ALEXION PHARMACEUTICALS, INC.
Form 10-Q
July 26, 2018
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q
x Quarterly report pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934
For the quarterly period ended June 30, 2018
or
¨Transition report pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934
For the transition period from to
Commission file number: 0-27756

ALEXION PHARMACEUTICALS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	13-3648318
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

121 Seaport Boulevard, Boston Massachusetts 02210
(Address of Principal Executive Offices) (Zip Code)
475-230-2596
(Registrant’s telephone number, including area code)
N/A
(Former name, former address, and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x 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 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. Check One:
Large accelerated filer x Accelerated filer ¨ Non-accelerated filer ¨ (Do not check if a smaller reporting company)
Smaller reporting company ¨ Emerging growth company ¨

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

Common Stock, $0.0001 par value	222,859,148
Class	Outstanding as of July 23, 2018

Alexion Pharmaceuticals, Inc.
Contents

Alexion Pharmaceuticals, Inc.
Condensed Consolidated Balance Sheets
(unaudited)
(amounts in millions, except per share amounts)

	June 30, 2018	December 31, 2017
Assets		
Current Assets:		
Cash and cash equivalents	$727.5	$ 584.4
Marketable securities	449.5	889.7
Trade accounts receivable, net	853.7	726.5
Inventories	463.2	460.4
Prepaid expenses and other current assets	342.2	292.9
Total current assets	2,836.1	2,953.9
Property, plant and equipment, net	1,422.6	1,325.4
Intangible assets, net	3,793.8	3,954.4
Goodwill	5,037.4	5,037.4
Other assets	400.5	312.2
Total assets	$13,490.4	$ 13,583.3
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	$58.8	$ 70.8
Accrued expenses	605.2	639.4
Revolving credit facility	250.0	—
Current portion of long-term debt	28.5	167.4
Current portion of contingent consideration	70.3	—
Other current liabilities	31.6	74.9
Total current liabilities	1,044.4	952.5
Long-term debt, less current portion	2,564.9	2,720.7
Contingent consideration	156.0	168.9
Facility lease obligation	361.4	342.9
Deferred tax liabilities	464.0	365.0
Other liabilities	132.3	140.2
Total liabilities	4,723.0	4,690.2
Commitments and contingencies (Note 18)		
Stockholders' Equity:		
Common stock, $0.0001 par value; 290.0 shares authorized; 235.5 and 234.3 shares issued at June 30, 2018 and December 31, 2017, respectively	—	—
Additional paid-in capital	8,420.2	8,290.3
Treasury stock, at cost, 12.7 and 12.0 shares at June 30, 2018 and December 31, 2017, respectively	(1,689.9)	(1,604.9)
Accumulated other comprehensive loss	(2.9)	(34.4)
Retained earnings	2,040.0	2,242.1
Total stockholders' equity	8,767.4	8,893.1
Total liabilities and stockholders' equity	$13,490.4	$ 13,583.3

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

Alexion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Operations
(unaudited)
(amounts in millions, except per share amounts)

	Three months ended June 30,		Six months ended June 30,	
	2018	2017	2018	2017
Net product sales	$1,044.7	$912.2	$1,975.1	$1,781.3
Other revenue	0.3	0.5	0.8	1.0
Total revenues	1,045.0	912.7	1,975.9	1,782.3
Cost of sales	95.3	83.6	186.9	152.6
Operating expenses:				
Research and development	173.4	198.2	350.0	417.7
Selling, general and administrative	277.3	265.6	534.4	527.4
Acquired in-process research and development	803.7	—	803.7	—
Amortization of purchased intangible assets	80.1	80.1	160.1	160.1
Change in fair value of contingent consideration	4.7	24.6	57.4	28.1
Restructuring expenses	10.6	2.9	16.1	26.7
Impairment of intangible assets	—	31.0	—	31.0
Total operating expenses	1,349.8	602.4	1,921.7	1,191.0
Operating (loss) income	(400.1)	226.7	(132.7)	438.7
Other income and expense:				
Investment income	7.7	4.5	113.5	8.4
Interest expense	(25.0)	(24.8)	(49.1)	(48.3)
Other income (expense)	(1.2)	(0.1)	1.3	1.5
(Loss) income before income taxes	(418.6)	206.3	(67.0)	400.3
Income tax expense	38.8	41.1	141.3	65.0
Net (loss) income	$(457.4)	$165.2	$(208.3)	$335.3
Earnings (loss) per common share				
Basic	$(2.05)	$0.74	$(0.94)	$1.49
Diluted	$(2.05)	$0.73	$(0.94)	$1.49
Shares used in computing earnings (loss) per common share				
Basic	222.6	224.4	222.3	224.5
Diluted	222.6	225.5	222.3	225.7

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

Alexion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(unaudited)
(amounts in millions)

	Three months ended June 30,		Six months ended June 30,	
	2018	2017	2018	2017
Net income (loss)	$(457.4)	$165.2	$(208.3)	$335.3
Other comprehensive income (loss), net of tax:				
Foreign currency translation	(8.1)	4.1	(4.3)	6.8
Unrealized gains (losses) on debt securities	—	0.3	(0.4)	0.9
Unrealized gains on pension obligation	—	0.3	0.7	0.3
Unrealized gains (losses) on hedging activities, net of tax of $15.4, $(30.0), $10.5 and $(45.3), respectively	50.9	(54.5)	35.5	(82.3)
Other comprehensive income (loss), net of tax	42.8	(49.8)	31.5	(74.3)
Comprehensive income (loss)	$(414.6)	$115.4	$(176.8)	$261.0

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

Alexion Pharmaceuticals, Inc.
Condensed Consolidated Statements of Cash Flows
(unaudited)
(amounts in millions)

	Six months ended June 30,	
	2018	2017
Cash flows from operating activities:		
Net income (loss)	$(208.3)	$335.3
Adjustments to reconcile net income to net cash flows from operating activities:		
Depreciation and amortization	202.0	201.2
Impairment of intangible assets	—	31.0
Change in fair value of contingent consideration	57.4	28.1
Share-based compensation expense	105.2	114.9
Non-cash expense for acquired IPR&D	86.6	—
Deferred taxes	111.5	21.5
Unrealized foreign currency loss (gain)	12.7	(9.6)
Unrealized loss (gain) on forward contracts	3.1	(8.0)
Unrealized gain on equity investments	(100.5)	—
Other	13.2	4.3
Changes in operating assets and liabilities:		
Accounts receivable	(137.0)	(46.4)
Inventories	(4.1)	(33.1)
Prepaid expenses and other assets	(55.7)	(89.8)
Accounts payable, accrued expenses and other liabilities	(130.6)	38.6
Net cash (used in) provided by operating activities	(44.5)	588.0
Cash flows from investing activities:		
Purchases of available-for-sale debt securities	(612.8)	(1,128.2)
Proceeds from maturity or sale of available-for-sale debt securities	1,054.8	557.5
Purchases of mutual funds related to nonqualified deferred compensation plan	(7.5)	(4.7)
Proceeds from sale of mutual funds related to nonqualified deferred compensation plan	5.9	2.2
Purchases of property, plant and equipment	(129.4)	(175.5)
Other	2.6	0.2
Net cash provided by (used in) investing activities	313.6	(748.5)
Cash flows from financing activities:		
Debt issuance costs	(7.6)	—
Proceeds from revolving credit facility	250.0	—
Payments on term loan	(293.8)	(87.5)
Repurchases of common stock	(85.0)	(238.9)
Net proceeds from issuance of common stock under share-based compensation arrangements	24.6	60.6
Other	(4.7)	(9.9)
Net cash used in financing activities	(116.5)	(275.7)
Effect of exchange rate changes on cash and cash equivalents and restricted cash	(6.1)	12.0
Net change in cash and cash equivalents and restricted cash	146.5	(424.2)
Cash and cash equivalents and restricted cash at beginning of period	586.3	966.0
Cash and cash equivalents and restricted cash at end of period	$732.8	$541.8
Supplemental cash flow disclosures from investing and financing activities:		
Capitalization of construction costs related to facility lease obligations	$33.2	$49.9

Accrued expenses for purchases of property, plant and equipment	$15.8	$35.4

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

Alexion Pharmaceuticals, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)
(amounts in millions, except per share amounts)

1. Business

Alexion Pharmaceuticals, Inc. (Alexion, the Company, we, our or us) is a global biopharmaceutical company focused on serving patients and families affected by rare diseases through the innovation, development and commercialization of life-changing therapies.

We are the global leader in complement inhibition and have developed and commercialize the first and only approved complement inhibitor to treat patients with paroxysmal nocturnal hemoglobinuria (PNH), atypical hemolytic uremic syndrome (aHUS), and anti-acetylcholine receptor (AChR) antibody-positive generalized myasthenia gravis (gMG). In addition, Alexion has two highly innovative enzyme replacement therapies for patients with life-threatening and ultra-rare metabolic disorders, hypophosphatasia (HPP) and lysosomal acid lipase deficiency (LAL-D).

As the leader in complement biology for over 20 years, Alexion focuses its research efforts on novel molecules and targets in the complement cascade, and its development efforts on the core therapeutic areas of hematology, nephrology, neurology, and metabolic disorders. We were incorporated in 1992 under the laws of the State of Delaware.

2. Basis of Presentation and Principles of Consolidation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States for complete financial statements. These accounting principles were applied on a basis consistent with those of the consolidated financial statements contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2017. In our opinion, the accompanying unaudited consolidated financial statements include all adjustments, consisting of normal recurring accruals, necessary for a fair presentation of our financial statements for interim periods in accordance with accounting principles generally accepted in the United States. The condensed consolidated balance sheet data as of December 31, 2017 was derived from audited financial statements but does not include all disclosures required by accounting principles generally accepted in the United States. These interim financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 2017 included in our Annual Report on Form 10-K for the year ended December 31, 2017. The results of operations for the three and six months ended June 30, 2018 are not necessarily indicative of the results to be expected for the full year or any other future periods. In the current year, the Company’s rounding presentation of reported amounts have changed. The current year rounding presentation has been applied to all prior year amounts presented and, in certain circumstances, this change may adjust previously reported balances.

