities:		
Proceeds from senior notes	-	749.5
Redemption of senior notes	-	(1,150.0)
Proceeds from multicurrency revolving facility	-	400.0
Payments on multicurrency revolving facility	-	(375.0)
Proceeds from term loans	200.0	-
Payments on term loans	(425.0)	(225.0)
Net payments on other debt	-	(0.2)
Dividends paid to stockholders	(98.1)	(97.4)
Proceeds from employee stock compensation plans	54.8	56.4
Net cash flows from unremitted collections from factoring programs	(25.6)	(62.9)
Business combination contingent consideration payments	-	(16.7)
Other financing activities	(4.9)	(7.7)
Net cash used in financing activities	<u>(298.8)</u>	<u>(729.0)</u>
Effect of exchange rates on cash and cash equivalents	2.2	(2.7)
Decrease in cash and cash equivalents	(139.7)	(43.2)
Cash and cash equivalents, beginning of year	542.8	524.4
Cash and cash equivalents, end of period	<u>\$ 403.1</u>	<u>\$ 481.2</u>

The accompanying notes are an integral part of these condensed consolidated financial statements.

ZIMMER BIOMET HOLDINGS, INC. AND SUBSIDIARIES
NOTES TO INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Basis of Presentation

The financial data presented herein is unaudited and should be read in conjunction with the consolidated financial statements and accompanying notes included in our Annual Report on Form 10-K for the year ended December 31, 2018.

In our opinion, the accompanying unaudited condensed consolidated financial statements include all adjustments, consisting of only normal recurring adjustments, necessary for a fair statement of the financial position, results of operations and cash flows for the interim periods presented. The December 31, 2018 condensed consolidated balance sheet data was derived from audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America (“GAAP”). Results for interim periods should not be considered indicative of results for the full year.

The words “we,” “us,” “our” and similar words and “Zimmer Biomet” refer to Zimmer Biomet Holdings, Inc. and its subsidiaries. “Zimmer Biomet Holdings” refers to the parent company only.

2. Significant Accounting Policies

Accounting Pronouncements Recently Adopted

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standard Update (“ASU”) 2016-02 – Leases (Topic 842). This ASU requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. This ASU was effective for us as of January 1, 2019. This ASU required a modified retrospective transition method that could either be applied at the earliest comparative period in the financial statements or the period of adoption. We elected to use the period of adoption (January 1, 2019) transition method and therefore did not recast prior periods. This ASU allowed for certain practical expedients to make the adoption of the ASU less burdensome. We elected the practical expedients upon transition which permitted us to not reassess lease identification, classification, and initial direct costs under the new standard for leases that commenced prior to the effective date. We also elected not to recognize a right-of-use asset nor a lease liability for leases with an initial term of twelve months or less. Finally, we elected not to separate non-lease components from the leased components in the valuation of our right-of-use asset and lease liability for all asset classes.

On January 1, 2019, we recognized a right-of-use asset of \$274.7 million in other assets and lease liabilities of \$62.2 million and \$221.2 million in other current liabilities and other long-term liabilities, respectively. No cumulative adjustment to retained earnings was required upon adoption. We do not have any significant finance leases. See Note 7 for additional information.

There are no other recently issued accounting pronouncements that we have not yet adopted that are expected to have a material effect on our financial position, results of operations or cash flows.

3. Revenue Recognition

Net sales by geography are as follows (in millions):

	Three Months Ended				Six Months Ended			
	June 30,				June 30,			
	2019		2018		2019		2018	
Americas	\$	1,214.3	\$	1,216.3	\$	2,408.4	\$	2,424.4
EMEA		438.0		457.7		901.9		954.2
Asia Pacific		336.3		333.6		653.8		646.6
Total	\$	1,988.6	\$	2,007.6	\$	3,964.1	\$	4,025.2

Net sales by product category are as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Knees	\$ 703.5	\$ 703.0	\$ 1,397.6	\$ 1,416.3
Hips	479.4	486.9	963.6	978.9
S.E.T.	444.4	433.8	884.3	876.1
Spine & CMF	185.9	198.2	368.7	381.3
Dental	106.5	106.9	211.0	214.5
Other	68.9	78.8	138.9	158.1
Total	\$ 1,988.6	\$ 2,007.6	\$ 3,964.1	\$ 4,025.2

“S.E.T.” refers to our Surgical, Sports Medicine, Extremities and Trauma product category. “CMF” refers to our craniomaxillofacial and thoracic products.

4. Inventories

	June 30, 2019	December 31, 2018
	(in millions)	
Finished goods	\$ 1,837.1	\$ 1,797.7
Work in progress	252.9	230.4
Raw materials	254.5	228.4
Inventories	\$ 2,344.5	\$ 2,256.5

5. Property, Plant and Equipment

	June 30, 2019	December 31, 2018
	(in millions)	
Land	\$ 27.9	\$ 28.0
Buildings and equipment	1,954.3	1,885.6
Capitalized software costs	457.6	425.8
Instruments	3,137.0	2,950.5
Construction in progress	140.9	147.2
	5,717.7	5,437.1
Accumulated depreciation	(3,681.9)	(3,421.7)
Property, plant and equipment, net	\$ 2,035.8	\$ 2,015.4

We had \$38.1 million and \$49.3 million of property, plant and equipment included in accounts payable as of June 30, 2019 and December 31, 2018, respectively.

6. Intangible Assets

In the second quarter of 2019, we entered into an agreement and paid \$192.5 million to buy out certain licensing arrangements from an unrelated third party. This new agreement and the related payment replace the variable royalty payments that otherwise would have been due under the terms of previous licensing arrangements through 2029. Under the new agreement, we maintain the rights to the counterparty’s intellectual property provided under the previous licensing arrangements. The \$192.5 million payment was recognized as an intangible asset and will be amortized through 2029, which represents the useful life of the intellectual property.

In the second quarter of 2019, we recognized \$70.1 million of in-process research and development (“IPR&D”) intangible asset impairment due to the termination of certain IPR&D projects. The termination of these projects is the result of the progress we are making to prioritize our internal research and development portfolio and focus our engineering resources on the opportunities that most closely link to our mission. Since these projects were not a priority, their terminations are not expected to have a significant impact to our future cash flows.

7. Leases

We own most of our manufacturing facilities, but lease various office space, vehicles and other less significant assets throughout the world. Our contracts contain a lease if they convey a right to control the use of an identified asset, either explicitly or implicitly, in exchange for consideration. Our lease contracts are a necessary part of our business, but we do not believe they are significant to our overall operations. We do not have any significant finance leases. Additionally, we do not have significant leases: where we are considered a lessor; where we sublease our assets; with an initial term of twelve months or less; with related parties; with residual value guarantees; that impose restrictions or covenants on us; or that have not yet commenced, but create significant rights and obligations against us.

Our real estate leases generally have terms of between 5 to 10 years and contain lease extension options that can vary from month-to-month extensions to up to 5 year extensions. We include extension options in our lease term if we are reasonably certain to exercise that option. In determining whether an extension is reasonably certain, we consider the uniqueness of the property for our needs, the availability of similar properties, whether the extension period payments remain the same or may change due to market rates or fixed price increases in the contract, and other economic factors. Our vehicle leases generally have terms of between 3 to 5 years and contain lease extension options on a month-to-month basis. Our vehicle leases are generally not reasonably certain to be extended.

Under GAAP, we are required to discount our lease liabilities to present value using the rate implicit in the lease, or our incremental borrowing rate for a similar term as the lease term if the implicit rate is not readily available. We generally do not have adequate information to know the implicit rate in a lease and therefore use our incremental borrowing rate. Under GAAP, the incremental borrowing rate must be on a collateralized basis, but our debt arrangements are unsecured. We have determined our incremental borrowing rate by using our credit rating to estimate our unsecured borrowing rate and applying reasonable assumptions to reduce the unsecured rate for a risk adjustment effect from collateral.

Information on our leases is as follows (\$ in millions):

	Three Months Ended	Six Months Ended
	June 30, 2019	June 30, 2019
Lease cost	\$ 18.4	\$ 37.0
Cash paid for leases recognized in operating cash flows	\$ 18.4	\$ 37.2
Right-of-use assets obtained in exchange for new lease liabilities	\$ 10.6	\$ 16.4

	As of
	June 30, 2019
Right-of-use assets recognized in Other assets	\$ 257.6
Lease liabilities recognized in Other current liabilities	\$ 62.5
Lease liabilities recognized in Other long-term liabilities	\$ 205.4
Weighted-average remaining lease term	6.2 years
Weighted-average discount rate	2.7%

Our variable lease costs are not significant.

Our future minimum lease payments as of June 30, 2019 were (in millions):

For the Years Ending December 31,	
2019 (July 1, 2019 to December 31, 2019)	\$ 35.4
2020	61.8
2021	48.3
2022	34.1
2023	28.7
Thereafter	84.8
Total	293.1
Less imputed interest	25.2
Total	\$ 267.9

Under GAAP, since we adopted the new standard using the period of adoption transition method (see Note 2 for additional information regarding the new standard), we are not required to present 2018 comparative disclosures. However, we are required to present the required annual disclosures under the previous GAAP lease accounting standard. Accordingly, the following were the future minimum rental commitments under non-cancelable operating leases as of December 31, 2018 (in millions):

For the Years Ending December 31,		
2019	\$	67.1
2020		56.9
2021		44.1
2022		32.2
2023		27.7
Thereafter		81.6

8. Transfers of Financial Assets

We have receivables purchase arrangements with unrelated third parties to liquidate portions of our trade accounts receivable balance. The receivables relate to products sold to customers and are short-term in nature. The factorings are treated as sales of our accounts receivable. Proceeds from the transfers reflect either the face value of the accounts receivable or the face value less factoring fees.

In the U.S. and Japan, our programs are executed on a revolving basis with a maximum funding limit as of June 30, 2019 of \$400.0 million combined. We act as the collection agent on behalf of the third party, but have no significant retained interests or servicing liabilities related to the accounts receivable sold. In order to mitigate credit risk, we purchased credit insurance for the factored accounts receivable. As a result, our risk of loss is limited to the factored accounts receivable not covered by the insurance. Additionally, we have provided guarantees for the factored accounts receivable. The maximum exposures to loss associated with these arrangements were \$33.5 million and \$33.0 million as of June 30, 2019 and December 31, 2018, respectively.

In Europe, we sell to a third party and have no continuing involvement or significant risk with the factored accounts receivable.

Funds received from the transfers are recorded as an increase to cash and a reduction to accounts receivable outstanding in the condensed consolidated balance sheets. We report the cash flows attributable to the sale of receivables to third parties in cash flows from operating activities in our condensed consolidated statements of cash flows. Net expenses resulting from the sales of receivables are recognized in selling, general and administrative expense. Net expenses include any resulting gains or losses from the sales of receivables, credit insurance and factoring fees.

In the six month periods ended June 30, 2019 and 2018, we sold receivables having an aggregate face value of \$1,595.9 million and \$1,260.7 million to third parties in exchange for cash proceeds of \$1,594.9 million and \$1,260.1 million, respectively. Expenses recognized on these sales during the six month periods ended June 30, 2019 and 2018 were not significant. In the six month periods ended June 30, 2019 and 2018, under the U.S. and Japan programs, we collected \$1,438.3 million and \$1,007.8 million, respectively, from our customers and remitted that amount to the third party, and we effectively repurchased \$73.9 million and \$121.0 million, respectively, of previously sold accounts receivable from the third party, due to the programs' revolving nature. As of June 30, 2019 and December 31, 2018, we had collected \$41.2 million and \$66.8 million, respectively, of funds that were unremitted to the third party, which are reflected in our condensed consolidated balance sheets under other current liabilities. The initial collection of cash from customers and its remittance to the third party is reflected in net cash provided by/(used in) financing activities in our condensed consolidated statements of cash flows.

At June 30, 2019 and December 31, 2018, the outstanding principal amount of receivables that has been derecognized under the U.S. and Japan revolving arrangements amounted to \$378.1 million and \$365.9 million, respectively.

9. Debt

Our debt consisted of the following (in millions):

	June 30, 2019	December 31, 2018
Current portion of long-term debt		
4.625% Senior Notes due 2019	\$ 500.0	\$ 500.0
2.700% Senior Notes due 2020	1,500.0	-
U.S. Term Loan B	-	25.0
Total current portion of long-term debt	<u>\$ 2,000.0</u>	<u>\$ 525.0</u>
Long-term debt		
2.700% Senior Notes due 2020	\$ -	\$ 1,500.0
Floating Rate Notes due 2021	450.0	450.0
3.375% Senior Notes due 2021	300.0	300.0
3.150% Senior Notes due 2022	750.0	750.0
3.700% Senior Notes due 2023	300.0	300.0
3.550% Senior Notes due 2025	2,000.0	2,000.0
4.250% Senior Notes due 2035	253.4	253.4
5.750% Senior Notes due 2039	317.8	317.8
4.450% Senior Notes due 2045	395.4	395.4
1.414% Euro Notes due 2022	569.4	571.6
2.425% Euro Notes due 2026	569.4	571.6
U.S. Term Loan B	-	200.0
U.S. Term Loan C	535.0	535.0
Japan Term Loan A	108.7	105.3
Japan Term Loan B	197.9	191.7
Debt discount and issuance costs	(38.1)	(42.7)
Adjustment related to interest rate swaps	10.4	14.6
Total long-term debt	<u>\$ 6,719.3</u>	<u>\$ 8,413.7</u>

At June 30, 2019, our total current and non-current debt of \$8.7 billion consisted of \$7.9 billion aggregate principal amount of our senior notes, which included \$1.1 billion of Euro-denominated senior notes (“Euro Notes”), \$535.0 million outstanding under a U.S. term loan (“U.S. Term Loan C”) that will mature on December 14, 2020, an 11.7 billion Japanese Yen term loan agreement (“Japan Term Loan A”) and a 21.3 billion Japanese Yen term loan agreement (“Japan Term Loan B”) that will each mature on September 27, 2022, and fair value adjustments totaling \$10.4 million, partially offset by debt discount and issuance costs of \$38.1 million.

On December 14, 2018, we entered into a credit agreement (the “2018 Credit Agreement”) that provides for U.S. Term Loan C, which is a two-year unsecured multi-draw term loan facility in the principal amount of \$900.0 million, with a maturity date of December 14, 2020, and borrowed \$675.0 million under that facility. In January 2019, we borrowed an additional \$200.0 million under U.S. Term Loan C and used those proceeds, along with cash on hand, to repay the remaining \$225.0 million outstanding under a U.S. term loan issued under the 2016 Credit Agreement (as defined below) (“U.S. Term Loan B”). Under the applicable accounting rules, since \$200.0 million of U.S. Term Loan B was refinanced on a long-term basis before the issuance of our consolidated financial statements for the year ended December 31, 2018, we classified the refinanced portion of U.S. Term Loan B as long-term as of December 31, 2018.

On March 19, 2018, we completed the offering of \$450.0 million aggregate principal amount of our floating rate senior notes due March 19, 2021 and \$300.0 million aggregate principal amount of our 3.700% senior notes due March 19, 2023. Interest on the floating rate senior notes is equal to three-month LIBOR plus 0.750% and is payable quarterly, commencing on June 19, 2018, until maturity. Interest is payable on the 3.700% senior notes semi-annually, commencing on September 19, 2018, until maturity. We received net proceeds of \$749.5 million from this offering.

In addition to the 2018 Credit Agreement, we have a revolving credit and term loan agreement (the “2016 Credit Agreement”), which contains a five-year unsecured multicurrency revolving facility of \$1.5 billion (the “Multicurrency Revolving Facility”), and previously contained U.S. Term Loan B, which was paid in full during the six month period ended June 30, 2019. The Multicurrency Revolving Facility replaced the previous multicurrency revolving facility under our credit agreement executed in 2014 (as amended),

the “2014 Credit Agreement”) and will mature on September 30, 2021, with two available one-year extensions at our discretion. The 2014 Credit Agreement previously contained a term loan (“U.S. Term Loan A”), which was paid in full in December 2018.

Borrowings under the 2018 and 2016 Credit Agreements generally bear interest at floating rates. We pay a facility fee on the aggregate amount of the Multicurrency Revolving Facility. The 2018 and 2016 Credit Agreements contain customary affirmative and negative covenants and events of default for unsecured financing arrangements, including, among other things, limitations on consolidations, mergers and sales of assets. If our credit rating falls below investment grade, additional restrictions would result, including restrictions on investments and payment of dividends. We were in compliance with all covenants under the 2018 and 2016 Credit Agreements as of June 30, 2019. As of June 30, 2019, we had no borrowings outstanding under the Multicurrency Revolving Facility.

During the six month period ended June 30, 2019, we repaid \$200.0 million on U.S. Term Loan C with cash generated from operations. Under the terms of U.S. Term Loan C, the remaining balance as of June 30, 2019 of \$535.0 million is due on the maturity date of December 14, 2020.

The estimated fair value of our senior notes as of June 30, 2019, based on quoted prices for the specific securities from transactions in over-the-counter markets (Level 2), was \$8,126.5 million. The estimated fair value of Japan Term Loan A and Japan Term Loan B, in the aggregate, as of June 30, 2019, based upon publicly available market yield curves and the terms of the debt (Level 2), was \$303.1 million. The carrying value of U.S. Term Loan C approximates its fair value as it bears interest at short-term variable market rates.