The financial statements of our subsidiaries with functional currencies other than the U.S. dollar are translated into U.S. dollars using period-end exchange rates for assets and liabilities, historical exchange rates for stockholders' equity and weighted average exchange rates for operating results. Translation gains and losses are included in accumulated other comprehensive income (loss), net of tax, in stockholders' equity. Foreign currency transaction gains and losses are included in the results of operations in other income and expense.

The accompanying unaudited condensed consolidated financial statements include the accounts of Alexion Pharmaceuticals, Inc. and its subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Our significant accounting policies are described in Note 1 of the Notes to the Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2017. Updates to our accounting policies, including impacts from the adoption of new accounting standards, are discussed within Note 8, Marketable Securities, Note 9, Derivative Instruments and Hedging Activities, Note 10, Other Investments, and Note 14, Revenue Recognition.

Reclassifications

Certain items in the prior period's condensed consolidated financial statements have been reclassified to conform to the current presentation.

Alexion Pharmaceuticals, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)
(amounts in millions, except per share amounts)

New Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (FASB) issued a new standard requiring that the rights and obligations arising from leases be recognized on the balance sheet by recording a right-of-use (ROU) asset and corresponding lease liability. The new standard also requires qualitative and quantitative disclosures to understand the amount, timing, and uncertainty of cash flows arising from leases, as well as significant management estimates utilized. The standard is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption. We have substantially completed the process of collecting and analyzing the Company's lease contracts and have selected a leasing software system. Our lease accounting software implementation efforts are ongoing. While our assessment of the standard remains open, the standard may have a material impact on the Company's Condensed Consolidated Balance Sheets due to the requirement to recognize lease ROU assets and corresponding liabilities related to leases on the Company's Condensed Consolidated Balance Sheets.

In June 2016, the FASB issued a new standard intended to improve reporting requirements specific to loans, receivables and other financial instruments. The new standard requires that credit losses be reported based on expected losses compared to the current incurred loss model. The new standard also requires enhanced disclosure of credit risk associated with respective assets. The standard is effective for interim and annual periods beginning after December 15, 2019 with early adoption permitted. We are currently assessing the impact of this standard on our financial condition and results of operations.

In February 2018, the FASB issued a new standard that would permit entities to make a one time reclassification from accumulated other comprehensive income (AOCI) to retained earnings for the stranded tax effects resulting from the newly enacted corporate tax rates under the Tax Cuts and Jobs Act (the Tax Act), effective for the year ended December 31, 2017. The amount of the reclassification is calculated on the basis of the difference between the historical tax rate and newly enacted tax rate. The standard is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. We are currently assessing the impact of this standard on our financial condition.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued a comprehensive new standard which amends revenue recognition principles and provides a single set of criteria for revenue recognition among all industries. The new standard provides a five-step framework whereby revenue is recognized when promised goods or services are transferred to a customer at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted the new standard on January 1, 2018.

In January 2017, the FASB issued a new standard that clarifies the definition of a business and determines when an integrated set of assets and activities is not a business. This framework requires that if substantially all of the fair value of gross assets acquired or disposed of is concentrated in a single asset or group of similar identifiable assets, the assets would not represent a business. We adopted the new standard on January 1, 2018 and will apply the new guidance prospectively to transactions occurring after adoption. We anticipate that the adoption of this new standard will likely result in more transactions, to the extent that such transactions are undertaken by the Company, being accounted for as asset acquisitions.

In January 2016, the FASB issued a new standard that changes accounting for equity investments, financial liabilities under the fair value option, and presentation and disclosure requirements for financial instruments. In addition, the FASB clarified guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale debt securities. Equity investments with readily determinable fair values will be measured at fair value with changes in fair value recognized in net income. Companies have the option to

either measure equity investments without readily determinable fair values at fair value, or at cost adjusted for changes in observable prices minus impairment. We adopted the new standard on January 1, 2018, and have elected to measure our current equity investments without readily determinable fair values at cost adjusted for changes in observable prices minus impairment. In connection with the adoption of the new standard, we reclassified an immaterial amount of unrealized gains on equity securities from other comprehensive income to retained earnings. The guidance related to equity investments without readily determinable fair values was applied prospectively to equity investments that existed as of the date of adoption. We will assess our equity investments without readily determinable fair values for observable price changes and impairment on a quarterly basis. Refer to Note 10, Other Investments, for further details.

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Notes to Condensed Consolidated Financial Statements
(unaudited)
(amounts in millions, except per share amounts)

In March 2017, the FASB issued a new standard that improves the presentation of net periodic pension cost and net periodic post retirement benefit cost by requiring the bifurcation of net benefit cost. Under the new standard, the service cost component of net benefit cost will be presented with other employee costs in operating expenses; while other components will be reported separately in other income and expense. We adopted the new standard on January 1, 2018. The adoption of this standard did not have a material impact on our condensed consolidated statements of operations.

In November 2016, the FASB issued a new standard that clarifies how entities should present restricted cash in the statement of cash flows. Under the new standard, changes in total cash, inclusive of restricted cash, should be reflected in the statement of cash flows. As a result, transfers between cash and restricted cash will no longer be reflected as activity within the statement of cash flows. We adopted the new standard on January 1, 2018. The adoption of this standard did not have a material impact on our condensed consolidated statements of cash flows.

In August 2017, the FASB issued a new standard intended to improve and simplify certain aspects of the accounting for hedges. The new standard is intended to more closely align hedge accounting with companies' risk management strategies, simplify the application of hedge accounting, and increase transparency as to the scope and results of hedging programs. It also amends the presentation and disclosure requirements and changes how companies assess effectiveness. The standard is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. We early adopted the new standard in the second quarter 2018 using the modified retrospective method. The adoption of this standard did not have a material impact on our condensed consolidated financial statements.

Impacts of the New Revenue Standard

We adopted the new revenue standard by applying the modified retrospective method to all contracts that were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under the new standard, while prior period amounts are not adjusted and continue to be reported under the accounting standards in effect for the prior period. We recorded a net increase to opening equity of $6.0 as of January 1, 2018 due to the cumulative impact of adopting this new standard.

The impact to revenues for the three and six months ended June 30, 2018 was an increase of $10.2 and $13.8, respectively, as a result of adopting the new standard. The resulting impact to net income for the three and six months ended June 30, 2018 was an increase of $8.6 and $11.8, respectively. The impact of adopting the new standard for the three and six months ended June 30, 2018 is due primarily to the earlier recognition of revenue associated with customer arrangements for which control of the product has transferred to the customer prior to the shipment clearing customs in the respective country. Under prior revenue guidance, these amounts would have been deferred until risk of loss had transferred to the customer following customs clearance.

The new standard also resulted in a decrease of $24.6 in deferred revenue and an increase of $17.8 in retained earnings as of June 30, 2018. The adoption of the new revenue standard did not have a material impact on any other balances within the condensed consolidated financial statements as of and for the three and six months ended June 30, 2018.

3. Acquisitions

In April 2018, we announced our intent to acquire Wilson Therapeutics AB (publ), a biopharmaceutical company based in Stockholm, Sweden (Wilson Therapeutics) that develops novel therapies for patients with rare copper-mediated disorders, pursuant to a recommended public cash offer. The public cash offer was for SEK 232 for each share of stock of Wilson Therapeutics. On May 25, 2018, we completed the acquisition of Wilson Therapeutics, following the acceptance of our offer by more than 97% of shareholders. As a result of the acquisition, we added

WTX101, a highly innovative drug candidate that is currently in the early stages of Phase III clinical trials for the treatment of patients with Wilson disease, to our clinical pipeline.

The acquisition of Wilson Therapeutics is accounted for as an asset acquisition, as substantially all of the fair value of the gross assets acquired is concentrated in a single asset, WTX101. As of June 30, 2018, Alexion had acquired 99.8% of the outstanding shares of Wilson Therapeutics.

Alexion Pharmaceuticals, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)
(amounts in millions, except per share amounts)

The following table summarizes the total consideration for the acquisition and the value of assets acquired and liabilities assumed:

Consideration	
Cash paid for acquisition of Wilson Therapeutics outstanding shares	$749.3
Transaction costs	15.1
Total consideration	$764.4
Assets Acquired and Liabilities Assumed	
Cash	$45.1
In-process research & development	803.7
Employee related liabilities	(71.4)
Other assets and liabilities	(13.0)
Total net assets acquired	$764.4

The acquired in-process research and development asset relates to WTX101, which is in early Phase III development for the treatment of Wilson Disease. Due to the stage of development of this asset, significant risk remains and it is not yet probable that there is future economic benefit from this asset. Absent successful clinical results and regulatory approval for the asset, there is no alternative future use associated with WTX101. Accordingly, the value of this asset of $803.7 was expensed during the three and six months ended June 30, 2018.

Employee related liabilities include the value of outstanding employee equity incentive awards that were accelerated in connection with the Wilson Therapeutics acquisition that have been, or will be, settled in cash. Also included in this amount are employer tax obligations associated with the employee equity incentive awards.

In connection with rights to WTX101 that were previously acquired by Wilson Therapeutics from third parties, we could be required to pay up to approximately $19.0 if certain development, regulatory and commercial milestones are met over time, as well as royalties on commercial sales.

4. Inventories

Inventories are stated at the lower of cost or estimated realizable value. We determine the cost of inventory on a standard cost basis, which approximates average costs.

The components of inventory are as follows:

	June 30, 2018	December 31, 2017
Raw materials	$5.4	$4.7
Work-in-process	164.9	148.6
Finished goods	292.9	307.1
	$463.2	$460.4

Alexion Pharmaceuticals, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)
(amounts in millions, except per share amounts)

5.Intangible Assets and Goodwill

The following table summarizes the carrying amount of our intangible assets and goodwill, net of accumulated amortization:

		June 30, 2018			December 31, 2017		
	Estimated Life (years)	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
Licensing rights	5-8	$31.0	$ (28.9)	$2.1	$31.0	$ (28.5)	$2.5
Patents	7	10.5	(10.5)	—	10.5	(10.5)	—
Purchased technology	6-16	4,710.5	(919.0)	3,791.5	4,710.5	(758.9)	3,951.6
Other intangibles	5	0.4	(0.2)	0.2	0.4	(0.1)	0.3
Total		$4,752.4	$ (958.6)	$3,793.8	$4,752.4	$ (798.0)	$3,954.4
Goodwill	Indefinite	$5,040.3	$ (2.9)	$5,037.4	$5,040.3	$ (2.9)	$5,037.4

Amortization expense for the three months ended June 30, 2018 and 2017 was $80.3 and $80.1. Amortization expense for the six months ended June 30, 2018 and 2017 was $160.6 and $160.1, respectively. Assuming no changes in the gross cost basis of intangible assets, the total estimated amortization expense for finite-lived intangible assets is 160.6 for the six months ending December 31, 2018, and approximately $320.0 for each of the years ending December 31, 2019 through December 31, 2023.

In the second quarter 2017, we recognized an impairment charge of $31.0 related to our SBC-103 acquired in-process research and development asset due to clinical results.

6. Debt

On June 7, 2018, we entered into an Amended and Restated Credit Agreement (the Credit Agreement), with Bank of America, N.A. as Administrative Agent. The Credit Agreement amends and restates our credit agreement dated as of June 22, 2015 (the Prior Credit Agreement).

The Credit Agreement provides for a $1,000.0 revolving credit facility and a $2,612.5 term loan facility. The revolving credit facility and the term loan facility mature on June 7, 2023. Commencing on June 30, 2019, we are required to make amortization payments of 5.00% of the aggregate principal amount of the term loan facility annually, payable in equal quarterly installments.

Loans under the Credit Agreement bear interest, at our option, at either a base rate or a Eurodollar rate, in each case plus an applicable margin. Under the Credit Agreement, the applicable margins on base rate loans range from 0.25% to 1.00% and the applicable margins on Eurodollar loans range from 1.25% to 2.00%, in each case based on our consolidated net leverage ratio (as calculated in accordance with the Credit Agreement). Our obligations under the Credit Agreement are guaranteed by certain of Alexion Pharmaceuticals, Inc.'s foreign and domestic subsidiaries and secured by liens on certain of our subsidiaries' equity interests, subject to certain exceptions. Under the terms of the Credit Agreement, we must maintain a ratio of total net debt to EBITDA of 3.50 to 1.00 (subject to certain limited adjustments) and EBITDA to cash interest expense ratio of at least 3.50 to 1.00, in each case as calculated in accordance with the Credit Agreement.

The Credit Agreement contains certain representations and warranties, affirmative and negative covenants and events of default. The negative covenants in the credit agreement restrict Alexion's and its subsidiaries' ability, subject to certain baskets and exceptions, to incur liens or indebtedness, make investments, enter into mergers and other fundamental changes, make dispositions or pay dividends. The restriction on dividend payments includes an exception that permits us to pay dividends and make other restricted payments regardless of dollar amount so long as, after

giving pro forma effect thereto, we have a consolidated net leverage ratio, as defined in the Credit Agreement, within predefined ranges, subject to certain increases following designated material acquisitions.

In connection with entering into the Credit Agreement and Prior Credit Agreement, we paid $53.1 in financing costs. Financing costs are amortized as interest expense over the life of the debt. Amortization expense associated with deferred financing costs for the three months ended June 30, 2018 and 2017 was $3.2 and $2.3, respectively, and deferred financing costs for the six months ended June 30, 2018 and 2017 was $5.5 and $4.7 respectively. Remaining unamortized deferred financing costs as of June 30, 2018 and December 31, 2017 were $23.3 and $21.0, respectively.

Alexion Pharmaceuticals, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)
(amounts in millions, except per share amounts)

As of June 30, 2018, we had $2,612.5 outstanding on the term loan and $250.0 of borrowings outstanding under the revolving credit facility. The $250.0 of proceeds on the revolving credit facility was used to refinance amounts outstanding under the Prior Credit Agreement. As of June 30, 2018, we had open letters of credit of $1.8 that offset our availability in the revolving facility.
The fair value of our long term debt, which is measured using Level 2 inputs, approximates book value.

7. Earnings Per Common Share

Basic earnings per common share (EPS) is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the applicable period. For purposes of calculating diluted EPS, the denominator reflects the potential dilution that could occur if stock options, unvested restricted stock units or other contracts to issue common stock were exercised or converted into common stock, using the treasury stock method.
The following table summarizes the calculation of basic and diluted EPS for the three and six months ended June 30, 2018 and 2017:

	Three months ended June 30,		Six months ended June 30,	
	2018	2017	2018	2017
Net income (loss) used for basic and diluted calculation	$(457.4)	$165.2	$(208.3)	$335.3
Shares used in computing earnings per common share—basic	222.6	224.4	222.3	224.5
Weighted-average effect of dilutive securities:				
Stock awards	—	1.1	—	1.2
Shares used in computing earnings per common share—diluted	222.6	225.5	222.3	225.7
Earnings (loss) per common share:				
Basic	$(2.05)	$0.74	$(0.94)	$1.49
Diluted	$(2.05)	$0.73	$(0.94)	$1.49

We exclude from EPS the weighted-average number of securities whose effect is anti-dilutive. Excluded from the calculation of EPS for the three and six months ended June 30, 2017 were 6.0 and 5.8 shares of common stock, respectively, because their effect was anti-dilutive. For the three and six months ended June 30, 2018, we reported a net loss; therefore, no outstanding stock awards were included in the computation of diluted net loss per share since such inclusion would have been anti-dilutive.

8. Marketable Securities

We invest our excess cash balances in marketable securities of highly rated financial institutions and investment-grade debt instruments. We classify these marketable securities as available-for-sale and, accordingly, record such securities at fair value. Unrealized gains and losses that are deemed temporary are included in accumulated other comprehensive income (loss) as a separate component of stockholders' equity in the accompanying balance sheets.

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The amortized cost, gross unrealized holding gains, gross unrealized holding losses and fair value of available-for-sale debt securities by type of security as of June 30, 2018 and December 31, 2017 were as follows:

	June 30, 2018			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Commercial paper	$138.9	$ —	$ —	$138.9
Corporate bonds	218.8	0.1	(0.2)	218.7
Other government-related obligations:				
U.S.	62.5	—	—	62.5
Foreign	79.0	—	—	79.0
Bank certificates of deposit	46.1	—	—	46.1
Total available-for-sale debt securities	$545.3	$ 0.1	$ (0.2)	$545.2

	December 31, 2017			
	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Commercial paper	$16.0	$ —	$ —	$16.0
Repurchase agreements	27.0	—	—	27.0
Corporate bonds	432.2	0.5	(0.2)	432.5
Other government-related obligations:				
U.S.	—	—	—	—
Foreign	426.3	0.2	(0.2)	426.3
Bank certificates of deposit	11.8	—	—	11.8
Total available-for-sale debt securities	$913.3	$ 0.7	$ (0.4)	$913.6

The aggregate fair value of available-for-sale debt securities in an unrealized loss position as of June 30, 2018 and December 31, 2017 was $188.2 and $436.2, respectively. Investments that have been in a continuous unrealized loss position for more than 12 months were $1.3 as of June 30, 2018 and $12.0 as of December 31, 2017. As of June 30, 2018, we believe that the cost basis of our available-for-sale debt securities is recoverable.

The fair values of available-for-sale debt securities by classification in the condensed consolidated balance sheet were as follows:

	June 30, 2018	December 31, 2017
Cash and cash equivalents	$115.9	$ 42.7
Marketable securities	429.3	870.9
	$545.2	$ 913.6

The fair values of available-for-sale debt securities at June 30, 2018, by contractual maturity, are summarized as follows:

	June 30, 2018
Due in one year or less	$ 431.2
Due after one year through three years	114.0
	$ 545.2

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We hold a single equity investment that we record at fair value, with changes in fair value recognized in net income effective January 1, 2018, upon the adoption of the new financial instruments standard. Unrealized holding gains on this investment were previously recognized in accumulated other comprehensive income (loss). As of December 31, 2017, the fair value of this investment was not material.

We sponsor a nonqualified deferred compensation plan which allows certain highly-compensated employees to elect to defer income to future periods. Participants in the plan earn a return on their deferrals based on several investments options, which mirror returns on underlying mutual fund investments. We choose to invest in the underlying mutual fund investments to offset the liability associated with our nonqualified deferred compensation plan. These mutual fund investments are valued at net asset value per share and are carried at fair value with gains and losses included in investment income. The changes in the underlying liability to the employee are recorded in operating expenses. As of June 30, 2018 and December 31, 2017, the fair value of these investments was $20.2 and $18.5, respectively.

We utilize the specific identification method in computing realized gains and losses. Realized gains and losses on our marketable securities were not material for the three and six months ended June 30, 2018 and 2017.

9. Derivative Instruments and Hedging Activities

We operate internationally and, in the normal course of business, are exposed to fluctuations in foreign currency exchange rates. The exposures result from portions of our revenues, as well as the related receivables, and expenses that are denominated in currencies other than the U.S. dollar, primarily the Euro and Japanese Yen. We are also exposed to fluctuations in interest rates on outstanding borrowings under our revolving credit facility and term loan facility. We manage these exposures within specified guidelines through the use of derivatives. All of our derivative instruments are utilized for risk management purposes, and we do not use derivatives for speculative trading purposes.