10. Accumulated Other Comprehensive Income

Accumulated other comprehensive income (loss) (“AOCI”) refers to certain gains and losses that under GAAP are included in comprehensive income but are excluded from net earnings as these amounts are initially recorded as an adjustment to stockholders’ equity. Amounts in AOCI may be reclassified to net earnings upon the occurrence of certain events.

Our AOCI is comprised of foreign currency translation adjustments, unrealized gains and losses on cash flow hedges and amortization of prior service costs and unrecognized gains and losses in actuarial assumptions on our defined benefit plans. Foreign currency translation adjustments are reclassified to net earnings upon sale or upon a complete or substantially complete liquidation of an investment in a foreign entity. Unrealized gains and losses on cash flow hedges are reclassified to net earnings when the hedged item affects net earnings. Amounts related to defined benefit plans that are in AOCI are reclassified over the service periods of employees in the plan.

The following table shows the changes in the components of AOCI, net of tax (in millions):

	Foreign Currency Translation	Cash Flow Hedges	Defined Benefit Plan Items	Total AOCI
Balance at December 31, 2018	\$ (31.3)	\$ 20.9	\$ (177.0)	\$ (187.4)
AOCI before reclassifications	10.7	14.9	-	25.6
Reclassifications to statement of earnings	-	(14.4)	4.4	(10.0)
Balance at June 30, 2019	<u>\$ (20.6)</u>	<u>\$ 21.4</u>	<u>\$ (172.6)</u>	<u>\$ (171.8)</u>

The following table shows the reclassification adjustments from AOCI (in millions):

Component of AOCI	Amount of Gain (Loss) Reclassified from AOCI				Location on Statements of Earnings
	Three Months Ended June 30,		Six Months Ended June 30,		
	2019	2018	2019	2018	
<i>Cash flow hedges</i>					
Foreign exchange forward contracts	\$ 7.4	\$ (10.5)	\$ 14.5	\$ (21.6)	Cost of products sold
Interest rate swaps	-	-	2.8	-	Interest expense, net
Forward starting interest rate swaps	(0.2)	(0.2)	(0.3)	(0.3)	Interest expense, net
	7.2	(10.7)	17.0	(21.9)	Total before tax
	1.0	(1.5)	2.6	(3.0)	Provision for income taxes
	<u>\$ 6.2</u>	<u>\$ (9.2)</u>	<u>\$ 14.4</u>	<u>\$ (18.9)</u>	Net of tax
<i>Defined benefit plans</i>					
Prior service cost	\$ 1.9	\$ 2.5	\$ 3.7	\$ 5.0	Other expense, net
Unrecognized actuarial loss	(5.5)	(6.7)	(10.8)	(12.8)	Other expense, net
	(3.6)	(4.2)	(7.1)	(7.8)	Total before tax
	(1.2)	(1.2)	(2.7)	(2.0)	Provision for income taxes
	<u>\$ (2.4)</u>	<u>\$ (3.0)</u>	<u>\$ (4.4)</u>	<u>\$ (5.8)</u>	Net of tax
Total reclassifications	<u>\$ 3.8</u>	<u>\$ (12.2)</u>	<u>\$ 10.0</u>	<u>\$ (24.7)</u>	Net of tax

The following table shows the tax effects on each component of AOCI recognized in our condensed consolidated statements of comprehensive income (in millions):

	Three Months Ended June 30, 2019			Six Months Ended June 30, 2019		
	Before Tax	Tax	Net of Tax	Before Tax	Tax	Net of Tax
Foreign currency cumulative translation adjustments	\$ 8.1	\$ (7.0)	\$ 15.1	\$ 16.0	\$ 5.3	\$ 10.7
Unrealized cash flow hedge (losses) gains	(3.9)	(4.3)	0.4	12.8	(2.1)	14.9
Reclassification adjustments on cash flow hedges	(7.2)	(1.0)	(6.2)	(17.0)	(2.6)	(14.4)
Adjustments to prior service cost and unrecognized actuarial assumptions	3.6	1.2	2.4	7.1	2.7	4.4
Total Other Comprehensive Income	<u>\$ 0.6</u>	<u>\$ (11.1)</u>	<u>\$ 11.7</u>	<u>\$ 18.9</u>	<u>\$ 3.3</u>	<u>\$ 15.6</u>

	Three Months Ended June 30, 2018			Six Months Ended June 30, 2018		
	Before Tax	Tax	Net of Tax	Before Tax	Tax	Net of Tax
Foreign currency cumulative translation adjustments	\$ (192.0)	\$ (14.2)	\$ (177.8)	\$ (90.6)	\$ (7.6)	\$ (83.0)
Unrealized cash flow hedge gains	62.7	11.1	51.6	29.6	4.4	25.2
Reclassification adjustments on cash flow hedges	10.7	1.5	9.2	21.9	3.0	18.9
Adjustments to prior service cost and unrecognized actuarial assumptions	4.1	(1.2)	5.3	-	(2.0)	2.0
Total Other Comprehensive Loss	<u>\$ (114.5)</u>	<u>\$ (2.8)</u>	<u>\$ (111.7)</u>	<u>\$ (39.1)</u>	<u>\$ (2.2)</u>	<u>\$ (36.9)</u>

11. Fair Value Measurement of Assets and Liabilities

The following financial assets and liabilities are recorded at fair value on a recurring basis (in millions):

Description	As of June 30, 2019			
	Recorded Balance	Fair Value Measurements at Reporting Date Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Derivatives, current and long-term				
Foreign currency forward contracts	\$ 42.7	\$ -	\$ 42.7	\$ -
Interest rate swaps	31.8	-	31.8	-
Total Assets	\$ 74.5	\$ -	\$ 74.5	\$ -
Liabilities				
Derivatives, current and long-term				
Foreign currency forward contracts	\$ 0.6	\$ -	\$ 0.6	\$ -
Total Liabilities	\$ 0.6	\$ -	\$ 0.6	\$ -
Description	As of December 31, 2018			
	Recorded Balance	Fair Value Measurements at Reporting Date Using:		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
Derivatives, current and long-term				
Foreign currency forward contracts	\$ 45.7	\$ -	\$ 45.7	\$ -
Interest rate swaps	17.9	-	17.9	-
Total Assets	\$ 63.6	\$ -	\$ 63.6	\$ -
Liabilities				
Derivatives, current and long-term				
Foreign currency forward contracts	\$ 0.5	\$ -	\$ 0.5	\$ -
Interest rate swaps	2.5	-	2.5	-
Total Liabilities	\$ 3.0	\$ -	\$ 3.0	\$ -

We value our foreign currency forward contracts using a market approach based on foreign currency exchange rates obtained from active markets, and we perform ongoing assessments of counterparty credit risk.

We value our interest rate swaps using a market approach based on publicly available market yield curves, foreign currency exchange rates and the terms of our swaps, and we perform ongoing assessments of counterparty credit risk.

12. Derivative Instruments and Hedging Activities

We are exposed to certain market risks relating to our ongoing business operations, including foreign currency exchange rate risk, commodity price risk, interest rate risk and credit risk. We manage our exposure to these and other market risks through regular operating and financing activities. Currently, the only risks that we manage through the use of derivative instruments are interest rate risk and foreign currency exchange rate risk.

Interest Rate Risk

Derivatives Designated as Fair Value Hedges

In prior years, we entered into various fixed-to-variable interest rate swap agreements that were accounted for as fair value hedges of a portion of our 4.625% Senior Notes due 2019 and all of our 3.375% Senior Notes due 2021. In August 2016, we received cash for these interest rate swap assets by terminating the hedging instruments with the counterparties. The remaining unamortized balance as of June 30, 2019 related to these discontinued hedges was \$10.4 million, which will be recognized using the effective interest rate method over the remaining maturity period of the hedged notes. As of June 30, 2019 and December 31, 2018, the following amounts were recorded on our condensed consolidated balance sheets related to cumulative basis adjustments for fair value hedges (in millions):

<u>Balance Sheet Line Item</u>	<u>Carrying Amount of the Hedged Liabilities</u>		<u>Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Liabilities</u>	
	<u>June 30, 2019</u>	<u>December 31, 2018</u>	<u>June 30, 2019</u>	<u>December 31, 2018</u>
Long-term debt	\$ 560.3	\$ 564.4	\$ 10.4	\$ 14.6

Derivatives Designated as Cash Flow Hedges

In 2014, we entered into forward starting interest rate swaps that were designated as cash flow hedges of our thirty-year tranche of senior notes (the 4.450% Senior Notes due 2045) we expected to issue in 2015. The forward starting interest rate swaps mitigated the risk of changes in interest rates prior to the completion of the offering of senior notes in connection with our merger with LVB Acquisition, Inc., the parent company of Biomet, Inc. (“Biomet”) (which merger is sometimes referred to herein as the “Biomet merger”). The interest rate swaps were settled, and the remaining loss to be recognized at June 30, 2019 was \$26.8 million, which will be recognized using the effective interest rate method over the remaining maturity period of the hedged notes.

In September 2016, we entered into various variable-to-fixed interest rate swap agreements with a notional amount of \$375.0 million that were accounted for as cash flow hedges of U.S. Term Loan B. The interest rate swaps minimized the exposure to changes in the LIBOR interest rates while the variable-rate debt was outstanding. In the first quarter of 2019, we terminated these interest rate swaps concurrently with the repayment of the remaining balance of U.S. Term Loan B, and we recognized proceeds and interest income of \$2.8 million related to the termination.

Foreign Currency Exchange Rate Risk

We operate on a global basis and are exposed to the risk that our financial condition, results of operations and cash flows could be adversely affected by changes in foreign currency exchange rates. To reduce the potential effects of foreign currency exchange rate movements on net earnings, we enter into derivative financial instruments in the form of foreign currency exchange forward contracts with major financial institutions. We also designated our Euro Notes as net investment hedges of investments in foreign subsidiaries. We are primarily exposed to foreign currency exchange rate risk with respect to transactions and net assets denominated in Euros, Swiss Francs, Japanese Yen, British Pounds, Canadian Dollars, Australian Dollars, Korean Won, Swedish Krona, Czech Koruna, Thai Baht, Taiwan Dollars, South African Rand, Russian Rubles, Indian Rupees, Turkish Lira, Polish Zloty, Danish Krone, and Norwegian Krone. We do not use derivative financial instruments for trading or speculative purposes.

Derivatives Designated as Net Investment Hedges

We are exposed to the impact of foreign exchange rate fluctuations in the investments in our wholly-owned foreign subsidiaries that are denominated in currencies other than the U.S. Dollar. In order to mitigate the volatility in foreign exchange rates, we issued Euro Notes in December 2016 and designated 100 percent of the Euro Notes to hedge our net investment in certain wholly-owned foreign subsidiaries that have a functional currency of the Euro. All changes in the fair value of a hedging instrument designated as a net investment hedge are recorded as a component of AOCI in the condensed consolidated balance sheets.

At June 30, 2019, we had receive-fixed-rate, pay-fixed-rate cross-currency interest swaps with notional amounts outstanding of Euro 1,450 million, Japanese Yen 7 billion and Swiss Franc 50 million. These transactions further hedge our net investment in certain wholly-owned foreign subsidiaries that have a functional currency of Euro, Japanese Yen and Swiss Franc. All changes in the fair value of a derivative instrument designated as a net investment hedge are recorded as a component of AOCI in the condensed consolidated balance sheets. The portion of this change related to the excluded component will be amortized into earnings over the life of the derivative while the remainder will be recorded in AOCI until the hedged net investment is sold or substantially liquidated.

We recognize the excluded component in interest expense, net on our condensed consolidated statements of earnings. The net cash received related to the receive-fixed-rate, pay-fixed-rate component of the cross-currency interest rate swaps is reflected in investing cash flows in our condensed consolidated statements of cash flows.

Derivatives Designated as Cash Flow Hedges

Our revenues are generated in various currencies throughout the world. However, a significant amount of our inventory is produced in U.S. Dollars. Therefore, movements in foreign currency exchange rates may have different proportional effects on our revenues compared to our cost of products sold. To minimize the effects of foreign currency exchange rate movements on cash flows, we hedge intercompany sales of inventory expected to occur within the next 30 months with foreign currency exchange forward contracts. We designate these derivative instruments as cash flow hedges.

We perform quarterly assessments of hedge effectiveness by verifying and documenting the critical terms of the hedge instrument and confirming that forecasted transactions have not changed significantly. We also assess on a quarterly basis whether there have been adverse developments regarding the risk of a counterparty default. For derivatives which qualify as hedges of future cash flows, the gains and losses are temporarily recorded in AOCI and then recognized in cost of products sold when the hedged item affects net earnings. On our condensed consolidated statements of cash flows, the settlements of these cash flow hedges are recognized in operating cash flows.

For foreign currency exchange forward contracts and options outstanding at June 30, 2019, we had obligations to purchase U.S. Dollars and sell Euros, Japanese Yen, British Pounds, Canadian Dollars, Australian Dollars, Korean Won, Swedish Krona, Czech Koruna, Thai Baht, Taiwan Dollars, South African Rand, Russian Rubles, Indian Rupees, Polish Zloty, Danish Krone, and Norwegian Krone and obligations to purchase Swiss Francs and sell U.S. Dollars. These derivatives mature at dates ranging from July 2019 through November 2021. As of June 30, 2019, the notional amounts of outstanding forward contracts and options entered into with third parties to purchase U.S. Dollars were \$1,535.1 million. As of June 30, 2019, the notional amounts of outstanding forward contracts and options entered into with third parties to purchase Swiss Francs were \$270.7 million.

Derivatives Not Designated as Hedging Instruments

We enter into foreign currency forward exchange contracts with terms of one month to manage currency exposures for monetary assets and liabilities denominated in a currency other than an entity's functional currency. As a result, any foreign currency re-measurement gains/losses recognized in earnings are generally offset with gains/losses on the foreign currency forward exchange contracts in the same reporting period. The net amount of these offsetting gains/losses is recorded in other expense, net. These contracts are settled on the last day of each reporting period. Therefore, there is no outstanding balance related to these contracts recorded on the balance sheet as of the end of the reporting period. The notional amounts of these contracts are typically in a range of \$1.5 billion to \$2.0 billion per quarter.

Income Statement Presentation

Derivatives Designated as Cash Flow Hedges

Derivative instruments designated as cash flow hedges had the following effects, before taxes, on AOCI and net earnings on our condensed consolidated statements of earnings, condensed consolidated statements of comprehensive income and condensed consolidated balance sheets (in millions):

Derivative Instrument	Amount of Gain (Loss) Recognized in AOCI				Location on Statements of Earnings	Amount of Gain (Loss) Reclassified from AOCI			
	Three Months Ended June 30,		Six Months Ended June 30,			Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018		2019	2018	2019	2018
Foreign exchange forward contracts	\$ (3.9)	\$ 63.7	\$ 12.8	\$ 29.5	Cost of products sold	\$ 7.4	\$ (10.5)	\$ 14.5	\$ (21.6)
Interest rate swaps	-	(1.0)	-	0.1	Interest expense, net	-	-	2.8	-
Forward starting interest rate swaps	-	-	-	-	Interest expense, net	(0.2)	(0.2)	(0.3)	(0.3)
	<u>\$ (3.9)</u>	<u>\$ 62.7</u>	<u>\$ 12.8</u>	<u>\$ 29.6</u>		<u>\$ 7.2</u>	<u>\$ (10.7)</u>	<u>\$ 17.0</u>	<u>\$ (21.9)</u>

The fair value of outstanding derivative instruments designated as cash flow hedges and recorded on our condensed consolidated balance sheet at June 30, 2019, together with settled derivatives where the hedged item has not yet affected earnings, was a net unrealized gain of \$19.2 million, or \$21.4 million after taxes, which is deferred in AOCI. A gain of \$35.0 million, or \$30.2 million after taxes, is expected to be reclassified to earnings in cost of products sold and a loss of \$0.6 million, or \$0.5 million after taxes, is expected to be reclassified to earnings in interest expense, net over the next twelve months.

The following table presents the effect of fair value and cash flow hedge accounting on our condensed consolidated statements of earnings (in millions):

	Location and Amount of Gain/(Loss) Recognized in Income on Fair Value and Cash Flow Hedging Relationships for the Period Ended:							
	Three Months Ended		Three Months Ended		Six Months Ended		Six Months Ended	
	June 30, 2019		June 30, 2018		June 30, 2019		June 30, 2018	
	Cost of Goods Sold	Interest Expense, Net	Cost of Goods Sold	Interest Expense, Net	Cost of Goods Sold	Interest Expense	Cost of Goods Sold	Interest Expense
Total amounts of income and expense line items presented in the statements of earnings in which the effects of fair value or cash flow hedges are recorded	\$ 581.3	\$ (59.7)	\$ 583.7	\$ (75.3)	\$ 1,134.7	\$ (117.7)	\$ 1,159.5	\$ (153.3)
The effects of fair value and cash flow hedging:								
Gain on fair value hedging relationships								
Discontinued interest rate swaps	-	2.1	-	2.1	-	4.2	-	4.2
Gain (loss) on cash flow hedging relationships								
Foreign exchange forward contracts	7.4	-	(10.5)	-	14.5	-	(21.6)	-
Interest rate swaps	-	-	-	-	-	2.8	-	-
Forward starting interest rate swaps	-	(0.2)	-	(0.2)	-	(0.3)	-	(0.3)
Gain on net investment hedging relationships								
Cross-currency interest rate swaps	-	13.4	-	5.1	-	25.4	-	5.2

Derivatives Not Designated as Hedging Instruments

The following gains and (losses) from these derivative instruments were recognized on our condensed consolidated statements of earnings (in millions):

Derivative Instrument	Location on Statements of Earnings	Three Months Ended		Six Months Ended	
		June 30,		June 30,	
		2019	2018	2019	2018
Foreign exchange forward contracts	Other expense, net	\$ (6.3)	\$ 27.6	\$ (8.9)	\$ 17.9

These gains/losses do not reflect offsetting gains of \$1.3 million and \$1.9 million in the three and six month periods ended June 30, 2019, respectively, and offsetting losses of \$32.9 million and \$29.0 million in the three and six month periods ended June 30, 2018, respectively, recognized in other expense, net as a result of foreign currency re-measurement of monetary assets and liabilities denominated in a currency other than an entity's functional currency.