We enter into foreign exchange forward contracts, with durations of up to 60 months, to hedge exposures resulting from portions of our forecasted revenues, including intercompany revenues, and certain forecasted expenses that are denominated in currencies other than the U.S. dollar. The purpose of these hedges is to reduce the volatility of exchange rate fluctuations on our operating results. These hedges are designated as cash flow hedges upon contract inception. As of June 30, 2018, we had open revenue related foreign exchange forward contracts with notional amounts totaling $984.7 that qualified for hedge accounting. As of June 30, 2018, we had open expense related foreign exchange forward contracts with notional amounts totaling $23.7 that qualified for hedge accounting.

To achieve a desired mix of floating and fixed interest rates on our term loan, we enter into interest rate swap agreements that qualify for and are designated as cash flow hedges. These contracts convert the floating interest rate on a portion of our debt to a fixed rate, plus a borrowing spread.

The following tables summarize the total interest rate swap contracts executed as of June 30, 2018:

Type of Interest Rate Swap	Notional Amount	Effective Date	Termination Date	Fixed Interest Rate
Floating to Fixed	656.3	December 31, 2016	December 31, 2019	0.98%
Floating to Fixed	300.0	January 31, 2017	December 31, 2018	1.29%
Floating to Fixed	300.0	January 2, 2019	December 31, 2019	2.08%
Floating to Fixed	200.0	March 31, 2017	December 31, 2019	1.62%
Floating to Fixed	200.0	March 31, 2017	December 31, 2018	1.40%
Floating to Fixed	200.0	June 30, 2017	December 31, 2019	1.53%
Floating to Fixed	100.0	June 30, 2017	December 31, 2019	1.50%
Floating to Fixed	100.0	June 30, 2017	December 31, 2019	1.52%
Floating to Fixed	200.0	June 30, 2017	December 31, 2019	1.57%
Floating to Fixed	75.0	January 1, 2018	December 31, 2019	1.58%

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During the second quarter 2018, we adopted the new standard for accounting for hedges that is designed to simplify the application of hedge accounting and increase transparency as to the scope and results of hedging programs. The updated guidance no longer requires the separate measurement and reporting of hedge ineffectiveness. Following adoption, all unrealized gains and losses on derivatives that are designated and qualify for hedge accounting are reported in other comprehensive income (loss) and recognized in our condensed consolidated statements of operations when the underlying hedged transaction affects earnings.

The amount of gains and losses recognized in the condensed consolidated statements of operations for the three and six months ended June 30, 2018 and 2017 from foreign exchange and interest rate swap contracts that qualified as cash flow hedges were as follows:

	Three months ended June 30, 2018		Three months ended June 30, 2017	
	Net Product Sales	Interest Expense	Net Product Sales	Interest Expense
Financial Statement Line Item in which the Effects of Cash Flow Hedges are Recorded	$1,044.7	$(25.0)	$912.2	$(24.8)
Impact of cash flow hedging relationships:				
Foreign Exchange Forward Contracts	$(1.7)	$—	$12.3	$—
Interest Rate Swap Contracts	$—	$3.1	$—	$(0.8)

	Six months ended June 30, 2018		Six months ended June 30, 2017	
	Net Product Sales	Interest Expense	Net Product Sales	Interest Expense
Financial Statement Line Item in which the Effects of Cash Flow Hedges are Recorded	$1,975.1	$(49.1)	$1,781.3	$(48.3)
Impact of cash flow hedging relationships:				
Foreign Exchange Forward Contracts	$(14.8)	$—	$32.0	$—
Interest Rate Swap Contracts	$—	$4.5	$—	$(1.3)

The impact on accumulated other comprehensive income (AOCI) from foreign exchange and interest rate swap contracts that qualified as cash flow hedges, for the three and six months ended June 30, 2018 and 2017 were as follows:

	Three months ended June 30,		Six months ended June 30,	
	2018	2017	2018	2017
Foreign Exchange Forward Contracts:				
Gain (loss) recognized in AOCI, net of tax	$49.0	$(45.7)	$16.5	$(61.7)
Gain (loss) reclassified from AOCI to net product sales, net of tax	$(1.3)	$7.9	$(11.4)	$20.6
Interest Rate Contracts:				
Gain (loss) recognized in AOCI, net of tax	$3.1	$(1.4)	$11.2	$(0.8)

Gain (loss) reclassified from AOCI to interest expense, net of tax	$2.5	$(0.5)	$3.6	$(0.8)

Assuming no change in foreign exchange rates from market rates at June 30, 2018, $0.8 of gains recognized in AOCI will be reclassified to revenue over the next 12 months. The amount of gains recognized in AOCI that will be reclassified to interest expense over the next 12 months is $9.1. Amounts recognized in AOCI for expense related foreign exchange forward contracts was not material at June 30, 2018.

We enter into foreign exchange forward contracts, with durations up to six months, designed to limit the balance sheet exposure of monetary assets and liabilities. We enter into these hedges to reduce the impact of fluctuating exchange rates on our operating results. Hedge accounting is not applied to these derivative instruments as gains and losses on these hedge transactions are designed to offset gains and losses on underlying balance

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sheet exposures. As of June 30, 2018, the notional amount of foreign exchange contracts where hedge accounting is not applied was $260.8.

We recognized a gain (loss) of $18.4 and $(0.5), in other income and expense, for the three months ended June 30, 2018 and 2017, associated with the foreign exchange contracts not designated as hedging instruments. We recognized a gain (loss) of $10.3 and $(9.2), for the six months ended June 30, 2018 and 2017, respectively, associated with the foreign exchange contracts not designated as hedging instruments. These amounts were partially offset by gains or losses on monetary assets and liabilities.

The following tables summarize the fair value of outstanding derivatives at June 30, 2018 and December 31, 2017:

	June 30, 2018			
	Derivative Assets		Derivative Liabilities	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Derivatives designated as hedging instruments:				
Foreign exchange forward contracts	Prepaid expenses and other current assets	$16.0	Other current liabilities	$15.5
Foreign exchange forward contracts	Other assets	1.9	Other liabilities	9.9
Interest rate contracts	Prepaid expenses and other current assets	9.1	Other current liabilities	—
Interest rate contracts	Other assets	22.3	Other liabilities	—
Derivatives not designated as hedging instruments:				
Foreign exchange forward contracts	Prepaid expenses and other current assets	0.4	Other current liabilities	1.0
Total fair value of derivative instruments		$49.7		$26.4

	December 31, 2017			
	Derivative Assets		Derivative Liabilities	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Derivatives designated as hedging instruments:				
Foreign exchange forward contracts	Prepaid expenses and other current assets	$12.9	Other current liabilities	$34.8
Foreign exchange forward contracts	Other assets	4.1	Other liabilities	26.0
Interest rate contracts	Prepaid expenses and other current assets	9.3	Other current liabilities	—
Interest rate contracts	Other assets	12.5	Other liabilities	—
Derivatives not designated as hedging instruments:				

Foreign exchange forward contracts	Prepaid expenses and other current assets	10.0	Other current liabilities	13.7
Total fair value of derivative instruments		$48.8		$74.5

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Although we do not offset derivative assets and liabilities within our condensed consolidated balance sheets, our International Swap and Derivatives Association agreements provide for net settlement of transactions that are due to or from the same counterparty upon early termination of the agreement due to an event of default or other termination event. The following tables summarize the potential effect on our condensed consolidated balance sheets of offsetting our foreign exchange forward contracts and interest rate contracts subject to such provisions:

	June 30, 2018					
				Gross Amounts Not Offset in the Condensed Consolidated Balance Sheet		
Description	Gross Amounts of Recognized Assets/Liabilities	Gross Amounts Offset in the Condensed Consolidated Balance Sheet	Net Amounts of Assets/Liabilities Presented in the Condensed Consolidated Balance Sheet	Derivative Financial Instruments	Cash Collateral Received (Pledged)	Net Amount
Derivative assets	$49.7	$ —	$ 49.7	$ (13.3)	$ —	$ 36.4
Derivative liabilities	(26.4)	—	(26.4)	13.3	—	(13.1)

	December 31, 2017					
				Gross Amounts Not Offset in the Condensed Consolidated Balance Sheet		
Description	Gross Amounts of Recognized Assets/Liabilities	Gross Amounts Offset in the Condensed Consolidated Balance Sheet	Net Amounts of Assets/Liabilities Presented in the Condensed Consolidated Balance Sheet	Derivative Financial Instruments	Cash Collateral Received (Pledged)	Net Amount
Derivative assets	$48.8	$ —	$ 48.8	$ (26.3)	$ —	$ 22.5
Derivative liabilities	(74.5)	—	(74.5)	26.3	—	(48.2)

10. Other Investments

We invest in companies with securities that are not publicly traded and where fair value is not readily available. Other investments include an investment in the preferred stock of the non-public entity Moderna Therapeutics, Inc. (Moderna). During 2014, we purchased $37.5 of preferred equity of Moderna. We have historically recorded this investment at cost, less impairments. In January 2016, the FASB issued a new standard that changes accounting for equity investments, including equity investments without a readily determinable fair value. We adopted the new

standard on January 1, 2018. While results for reporting periods beginning after January 1, 2018 are presented under the new guidance, prior period amounts are not adjusted and continue to be reported under the accounting standards in effect for the prior period.

In connection with our adoption of the new guidance for equity securities in the first quarter 2018, we elected the alternative measurement approach for our investment in Moderna. As a result, we will continue to record this investment at cost, less impairments; however, we will also adjust the investment for any changes resulting from an observable price change in an orderly transaction for identical or similar investments of the same issuer. We assess relevant transactions that occur on or before the balance sheet date to identify observable price changes, and we regularly monitor these investments to evaluate whether there is an indication that the investment is impaired, based on the implied value of recent company financings, public market prices of comparable companies, and general market conditions.

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During the first quarter 2018, Moderna announced the completion of a new round of financing. We considered this transaction and the rights of the preferred shares issued in the new round, compared to the rights of the preferred equity that we hold, and concluded that Moderna's new round of financing represents an observable price change in an orderly transaction for a similar investment. We further concluded, based on the respective rights of the stock and consideration of potential liquidity events, that the value of our preferred stock is equivalent to the value of the newly issued preferred stock. As a result, we recognized an unrealized gain of $100.8 in investment income during the first quarter 2018 to adjust our investment in Moderna to fair value as of the date of the observable price change, based on the per share price in Moderna's new round of financing. The carrying value of this investment was $138.3 and $37.5 as of June 30, 2018 and December 31, 2017, respectively. The carrying value of this investment was not impaired as of June 30, 2018.

11. Stockholders' Equity

In November 2012, our Board of Directors authorized a share repurchase program. The repurchase program does not have an expiration date, and we are not obligated to acquire a particular number of shares. The repurchase program may be discontinued at any time at our discretion. In February 2017, our Board of Directors authorized the future acquisition of shares with an aggregate value of up to $1,000.0 under the repurchase program, which superseded all prior repurchase programs. Under the program, for the three months ended June 30, 2017, we repurchased 1.6 shares at a cost of $170.8. During the six months ended June 30, 2018 and 2017, we repurchased 0.7 and 2.1 shares of our common stock at a cost of $85.0 and $238.9, respectively. The Company did not repurchase any shares during the three months ended June 30, 2018. As of July 26, 2018, there is a total of $451.5 remaining for repurchases under the repurchase program.

12. Other Comprehensive Income and Accumulated Other Comprehensive Income

The following tables summarize the changes in AOCI, by component, for the six months ended June 30, 2018 and 2017:

	Defined Benefit Pension Plans	Unrealized Gains (Losses) from Debt Securities	Unrealized Gains (Losses) from Hedging Activities	Foreign Currency Translation Adjustment	Total Accumulated Other Comprehensive Income (Loss)
Balances, December 31, 2017	$ (4.8)	$ 0.2	$ (13.9)	$ (15.9)	$ (34.4)
Other comprehensive income (loss) before reclassifications	1.3	0.1	27.7	(4.3)	24.8
Amounts reclassified from other comprehensive income	(0.6)	(0.5)	7.8	—	6.7
Net other comprehensive income (loss)	0.7	(0.4)	35.5	(4.3)	31.5
Balances, June 30, 2018	$ (4.1)	$ (0.2)	$ 21.6	$ (20.2)	$ (2.9)

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	Defined Benefit Pension Plans	Unrealized Gains (Losses) from Debt Securities	Unrealized Gains (Losses) from Hedging Activities	Foreign Currency Translation Adjustment	Total Accumulated Other Comprehensive Income (Loss)
Balances, December 31, 2016	$ (6.7)	$ (0.4)	$ 91.9	$ (24.3)	$ 60.5
Other comprehensive income (loss) before reclassifications	0.2	—	(62.5)	6.8	(55.5)
Amounts reclassified from other comprehensive income	0.1	0.9	(19.8)	—	(18.8)
Net other comprehensive income (loss)	0.3	0.9	(82.3)	6.8	(74.3)
Balances, June 30, 2017	$ (6.4)	$ 0.5	$ 9.6	$ (17.5)	$ (13.8)

The table below provides details regarding significant reclassifications from AOCI during the three and six months ended June 30, 2018 and 2017:

Details about Accumulated Other Comprehensive Income Components	Amount Reclassified From Accumulated Other Comprehensive Income during the three months ended June 30,		Amount Reclassified From Accumulated Other Comprehensive Income during the six months ended June 30,		Affected Line Item in the Condensed Consolidated Statements of Operations
	2018	2017	2018	2017	
Unrealized Gains (Losses) from Hedging Activity					
Foreign exchange forward contracts	$ (1.7)	$ 12.3	$ (14.8)	$ 32.0	Net product sales
Interest rate swap contracts	3.1	(0.8)	4.5	(1.3)	Interest expense
	1.4	11.5	(10.3)	30.7	
	(0.2)	(4.1)	2.5	(10.9)	Income tax expense
	$ 1.2	$ 7.4	$ (7.8)	$ 19.8	

13. Fair Value Measurement

Authoritative guidance establishes a valuation hierarchy for disclosure of the inputs to the valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument. Level 3 inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value.

The following tables present information about our assets and liabilities that are measured at fair value on a recurring basis as of June 30, 2018 and December 31, 2017, and indicate the fair value hierarchy of the valuation techniques we utilized to determine such fair value.

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		Fair Value Measurement at June 30, 2018			
Balance Sheet Classification	Type of Instrument	Total	Level 1	Level 2	Level 3
Cash equivalents	Money market funds	$5.4	$ —	$5.4	$—
Cash equivalents	Commercial paper	$55.8	$ —	$55.8	$—
Cash equivalents	Corporate bonds	$3.5	$ —	$3.5	$—
Cash equivalents	Bank certificates of deposit	$7.1	$ —	$7.1	$—
Cash equivalents	Other government-related obligations	$49.5	$ —	$49.5	$—
Marketable securities	Mutual funds	$20.2	$ 20.2	$—	$—
Marketable securities	Commercial paper	$83.1	$ —	$83.1	$—
Marketable securities	Corporate bonds	$215.2	$ —	$215.2	$—
Marketable securities	Other government-related obligations	$92.0	$ —	$92.0	$—
Marketable securities	Bank certificates of deposit	$39.0	$ —	$39.0	$—
Prepaid expenses and other current assets	Foreign exchange forward contracts	$16.4	$ —	$16.4	$—
Other assets	Foreign exchange forward contracts	$1.9	$ —	$1.9	$—
Other current liabilities	Foreign exchange forward contracts	$16.5	$ —	$16.5	$—
Other liabilities	Foreign exchange forward contracts	$9.9	$ —	$9.9	$—
Prepaid expenses and other current assets	Interest rate contracts	$9.1	$ —	$9.1	$—
Other assets	Interest rate contracts	$22.3	$ —	$22.3	$—
Current portion of contingent consideration	Acquisition-related contingent consideration	$70.3	$ —	$—	$70.3
Contingent consideration	Acquisition-related contingent consideration	$156.0	$ —	$—	$156.0

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		Fair Value Measurement at December 31, 2017			
Balance Sheet Classification	Type of Instrument	Total	Level 1	Level 2	Level 3
Cash equivalents	Commercial paper	$9.5	$ —	$9.5	$—
Cash equivalents	Reverse repurchase agreements	$27.0	$ —	$27.0	$—
Cash equivalents	Corporate bonds	$1.2	$ —	$1.2	$—
Cash equivalents	Other government-related obligations	$5.0	$ —	$5.0	$—
Marketable securities	Mutual funds	$18.5	$ 18.5	$—	$—
Marketable securities	Commercial paper	$6.5	$ —	$6.5	$—
Marketable securities	Corporate bonds	$431.3	$ —	$431.3	$—
Marketable securities	Other government-related obligations	$421.3	$ —	$421.3	$—
Marketable securities	Bank certificates of deposit	$11.8	$ —	$11.8	$—
Marketable securities	Equity securities	$0.3	$ 0.3	$—	$—
Prepaid expenses and other current assets	Foreign exchange forward contracts	$22.9	$ —	$22.9	$—
Other assets	Foreign exchange forward contracts	$4.1	$ —	$4.1	$—
Other current liabilities	Foreign exchange forward contracts	$48.5	$ —	$48.5	$—
Other liabilities	Foreign exchange forward contracts	$26.0	$ —	$26.0	$—
Prepaid expenses and other current assets	Interest rate contracts	$9.3	$ —	$9.3	$—
Other assets	Interest rate contracts	$12.5	$ —	$12.5	$—
Contingent consideration	Acquisition-related contingent consideration	$168.9	$ —	$—	$168.9

There were no securities transferred between Level 1, 2 and 3 during the six months ended June 30, 2018.

Valuation Techniques

We classify mutual fund investments and equity securities, which are valued based on quoted market prices in active markets with no valuation adjustment, as Level 1 assets within the fair value hierarchy.

Cash equivalents and marketable securities classified as Level 2 within the valuation hierarchy consist of commercial paper, reverse repurchase agreements, U.S. and foreign government-related debt, corporate debt securities and certificates of deposit. We estimate the fair values of these marketable securities by taking into consideration valuations obtained from third-party pricing sources. These pricing sources utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include market pricing based on real-time trade data for similar securities, issuer credit spreads, benchmark yields, and other observable inputs. We validate the prices provided by our third-party pricing sources by understanding the models used, obtaining market values from other pricing sources and analyzing pricing data in certain instances.

Our derivative assets and liabilities include foreign exchange and interest rate derivatives that are measured at fair value using observable market inputs such as forward rates, interest rates, our own credit risk as well as an evaluation of our counterparties' credit risks. Based on these inputs, the derivative assets and liabilities are classified within Level 2 of the valuation hierarchy.

Contingent consideration liabilities related to acquisitions are classified as Level 3 within the valuation hierarchy and are valued based on various estimates, including probability of success, discount rates and amount of time until the conditions of the milestone payments are met.

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As of June 30, 2018, there has not been any impact to the fair value of our derivative liabilities due to our own credit risk. Similarly, there has not been any significant adverse impact to our derivative assets based on our evaluation of our counterparties' credit risks.