Balance Sheet Presentation

As of June 30, 2019 and December 31, 2018, all derivative instruments designated as fair value hedges, cash flow hedges and net investment hedges were recorded at fair value on our condensed consolidated balance sheets. On our condensed consolidated balance sheets, we recognize individual forward contracts and options with the same counterparty on a net asset/liability basis if we have a master netting agreement with the counterparty. Under these master netting agreements, we are able to settle derivative instrument assets and liabilities with the same counterparty in a single transaction, instead of settling each derivative instrument separately. We have master netting agreements with all of our counterparties. The fair value of derivative instruments on a gross basis is as follows (in millions):

	As of June 30, 2019		As of December 31, 2018	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Asset Derivatives				
Foreign exchange forward contracts	Other current assets	\$ 42.0	Other current assets	\$ 37.9
Foreign exchange forward contracts	Other assets	12.5	Other assets	20.9
Interest rate swaps	Other assets	-	Other assets	2.8
Cross-currency interest rate swaps	Other assets	31.8	Other assets	15.1
Total asset derivatives		<u>\$ 86.3</u>		<u>\$ 76.7</u>
Liability Derivatives				
Foreign exchange forward contracts	Other current liabilities	\$ 8.5	Other current liabilities	\$ 9.9
Foreign exchange forward contracts	Other long-term liabilities	3.9	Other long-term liabilities	3.7
Cross-currency interest rate swaps	Other long-term liabilities	-	Other long-term liabilities	2.5
Total liability derivatives		<u>\$ 12.4</u>		<u>\$ 16.1</u>

The table below presents the effects of our master netting agreements on our condensed consolidated balance sheets (in millions):

Description	Location	As of June 30, 2019			As of December 31, 2018		
		Gross Amount	Offset	Net Amount in Balance Sheet	Gross Amount	Offset	Net Amount in Balance Sheet
Asset Derivatives							
Cash flow hedges	Other current assets	\$ 42.0	\$ 8.3	\$ 33.7	\$ 37.9	\$ 9.6	\$ 28.3
Cash flow hedges	Other assets	12.5	3.5	9.0	20.9	3.5	17.4
Liability Derivatives							
Cash flow hedges	Other current liabilities	8.5	8.3	0.2	9.9	9.6	0.3
Cash flow hedges	Other long-term liabilities	3.9	3.5	0.4	3.7	3.5	0.2

The following net investment hedge gains (losses) were recognized on our condensed consolidated statements of comprehensive income (in millions):

Derivative Instrument	Amount of Gain (Loss) Recognized in AOCI			
	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Euro Notes	\$ (16.0)	\$ 62.3	\$ 4.4	\$ 33.3
Cross-currency interest rate swaps	(15.0)	28.8	19.2	31.4
	<u>\$ (31.0)</u>	<u>\$ 91.1</u>	<u>\$ 23.6</u>	<u>\$ 64.7</u>

13. Income Taxes

We operate on a global basis and are subject to numerous and complex tax laws and regulations. Additionally, tax laws continue to undergo rapid changes in both application and interpretation by various countries, including state aid interpretations and initiatives led by the Organization for Economic Cooperation and Development. Our income tax filings are subject to examinations by taxing authorities throughout the world. Income tax audits may require an extended period of time to reach resolution and may result in significant income tax adjustments when interpretation of tax laws or allocation of company profits is disputed. Although ultimate timing is uncertain, the net amount of tax liability for unrecognized tax benefits may change within the next twelve months due to changes in audit status, expiration of statutes of limitations, settlements of tax assessments and other events. Management's best estimate of such change is within the range of a \$175 million decrease to a \$25 million increase.

Our U.S. Federal income tax returns have been audited through 2009 and are currently under audit for years 2010-2015. The IRS has proposed adjustments for years 2005-2012, reallocating profits between certain of our U.S. and foreign subsidiaries. We have disputed these adjustments and intend to continue to vigorously defend our positions. For years 2005-2007 and 2008-2009, we have filed petitions with the U.S. Tax Court. For years 2010-2012, we are pursuing resolution through the IRS Administrative Appeals Process.

In the three and six month periods ended June 30, 2019, our effective tax rate ("ETR") was 6.0 percent and 12.5 percent, respectively, compared to 15.1 percent and 18.2 percent in the three and six month periods ended June 30, 2018, respectively. The decline in ETR in the three month period ended June 30, 2019, compared to the same prior year period was primarily due to the favorable resolution of certain tax audits. The decline in ETR in the six month period ended June 30, 2019, compared to the same prior year period was primarily due to the favorable resolution of certain tax audits as well as a release of uncertain tax positions due to emerging foreign tax guidance in the first quarter. Absent discrete tax events, we expect our future ETR will continue to be lower than the U.S. corporate income tax rate of 21.0 percent due to our mix of earnings between U.S. and foreign locations, which have lower corporate income tax rates. Our ETR in future periods could also potentially be impacted by: changes in our mix of pre-tax earnings; changes in tax rates, tax laws or their interpretation, including the European Union rules on state aid; the outcome of various federal, state and foreign audits; and the expiration of certain statutes of limitations. Currently, we cannot reasonably estimate the impact of these items on our financial results.

14. Retirement Benefit Plans

We have defined benefit pension plans covering certain U.S. and Puerto Rico employees. The employees who are not participating in the defined benefit plans receive additional benefits under our defined contribution plans. Plan benefits are primarily based on years of credited service and the participant's compensation. In addition to the U.S. and Puerto Rico defined benefit pension plans, we sponsor various foreign pension arrangements, including retirement and termination benefit plans required by local law or coordinated with government sponsored plans.

The components of net periodic pension expense for our U.S. and foreign defined benefit pension plans are as follows (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Service cost	\$ 6.4	\$ 7.0	\$ 13.1	\$ 14.5
Interest cost	6.2	5.6	12.4	11.1
Expected return on plan assets	(11.4)	(11.7)	(22.9)	(23.5)
Amortization of prior service cost	(1.9)	(2.5)	(3.7)	(5.0)
Amortization of unrecognized actuarial loss	5.5	6.7	10.8	12.8
Net periodic pension expense	<u>\$ 4.8</u>	<u>\$ 5.1</u>	<u>\$ 9.7</u>	<u>\$ 9.9</u>

Service cost is recognized in the operating expense line item in which the related employee is classified. All other components of net periodic pension expense are recognized in other expense, net.

We expect that we will have minimal legally required funding obligations in 2019 for our U.S. and Puerto Rico defined benefit pension plans, and therefore we have not made, nor do we voluntarily expect to make, any material contributions to these plans during 2019. We contributed \$11.3 million to our foreign-based defined benefit pension plans in the six month period ended June 30, 2019, and we expect to contribute \$8.2 million to these foreign-based plans during the remainder of 2019.

15. Earnings Per Share

The following is a reconciliation of weighted average shares for the basic and diluted shares computations (in millions):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Weighted average shares outstanding for basic net earnings per share	204.8	203.3	204.6	203.2
Effect of dilutive stock options and other equity awards	1.4	1.3	1.4	1.4
Weighted average shares outstanding for diluted net earnings per share	206.2	204.6	206.0	204.6

During the three and six month periods ended June 30, 2019, an average of 2.1 million options and 1.7 million options, respectively, to purchase shares of common stock were not included in the computation of diluted earnings per share because the exercise prices of these options were greater than the average market price of our common stock. In the three and six month periods ended June 30, 2018, an average of 3.4 million options and 2.3 million options, respectively, were not included for the same reason.

16. Segment Information

We design, manufacture and market orthopedic reconstructive products; sports medicine, biologics, extremities and trauma products; spine, craniomaxillofacial and thoracic products (“CMF”); office based technologies; dental implants; and related surgical products. Our chief operating decision maker (“CODM”) allocates resources to achieve our operating profit goals through seven operating segments. Our operating segments are comprised of both geographic and product category business units. The geographic operating segments are the Americas, which is comprised principally of the U.S. and includes other North, Central and South American markets; EMEA, which is comprised principally of Europe and includes the Middle East and African markets; and Asia Pacific, which is comprised principally of Japan, China and Australia and includes other Asian and Pacific markets. The product category operating segments are Spine, Office Based Technologies, CMF and Dental. The geographic operating segments include results from all of our product categories except those in the product category operating segments. The Office Based Technologies, CMF and Dental product category operating segments reflect those respective product category results from all regions, whereas the Spine product category operating segment includes all spine product results excluding those from Asia Pacific.

As it relates to the geographic operating segments, our CODM evaluates performance based upon segment operating profit exclusive of operating expenses pertaining to inventory and manufacturing-related charges, intangible asset amortization, intangible asset impairment, acquisition, integration and related, quality remediation, litigation, litigation settlement gain, certain European Union Medical Device Regulation expenses, other charges, and global operations and corporate functions. Global operations and corporate functions include research, development engineering, medical education, brand management, corporate legal, finance and human resource functions, manufacturing operations and logistics and share-based payment expense. As it relates to each product category operating segment, research, development engineering, medical education, brand management and other various costs that are specific to the product category operating segment’s operations are reflected in its operating profit results. Due to these additional costs included in the product category operating segments, profitability metrics among the geographic operating segments and product category operating segments are not comparable. Intercompany transactions have been eliminated from segment operating profit.

Our CODM does not review asset information by operating segment. Instead, our CODM reviews cash flow and other financial ratios by operating segment.

These seven operating segments are the basis for our reportable segment information provided below. The four product category operating segments are individually insignificant to our consolidated results and therefore do not constitute a reporting segment either individually or combined. For presentation purposes, these product category operating segments have been aggregated. Prior period reportable segment financial information has been restated to conform to the current presentation.

Net sales and operating profit by segment are as follows (in millions):

	Net Sales		Operating Profit	
	Three Months Ended June 30,		Three Months Ended June 30,	
	2019	2018	2019	2018
Americas	\$ 989.1	\$ 979.3	\$ 538.8	\$ 530.1
EMEA	383.2	400.0	116.9	117.5
Asia Pacific	321.9	319.2	114.8	109.7
Product Category Operating Segments	294.4	309.1	49.7	39.4
Global Operations and Corporate Functions	-	-	(275.0)	(235.2)
Total	<u>\$ 1,988.6</u>	<u>\$ 2,007.6</u>		
Inventory and manufacturing-related charges			(34.1)	(12.5)
Intangible asset amortization			(146.9)	(149.5)
Intangible asset impairment			(70.1)	-
Acquisition, integration and related			(10.5)	(50.5)
Quality remediation			(23.4)	(45.4)
Litigation			(7.0)	4.2
European Union Medical Device Regulation			(5.1)	(0.5)
Other charges			(43.4)	(11.3)
Operating profit			<u>\$ 204.7</u>	<u>\$ 296.0</u>

	Net Sales		Operating Profit	
	Six Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Americas	\$ 1,964.5	\$ 1,970.4	\$ 1,045.9	\$ 1,062.3
EMEA	789.1	832.6	243.3	256.7
Asia Pacific	625.6	618.1	218.8	211.8
Product Category Operating Segments	584.9	604.1	90.6	92.6
Global Operations and Corporate Functions	-	-	(528.4)	(490.1)
Total	<u>\$ 3,964.1</u>	<u>\$ 4,025.2</u>		
Inventory and manufacturing-related charges			(36.1)	(19.7)
Intangible asset amortization			(290.3)	(300.3)
Intangible asset impairment			(70.1)	-
Acquisition, integration and related			(21.2)	(96.5)
Quality remediation			(43.1)	(91.6)
Litigation			(5.2)	(1.5)
Litigation settlement gain			23.5	-
European Union Medical Device Regulation			(6.7)	(0.8)
Other charges			(66.1)	(21.9)
Operating profit			<u>\$ 554.9</u>	<u>\$ 601.0</u>

17. Commitments and Contingencies

On a quarterly and annual basis, we review relevant information with respect to loss contingencies and update our accruals, disclosures and estimates of reasonably possible losses or ranges of loss based on such reviews. We establish liabilities for loss contingencies when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. For matters where a loss is believed to be reasonably possible, but not probable, no accrual has been made.

Litigation

Durom Cup-related claims: On July 22, 2008, we temporarily suspended marketing and distribution of the Durom Cup in the U.S. Subsequently, a number of product liability lawsuits were filed against us in various U.S. and foreign jurisdictions. The plaintiffs seek damages for personal injury, and they generally allege that the Durom Cup contains defects that result in complications and premature revision of the device. We have settled the majority of these claims and others are still pending. The majority of the pending U.S. lawsuits are currently in a federal Multidistrict Litigation (“MDL”) in the District of New Jersey (*In Re: Zimmer Durom Hip Cup Products Liability Litigation*). Litigation activity in the MDL is stayed pending finalization of the U.S. Durom Cup Settlement Program, an extrajudicial program created to resolve actions and claims of eligible U.S. plaintiffs and claimants. Other lawsuits are pending in various domestic and foreign jurisdictions, and additional claims may be asserted in the future. The majority of claims outside the U.S. are pending in Germany, Netherlands and Italy.

Since 2008, we have recognized net expense of \$443.0 million for Durom Cup-related claims. In the three and six month periods ended June 30, 2019, we lowered our estimate of the number of Durom Cup-related claims we expect to settle and, as a result, we recognized gains of \$7.0 million and \$9.5 million, respectively, in selling, general and administrative expense. We recorded a \$20.0 million gain in the three and six month periods ended June 30, 2018.

We maintain insurance for product liability claims, subject to self-insurance retention requirements. We have recovered insurance proceeds from certain of our insurance carriers for Durom Cup-related claims. While we may recover additional insurance proceeds in the future for Durom Cup-related claims, we do not have a receivable recorded on our condensed consolidated balance sheet as of June 30, 2019 for any possible future insurance recoveries for these claims.

Our estimate as of June 30, 2019 of the remaining liability for all Durom Cup-related claims is \$73.5 million, of which \$19.5 million is classified as short-term in other current liabilities and \$54.0 million is classified as long-term in other long-term liabilities on our condensed consolidated balance sheet. We expect to pay the majority of the Durom Cup-related claims within the next few years.

Our understanding of clinical outcomes with the Durom Cup and other large diameter hip cups continues to evolve. We rely on significant estimates in determining the provisions for Durom Cup-related claims, including our estimate of the number of claims that we will receive and the average amount we will pay per claim. The actual number of claims and the actual amount we pay per claim may differ from our estimates. Among other factors, since our understanding of the clinical outcomes is still evolving, we cannot reasonably estimate the possible loss or range of loss that may result from Durom Cup-related claims in excess of the losses we have accrued. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

NexGen Knee System claims: Following a wide-spread advertising campaign conducted by certain law firms beginning in 2010, a number of product liability lawsuits have been filed against us in various jurisdictions. The plaintiffs seek damages for personal injury, alleging that certain products within the NexGen Knee System, specifically the NexGen Flex Femoral Components and MIS Stemmed Tibial Component, suffer from defects that cause them to loosen prematurely. The majority of the cases are currently pending in an MDL in the Northern District of Illinois (*In Re: Zimmer NexGen Knee Implant Products Liability Litigation*). Other cases are pending in various state courts, and additional lawsuits may be filed. Thus far, all cases decided by the MDL court or a jury on the merits have involved NexGen Flex Femoral Components, which represent the majority of cases in the MDL. The initial bellwether trial took place in October 2015 and resulted in a defense verdict. The next scheduled bellwether trial, which was set to commence in November 2016, was dismissed following the court’s grant of summary judgment in our favor in October 2016. That decision was appealed by the plaintiff and subsequently affirmed by the U.S. Court of Appeals for the Seventh Circuit in March 2018. The second bellwether trial took place in January 2017 and resulted in a defense verdict. The parties attended a court-ordered mediation in January 2018, at which a settlement in principle was reached that would resolve all MDL cases and all state court cases that involved MDL products. On February 11, 2019, we informed the MDL court of our intention to consummate a confidential settlement that resolves nearly all of the remaining cases, which was completed in June 2019. The settlement did not have a material adverse effect on our results of operations or cash flows.