Contingent Consideration

In connection with prior acquisitions, we may be required to pay future consideration that is contingent upon the achievement of specified development, regulatory approvals or sales-based milestone events. We determine the fair value of these obligations using various estimates that are not observable in the market and represent a Level 3 measurement within the fair value hierarchy. The resulting probability-weighted cash flows were discounted using a cost of debt of 4.2% for developmental milestones and a weighted average cost of capital ranging from 9.0% to 21.0% for sales-based milestones.

Each reporting period, we adjust the contingent consideration to fair value with changes in fair value recognized in operating earnings. Changes in fair values reflect new information about the probability and timing of meeting the conditions of the milestone payments. In the absence of new information, changes in fair value will only reflect the interest component of contingent consideration related to the passage of time.

Estimated future contingent milestone payments related to prior business combinations range from zero if no milestone events are achieved, to a maximum of $741.0 if all development, regulatory and sales-based milestones are reached. As of June 30, 2018, the fair value of acquisition-related contingent consideration was $226.3. The following table represents a roll-forward of our acquisition-related contingent consideration:

	Six months ended June 30, 2018
Balance at December 31, 2017	$ 168.9
Changes in fair value	57.4
Balance at June 30, 2018	$ 226.3

14. Revenue Recognition

In May 2014, the FASB issued a comprehensive new standard which amends revenue recognition principles. We adopted the new standard on January 1, 2018 by applying the modified retrospective method to all contracts that were not completed as of that date. Under the new guidance, revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration expected to be received in exchange for those goods or services. Revenue is recognized through a five-step process: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) a performance obligation is satisfied. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, the Company assesses the goods or services promised within each contract, and determines those that are performance obligations. Revenue is recognized for the applicable performance element when each distinct performance obligation is satisfied.

While results for reporting periods beginning after January 1, 2018 are presented under the new guidance, prior period amounts are not adjusted and continue to be reported under the accounting standards in effect for the prior period. The accounting policy for revenue recognition for periods prior to January 1, 2018 is described in Note 1 of the Notes to the Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2017.

Nature of Products

Our principal source of revenue is product sales. Our contracts with customers generally contain a single performance obligation and we recognize revenue from product sales when we have satisfied our performance obligation by transferring control of the product to our customers. Control of the product generally transfers to the customer upon delivery. In certain countries, we sell to distributors on a consignment basis and record revenue when control of the product transfers to the customer upon sale to the end user.

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Our customers are primarily comprised of distributors, pharmacies, hospitals, hospital buying groups, and other healthcare providers. In some cases, we may also sell to governments and government agencies. In addition to sales in countries where our products are commercially available, we have also recorded revenue on sales for patients receiving treatment through named-patient programs. The relevant authorities or institutions in those countries have agreed to reimburse for product sold on a named-patient basis where our products have not received final approval for commercial sale.

Revenue is recognized at the amount to which we expect to be entitled in exchange for the sale of our products. This amount includes both fixed and variable consideration and excludes amounts that are collected from customers and remitted to governmental authorities, such as value-added taxes in foreign jurisdictions. Shipping and handling costs associated with outbound freight after control of a product has transferred to our customers are accounted for as a fulfilment cost and are included in operating expenses. The cost for any shipping and handling activities (including customs clearance activities) associated with transactions for which revenue has been recognized are accrued if not completed before the respective period end.

The timing between the recognition of revenue for product sales and the receipt of payment is not significant. Our standard credit terms, which vary based on the country of sale, range from 30 to 120 days and all arrangements are payable within one year of the transfer of the product. We do not assess whether a contract has a significant financing component if the expectation at contract inception is such that the period between the transfer of the promised good to the customer and receipt of payment will be one year or less.

We evaluate the creditworthiness of customers on a regular basis. In certain European countries, sales by us are subject to payment terms that are statutorily determined. This is primarily the case in countries where the payer is government-owned or government-funded, which we consider to be creditworthy. The length of time from sale to receipt of payment in certain countries exceeds our credit terms. In countries in which collections from customers extend beyond normal payment terms, we seek to collect interest. We record interest on customer receivables as interest income when collected. Subsequent adjustments for further declines in credit rating are recorded as bad debt expense as a component of selling, general and administrative expense. We also use judgments as to our ability to collect outstanding receivables and provide allowances for the portion of receivables if and when collection becomes doubtful, and we also assess on an ongoing basis whether collectibility is probable at the time of sale. As of June 30, 2018 and December 31, 2017, allowances on receivables were not material.

Variable Consideration

We pay distribution fees to our distributors and offer rebates and/or discounts, or enter into volume-based reimbursement arrangements with certain customers. We reduce the transaction price on our sales for these amounts. For variable amounts, we estimate the amount of consideration to which we expect to be entitled based on all available historic, current and forecast information. We use both the expected value and the most likely method to estimate variable payments based on the type of variable consideration and what method better predicts the amount of consideration we expect to be entitled to. Consideration that is received from a customer that we expect will need to be refunded in the future is recorded as a refund liability to the customer within accrued expenses. Actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we adjust these estimates, which would affect net product sales and earnings in the period such variances become know.

Variability in the transaction price for our products pursuant to our contracts with customers primarily arises from the following:

Discounts and Rebates: We offer discounts and rebates to certain customers under our arrangements. In many cases, these amounts are fixed at the time of sale and the transaction price is reduced accordingly. We also provide for rebates under certain governmental programs, including Medicaid in the U.S. and other programs outside the U.S. which are payable based on actual claim data. We estimate these rebates based on an analysis of historical claim patterns and estimates of customer mix to determine which sales will be subject to rebates and the amount of such rebates. We update our estimates and assumptions each period and record any necessary adjustments, which may have an impact on revenue in the period in which the adjustment is made. Generally, the length of time between product sale and the processing and reporting of the rebates is three to six months.

Volume-Based Arrangements: We have entered into volume-based arrangements with governments in certain countries and other customers in which reimbursement is limited to a contractual amount. Under this type of arrangement, amounts billed in excess of the contractual limitation are repaid to the customer as a rebate. We

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estimate incremental discounts resulting from these contractual limitations, based on forecasted sales during the limitation period, and we apply the discount percentage to product shipments as a reduction of revenue. Our calculations related to these arrangements require estimation of sales during the limitation period, and adjustments in these estimates may have a material impact in the period in which these estimates change.

Distribution & Other Fees: We pay distribution and other fees to certain customers in connection with the sales of our products. We record distribution and other fees paid to our customers as a reduction of revenue, unless the payment is for a distinct good or service from the customer and we can reasonably estimate the fair value of the goods or services received. If both conditions are met, we record the consideration paid to the customer as an operating expense. These costs are typically known at the time of sale, resulting in minimal adjustments subsequent to the period of sale.

Product Returns: Our contracts with customers generally provide for returns only if the product is damaged or defective upon delivery. We assess our sales transactions and arrangements with customers and monitor inventory within our sales channels to determine whether a provision for returns is warranted and a resulting adjustment to the transaction price is necessary. This assessment is based on historical experience and assumptions as of the date of sale and changes in these estimates could have an impact in the period in which the change occurs. Because of factors such as the price of our products, the limited number of patients, the short period from product sale to patient infusion and limited contractual return rights, our customers often carry limited inventory.

The amount of variable consideration included in the transaction price is constrained by the amount that is probable will not result in a significant reversal of revenue. We consider our experience with similar transactions and expectations regarding the contract in estimating the amount of variable consideration to which we expect to be entitled, and determining whether the estimated variable consideration should be constrained. We do not have any material constraints on the variable consideration included within the transaction price of our current revenue arrangements.

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Disaggregation of Revenue

The Company disaggregates revenue from contracts with customers into product and geographical regions as summarized below.

	Three months ended June 30,		Six months ended June 30,	
	2018	2017	2018	2017
Soliris				
United States	$395.8	$317.8	$731.8	$605.9
Europe	253.4	248.5	504.2	489.9
Asia Pacific	93.6	80.8	179.1	159.6
Rest of World	155.4	166.2	283.2	341.4
Total	$898.2	$813.3	$1,698.3	$1,596.8
Strensiq				
United States	$99.9	$70.0	$189.1	$133.3
Europe	16.4	8.6	30.4	13.7
Asia Pacific	6.3	4.4	12.0	8.1
Rest of World	2.5	0.6	4.3	2.1
Total	$125.1	$83.6	$235.8	$157.2
Kanuma				
United States	$13.0	$11.1	$24.9	$19.8
Europe	5.8	3.3	11.7	5.1
Asia Pacific	1.1	0.6	2.1	1.1
Rest of World	1.5	0.3	2.3	1.3
Total	$21.4	$15.3	$41.0	$27.3

Contract Balances and Receivables

Contract liabilities relate to consideration received and/or billed for goods that have not been delivered to the customer and for which the performance obligation has not yet been completed. These amounts are included within other current liabilities in the condensed consolidated statements of operations.

The following table provides information about receivables and contract liabilities from our contracts with customers.

	June 30, 2018	December 31, 2017
Receivables, which are included in "Trade accounts receivable, net"	$ 853.7	$ 726.5
Contract liabilities, which are included in "Other current liabilities"	$ 3.7	$ 15.9

Upon adoption of the new standard, on January 1, 2018, we reduced our deferred revenue balance by $10.4, with an offsetting increase of $6.0 in retained earnings due to the cumulative impact of adopting this new standard. The adjusted deferred revenue balance, as of January 1, 2018, was $5.5. We recognized this amount in revenue in the first quarter of 2018.