Zimmer M/L Taper, M/L Taper with Kinectiv Technology, and Versys Femoral Head-related claims: We are a defendant in a number of product liability lawsuits relating to our M/L Taper and M/L Taper with Kinectiv Technology hip stems, and Versys Femoral Head implants. The plaintiffs seek damages for personal injury, alleging that defects in the products lead to corrosion at the

head/stem junction resulting in, among other things, pain, inflammation and revision surgery. The majority of the cases are consolidated in an MDL in the United States District Court for the Southern District of New York (*In Re: Zimmer M/L Taper Hip Prosthesis or M/L Taper Hip Prosthesis with Kinectiv Technology and Versys Femoral Head Products Liability Litigation*). Other related cases are pending in various state courts, with the majority of state court cases pending in Oregon, New Mexico, Indiana and Florida. Additional lawsuits are likely to be filed. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

Biomet metal-on-metal hip implant claims: Biomet is a defendant in a number of product liability lawsuits relating to metal-on-metal hip implants, most of which involve the M2a-Magnum hip system. Cases are currently consolidated in an MDL in the U.S. District Court for the Northern District of Indiana (*In Re: Biomet M2a Magnum Hip Implant Product Liability Litigation*) and in various state and foreign courts, with the majority of domestic state court cases pending in Indiana and Florida.

On February 3, 2014, Biomet announced the settlement of the MDL. Lawsuits filed in the MDL by April 15, 2014 were eligible to participate in the settlement. Those claims that did not settle via the MDL settlement program have re-commenced litigation in the MDL under a new case management plan, or are in the process of being remanded to their originating jurisdictions. The settlement does not affect certain other claims relating to Biomet's metal-on-metal hip products that are pending in various state and foreign courts, or other claims that may be filed in the future. Our estimate as of June 30, 2019 of the remaining liability for all Biomet metal-on-metal hip implant claims is \$64.3 million.

Biomet has exhausted the self-insured retention in its insurance program and has been reimbursed for claims related to its metal-on-metal products up to its policy limits in the program. Zimmer Biomet is responsible for any amounts by which the ultimate losses exceed the amount of Biomet's third-party insurance coverage. As of June 30, 2019, Biomet had received all of the insurance proceeds it expects to recover under the excess policies. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

Heraeus trade secret misappropriation lawsuits: In December 2008, Heraeus Kulzer GmbH (together with its affiliates, "Heraeus") initiated legal proceedings in Germany against Biomet, Inc., Biomet Europe BV, certain other entities and certain employees alleging that the defendants misappropriated Heraeus trade secrets when developing Biomet Europe's Refobacin and Biomet Bone Cement line of cements ("European Cements"). The lawsuit sought to preclude the defendants from producing, marketing and offering for sale their then-current line of European Cements and to compensate Heraeus for any damages incurred.

Germany: On June 5, 2014, the German appeals court in Frankfurt (i) enjoined Biomet, Inc., Biomet Europe BV and Biomet Deutschland GmbH from manufacturing, selling or offering the European Cements to the extent they contain certain raw materials in particular specifications; (ii) held the defendants jointly and severally liable to Heraeus for any damages from the sale of European Cements since 2005; and (iii) ruled that no further review may be sought (the "Frankfurt Decision"). The Heraeus and Biomet parties both sought appeal against the Frankfurt Decision. In a decision dated June 16, 2016, the German Supreme Court dismissed the parties' appeals without reaching the merits, rendering that decision final.

In December 2016, Heraeus filed papers to restart proceedings against Biomet Orthopaedics Switzerland GmbH, seeking to require that entity to relinquish its CE certificates for the European Cements. In January 2017, Heraeus notified Biomet it had filed a claim for damages in the amount of €121.9 million for sales in Germany, which it first increased to €125.9 million and with a filing in June 2019 further increased to €146.7 million plus statutory interest. In September 2017, Heraeus filed an enforcement action in the Darmstadt court against Biomet Europe, requesting that a fine be imposed against Biomet Europe for failure to disclose the amount of the European Cements which Biomet Orthopaedics Switzerland had ordered to be manufactured in Germany (e.g., for the Chinese market). In June 2018, the Darmstadt court dismissed Heraeus' request. Heraeus appealed the decision. Also in September 2017, Heraeus filed suit against Zimmer Biomet Deutschland in the court of first instance in Freiberg concerning the sale of the European Cements with certain changed raw materials. Heraeus seeks an injunction on the basis that the continued use of the product names for the European Cements is misleading for customers and thus an act of unfair competition. On June 29, 2018, the court in Freiberg, Germany dismissed Heraeus' request for an injunction prohibiting the marketing of the European Cements under their current names on the grounds that the same request had already been decided upon by the Frankfurt Decision which became final and binding. Heraeus has appealed this decision to the Court of Appeals in Karlsruhe, Germany. The appeals hearing is scheduled for December 2019.

United States: On September 8, 2014, Heraeus filed a complaint against a Biomet supplier, Esschem, Inc. ("Esschem"), in the U.S. District Court for the Eastern District of Pennsylvania. The lawsuit contained allegations that focused on two copolymer compounds that Esschem sold to Biomet, which Biomet incorporated into certain bone cement products that compete with Heraeus' bone cement products. The complaint alleged that Biomet helped Esschem to develop these copolymers, using Heraeus trade secrets that Biomet allegedly misappropriated. The complaint asserted a claim under the Pennsylvania Uniform Trade Secrets Act, as well as other various common law tort claims, all based upon the same trade secret misappropriation theory. Heraeus sought to enjoin

Esschem from supplying the copolymers to any third party and actual damages. The complaint also sought punitive damages, costs and attorneys' fees. Although Biomet was not a party to this lawsuit, Biomet agreed, at Esschem's request and subject to certain limitations, to indemnify Esschem for any liability, damages and legal costs related to this matter. On November 3, 2014, the court entered an order denying Heraeus' motion for a temporary restraining order. On June 30, 2016, the court entered an order denying Heraeus' request to give preclusive effect to the factual findings in the Frankfurt Decision. On June 6, 2017, the court entered an order denying Heraeus' motion to add Biomet as a party to the lawsuit. On January 26, 2018, the court entered an order granting Esschem's motion for summary judgment and dismissed all of Heraeus' claims with prejudice. On February 21, 2018, Heraeus filed a notice of appeal to the U.S. Court of Appeals for the Third Circuit, which heard oral argument on the appeal on October 23, 2018. On June 21, 2019, the Third Circuit partially reversed the decision of the U.S. District Court for the Eastern District of Pennsylvania granting Esschem summary judgment and remanded the case back to the lower court. On July 5, 2019, Esschem filed a petition in the Third Circuit for rehearing *en banc* and a motion in the alternative to certify a question of state law to the Supreme Court of Pennsylvania, which remained pending as of July 31, 2019.

On December 7, 2017, Heraeus filed a complaint against Zimmer Biomet Holdings, Inc. and Biomet, Inc. in the U.S. District Court for the Eastern District of Pennsylvania alleging a single claim of trade secret misappropriation under the Pennsylvania Uniform Trade Secrets Act based on the same factual allegations as the Esschem litigation. On March 5, 2018, Heraeus filed an amended complaint adding a second claim of trade secret misappropriation under Pennsylvania common law. Heraeus seeks to enjoin the Zimmer Biomet parties from future use of the allegedly misappropriated trade secrets and recovery of unspecified damages for alleged past use. On April 18, 2018, the Zimmer Biomet parties filed a motion to dismiss both claims. On March 8, 2019, the court stayed the case pending the Third Circuit's decision in the Esschem case described above.

Other European Countries: Heraeus continues to pursue other related legal proceedings in Europe seeking various forms of relief, including injunctive relief and damages, against Biomet-related entities relating to the European Cements. On October 2, 2018, the Belgian Court of Appeal of Mons issued a judgment in favor of Heraeus relating to its request for past damages caused by the alleged misappropriation of its trade secrets, and an injunction preventing future sales of certain European Cements in Belgium (the "Belgian Decision"). We have appealed this judgment to the Belgian Supreme Court. Heraeus subsequently filed a suit in Belgium concerning the continued sale of the European Cements with certain changed materials. Like its suit in Germany, Heraeus seeks an injunction on the basis that the continued use of the product names for the European Cements is misleading for customers and thus an act of unfair competition. On May 7, 2019, the Liège Commercial Court issued a judgment that Zimmer Biomet failed to inform its hospital and surgeon customers of the changes made to the composition of the cement with certain changed materials and ordered, as a sole remedy, that Zimmer Biomet send letters to those customers, which we have done. We filed an appeal to the judgment.

On February 13, 2019, a Norwegian court of first instance issued a judgment in favor of Heraeus on its claim for misappropriation of trade secrets. The court awarded damages of 19,500,000 NOK, or approximately \$2.3 million, plus attorneys' fees, and issued an injunction, which is not final and thus not currently being enforced, preventing Zimmer Biomet Norway from marketing in Norway bone cements identified with the current product names and bone cements making use of the trade secrets which were acknowledged in the Frankfurt Decision. We have appealed the Norwegian judgment to the court of second instance.

Heraeus is pursuing damages and injunctive relief in France in an effort to prevent us from manufacturing, marketing and selling the European Cements (the "France Litigation"). The European Cements are manufactured at our facility in Valence, France. On December 11, 2018, a hearing was held in the France Litigation before the commercial court in Romans-sur-Isère. On May 23, 2019, the commercial court ruled in our favor. On July 12, 2019, Heraeus filed an appeal to the court of second instance in Grenoble, France. Although we are vigorously defending the France Litigation, the ultimate outcome is uncertain. An adverse ruling in the France Litigation could have a material adverse effect on our business, financial condition and results of operations.

We have accrued an estimated loss relating to the collective European trade secret litigation, including estimated legal costs to defend. Damages relating to the Frankfurt Decision are subject to separate proceedings, and the Belgian court appointed an expert to determine the amount of damages related to the Belgian Decision. Thus, it is reasonably possible that our estimate of the loss we may incur may change in the future. Although we are vigorously defending these lawsuits, their ultimate resolution is uncertain.

Stryker patent infringement lawsuit: On December 10, 2010, Stryker Corporation and related entities ("Stryker") filed suit against us in the U.S. District Court for the Western District of Michigan, alleging that certain of our Pulsavac[®] Plus Wound Debridement Products infringe three U.S. patents assigned to Stryker. The case was tried beginning on January 15, 2013, and on February 5, 2013, the jury found that we infringed certain claims of the subject patents. The jury awarded \$70.0 million in monetary damages for lost profits. The jury also found that we willfully infringed the subject patents. We filed multiple post-trial motions, including a motion seeking a new trial. On August 7, 2013, the trial court issued a ruling denying all of our motions and awarded treble damages and attorneys' fees to Stryker. We filed a notice of appeal to the Court of Appeals for the Federal Circuit to seek reversal of both the jury's verdict and the trial court's rulings on our post-trial motions. Oral argument before the Court of Appeals for the Federal Circuit took place on September 8, 2014. On December 19, 2014, the Federal Circuit issued a decision affirming the \$70.0 million lost profits award but reversed the willfulness finding, vacating the treble damages award and vacating and remanding the attorneys' fees award. We accrued an estimated loss of \$70.0 million related to this matter in the three month period ended

December 31, 2014. On January 20, 2015, Stryker filed a motion with the Federal Circuit for a rehearing *en banc*. On March 23, 2015, the Federal Circuit denied Stryker's petition. Stryker subsequently filed a petition for certiorari to the U.S. Supreme Court. In July 2015, we paid the final lost profits award of \$90.3 million, which includes the original \$70.0 million plus pre- and post-judgment interest and damages for sales that occurred post-trial but prior to our entry into a license agreement with Stryker. On October 19, 2015, the U.S. Supreme Court granted Stryker's petition for certiorari. Oral argument took place on February 23, 2016. On June 13, 2016, the U.S. Supreme Court issued its decision, vacating the judgment of the Federal Circuit and remanding the case for further proceedings related to the willfulness issue. On September 12, 2016, the Federal Circuit issued an opinion affirming the jury's willfulness finding and vacating and remanding the trial court's award of treble damages, its finding that this was an exceptional case and its award of attorneys' fees. The case was remanded back to the trial court. Oral argument on Stryker's renewed consolidated motion for enhanced damages and attorneys' fees took place on June 28, 2017. On July 12, 2017, the trial court issued an order reaffirming its award of treble damages, its finding that this was an exceptional case and its award of attorneys' fees. On July 24, 2017, we appealed the ruling to the Federal Circuit and obtained a supersedeas bond staying enforcement of the judgment pending appeal. Oral argument before the Federal Circuit took place on December 3, 2018 and the Federal Circuit affirmed the trial court's ruling in full on December 10, 2018. We accrued an estimated loss of approximately \$168.0 million related to the award of treble damages and attorneys' fees in the three-month period ended December 31, 2018. On January 23, 2019, we filed a petition with the Federal Circuit for a rehearing *en banc*. On March 19, 2019, the petition for rehearing *en banc* was denied. In late March 2019, we paid the outstanding judgment of approximately \$168.0 million. On June 17, 2019, we filed a petition for certiorari seeking U.S. Supreme Court review of the Federal Circuit's decision.

Putative Securities Class Action: On December 2, 2016, a complaint was filed in the U.S. District Court for the Northern District of Indiana (*Shah v. Zimmer Biomet Holdings, Inc. et al.*), naming us, one of our officers and two of our now former officers as defendants. On June 28, 2017, the plaintiffs filed a corrected amended complaint, naming as defendants, in addition to those previously named, current and former members of our Board of Directors, one additional officer, and the underwriters in connection with secondary offerings of our common stock by certain selling stockholders in 2016. On October 6, 2017, the plaintiffs voluntarily dismissed the underwriters without prejudice. On October 8, 2017, the plaintiffs filed a second amended complaint, naming as defendants, in addition to those current and former officers and Board members previously named, certain former stockholders of ours who sold shares of our common stock in secondary public offerings in 2016. We and our current and former officers and Board members named as defendants are sometimes hereinafter referred to as the "Zimmer Biomet Defendant group". The former stockholders of ours who sold shares of our common stock in secondary public offerings in 2016 are sometimes hereinafter referred to as the "Private Equity Fund Defendant group". The second amended complaint relates to a putative class action on behalf of persons who purchased our common stock between June 7, 2016 and November 7, 2016. The second amended complaint generally alleges that the defendants violated federal securities laws by making materially false and/or misleading statements and/or omissions about our compliance with U.S. Food and Drug Administration ("FDA") regulations and our ability to continue to accelerate our organic revenue growth rate in the second half of 2016. The defendants filed their respective motions to dismiss on December 20, 2017, plaintiffs filed their omnibus response to the motions to dismiss on March 13, 2018 and the defendants filed their respective reply briefs on May 18, 2018. On September 27, 2018, the court denied the Zimmer Biomet Defendant group's motion to dismiss in its entirety. The court granted the Private Equity Fund Defendant group's motion to dismiss, without prejudice. On October 9, 2018, the Zimmer Biomet Defendant group filed a motion (i) to amend the court's order on the motion to certify two issues for interlocutory appeal, and (ii) to stay proceedings pending appeal. On February 21, 2019, that motion was denied. On April 11, 2019, the plaintiffs moved for class certification. On June 20, 2019, the Zimmer Biomet Defendant group filed its response. The plaintiffs seek unspecified damages and interest, attorneys' fees, costs and other relief. We believe this lawsuit is without merit, and we and the individual defendants are defending it vigorously.

Shareholder Derivative Actions: On June 14 and July 29, 2019, two separate shareholder derivative actions, *Green v. Begley et al.* and *Detectives Endowment Association Annuity Fund v. Begley et al.*, were filed in the court of Chancery in the State of Delaware. The plaintiff in each action seeks to maintain the action purportedly on our behalf against certain of our current and former directors and officers (the "individual defendants") and certain former stockholders of ours who sold shares of our common stock in various secondary public offerings in 2016 (the "private equity fund defendants"). The plaintiff in each action alleges, among other things, breaches of fiduciary duties against the individual defendants and insider trading against two individual defendants and the private equity fund defendants, based on substantially the same factual allegations as the putative federal securities class action referenced above (*Shah v. Zimmer Biomet Holdings, Inc. et al.*). The plaintiffs do not seek damages from us, but instead request damages from the defendants of an unspecified amount on our behalf. The plaintiffs also seek attorneys' fees, costs and other relief. As of July 31, 2019, the parties were negotiating stipulations governing service of process and the timing for motions by the various defendants, including potential motions to stay, motions raising demand futility issues and substantive motions to dismiss some or all of the asserted claims.

U.S. International Trade Commission Investigation: On March 5, 2019, Heraeus filed a complaint with the U.S. International Trade Commission (“ITC”) against us and certain of our subsidiaries. The complaint alleges that Biomet misappropriated Heraeus’ trade secrets in the formulation and manufacture of two bone cement products now sold by Zimmer Biomet, both of which are imported from our Valence, France facility. Heraeus requested that the ITC institute an investigation and, after the investigation, issue a limited exclusion order and cease and desist orders. On April 5, 2019, the ITC ordered an investigation be instituted into whether we have committed an “unfair act” in the importation, sale for importation, or sale after importation of certain bone cement products. The investigation is ongoing, and an evidentiary hearing in front of an administrative law judge at the ITC is scheduled for January 2020. We cannot currently predict the outcome of this investigation.

FDA warning letters: In August 2018, we received a warning letter from the FDA related to observed non-conformities with current good manufacturing practice requirements of the FDA’s Quality System Regulation (21 CFR Part 820) (“QSR”) at our legacy Biomet manufacturing facility in Warsaw, Indiana (this facility is sometimes referred to in this report as the “Warsaw North Campus”). In May 2016, we received a warning letter from the FDA related to observed non-conformities with current good manufacturing practice requirements of the QSR at our facility in Montreal, Quebec, Canada. In September 2012, we received a warning letter from the FDA citing concerns relating to certain processes pertaining to products manufactured at our Ponce, Puerto Rico manufacturing facility. We have provided detailed responses to the FDA as to our corrective actions and will continue to work expeditiously to address the issues identified by the FDA during inspections in Warsaw, Montreal and Ponce. As of July 31, 2019, these warning letters remained pending. Until the violations cited in the pending warning letters are corrected, we may be subject to additional regulatory action by the FDA, as described more fully below. Additionally, requests for Certificates to Foreign Governments related to products manufactured at certain of our facilities may not be granted and premarket approval applications for Class III devices to which the QSR deviations at these facilities are reasonably related will not be approved until the violations have been corrected. In addition to responding to the warning letters described above, we are in the process of addressing various FDA Form 483 inspectional observations at certain of our manufacturing facilities. The ultimate outcome of these matters is presently uncertain. Among other available regulatory actions, the FDA may impose operating restrictions, including a ceasing of operations, at one or more facilities, enjoining and restraining certain violations of applicable law pertaining to medical devices and assessing civil or criminal penalties against our officers, employees or us. The FDA could also issue a corporate warning letter, a recidivist warning letter or a consent decree of permanent injunction. The FDA may also recommend prosecution by the U.S. Department of Justice (“DOJ”). Any adverse regulatory action, depending on its magnitude, may restrict us from effectively manufacturing, marketing and selling our products and could have a material adverse effect on our business, financial condition and results of operations.

Deferred Prosecution Agreement (“DPA”) relating to U.S. Foreign Corrupt Practices Act (“FCPA”) matters: On January 12, 2017, we resolved previously-disclosed FCPA matters involving Biomet and certain of its subsidiaries. As part of the settlement, (i) Biomet resolved matters with the U.S. Securities and Exchange Commission (the “SEC”) through an administrative cease-and-desist order (the “Order”); (ii) we entered into a DPA with the DOJ; and (iii) JERDS Luxembourg Holding S.à r.l. (“JERDS”), the direct parent company of Biomet 3i Mexico SA de CV and an indirect, wholly-owned subsidiary of Biomet, entered into a plea agreement (the “Plea Agreement”) with the DOJ. The conduct underlying these resolutions occurred prior to our acquisition of Biomet.

Pursuant to the terms of the Order, Biomet resolved claims with the SEC related to violations of the books and records, internal controls and anti-bribery provisions of the FCPA by disgorging profits to the U.S. government in an aggregate amount of approximately \$6.5 million, inclusive of pre-judgment interest, and paying a civil penalty in the amount of \$6.5 million (collectively, the “Civil Settlement Payments”). We also agreed to pay a criminal penalty of approximately \$17.5 million (together with the Civil Settlement Payments, the “Settlement Payments”) to the U.S. government pursuant to the terms of the DPA. We made the Settlement Payments in January 2017 and, as previously disclosed, had accrued, as of June 24, 2015, the closing date of the Biomet merger, an amount sufficient to cover this matter.

Under the DPA, which has a term of three years, the DOJ agreed to defer criminal prosecution of us in connection with the charged violation of the internal controls provision of the FCPA as long as we comply with the terms of the DPA. In addition, we are subject to oversight by an independent compliance monitor, who was appointed effective as of August 7, 2017. The monitorship may remain in place until August 7, 2020. If we remain in compliance with the DPA during its term, the charges against us will be dismissed with prejudice. The term of the DPA and monitorship may be extended for up to one additional year at the DOJ’s discretion. In addition, under its Plea Agreement with the DOJ, JERDS pleaded guilty on January 13, 2017 to aiding and abetting a violation of the books and records provision of the FCPA. In light of the DPA we entered into, JERDS paid only a nominal assessment and no criminal penalty.

If we do not comply with the terms of the DPA, we could be subject to prosecution for violating the internal controls provisions of the FCPA and the conduct of Biomet and its subsidiaries described in the DPA, which conduct pre-dated our acquisition of Biomet, as well as any new or continuing violations. We could also be subject to exclusion by the Office of Inspector General of the Department of Health and Human Services (“OIG”) from participation in federal healthcare programs, including Medicaid and

Medicare. Any of these events could have a material adverse effect on our business, financial condition, results of operations and cash flows.

OIG subpoena: In June 2017, we received a subpoena from the OIG. The subpoena requests that we produce a variety of records primarily related to our healthcare professional consulting arrangements (including in the areas of medical education, product development, and clinical research) for the period spanning January 1, 2010 to the present. The subpoena does not indicate the nature of the OIG's investigation beyond reference to possible false or otherwise improper claims submitted for payment. We are in the process of responding to the subpoena. We cannot currently predict the outcome of this investigation.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with the interim condensed consolidated financial statements and corresponding notes included elsewhere in this Form 10-Q. Certain percentages presented in this discussion and analysis are calculated from the underlying whole-dollar amounts and, therefore, may not recalculate from the rounded numbers used for disclosure purposes.

Executive Level Overview

Results for the Three and Six Month Periods ended June 30, 2019

Net sales declined by 0.9 percent and 1.5 percent in the three and six month periods ended June 30, 2019, compared to the same prior year periods. The decline was driven by declines in pricing and the negative impacts from changes in foreign currency exchange rates, partially offset by strong volume/mix in our Knees, Hips and S.E.T (Surgical, Sports Medicine, Extremities and Trauma) product categories.

Our net earnings declined in the three month period ended June 30, 2019, but increased in the six month period ended June 30, 2019, when compared to the same prior year periods. The decline in the three month period was driven by a \$70.1 million IPR&D intangible asset impairment on certain IPR&D projects that we terminated. Additionally, we recognized a \$20.8 million charge related to the termination of a raw material supply agreement. These expenses were partially offset by lower quality remediation and acquisition, integration and related expenses in the three month period ended June 30, 2019, compared to the same prior year period. Additionally, interest expense, net, declined \$15.6 million in the three month period ended June 30, 2019, compared to the same prior year period, due to hedging strategies that have lowered our effective interest rate and lower average outstanding debt balances. Our net earnings increased in the six month period ended June 30, 2019 when compared to the same prior year period. In the six month period ended June 30, 2019, lower quality remediation expenses, acquisition, integration and related expenses and interest expense, net, when compared to the same prior year period, along with a \$23.5 million gain related to a litigation settlement in the first quarter of 2019, more than offset the additional charges related to the IPR&D intangible asset impairment and raw material supply agreement termination that were recognized in the second quarter of 2019.

2019 Outlook

2019 marks the second year of our two-year turnaround effort since the appointment of a new Chief Executive Officer in December 2017. In late 2018 and early 2019, we had various product launches in our Knees product category, which we anticipate will drive improving commercial momentum, especially in the second half of 2019. We estimate the change in sales in 2019 compared to 2018 will be in a range of flat to positive 0.5 percent. This range includes estimated negative effects of changes in foreign currency exchange rates of 1.25 percent to 1.75 percent. We estimate the negative effects of foreign currency exchange rates will be much smaller in the second half of the year compared to the first half of the year.

In 2019, we expect our net earnings to increase significantly compared to the net loss recognized in 2018. In 2018, we incurred a net loss due to significant goodwill and intangible asset impairments and litigation charges. At this point in time based upon information known or knowable by us, we do not expect to incur similar significant charges in 2019. We expect our costs of products sold will continue to reflect costs associated with our quality remediation efforts. We anticipate continuing to make investments in operating expenses for R&D, salesforce specialization, and to support our new product launches. However, we expect expenses related to our acquisition and integration activities and quality remediation will decline as we complete these projects during 2019. We believe that our interest expense, net, will continue to decline throughout the year when compared to the same prior year periods due to lower anticipated debt levels.

Results of Operations

We analyze sales by three geographies, the Americas, EMEA and Asia Pacific, and by the following product categories: Knees, Hips, S.E.T., Spine & CMF, Dental and Other. This sales analysis differs from our reportable operating segments, which are based upon our senior management organizational structure and how we allocate resources towards achieving operating profit goals. We analyze sales by geography because the underlying market trends in any particular geography tend to be similar across product categories and because we primarily sell the same products in all geographies. Our business is seasonal in nature to some extent, as many of our products are used in elective procedures, which typically decline during the summer months and can increase at the end of the year once annual deductibles have been met on health insurance plans.

Net Sales by Geography

The following tables present our net sales by geography and the components of the percentage changes (dollars in millions):

	Three Months Ended		% Inc / (Dec)	Volume / Mix	Price	Foreign Exchange
	June 30,					
	2019	2018				
Americas	\$ 1,214.3	\$ 1,216.3	(0.2) %	3.0 %	(2.9) %	(0.3) %
EMEA	438.0	457.7	(4.3)	4.5	(2.6)	(6.2)
Asia Pacific	336.3	333.6	0.8	6.8	(2.1)	(3.9)
Total	\$ 1,988.6	\$ 2,007.6	(0.9)	3.9	(2.7)	(2.1)

	Six Months Ended		% Inc / (Dec)	Volume / Mix	Price	Foreign Exchange
	June 30,					
	2019	2018				
Americas	\$ 2,408.4	\$ 2,424.4	(0.7) %	2.5 %	(2.9) %	(0.3) %
EMEA	901.9	954.2	(5.5)	3.9	(2.2)	(7.2)
Asia Pacific	653.8	646.6	1.1	7.3	(2.2)	(4.0)
Total	\$ 3,964.1	\$ 4,025.2	(1.5)	3.6	(2.6)	(2.5)

“Foreign Exchange,” as used in the tables in this report, represents the effect of changes in foreign currency exchange rates on sales.

Net Sales by Product Category

The following tables present our net sales by product category and the components of the percentage changes (dollars in millions):

	Three Months Ended		% Inc / (Dec)	Volume / Mix	Price	Foreign Exchange
	June 30,					
	2019	2018				
Knees	\$ 703.5	\$ 703.0	0.1 %	5.7 %	(3.2) %	(2.4) %
Hips	479.4	486.9	(1.5)	4.2	(3.3)	(2.4)
S.E.T.	444.4	433.8	2.5	5.6	(1.3)	(1.8)
Spine & CMF	185.9	198.2	(6.2)	(2.2)	(2.7)	(1.3)
Dental	106.5	106.9	(0.3)	2.9	(1.2)	(2.0)
Other	68.9	78.8	(12.6)	(6.0)	(4.9)	(1.7)
Total	\$ 1,988.6	\$ 2,007.6	(0.9)	3.9	(2.7)	(2.1)

	Six Months Ended		% Inc / (Dec)	Volume / Mix	Price	Foreign Exchange
	June 30,					
	2019	2018				
Knees	\$ 1,397.6	\$ 1,416.3	(1.3) %	4.6 %	(3.1) %	(2.8) %
Hips	963.6	978.9	(1.6)	4.5	(3.2)	(2.9)
S.E.T.	884.3	876.1	0.9	4.3	(1.3)	(2.1)
Spine & CMF	368.7	381.3	(3.3)	0.8	(2.6)	(1.5)
Dental	211.0	214.5	(1.6)	2.1	(1.4)	(2.3)
Other	138.9	158.1	(12.2)	(6.3)	(3.8)	(2.1)
Total	\$ 3,964.1	\$ 4,025.2	(1.5)	3.6	(2.6)	(2.5)

The following table presents our net sales by geography for our Knees and Hips product categories, which represent our most significant product categories (dollars in millions):

	<u>Three Months Ended June 30,</u>		<u>% Inc / (Dec)</u>	<u>Six Months Ended June 30,</u>		<u>% Inc / (Dec)</u>
	<u>2019</u>	<u>2018</u>		<u>2019</u>	<u>2018</u>	
Knees						
<i>Americas</i>	\$ 414.5	\$ 408.1	1.6 %	\$ 823.7	\$ 825.3	(0.2) %
<i>EMEA</i>	163.4	170.8	(4.3)	339.1	359.7	(5.7)
<i>Asia Pacific</i>	125.6	124.1	1.2	234.8	231.3	1.5
<i>Total</i>	<u>\$ 703.5</u>	<u>\$ 703.0</u>	0.1	<u>\$ 1,397.6</u>	<u>\$ 1,416.3</u>	(1.3)
Hips						
<i>Americas</i>	\$ 253.3	\$ 250.0	1.3 %	\$ 500.4	\$ 497.8	0.5 %
<i>EMEA</i>	125.9	133.8	(5.9)	259.0	276.0	(6.1)
<i>Asia Pacific</i>	100.2	103.1	(2.8)	204.2	205.1	(0.5)
<i>Total</i>	<u>\$ 479.4</u>	<u>\$ 486.9</u>	(1.5)	<u>\$ 963.6</u>	<u>\$ 978.9</u>	(1.6)

Demand (Volume and Mix) Trends

Increased volume and changes in the mix of product sales had a positive effect of 3.9 percent and 3.6 percent on year-over-year sales during the three and six month periods ended June 30, 2019, respectively. Volume/mix growth was driven by recent product introductions, sales in key emerging markets and an aging population.

We believe long-term indicators point toward sustained growth driven by an aging global population, growth in emerging markets, obesity, proven clinical benefits, new material technologies, advances in surgical techniques and more active lifestyles, among other factors. In addition, demand for clinically proven premium products, patient specific devices and robotic surgical assistance are expected to continue to positively affect sales growth in markets that recognize the value of these advanced technologies.

Pricing Trends

Global selling prices had a negative effect of 2.7 percent and 2.6 percent on year-over-year sales during the three and six month periods ended June 30, 2019, respectively. The majority of countries in which we operate continue to experience pricing pressure from governmental healthcare cost containment efforts and from local hospitals and health systems.

Foreign Currency Exchange Rates

For the three and six month periods ended June 30, 2019, changes in foreign currency exchange rates had a negative effect of 2.1 percent and 2.5 percent, respectively, on year-over-year sales. If foreign currency exchange rates remain at levels consistent with recent rates, we estimate 2019 sales will be negatively affected by 1.25 percent to 1.75 percent.

Sales by Product Category

Knees

Knee sales increased minimally in the three month period ended June 30, 2019, but declined in the six month period ended June 30, 2019, when compared to the same prior year periods. Price declines and changes in foreign currency exchange rates negatively impacted sales, but were partially offset by volume/mix growth in all of our geographic operating segments. Knee sales volume/mix growth was led by Persona® The Personalized Knee System, the Oxford® Partial Knee and the ROSA® Knee System.

Hips

Hip sales declined in the three and six month periods ended June 30, 2019 when compared to the same prior year periods, primarily due to price declines and changes in foreign currency exchange rates, partially offset by volume/mix growth in all of our geographic operating segments. Hip sales volume/mix growth was led by our Taperloc® Complete Hip System, Arcos® Modular Hip System and G7® Acetabular System.

S.E.T.

Our S.E.T. product category sales increased in the three and six month periods ended June 30, 2019 when compared to the same prior year periods, primarily due to supply stability, salesforce specialization and new product launches, partially offset by changes in foreign currency exchange rates and price declines.

Spine and CMF

Spine and CMF sales declined in the three and six month periods ended June 30, 2019 when compared to the same prior year periods, primarily due to price declines, changes in foreign currency exchange rates, and ongoing sales channel consolidation, partially offset by continuing strong sales of our Thoracic products.

Dental

Dental sales declined in the three and six month periods ended June 30, 2019 when compared to the same prior year periods mostly due to changes in foreign exchange rates. Volume/mix growth in our Dental product category has improved from recent years due to investing resources in priority areas and other operational improvements.

Expenses as a Percentage of Net Sales

	Three Months Ended			% Inc / (Dec)	Six Months Ended		
	June 30,				June 30,		% Inc / (Dec)
	2019	2018			2019	2018	
Cost of products sold, excluding intangible asset amortization	29.2 %	29.1 %	0.1 %	28.6 %	28.8 %	(0.2)%	
Intangible asset amortization	7.4	7.4	-	7.3	7.5	(0.2)	
Research and development	5.6	4.9	0.7	5.4	4.8	0.6	
Selling, general and administrative	42.3	39.4	2.9	41.3	39.6	1.7	
Intangible asset impairment	3.5	-	3.5	1.8	-	1.8	
Acquisition, integration and related	0.5	2.5	(2.0)	0.5	2.4	(1.9)	
Quality remediation	1.1	1.9	(0.8)	1.1	2.0	(0.9)	
Operating profit	10.3	14.7	(4.4)	14.0	14.9	(0.9)	

The minimal increase in cost of products sold as a percentage of net sales for the three month period ended June 30, 2019 compared to the same prior year period was primarily due to a \$20.8 million charge incurred to terminate a long-term raw material supply agreement in the 2019 period as well as the effects of lower average selling prices and higher manufacturing costs. These unfavorable items were mostly offset by the effects of our hedging program, lower excess and obsolete inventory charges and lower royalty expense. We recognized hedge gains of \$7.4 million in the three month period ended June 30, 2019 compared to hedge losses of \$10.5 million in the same prior year period. For derivatives which qualify as hedges of future cash flows, the effective portion of changes in fair value is temporarily recorded in other comprehensive income and then recognized in cost of products sold when the hedged items affect earnings. The reduction in royalty expense was the result of an agreement we entered into on April 1, 2019. Under the agreement, we paid \$192.5 million to buy out certain licensing arrangements from an unrelated third party. This new agreement and the related payment replace the variable royalty payments that otherwise would have been due under the terms of previous licensing arrangements through 2029. The payment was recorded as an intangible asset and will be amortized through 2029.