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15. Income Taxes

The following table provides a comparative summary of our income tax expense and effective income tax rate for the three and six months ended June 30, 2018 and 2017:

	Three months ended		Six months ended	
	June 30,		June 30,	
	2018	2017	2018	2017
Income tax expense	$38.8	$41.1	$141.3	$65.0
Effective tax rate	(9.3)%	19.9 %	(210.9)%	16.2 %

The income tax expense for the three and six months ended June 30, 2018 and 2017 is attributable to the U.S. federal, state and foreign income taxes on our profitable operations. The decrease in the effective tax rate for the three and six months ended June 30, 2018 as compared to the same periods in the prior year is primarily attributable to the acquisition of Wilson Therapeutics. Absent successful clinical results and regulatory approval, there is no alternative future use of the WTX101 asset acquired. Accordingly, the value of the asset of $803.7 was expensed in acquired in-process research and development for the three and six months ended June 30, 2018, for which no tax benefit has been recognized. The Wilson Therapeutics acquisition resulted in a decrease in the effective tax rate for the three and six months ended of approximately 19.4% and 230.1%, respectively. Also included in the six months ended June 30, 2018 is a U.S. tax reform measurement period adjustment to deferred taxes of $38.4. This deferred tax cost increased the effective tax rate for the six months ended June 30, 2018 by approximately 5.2%.

In December 2017, the Tax Act was enacted into law. The Tax Act decreased the U.S. federal corporate tax rate to 21.0%, imposed a minimum tax on foreign earnings related to intangible assets (GILTI), a one-time transition tax on previously unremitted foreign earnings, and modified the taxation of other income and expense items. With regard to the GILTI minimum tax, foreign earnings are reduced by the profit attributable to tangible assets and a deductible allowance of up to 50.0%, subject to annual limitations. We have elected to account for the impact of the minimum tax in deferred taxes, and to account for the deductible allowance and tangible asset profit reduction in the period realized.

We incorporated the impact of the Tax Act in our results or calculated provisional amounts for the tax effects of the Tax Act for the year ended December 31, 2017. Our accounting for the Tax Act is not yet complete. We did not record any measurement period adjustments to provisional amounts previously recorded related to the year ended December 31, 2017 during the second quarter 2018. As of June 30, 2018 our accounting for the Tax Act is incomplete as follows:

(a) We calculated a reasonable estimate of the one-time transition tax on previously unremitted earnings, which resulted in an increase to U.S. Federal tax expense of $177.9 and an increase to taxes payable, net of tax credits, of $28.0 in the period ended December 31, 2017. Our initial accounting for the transition tax is incomplete because there is uncertainty regarding the calculation of the amounts subject to the tax. Additional analysis of this provision of the law, as well as recently released interpretive guidance and its application to the Company are required to complete our accounting.

(b) We calculated a reasonable estimate of the impact of the GILTI minimum tax on deferred taxes in the period ended December 31, 2017, which resulted in an increase to U.S. Federal tax expense and the deferred tax liability of

$236.9. Our initial accounting for the minimum tax is incomplete because there is uncertainty regarding the calculation of the temporary differences that will be subject to the minimum tax. Additional analysis regarding the computation of these temporary differences and the expected timing and manner of their realization is required to complete our accounting. We recorded a measurement period adjustment of $32.0 to income tax expense and deferred taxes to this provisional estimate for the three months ended March 31, 2018.

(c) We calculated a reasonable estimate of the Tax Act's limits on deductions for employee remuneration, including remuneration in kind, which resulted in an insignificant impact to tax expense, taxes payable, and deferred taxes in the period ended December 31, 2017. Our initial accounting for these limits is incomplete

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because there is uncertainty regarding the value of the deduction-limited remuneration. Additional analysis regarding whether employee remuneration arrangements and agreements are deductible under the Tax Act is required to complete our accounting. We do not anticipate this item to have a material impact on our financial condition and results of operations.

(d) We calculated a reasonable estimate of the impact of the Tax Act to U.S. state income taxes, which resulted in an increase to tax expense, taxes payable, and deferred taxes of $2.9, $2.2, and $0.7, respectively, in the period ended December 31, 2017. We interpreted the effect of the Tax Act's changes to federal law on each U.S. state's system of taxation as of the date of enactment. However, additional analysis is required to determine the effect of modifications to federal deductions and income inclusions on these systems.

(e) We calculated the deferred tax liability related to our interest in the foreign captive partnership consistent with prior periods. We are considering the indirect effects of the Tax Act on this calculation. As a result, the deferred tax liability we recorded as of December 31, 2017 of $533.4 related to our foreign captive partnership is provisional. Additional analysis of the direct and indirect effects of the Tax Act is required to complete our accounting for this item. We recorded a measurement period adjustment of $6.4 to U.S. state income tax expense and deferred taxes to this provisional estimate for the three months ended March 31, 2018.

In 2017, the Internal Revenue Services (IRS) commenced an examination of our U.S. income tax returns for 2015. We anticipate this audit will conclude within the next twelve months. We have not been notified of any significant adjustments proposed by the IRS.

We have recorded tax on the undistributed earnings of our controlled foreign corporation (CFC) subsidiaries. To the extent CFC earnings may not be repatriated to the U.S. as a dividend distribution due to limitations imposed by law, we have not recorded the related potential withholding, foreign local, and U.S. state income taxes.

We continue to maintain a valuation allowance against certain deferred tax assets where realization is not certain.

16. Defined Benefit Plans

We maintain defined benefit plans for employees in certain countries outside the U.S., including retirement benefit plans required by applicable local law. The plans are valued by independent actuaries using the projected unit credit method. The liabilities correspond to the projected benefit obligations of which the discounted net present value is calculated based on years of employment, expected salary increases, and pension adjustments. The total net periodic benefit cost for the three months ended June 30, 2018 and 2017 was $1.3 and $1.5, respectively, and for the six months ended June 30, 2018 and 2017 was $1.8 and $3.0, respectively, primarily related to service costs.

17. Facility Lease Obligations

New Haven Facility Lease Obligation

In November 2012, we entered into a lease agreement for office and laboratory space to be constructed in New Haven, Connecticut. The term of the lease commenced in 2015 and will expire in 2030, with a renewal option of ten years. Although we do not legally own the premises, we are deemed to be the owner of the building due to the substantial improvements directly funded by us during the construction period based on applicable accounting guidance for build-to-suit leases. Accordingly, the landlord's costs of constructing the facility during the construction period are required to be capitalized, as a non-cash transaction, offset by a corresponding facility lease obligation in our consolidated balance sheets.

Construction of the facility was completed and the building was placed into service in the first quarter 2016. For each of the three and six months ended June 30, 2018 and 2017, we recognized $3.6 and $7.1, respectively, of interest expense associated with this arrangement. As of June 30, 2018 and December 31, 2017, our total facility lease obligation was $134.2 and $134.6, respectively, recorded within other current liabilities and facility lease obligation on our condensed consolidated balance sheets.

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Lonza Facility Lease Obligation

During the third quarter 2015, we entered into a new agreement with Lonza Group AG and its affiliates (Lonza) whereby Lonza will construct a new manufacturing facility dedicated to Alexion at one of its existing facilities. The agreement requires us to make certain payments during the construction of the new manufacturing facility and annual payments for ten years thereafter. As a result of our contractual right to full capacity of the new manufacturing facility, a portion of the payments under the agreement are considered to be lease payments and a portion as payment for the supply of inventory. Although we will not legally own the premises, we are deemed to be the owner of the manufacturing facility during the construction period based on applicable accounting guidance for build-to-suit leases due to our involvement during the construction period. Accordingly, the landlord’s costs of constructing the facility during construction period are required to be capitalized, as a non-cash transaction, offset by a corresponding facility lease obligation in our consolidated balance sheets. The completion of the facility, including obtaining regulatory approval, is expected in the first half of 2019. As of June 30, 2018 and December 31, 2017, we recorded a construction-in-process asset of $192.3 and $180.6, respectively, and an offsetting facility lease obligation of $157.6 and $159.1, respectively, associated with the manufacturing facility.

Payments to Lonza under the agreement are allocated to the purchases of inventory and the repayment of the facility lease obligation on a relative fair value basis. During the six months ended June 30, 2018, we incurred $31.5 of payments to Lonza under this agreement, of which $4.1 was applied against the outstanding facility lease obligation and $27.4 was recognized as a prepayment of inventory. See Note 18 for minimum fixed payments due under Lonza agreements.

Boston Facility Lease Obligation

In September 2017, we entered into a lease agreement for approximately 150,000 square feet of office space that was constructed in Boston, Massachusetts. The term of the lease commenced upon the landlord's substantial completion of our premises in the second quarter of 2018 and will expire on the thirteenth anniversary of commencement, with an option to renew for up to an additional 10 years. Although we will not legally own the premises, due to our involvement during the construction period, we are deemed to be the owner of the portion of the building that we will lease based on applicable accounting guidance for build-to-suit leases. Accordingly, the landlord's costs of constructing the facility during the construction period were capitalized, as a non-cash transaction, offset by a corresponding facility lease obligation in our condensed consolidated balance sheets.

Construction of the facility was completed and the building was placed into service in the second quarter 2018. As of June 30, 2018 and December 31, 2017, our total facility lease obligation was $81.0 and $59.6, respectively, within facility lease obligation on our condensed consolidated balance sheets.

18. Commitments and Contingencies

Commitments

License Agreements

We have entered into a number of license agreements in order to advance and obtain technologies and services related to our business. License agreements generally require us to pay an initial fee and certain agreements call for future payments upon the attainment of agreed upon development and/or commercial milestones. These agreements may also require minimum royalty payments based on sales of products developed from the applicable technologies, if any.

Manufacturing Agreements

We have various manufacturing development and license agreements to support our clinical and commercial product needs.

We rely on Lonza, a third party manufacturer, to produce a portion of commercial and clinical quantities of our commercial products and product candidates. We have various manufacturing and license agreements with Lonza, with remaining total non-cancellable future commitments of approximately $1,086.8. If we terminate certain supply agreements with Lonza without cause, we will be required to pay for product scheduled for manufacture under our arrangement. Under an existing arrangement with Lonza, we also pay Lonza a royalty on sales of Soliris that was

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manufactured at the Alexion Rhode Island Manufacturing Facility (ARIMF) and a payment with respect to sales of Soliris manufactured at Lonza facilities.
In addition to Lonza, we have non-cancellable commitments of approximately $28.4 with other third party manufacturers.