Cost of products sold as a percentage of net sales decreased minimally in the six month period ended June 30, 2019 compared to the same prior year period. The drivers of the decrease were the same favorable and unfavorable items as discussed for the three month period ended June 30, 2019. However, the \$20.8 million charge to terminate the long-term raw material supply agreement had a lesser negative effect on costs of products sold as a percentage of sales in the six month period ended June 30, 2019 simply due to including the full year-to-date amounts in the ratio.

Intangible asset amortization expense declined in the three and six month periods ended June 30, 2019 when compared to the same prior year period due to certain intangible assets from past acquisitions being fully amortized, partially offset by additional amortization from the agreement to buy out certain licensing arrangements we entered into on April 1, 2019.

Research and development (“R&D”) expenses and R&D expenses as a percentage of net sales increased in the three and six month periods ended June 30, 2019 compared to the same prior year period, primarily due to increased investment in our Knee

product pipeline, costs associated with the European Union Medical Device Regulation and a patent license we acquired to be used in R&D activities that was expensed immediately.

Selling, general and administrative (“SG&A”) expenses and SG&A expenses as a percentage of net sales increased in the three and six month periods ended June 30, 2019 when compared to the same prior year periods. The primary drivers of the increased expense were investments in preparation for new product launches, higher expenses related to legal entity, distribution and manufacturing restructuring, and higher litigation-related charges from commercial and product liability matters. In the six month period, these increases were partially offset by a \$23.5 million gain recognized in the first quarter of 2019 related to a litigation settlement.

In the second quarter of 2019, we recognized a \$70.1 million IPR&D intangible asset impairment on certain IPR&D projects that we terminated.

Acquisition, integration and related expenses declined in the three and six month periods ended June 30, 2019 compared to the same prior year periods due to the natural regression of integration activities related to the 2015 Biomet merger and other various acquisitions that were consummated in 2016. Similarly, our quality remediation expenses have declined as projects related to those efforts are completed.

Other Expense, Net, Interest Income, Interest Expense, Net, and Income Taxes

In the three and six month periods ended June 30, 2019 and 2018, other expense, net, was primarily related to certain components of pension expense, changes to the fair value of our equity investments and remeasuring monetary assets and liabilities denominated in a foreign currency other than an entity’s functional currency, partially offset by foreign currency forward exchange contracts we entered into to mitigate any gain or loss.

Interest expense, net, decreased in the three and six month periods ended June 30, 2019, compared to the same prior year periods, primarily due to hedging strategies that have lowered our effective interest rate and lower average outstanding debt balances during the 2019 periods resulting from debt repayments throughout 2018 and year-to-date 2019.

In the three and six month periods ended June 30, 2019, our effective tax rate (“ETR”) was 6.0 percent and 12.5 percent, respectively, compared to 15.1 percent and 18.2 percent in the three and six month periods ended June 30, 2018, respectively. The decline in ETR in the three month period ended June 30, 2019 compared to the same prior year period was primarily due to the favorable resolution of certain tax audits. The decline in ETR in the six month period ended June 30, 2019 compared to the same prior year period was primarily due to the favorable resolution of certain tax audits as well as a release of uncertain tax positions due to emerging foreign tax guidance in the first quarter. Absent discrete tax events, we expect our future ETR will continue to be lower than the U.S. corporate income tax rate of 21.0 percent due to our mix of earnings between U.S. and foreign locations, which have lower corporate income tax rates. Our ETR in future periods could also potentially be impacted by: changes in our mix of pre-tax earnings; changes in tax rates, tax laws or their interpretation, including the European Union rules on state aid; the outcome of various federal, state and foreign audits; and the expiration of certain statutes of limitations. Currently, we cannot reasonably estimate the impact of these items on our financial results.

Segment Operating Profit

(dollars in millions)	Net Sales		Operating Profit		Operating Profit as a Percentage of Net Sales	
	Three Months Ended		Three Months Ended		Three Months Ended	
	June 30,		June 30,		June 30,	
	2019	2018	2019	2018	2019	2018
Americas	\$ 989.1	\$ 979.3	\$ 538.8	\$ 530.1	54.5 %	54.1 %
EMEA	383.2	400.0	116.9	117.5	30.5	29.4
Asia Pacific	321.9	319.2	114.8	109.7	35.7	34.4

(dollars in millions)	Net Sales		Operating Profit		Operating Profit as a Percentage of Net Sales	
	Six Months Ended		Six Months Ended		Six Months Ended	
	June 30,		June 30,		June 30,	
	2019	2018	2019	2018	2019	2018
Americas	\$ 1,964.5	\$ 1,970.4	\$ 1,045.9	\$ 1,062.3	53.2 %	53.9 %
EMEA	789.1	832.6	243.3	256.7	30.8	30.8
Asia Pacific	625.6	618.1	218.8	211.8	35.0	34.3

In the Americas, operating profit as a percentage of net sales increased in the three month period ended June 30, 2019 compared to the same prior year period, but decreased in the six month period ended June 30, 2019. The increase in the three month period was primarily due to improved sales volume/mix and controlled spending. In the six month period, the decline was primarily due to price declines and higher excess and obsolete inventory charges. In EMEA, operating profit as a percentage of net sales increased in the three month period ended June 30, 2019 compared to the same prior year period and was flat in the six month period ended June 30, 2019. The increase in the three month period was primarily due to higher sales volume/mix and gains recognized related to our hedging program. In Asia Pacific, operating profit as a percentage of net sales increased in the three and six month periods ended June 30, 2019 due primarily to volume/mix net sales growth and gains recognized related to our hedging program.

Non-GAAP Operating Performance Measures

We use financial measures that differ from financial measures determined in accordance with GAAP to evaluate our operating performance. These non-GAAP financial measures exclude the impact of certain inventory and manufacturing-related charges including charges to terminate a long-term raw material supply agreement and discontinue certain product lines; intangible asset amortization; intangible asset impairment; acquisition, integration and related expenses; quality remediation expenses; certain litigation gains and charges; expenses to comply with the new European Union Medical Device Regulation; other charges; any related effects on our income tax provision associated with these items; and other certain tax adjustments. We use these non-GAAP financial measures internally to evaluate the performance of the business. Additionally, we believe these non-GAAP measures provide meaningful incremental information to investors to consider when evaluating our performance. We believe these measures offer the ability to make period-to-period comparisons that are not impacted by certain items that can cause dramatic changes in reported income but that do not impact the fundamentals of our operations. The non-GAAP measures enable the evaluation of operating results and trend analysis by allowing a reader to better identify operating trends that may otherwise be masked or distorted by these types of items that are excluded from the non-GAAP measures. In addition, adjusted diluted earnings per share is used as a performance metric in our incentive compensation programs.

The following are reconciliations from our GAAP net earnings and diluted earnings per share to our non-GAAP adjusted net earnings and non-GAAP adjusted diluted earnings per share used for internal management purposes (in millions, except per share amounts):

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2019	2018	2019	2018
Net Earnings of Zimmer Biomet Holdings, Inc.	\$ 133.7	\$ 185.0	\$ 379.8	\$ 359.7
Inventory and manufacturing-related charges ⁽¹⁾	34.1	12.5	36.1	19.7
Intangible asset amortization ⁽²⁾	146.9	149.5	290.3	300.3
Intangible asset impairment ⁽³⁾	70.1	-	70.1	-
Acquisition, integration and related ⁽⁴⁾	10.5	50.5	21.2	96.5
Quality remediation ⁽⁵⁾	23.4	45.4	43.1	91.6
Litigation ⁽⁶⁾	7.0	(4.2)	5.2	1.5
Litigation settlement gain ⁽⁷⁾	-	-	(23.5)	-
European Union Medical Device Regulation ⁽⁸⁾	5.1	0.5	6.7	0.8
Other charges ⁽⁹⁾	42.8	11.3	64.9	21.9
Taxes on above items ⁽¹⁰⁾	(69.8)	(44.7)	(100.6)	(95.4)
Other certain tax adjustments ⁽¹¹⁾	(6.1)	(13.8)	(11.4)	(13.7)
Adjusted Net Earnings	\$ 397.7	\$ 392.0	\$ 781.9	\$ 782.9

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2019	2018	2019	2018
Diluted Earnings Per Share	\$ 0.65	\$ 0.90	\$ 1.84	\$ 1.76
Inventory and manufacturing-related charges ⁽¹⁾	0.17	0.06	0.18	0.10
Intangible asset amortization ⁽²⁾	0.71	0.73	1.41	1.47
Intangible asset impairment ⁽³⁾	0.34	-	0.34	-
Acquisition, integration and related ⁽⁴⁾	0.05	0.25	0.10	0.47
Quality remediation ⁽⁵⁾	0.11	0.22	0.21	0.45
Litigation ⁽⁶⁾	0.03	(0.02)	0.03	0.01
Litigation settlement gain ⁽⁷⁾	-	-	(0.11)	-
European Union Medical Device Regulation ⁽⁸⁾	0.02	-	0.03	-
Other charges ⁽⁹⁾	0.21	0.06	0.32	0.11
Taxes on above items ⁽¹⁰⁾	(0.34)	(0.22)	(0.50)	(0.47)
Other certain tax adjustments ⁽¹¹⁾	(0.02)	(0.06)	(0.05)	(0.07)
Adjusted Diluted Earnings Per Share	\$ 1.93	\$ 1.92	\$ 3.80	\$ 3.83

- (1) In the 2019 periods, inventory and manufacturing-related charges relate to a \$20.8 million charge incurred to terminate a long-term raw material supply agreement, excess and obsolete inventory charges on certain product lines we intend to discontinue and other inventory and manufacturing-related charges. The 2018 charges primarily relate to the excess and obsolete inventory charges on certain product lines we intend to discontinue and other inventory and manufacturing-related charges. The excess and obsolete inventory charges on certain product lines are driven by acquisitions where there are competing product lines and we have plans to discontinue one of the competing product lines.
- (2) We exclude intangible asset amortization from our non-GAAP financial measures because we internally assess our performance against our peers without this amortization. Due to various levels of acquisitions among our peers, intangible asset amortization can vary significantly from company to company.

- (3) In the second quarter of 2019, we recognized \$70.1 million of IPR&D intangible asset impairment due to the termination of certain IPR&D projects.
- (4) The acquisition, integration and related expenses we have excluded from our non-GAAP financial measures resulted from our merger with Biomet in 2015 and various acquisitions we consummated in 2016. The acquisition, integration and related expenses include the following types of expenses:
 - Consulting and professional fees related to third-party integration consulting performed in a variety of areas, such as tax, compliance, logistics and human resources, and legal fees related to the consummation of mergers and acquisitions.
 - Employee termination benefits related to terminating employees with overlapping responsibilities in various areas of our business.
 - Dedicated project personnel expenses which include the salary, benefits, travel expenses and other costs directly associated with employees who are 100 percent dedicated to our integration of acquired businesses and employees who have been notified of termination, but are continuing to work on transferring their responsibilities.
 - Contract termination expenses related to terminated contracts, primarily with sales agents and distribution agreements.
 - Other various expenses to relocate facilities, integrate information technology, losses incurred on assets resulting from the applicable acquisition, and other various expenses.
- (5) We are addressing inspectional observations on Form 483 and a warning letter issued by the FDA following its inspections of our Warsaw North Campus facility, among other matters. This quality remediation has required us to devote significant financial resources and is for a discrete period of time. The majority of the expenses are related to consultants who are helping us to update previous documents and redesign certain processes.
- (6) We are involved in routine patent litigation, product liability litigation, commercial litigation and other various litigation matters. We review litigation matters from both a qualitative and quantitative perspective to determine if excluding the losses or gains will provide our investors with useful incremental information. Litigation matters can vary in their characteristics, frequency and significance to our operating results. The litigation charges and gains excluded from our non-GAAP financial measures in the periods presented relate to product liability matters where we have received numerous claims on specific products. In regards to these product liability matters, due to the complexities involved and claims filed in multiple districts, the expenses associated with these matters are significant to our operating results. Once the litigation matter has been excluded from our non-GAAP financial measures in a particular period, any additional expenses or gains from changes in estimates are also excluded, even if they are not significant, to ensure consistency in our non-GAAP financial measures from period-to-period.
- (7) In the first quarter of 2019, we settled a patent infringement lawsuit out of court, and the other party agreed to pay us an upfront, lump-sum amount for a non-exclusive license to the patent.
- (8) The European Union Medical Device Regulation imposes significant additional premarket and postmarket requirements. The new regulations provide a transition period until May 2020 for currently-approved medical devices to meet the additional requirements. For certain devices, this transition period can be extended until May 2024. We are excluding from our non-GAAP financial measures the incremental costs incurred to establish initial compliance with the regulations related to our currently-approved medical devices. The incremental costs primarily include third-party consulting necessary to supplement our internal resources.
- (9) We have incurred other various expenses from specific events or projects that we consider highly variable or that have a significant impact to our operating results that we have excluded from our non-GAAP measures. These include costs related to legal entity, distribution and manufacturing restructuring as well as our costs of complying with our Deferred Prosecution Agreement (“DPA”) with the U.S. government related to certain Foreign Corrupt Practices Act matters involving Biomet and certain of its subsidiaries. Under the DPA, which has a three-year term, we are subject to oversight by an independent compliance monitor, which monitorship commenced in August 2017. The excluded costs include the fees paid to the independent compliance monitor and to external legal counsel assisting in the matter.
- (10) Represents the tax effects on the previously specified items. The tax effect for the U.S. jurisdiction is calculated based on an effective rate considering federal and state taxes, as well as permanent items. For jurisdictions outside the U.S., the tax effect is calculated based upon the statutory rates where the items were incurred.
- (11) Other certain tax adjustments relate to various discrete tax period adjustments.

Liquidity and Capital Resources

Cash flows provided by operating activities were \$584.6 million in the six month period ended June 30, 2019, compared to \$883.8 million in the same prior year period. The decrease was primarily due to an approximate \$168 million payment on a patent infringement lawsuit as well as other product liability-related payments we made in the 2019 period. Additionally, in the prior year period, we continued to expand our sale of accounts receivable in certain countries which provided additional cash inflows, compared to the 2019 period where our sales of accounts receivable have not expanded significantly and therefore the incremental benefits to the period are less.

Cash flows used in investing activities were \$427.7 million in the six month period ended June 30, 2019, compared to \$195.3 million in the same prior year period. Instrument and property, plant and equipment additions reflected ongoing investments in our product portfolio and optimization of our manufacturing and logistics network. Additionally, we paid \$197.6 million to buy out certain licensing arrangements from unrelated third parties.

Cash flows used in financing activities were \$298.8 million in the six month period ended June 30, 2019, compared to \$729.0 million in the same prior year period. In the 2019 period, we borrowed \$200.0 million on U.S. Term Loan C and used those proceeds, along with cash on hand, to pay the remaining balance of \$225.0 million on U.S. Term Loan B. Additionally, we repaid \$200.0 million on U.S. Term Loan C in the 2019 period with cash generated from operations. In the 2018 period, we received net proceeds of \$749.5 million from the issuance of additional senior notes and borrowed \$400.0 million from our Multicurrency Revolving Facility to repay \$1,150.0 million of senior notes that became due on April 2, 2018. We repaid \$375.0 million of the Multicurrency Revolving Facility borrowings and also repaid \$225.0 million on a term loan in the 2018 period. In the 2019 period, we had net cash outflows of \$25.6 million related to our factoring programs caused by the timing differences of collections from customers and repayments to the financial institution to which we sold the collected receivables. The 2019 outflow was lower than the prior year based upon the timing of when receivable sales occurred in December of 2018 compared to December of 2017.

In February and May 2019, our Board of Directors declared a quarterly cash dividend of \$0.24 per share. We expect to continue paying cash dividends on a quarterly basis; however, future dividends are subject to approval of the Board of Directors and may be adjusted as business needs or market conditions change. Additionally, our debt facilities restrict the payment of dividends in certain circumstances.

In February 2016, our Board of Directors authorized a new \$1.0 billion share repurchase program effective March 1, 2016, with no expiration date. The previous program expired on February 29, 2016. As of June 30, 2019, all \$1.0 billion remained authorized.

We will continue to exercise disciplined capital allocation designed to drive stockholder value creation. We intend to use available cash for debt repayment, reinvestment in the business and dividends. If the right opportunities arise, we may also use available cash to pursue business development opportunities.

As discussed in Note 13 to our interim condensed consolidated financial statements included in Part I, Item 1 of this report, the IRS has issued proposed adjustments for years 2005 through 2012, reallocating profits between certain of our U.S. and foreign subsidiaries. We have disputed these proposed adjustments and intend to continue to vigorously defend our positions. Although the ultimate timing for resolution of the disputed tax issues is uncertain, future payments may be significant to our operating cash flows.

Also, as discussed in Note 17 to our interim condensed consolidated financial statements included in Part I, Item 1 of this report, as of June 30, 2019, a short-term liability of \$19.5 million and a long-term liability of \$54.0 million related to Durom Cup product liability claims were recorded on our condensed consolidated balance sheet. We expect to continue paying these claims over the next few years. We maintain insurance for product liability claims, subject to self-insurance retention requirements. We have recovered insurance proceeds from certain of our insurance carriers for Durom Cup-related claims. While we may recover additional insurance proceeds in the future for Durom Cup-related claims, we do not have a receivable recorded on our condensed consolidated balance sheet as of June 30, 2019 for any possible future insurance recoveries for these claims. As of June 30, 2019, we also had a liability of \$64.3 million related to Biomet metal-on-metal hip implant claims.

At June 30, 2019, our outstanding debt consisted of senior notes and term loans as follows (principal shown in U.S. Dollars in millions):

Type	Principal	Currency	Interest Rate	Maturity Date
Notes	\$ 500.0	U.S. Dollar	4.625	November 30, 2019
Notes	1,500.0	U.S. Dollar	2.700	April 1, 2020
Term	535.0	U.S. Dollar	Floating	December 14, 2020
Notes	450.0	U.S. Dollar	Floating	March 19, 2021
Notes	300.0	U.S. Dollar	3.375	November 30, 2021
Notes	750.0	U.S. Dollar	3.150	April 1, 2022
Term	108.7	Japanese Yen	0.635	September 27, 2022
Term	197.9	Japanese Yen	0.635	September 27, 2022
Notes	569.4	Euro	1.414	December 13, 2022
Notes	300.0	U.S. Dollar	3.700	March 19, 2023
Notes	2,000.0	U.S. Dollar	3.550	April 1, 2025
Notes	569.4	Euro	2.425	December 13, 2026
Notes	253.4	U.S. Dollar	4.250	August 15, 2035
Notes	317.8	U.S. Dollar	5.750	November 30, 2039
Notes	395.4	U.S. Dollar	4.450	August 15, 2045

We have a \$1.5 billion Multicurrency Revolving Facility that will mature on September 30, 2021. There were no outstanding borrowings under this facility as of June 30, 2019. We also have other available uncommitted credit facilities totaling \$51.7 million as of June 30, 2019.

We plan to use cash generated from operations to continue servicing our debt obligations through at least the remainder of this year. We have \$500.0 million principal amount of notes due November 30, 2019 and \$1.5 billion principal amount of notes due April 1, 2020. We believe we can satisfy these debt obligations with cash generated from our operations, by issuing new debt, or by borrowing on our Multicurrency Revolving Facility. We believe that our earnings, balance sheet and cash flows will allow us to obtain additional capital, if necessary, to satisfy these debt obligations.

For additional information on our debt, see Note 9 to our interim condensed consolidated financial statements included in Part I, Item 1 of this report.

We place our cash and cash equivalents in highly-rated financial institutions and limit the amount of credit exposure to any one entity. We invest only in high-quality financial instruments in accordance with our internal investment policy.

As of June 30, 2019, \$346.8 million of our cash and cash equivalents were held in jurisdictions outside of the U.S. Of this amount, \$94.3 million is denominated in U.S. Dollars and, therefore, bears no foreign currency translation risk. The balance of these assets is denominated in currencies of the various countries where we operate. We intend to repatriate at least \$5.1 billion of unremitted earnings in future years.

Our concentrations of credit risks with respect to trade accounts receivable is limited due to the large number of customers and their dispersion across a number of geographic areas and by frequent monitoring of the creditworthiness of the customers to whom credit is granted in the normal course of business. Substantially all of our trade receivables are concentrated in the public and private hospital and healthcare industry in the U.S. and internationally or with distributors or dealers who operate in international markets and, accordingly, are exposed to their respective business, economic and country-specific variables.

Management believes that cash flows from operations and available borrowings under the Multicurrency Revolving Facility are sufficient to meet our working capital, capital expenditure and debt service needs, as well as return cash to stockholders in the form of dividends and share repurchases. Should additional investment opportunities arise, we believe that our earnings, balance sheet and cash flows will allow us to obtain additional capital, if necessary.

Recent Accounting Pronouncements

Information pertaining to recent accounting pronouncements can be found in Note 2 to our interim condensed consolidated financial statements included in Part I, Item 1 of this report.

Critical Accounting Estimates

Our financial results are affected by the selection and application of accounting policies and methods. There were no changes in the three or six month periods ended June 30, 2019 to the application of critical accounting policies as described in our Annual Report on Form 10-K for the year ended December 31, 2018.

In the fourth quarter of 2018, we recognized a \$567.0 million goodwill impairment charge related to our EMEA reporting unit. The impairment charge represented the amount by which the reporting unit's carrying value exceeded its estimated fair value. We estimated the fair value of the reporting unit based on income and market approaches. Since the carrying value of this reporting unit was written down to its estimated fair value, future impairment could occur if the estimates used in the income and market approaches change. If our estimates of profitability in the reporting unit decline, the fair value estimate under the income approach will decline. If there are negative outlooks of the broader economic environment, comparable company valuation indicators may decline, which would cause our fair value estimate under the market approach to decline. The goodwill balance of our EMEA reporting unit was \$754.7 million at June 30, 2019.

Additionally, in our annual impairment test in the fourth quarter of 2018, our Dental reporting unit's fair value exceeded its carrying value by less than 5 percent. If our future operating results are below the estimations used for our impairment assessment, or there are negative impacts from the broader economic environment, then we may have to recognize goodwill impairment charges on this reporting unit in the future. The goodwill balance of our Dental reporting unit was \$386.8 million at June 30, 2019.

We have three other reporting units that have goodwill assigned to them. As of the date of our last goodwill impairment test, each of the three reporting unit's estimated fair value exceeded its carrying value by more than 25 percent.

Cautionary Note Regarding Forward-Looking Statements and Factors That May Affect Future Results

This quarterly report contains certain statements that are forward-looking statements within the meaning of federal securities laws. Forward-looking statements can be identified by the fact that they do not relate strictly to historical or current facts. When used in this report, the words "may," "will," "can," "should," "would," "could," "anticipate," "expect," "plan," "seek," "believe," "are confident that," "predict," "estimate," "potential," "project," "target," "forecast," "intend," "strategy," "future," "opportunity," "assume," "guide," "position," "continue" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are based on current beliefs, expectations and assumptions that are subject to significant risks, uncertainties and changes in circumstances that could cause actual results to differ materially from such forward-looking statements. These risks, uncertainties and changes in circumstances include, but are not limited to:

- compliance with the Deferred Prosecution Agreement entered into in January 2017;
- the possibility that the anticipated synergies and other benefits from mergers and acquisitions will not be realized, or will not be realized within the expected time periods;
- the risks and uncertainties related to our ability to successfully integrate the operations, products, employees and distributors of acquired companies;
- the effect of the potential disruption of management's attention from ongoing business operations due to integration matters related to mergers and acquisitions;
- the effect of mergers and acquisitions on our relationships with customers, vendors and lenders and on our operating results and business generally;
- the success of our quality and operational excellence initiatives, including our ongoing quality remediation efforts at our Warsaw North Campus facility;
- our ability to remediate matters identified in any inspectional observations or warning letters issued by the FDA, while continuing to satisfy the demand for our products;
- challenges relating to changes in and compliance with governmental laws and regulations affecting our U.S. and international businesses, including regulations of the FDA and foreign government regulators, such as more stringent requirements for regulatory clearance of our products;
- the outcome of government investigations;
- competition;
- pricing pressures;
- changes in customer demand for our products and services caused by demographic changes or other factors;
- the impact of healthcare reform measures, including the impact of the U.S. excise tax on medical devices if such tax is not further suspended or repealed;

- reductions in reimbursement levels by third-party payors and cost-containment efforts of healthcare purchasing organizations;
- dependence on new product development, technological advances and innovation;
- shifts in the product category or the regional sales mix of our products and services;
- supply and prices of raw materials and products;
- control of costs and expenses;
- our ability to obtain and maintain adequate intellectual property protection;
- our ability to form and implement alliances;
- changes in tax obligations arising from tax reform measures, including the European Union rules on state aid, or examinations by tax authorities;
- product liability and intellectual property litigation losses;
- our ability to retain the independent agents and distributors who market our products;
- our dependence on a limited number of suppliers for key raw materials and outsourced activities;
- changes in general industry and market conditions, including domestic and international growth rates;
- changes in general domestic and international economic conditions, including interest rate and currency exchange rate fluctuations; and
- the impact of the ongoing financial and political uncertainty on countries in the Euro zone on our ability to collect accounts receivable in affected countries.

Our Annual Report on Form 10-K for the year ended December 31, 2018 and this report contain detailed discussions of these and other important factors under the heading “Risk Factors.” You should understand that it is not possible to predict or identify all factors that could cause actual results to differ materially from forward-looking statements. Consequently, you should not consider any list or discussion of such factors to be a complete set of all potential risks or uncertainties.

Forward-looking statements speak only as of the date they are made and we expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Readers of this report are cautioned not to rely on these forward-looking statements since there can be no assurance that these forward-looking statements will prove to be accurate. This cautionary statement is applicable to all forward-looking statements contained in this report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes from the information provided in our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures. We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (“Exchange Act”)) that are designed to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. Because of inherent limitations, disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable, and not absolute, assurance that the objectives of disclosure controls and procedures are met.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control Over Financial Reporting. There were no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. As previously reported, on January 1, 2019 we adopted ASU 2016-02 – Leases (Topic 842). This ASU requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. As a result, we added additional internal controls to comply with the new standard in the first quarter of 2019.

Part II – Other Information

Item 1. Legal Proceedings

Information pertaining to legal proceedings can be found in Note 17 to our interim condensed consolidated financial statements included in Part I, Item 1 of this report and is incorporated herein by reference.

Item 1A. Risk Factors

Except as set forth below, there have been no material changes in our risk factors from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018. The risk factor set forth below replaces in its entirety the risk factor with the same title:

We incurred substantial additional indebtedness in connection with previous mergers and acquisitions and may not be able to meet all of our debt obligations.

We incurred substantial additional indebtedness in connection with previous mergers and acquisitions. At June 30, 2019, our total indebtedness was \$8.7 billion, as compared to \$1.4 billion at December 31, 2014. As of June 30, 2019, our debt service obligations, comprised of principal and interest (excluding leases and equipment notes), during the next 12 months are expected to be \$2.2 billion. As a result of the increase in our debt, demands on our cash resources have increased. The increased level of debt could, among other things:

- require us to dedicate a large portion of our cash flow from operations to the servicing and repayment of our debt, thereby reducing funds available for working capital, capital expenditures, research and development expenditures and other general corporate requirements;
- limit our ability to obtain additional financing to fund future working capital, capital expenditures, research and development expenditures and other general corporate requirements;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- restrict our ability to make strategic acquisitions or dispositions or to exploit business opportunities;
- place us at a competitive disadvantage compared to our competitors that have less debt;
- adversely affect our credit rating, with the result that the cost of servicing our indebtedness might increase and our ability to obtain surety bonds could be impaired;
- adversely affect the market price of our common stock; and
- limit our ability to apply proceeds from a future offering or asset sale to purposes other than the servicing and repayment of debt.

In addition, the annual interest rates applicable to certain of our debt obligations are based on a fluctuating rate of interest determined by reference to the London Interbank Offered Rate (“LIBOR”). Any increase in interest rates applicable to our debt obligations would increase our cost of borrowing and could adversely affect our financial position, results of operations or cash flows. Further, in July 2017, the U.K.’s Financial Conduct Authority, which regulates LIBOR, announced that it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR after 2021. In response to concerns regarding the future of LIBOR, the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee (“ARRC”) to identify alternatives to LIBOR. The ARRC has recommended a benchmark replacement waterfall to assist issuers in continued capital market entry while safeguarding against LIBOR’s discontinuation. The initial steps in the ARRC’s recommended provision reference variations of the Secured Overnight Financing Rate (“SOFR”). At this time, it is not possible to predict whether SOFR will attain market traction as a LIBOR replacement. Additionally, it is uncertain if LIBOR will cease to exist after calendar year 2021, or whether additional reforms to LIBOR may be enacted, or whether alternative reference rates will gain market acceptance as a replacement for LIBOR. At this time, all of our debt obligations that are based on LIBOR will mature before the end of 2021. We will continue to monitor the situation and address the potential reference rate changes in future debt obligations that we may incur. Accordingly, the potential effect of the phase-out or replacement of LIBOR on our cost of capital cannot yet be determined.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None

Item 3. Defaults Upon Senior Securities

None

Item 4. Mine Safety Disclosures

Not applicable

Item 5. Other Information

During the three month period ended June 30, 2019, the Audit Committee of our Board of Directors approved the engagement of PricewaterhouseCoopers LLP, our independent registered public accounting firm, to perform certain non-audit services. This disclosure is made pursuant to Section 10A(i)(2) of the Exchange Act, as added by Section 202 of the Sarbanes-Oxley Act of 2002.

Item 6. Exhibits

The following exhibits are filed or furnished as part of this report:

- 3.1 [Restated Certificate of Incorporation of Zimmer Biomet Holdings, Inc., dated June 24, 2015 \(incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed June 26, 2015\)](#)
- 3.2 [Restated By-Laws of Zimmer Biomet Holdings, Inc., effective June 24, 2015 \(incorporated by reference to Exhibit 3.3 to the Registrant's Current Report on Form 8-K filed June 26, 2015\)](#)
- 4.1 [Specimen Common Stock Certificate](#)
- 10.1 [First Amendment to Aircraft Time Sharing Agreement by and between Zimmer, Inc. and Bryan C. Hanson](#)
- 10.2 [Offer letter between Zimmer Biomet Holdings, Inc. and Suketu Upadhyay dated June 13, 2019 \(incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed June 19, 2019\)](#)
- 10.3 [Form of Change in Control Severance Agreement with Suketu Upadhyay \(incorporated by reference to Exhibit 10.11 to the Registrant's Annual Report on Form 10-K filed February 26, 2019\)](#)
- 10.4 [Form of Confidentiality, Non-Competition and Non-Solicitation Agreement with Suketu Upadhyay \(incorporated by reference to Exhibit 10.12 to the Registrant's Annual Report on Form 10-K filed February 26, 2019\)](#)
- 21 [List of Subsidiaries of Zimmer Biomet Holdings, Inc.](#)
- 31.1 [Certification pursuant to Rule 13a-14\(a\)/15d-14\(a\) of the Securities Exchange Act of 1934 of the Chief Executive Officer, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002](#)
- 31.2 [Certification pursuant to Rule 13a-14\(a\)/15d-14\(a\) of the Securities Exchange Act of 1934 of the Chief Financial Officer, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002](#)
- 32 [Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002](#)
- 101.INS XBRL Instance Document – The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document
- 101.SCH XBRL Taxonomy Extension Schema Document
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document

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.

ZIMMER BIOMET HOLDINGS, INC.

(Registrant)

Date: August 5, 2019

By: /s/ Suketu Upadhyay
Suketu Upadhyay
Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

ZQ|CERT#|COY|CLS|RGSTRY|ACCT#|TRANSTYPE|RUN#|TRANS#

ZIMMER BIOMET
 PO BOX 43984, Presidencia, MI 48968-3984
 MR. A. S. LAMM, E.
 DESIGNATION (IF ANY)
 A001 1
 A002 2
 A003 3
 A004 4

COMMON STOCK
PAR VALUE \$0.01

Certificate Number
ZQ00000000



ZIMMER BIOMET
ZIMMER BIOMET HOLDINGS, INC.
 INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

COMMON STOCK

Shares

 ****000000****

THIS CERTIFIES THAT

MR. SAMPLE & MRS. SAMPLE & MR. SAMPLE & MRS. SAMPLE

is the owner of

*****ZERO HUNDRED THOUSAND ZERO HUNDRED AND ZERO*****

FULLY-PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF

Zimmer Biomet Holdings, Inc. (hereinafter called the "Corporation"), transferable on the books of said Corporation by the holder hereof in person or by duly authorized attorney upon surrender of this Certificate properly endorsed. This Certificate and the shares represented hereby are issued and shall be held subject to all of the provisions of the Certificate of Incorporation of the Corporation, to all of which the holder by acceptance hereof assents. This Certificate is not valid until countersigned by the Transfer Agent and registered by the Registrar.

Witness the seal of said Corporation and the signatures of its duly authorized officers.

[Signature]
 President and Chief Executive Officer

[Signature]
 Senior Vice President, General Counsel and Secretary



DATED **DD-MMM-YYYY**

COUNTERSIGNED AND REGISTERED:
COMPUTERSHARE TRUST COMPANY, N.A.
 TRANSFER AGENT AND REGISTRAR,

By _____
 AUTHORIZED SIGNATURE

SEE REVERSE FOR CERTAIN DEFINITIONS

CUSIP 98956P 10 2

THIS CERTIFICATE IS TRANSFERABLE IN CITIES DESIGNATED BY THE TRANSFER AGENT AVAILABLE ONLINE AT www.computershare.com

CUSIP/IDENTIFIER	Holder ID	Insurance Value	Number of Shares	DTC	Certificate Numbers	Num./No. Denom.	Total	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	1	1	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	2	2	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	3	3	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	4	4	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	5	5	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	6	6	
XXXXXXXXXX	XXXXXXXXXX	1,000,000.00	12345678	12345678	12345678901234567890	7	7	
Total Transaction								

1234567

ZIMMER BIOMET HOLDINGS, INC.

ZIMMER BIOMET HOLDINGS, INC. WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS A STATEMENT OF THE DESIGNATIONS AND THE POWERS, PREFERENCES AND RIGHTS, AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS THEREOF, OF EACH CLASS OF STOCK OR SERIES THEREOF SET FORTH IN THE CERTIFICATE OF INCORPORATION, WHICH THE CORPORATION IS AUTHORIZED TO ISSUE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common	UNF GFT MN ACT _____ Custodian _____ (State) (Minor)
TEN ENT - as tenants by the entireties	under Uniform Gifts to Minors Act _____ (State)
JT TEN - as joint tenants with right of survivorship and not as tenants in common	UNF TRF MN ACT _____ Custodian (until age) _____ (State) (State)
	under Uniform Transfers to Minors Act _____ (Minor) (State)

Additional abbreviations may also be used though not in the above list.

For value received, _____ hereby sell, assign and transfer unto _____ **PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE**

(PLEASE PRINT OR TYPE NAME AND ADDRESS, INCLUDING PHONE NUMBER OF ASSIGNEE)

_____ Shares
of the common stock represented by the within Certificate, and do hereby irrevocably constitute and appoint _____ Attorney
to transfer the said stock on the books of the within-named Corporation with full power of substitution in the premises.

Dated: _____ 20____

Signature: _____

Signature: _____

Signature(s) Guaranteed: Medallion Guarantee Stamp
THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Bank, Broker/Dealer, Savings and Loan Association and Credit Union) WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO SEC. 15C.1-104-11.

Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate, in every particular, without alteration or enlargement, or any change whatever.

SECURITY | INTRACT | DRB
THIS IS UNTRANSFERRED VALUE. YOU MAY ACCEPT WITHOUT NOTICE. NOT NEARLY HELD TO LUMP TO SECURITY | INTRACT



The IRS requires that the transfer agent ("TA") report the cost basis of certain shares of units acquired after January 1, 2011. If your shares or units are covered by the regulation, and you need to sell or transfer the shares or units using a specific cost basis calculation method, then we have attached as you requested. If you do not specify a cost basis calculation method, then we have defaulted to the First-In, First-Out (FIFO) method. Please consult your tax adviser if you need additional information about cost basis.

If you do not keep in contact with the issuer or do not have any activity in your account for the time period specified by state law, your property may become subject to state unclaimed property laws and transferred to the appropriate state.

1534201

**FIRST AMENDMENT
TO
AIRCRAFT TIME SHARING AGREEMENT**

This **FIRST AMENDMENT TO AIRCRAFT TIME SHARING AGREEMENT** (this “**Amendment**”) is entered into this 23rd day of April, 2019 by and between Zimmer, Inc., a Delaware corporation (“**Time Share Lessor**” or “**Company**”), and Bryan C. Hanson (“**Time Share Lessee**” or “**Executive**”) and amends that certain **AIRCRAFT TIME SHARING AGREEMENT** (the “**Agreement**”) dated as of the 27th day of February, 2018, by and between Company and Executive.

WHEREAS, Company and Executive desire to amend the Agreement as provided for in this Amendment.

NOW, THEREFORE, in consideration of the foregoing premises, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Company and Executive hereby amend the terms of the Agreement as follows:

- A. Capitalized words and phrases not otherwise defined in this Amendment shall have the meanings ascribed to such words and phrases in the Agreement.
 - B. Section 6 of the Agreement is hereby amended by deleting all of the text of Section 6 up to but not including Subsections 6.1 through 6.10, and inserting in place of the deleted text the following new text:
 - 6. **Flight Charges.** For each flight provided to Executive under this Agreement, Company may, in its sole discretion, either provide such flight to Executive at no charge, or may charge Executive any amount determined by Company in its sole discretion up to an amount not in excess of the lesser of (i) the aggregate incremental costs incurred by the Company to operate the flight; and (ii) the maximum amount of expense reimbursement permitted in accordance with 14 C.F.R. Section 91.501(d), which expenses include and are limited to the sum of the amounts set forth below in Sections 6.1 through 6.10 of this Agreement inclusive. Without limiting the generality of the foregoing, in the event that the amount charged by the Company for any flight provided to Executive is zero or otherwise is less than the value of the flight as determined under Treas. Reg. Section 1.61-21(g) (hereinafter the “**SIFL Value**”), the Company shall impute fringe benefit income to Executive in an amount equal to the excess of the SIFL Value of such flight over the amount charged to the Executive for such flight.
 - C. Except as otherwise provided in this Amendment, all the terms and conditions contained in the Agreement remain in full force and effect.
 - D. This Amendment may be executed in counterparts, each of which when executed and delivered shall be deemed an original and all together shall constitute one and the same instrument.
-

IN WITNESS WHEREOF, the parties have caused this **FIRST AMENDMENT TO AIRCRAFT TIME SHARING AGREEMENT** to be executed and delivered as of the date first above written.

Company:

Zimmer, Inc.

Executive:

Bryan C. Hanson

By: /s/ Chad F. Phipps
Print: Chad F. Phipps
Title: Senior Vice President,
General Counsel and Secretary

/s/ Bryan C. Hanson

**Subsidiaries of Zimmer Biomet Holdings, Inc.
As of June 30, 2019**

<u>Name of Subsidiary¹</u>	<u>Jurisdiction of Formation</u>
<u>Domestic subsidiaries:</u>	
Accelero Health Partners, LLC	Pennsylvania
Biomet 3i, LLC	Florida
dba Zimmer Biomet Dental	
Biomet Biologics, LLC	Indiana
Biomet CV Holdings, LLC	Delaware
Biomet Fair Lawn LLC	Indiana
Biomet Finance US, LLC	Delaware
Biomet Holdings US, Inc.	Delaware
Biomet International Orthopedics, LLC	Delaware
Biomet International, Inc.	Delaware
Biomet Leasing, Inc.	Indiana
Biomet Manufacturing, LLC	Indiana
Biomet Orthopedics, LLC	Indiana
Biomet Sports Medicine, LLC	Indiana
dba Biomet Sports Medicine Limited Liability Company (<i>Forced</i>)	
Biomet Trauma, LLC	Indiana
Biomet U.S. Reconstruction, LLC	Indiana
Biomet US Inc.	Delaware
Biomet, Inc.	Indiana
dba Zimmer Biomet	
Cayenne Medical, Inc.	Delaware
CD Diagnostics, Inc.	Delaware
CD Laboratories, Inc.	Maryland
CelgenTek Innovations Corporation	Delaware
Citra Labs, LLC	Indiana
dba Biomet Citra Labs, LLC (<i>Forced</i>)	
Compression Therapy Concepts, Inc.	New Jersey
Dornoch Medical Systems, Inc.	Illinois
EBI Holdings, LLC	Delaware
EBI Medical Systems, LLC	Delaware
EBI, LLC	Indiana
dba Zimmer Biomet Bone Healing Technologies	
dba Biomet Bone Healing Technologies	
dba Biomet Bracing	
dba Biomet Healing Technologies (<i>Forced</i>)	
dba Biomet Osteobiologics	
dba Biomet Spine (<i>Forced</i>)	
dba Biomet Spine & Bone Healing Technologies	
dba Biomet Spine & Bone Healing Technologies, LLC (<i>Forced</i>)	
dba Biomet Spine & Bone Healing Technologies, Biomet Bracing and Biomet Osteobiologics, LLC (<i>Forced</i>)	
dba Biomet Trauma, Biomet Spine (<i>Forced</i>)	
dba Biomet Trauma, Biomet Spine, Biomet Bracing and Biomet Osteobiologics, LLC (<i>Forced</i>)	
dba EBI, LLC (IN) (<i>Forced</i>)	
dba EBI, LLC of Indiana (<i>Forced</i>)	
Electro-Biology, LLC	Delaware
ETEX Corporation	Massachusetts
dba Zimmer ETEX	

Name of Subsidiary¹**Jurisdiction of Formation**

dba Zimmer Biomet
dba Zimmer Biomet Corporate Services (*Forced*)
dba Z Hotel

Foreign subsidiaries:

Biomet Argentina SA	Argentina
Biomet 3i Australia Pty. Ltd.	Australia
Biomet Australia Pty. Ltd.	Australia
Zimmer Australia Holding Pty. Ltd.	Australia
Zimmer Biomet Pty. Ltd.	Australia
Zimmer Biomet Austria GmbH	Austria
ZH2LX Barbados Branch (branch)	Barbados
Zimmer Biomet Finance Srl	Barbados
Biomet 3i Belgium N.V.	Belgium
Biomet 3i Benelux Holdings N.V.	Belgium
Zimmer Biomet BVBA	Belgium
Biomet Insurance Ltd.	Bermuda
Biomet 3i do Brasil Comercio de Aparelhos Medicos Ltda.	Brazil
Biomet Brazil Medical Device Ltda.	Brazil
LDR Brasil Comercio, Importacao e Exportacao Ltda.	Brazil
Ospol Participacoes Ltda.	Brazil
Zimmer do Brasil Comercio Ltda.	Brazil
ORTHOsoft ULC dba Zimmer CAS	Canada
Zimmer Biomet Canada, Inc.	Canada
Zimmer Biomet Dental Canada Inc.	Canada
ZB Cayman (Asia) Holding Ltd.	Cayman Islands
ZB Cayman Island CBT 2 Ltd.	Cayman Islands
Zimmer Cayman Islands Holding Co. Ltd.	Cayman Islands
Biomet Chile SA	Chile
Zimmer Dental Chile Spa	Chile
Beijing Montagne Medical Device Co. Ltd.	China
Biomet China Co., Ltd.	China
Changzhou Biomet Medical Devices Co. Ltd.	China
Shanghai Biomet Business Consulting Co. Ltd.	China
Zhejiang Biomet Medical Products Co. Ltd.	China
Zimmer Biomet CBT	China
Zimmer Biomet CBT 2	China
Zimmer Dental (Shanghai) Medical Device Co. Ltd.	China
Zimmer (Shanghai) Medical International Trading Co., Ltd.	China
Zimmer Columbia SAS	Columbia
Zimmer Biomet Centroamerica SA	Costa Rica
Zimmer Czech sro	Czech Republic
Zimmer Biomet Denmark ApS	Denmark
Zimmer Biomet Finland Oy	Finland
Biomet France Sarl	France
LDR Médical S.A.S.	France
Medtech SA	France
Zimmer Dental SAS	France
Zimmer France Manufacturing Sarl	France
Zimmer Biomet France SAS	France
Zimmer Biomet France Holdings SAS	France

Name of Subsidiary¹**Jurisdiction of Formation**

Zimmer Spine SAS	France
Biomet Deutschland GmbH	Germany
Biomet Deutschland Holding GmbH	Germany
Biomet Healthcare Management GmbH	Germany
Medtech Surgical GmbH	Germany
Zimmer Dental GmbH	Germany
Zimmer Biomet Deutschland GmbH	Germany
Zimmer Germany Holdings GmbH	Germany
Zimmer International Logistics GmbH	Germany
Zfx GmbH	Germany
ZB (Gibraltar) Holding Limited	Gibraltar
Zimmer Biomet Hellas SA	Greece
SM Re Ltd.	Guernsey
Biomet Hong Kong CBT Ltd.	Hong Kong
Biomet Hong Kong Holding Ltd.	Hong Kong
Biomet Hong Kong No. 1 Ltd.	Hong Kong
Biomet Hong Kong No. 2 Ltd.	Hong Kong
LDR Medical Hong Kong (branch)	Hong Kong
ZB Hong Kong CBT 2 Ltd.	Hong Kong
ZB Hong Kong Holding Ltd.	Hong Kong
ZB Hong Kong Ltd.	Hong Kong
Zimmer Asia (HK) Ltd.	Hong Kong
Zimmer India Private Ltd.	India
CelgenTek, Limited	Ireland
Zimmer Finance Ireland	Ireland
Zimmer Biomet Ireland Limited	Ireland
Zimmer Orthopedics Manufacturing Limited	Ireland
D.S. Comp Ltd.	Israel
Zimmer Biomet Comp Ltd.	Israel
Zimmer Dental Ltd.	Israel
Lanx Srl	Italy
Zimmer Dental Italy Srl	Italy
Zimmer Biomet Italia Srl	Italy
Zfx Innovation GmbH	Italy
Zimmer Biomet Dental K.K.	Japan
Zimmer Biomet GK	Japan
Zimmer Biomet Korea Ltd.	Korea
JERDS Luxembourg Holding Sarl	Luxembourg
Zimmer Luxembourg Sarl	Luxembourg
Zimmer Luxembourg II Sarl	Luxembourg
Zimmer Medical Malaysia SDN BHD	Malaysia
Biomet 3i Mexico S.A. de C.V.	Mexico
Biomet Mexico S.A. de C.V.	Mexico
Representaciones Zimmer Inc., S. de R.L. de C.V.	Mexico
Biomet 3i Netherlands B.V.	Netherlands
Biomet C.V.	Netherlands
Biomet Global Supply Chain Center B.V.	Netherlands
Biomet Holdings B.V.	Netherlands
Biomet Microfixation B.V.	Netherlands
ZB COOP C.V.	Netherlands
Zimmer Biomet Asia Holding B.V.	Netherlands
Zimmer Europe Holdings B.V.	Netherlands

Name of Subsidiary¹**Jurisdiction of Formation**

Zimmer Manufacturing B.V.	Netherlands
Zimmer Biomet Nederland B.V.	Netherlands
Zimmer Netherlands Cooperatief U.A.	Netherlands
Zimmer Biomet New Zealand Company	New Zealand
Zimmer Biomet Norway AS	Norway
Zimmer Biomet Polska Sp. z o.o	Poland
Biomet 3i Portugal Lda	Portugal
Zimmer Biomet Portugal Unipessoal, Lda	Portugal
Biomet Orthopedics Puerto Rico, Inc.	Puerto Rico
EBI Patient Care, Inc.	Puerto Rico
Lanx Puerto Rico, LLC	Puerto Rico
Zimmer Manufacturing B.V. (branch)	Puerto Rico
Zimmer Biomet Romania S.R.L.	Romania
Zimmer CIS Ltd.	Russia
Zimmer Biomet Asel Alarabiya Limited Company	Saudi Arabia
Zimmer Biomet Asia Holdings Pte. Ltd.	Singapore
Zimmer Pte. Ltd.	Singapore
Zimmer Slovakia sro	Slovakia
Zimmer Biomet South Africa (Pty) Ltd.	South Africa
Biomet 3i Dental Iberica SL	Spain
Biomet Spain Orthopaedics S.L.	Spain
Espanormed S.L.	Spain
Zimmer Biomet Spain S.L.	Spain
Biomet 3i Nordic AB	Sweden
Biomet Cementing Technologies AB	Sweden
Scandimed Holding AB	Sweden
Zimmer Biomet Sweden AB	Sweden
Biomet 3i Switzerland GmbH	Switzerland
Biomet Orthopaedics Switzerland GmbH	Switzerland
Guillaume Genin & Co.	Switzerland
Zimmer Biomet Global Holdings Switzerland GmbH	Switzerland
Zimmer GmbH	Switzerland
Zimmer GmbH Euro IP Branch (branch)	Switzerland
Zimmer Luxembourg II Sarl, Luxembourg (LU), Winterthur Branch (branch)	Switzerland
Zimmer Surgical SA	Switzerland
Zimmer Switzerland Holdings LLC	Switzerland
Zimmer Switzerland Manufacturing GmbH	Switzerland
Zimmer Biomet Taiwan Co., Ltd.	Taiwan
Zimmer Biomet (Thailand) Co., Ltd.	Thailand
Biomet 3i Turkey	Turkey
Zimmer Tibbi Cihazlar Sanayi ve Ticaret AS	Turkey
Zimmer Gulf FZ LLC	United Arab Emirates
Biomet 3i UK Ltd.	United Kingdom
Biomet Acquisitions (Unlimited)	United Kingdom
Biomet UK Ltd.	United Kingdom
Biomet UK Healthcare Ltd.	United Kingdom
Zimmer Biomet UK Ltd.	United Kingdom
Zimmer Trustee Ltd.	United Kingdom
Zimmer UK Limited	United Kingdom

¹ Excludes certain entities that have de minimis activity or are in the process of being liquidated or dissolved and that, if considered in the aggregate as a single subsidiary, would not constitute a significant subsidiary.

CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Bryan C. Hanson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Zimmer Biomet Holdings, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
 - (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.

Date: August 5, 2019

/s/ Bryan C. Hanson

Bryan C. Hanson

President and Chief Executive Officer

CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Suketu Upadhyay, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Zimmer Biomet Holdings, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
 - (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.

Date: August 5, 2019

/s/ Suketu Upadhyay

Suketu Upadhyay

Executive Vice President and Chief Financial Officer

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

In connection with the Quarterly Report on Form 10-Q of Zimmer Biomet Holdings, Inc. (the "Company") for the period ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (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.

/s/ Bryan C. Hanson

Bryan C. Hanson

President and Chief Executive Officer

August 5, 2019

/s/ Suketu Upadhyay

Suketu Upadhyay

Executive Vice President and Chief Financial Officer

August 5, 2019