Contingent Liabilities
We are currently involved in various claims, lawsuits and legal proceedings. On a quarterly basis, we review the status of each significant matter and assess its potential financial exposure. If the potential loss from any claim, asserted or unasserted, or legal proceeding is considered probable and the amount can be reasonably estimated, we accrue a liability for the estimated loss. Because of uncertainties related to claims and litigation, accruals are based on our best estimates based on information available at the time of the assessment. On a periodic basis, as additional information becomes available, or based on specific events such as the outcome of litigation or settlement of claims (and offers of settlement), we may reassess the potential liability related to these matters and may revise these estimates, which could result in a material adverse adjustment to our operating results.
We have in the past received, and may in the future receive, notices from third parties claiming that their patents may be infringed by the development, manufacture or sale of our products. Under the guidance of ASC 450, Contingencies, we record a royalty accrual based on our best estimate of the fair value percent of net sales of our products that we could be required to pay the owners of patents for technology used in the manufacture and sale of our products. A costly license, or inability to obtain a necessary license, could have a material adverse effect on our financial results.
In May 2015, we received a subpoena in connection with an investigation by the Enforcement Division of the SEC requesting information related to our grant-making activities and compliance with the FCPA in various countries. In addition, in October 2015, we received a request from the DOJ for the voluntary production of documents and other information pertaining to Alexion’s compliance with FCPA. The SEC and DOJ also seek information related to Alexion’s recalls of specific lots of Soliris and related securities disclosures. Alexion is cooperating with these investigations.
The investigations have focused on operations in various countries, including Brazil, Colombia, Japan, Russia and Turkey, and Alexion's compliance with the FCPA and other applicable laws.
At this time, Alexion is unable to predict the duration, scope or outcome of these investigations. While it is possible that a loss related to these matters may be incurred, given the ongoing nature of these investigations, management cannot reasonably estimate the potential magnitude of any such loss or range of loss, or the cost of the ongoing investigation. Any determination that our operations or activities are not or were not in compliance with existing laws or regulations could result in the imposition of fines, civil and criminal penalties, equitable remedies, including disgorgement, injunctive relief, and/or other sanctions against us, and remediation of any such findings could have an adverse effect on our business operations.
Alexion is committed to strengthening its compliance program and has initiated a comprehensive company-wide transformation plan to enhance and remediate its business processes, structures, controls, training, talent and systems across Alexion’s global operations. For information concerning the risks associated with the investigation, see our Risk Factor - "If we fail to comply with laws or regulations, we may be subject to investigations and civil or criminal penalties and our business could be adversely affected."
As previously reported, on December 29, 2016, a shareholder filed a putative class action against the Company and certain former employees in the U.S. District Court for the District of Connecticut, alleging that defendants made

misrepresentations and omissions about Soliris. On April 12, 2017, the court appointed a lead plaintiff. On July 14, 2017, the lead plaintiff filed an amended putative class action complaint against the Company and seven current or former employees. The complaint alleges that defendants made misrepresentations and omissions about Soliris, including alleged misrepresentations regarding sales practices, management changes, and related investigations, between January 30, 2014 and May 26, 2017, and that the Company's stock price dropped upon the purported disclosure of the misrepresentations. Defendants moved to dismiss the amended complaint on September 12, 2017. Plaintiffs filed an opposition to defendants' motion to dismiss on November 13, 2017, and defendants' filed a reply brief in further support of their motion on December 28, 2017. Defendants' motion to dismiss is now fully briefed and pending before the court. Given the early stages of this litigation, an estimate of the possible loss or range of loss cannot be made at this time.

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In December 2016, we received a subpoena from the U.S. Attorney's Office for the District of Massachusetts requesting documents relating generally to our support of 501(c)(3) organizations that provide financial assistance to Medicare patients taking drugs sold by Alexion, Alexion's provision of free drug to Medicare patients, and Alexion compliance policies and training materials concerning the anti-kickback statute or payments to any 501(c)(3) organization that provides financial assistance to Medicare patients. We understand that the U.S. Attorney's Office is coordinating its inquiry with the Office of Inspector General (OIG) of the U.S. Department of Health and Human Services. Other companies have disclosed similar inquiries. We are cooperating with this inquiry. We have begun to engage in discussions with the DOJ about a potential resolution of this matter. There can be no assurance that any current or future discussions with the government to resolve these matters will be successful or that any potential settlement terms or amount will be agreed to or finalized. We are unable to predict when these matters will be resolved or what further action, if any, the government will take in connection with them.

In May 2017, Brazilian authorities seized records and data from our Sao Paulo, Brazil offices as part of an investigation being conducted into Alexion's Brazilian operations. We are cooperating with this inquiry.

In June 2017, we received a demand to inspect certain of our books and records pursuant to Section 220 of the General Corporation Law of the State of Delaware on behalf of a purported stockholder. Among other things, the demand sought to determine whether to institute a derivative lawsuit against certain of the Company's directors and officers in relation to the investigation by our Audit and Finance Committee announced in November 2016 and the investigations instituted by the SEC, DOJ, U.S. Attorney's Office for the District of Massachusetts, and Brazilian law enforcement officials that are described above. We have responded to the demand. Given the early stages of this matter, an estimate of the possible loss or range of loss cannot be made at this time.

On September 27, 2017, a hearing panel of the Canadian Patented Medicine Prices Review Board (PMPRB) issued a decision in a previously pending administrative pricing matter that we had excessively priced Soliris in a manner inconsistent with the Canadian pricing rules and guidelines. In its decision, the PMPRB ordered Alexion to decrease the price of Soliris to an upper limit based upon pricing in certain other countries, and to forfeit excess revenues for the period between 2009 and 2017. The amount of excess revenues was not determined to be a material amount. In October 2017, Alexion filed an application for judicial review of the PMPRB's decision in the Federal Court of Canada. At this time, we cannot predict the duration, scope or outcome of these judicial review proceedings or any appeals that may follow and cannot reasonably estimate the amount of any forfeitures that will be required to be made or the potential impact to future Soliris revenues in Canada relating to any potential future price reduction.

19. Restructuring and Related Expenses

In the first quarter of 2017, we initiated a company-wide restructuring designed to help position the Company for sustainable, long-term growth that we believe will further allow us to fulfill our mission of serving patients and families with rare diseases. The initial restructuring activities primarily focused on a reduction of the Company's global workforce. In September 2017, we committed to an operational plan to re-align the global organization with its refocused corporate strategy. The re-alignment focuses investments in priority growth areas to maximize leadership in complement and grow the rare disease business. The re-alignment also included the relocation of the Company's headquarters to Boston, Massachusetts which was completed in the second quarter of 2018. Our New Haven, Connecticut site continues to support employees working in the research and process development laboratories, the clinical supply and quality teams, nurse case management and a number of important enterprise business services. The plan also reduced the Company's global workforce by approximately 20.0%. The restructuring is designed to result in cost savings by focusing the development portfolio, simplifying business structures and processes across the

Company's global operations, and closing of multiple Alexion sites, including ARIMF and certain regional and country-based offices.

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The following table summarizes the total expenses recorded related to the restructuring activities by the type of activity and the locations recognized within the consolidated statements of operations:

	Three months ended June 30, 2018				Three months ended June 30, 2017			
	Employee Separation Costs	Asset-Related Charges	Other	Total	Employee Separation Costs	Asset-Related Charges	Other	Total
Cost of Sales	$—	$ 0.5	$ —	$0.5	$—	$ —	$ —	$ —
Research and Development	—	—	—	—	—	—	—	—
Selling, General and Administrative	—	6.5	—	6.5	—	—	—	—
Restructuring Expense	3.1	—	7.5	10.6	(0.6)	—	3.5	2.9
Other (Income) Expense	—	—	—	—	—	—	—	—
	$3.1	$ 7.0	$ 7.5	$17.6	$(0.6)	$ —	$ 3.5	$ 2.9

	Six months ended June 30, 2018				Six months ended June 30, 2017			
	Employee Separation Costs	Asset-Related Charges	Other	Total	Employee Separation Costs	Asset-Related Charges	Other	Total
Cost of Sales	$—	$ 5.8	$—	$5.8	—	—	—	$—
Research and Development	—	0.1	—	0.1	—	—	—	$—
Selling, General and Administrative	—	10.1	—	10.1	—	—	—	$—
Restructuring Expense	4.1	—	12.0	16.1	20.1	—	6.6	$26.7
Other (Income) Expense	—	—	(0.1)	(0.1)	—	—	—	$—
	$4.1	$ 16.0	$11.9	$32.0	$20.1	$ —	$ 6.6	$26.7

The following table presents a reconciliation of the restructuring reserve recorded within accrued expenses on the Company's condensed consolidated balance sheet for the three and six months ended June 30, 2018:

	Three months ended June 30, 2018				Six months ended June 30, 2018			
	Employee Separation Costs	Asset Charges	Other Costs	Total	Employee Separation Costs	Asset Charges	Other Costs	Total
Liability, beginning of period	$29.3	$ —	$1.3	$30.6	$53.8	$ —	$4.4	$58.2
Restructuring and Related Expenses	3.9	7.0	7.5	18.4	4.8	16.0	12.7	33.5
Cash settlements	(14.9)	—	(6.2)	(21.1)	(40.4)	—	(13.7)	(54.1)
Adjustments to previous estimates	(0.8)	—	—	(0.8)	(0.7)	—	(0.8)	(1.5)
Asset impairments	—	(7.0)	—	(7.0)	—	(16.0)	—	(16.0)
Liability, end of period	$17.5	$ —	$2.6	$20.1	$17.5	$ —	$2.6	$20.1

The restructuring reserve of $20.1 and $58.2 is recorded in accrued expenses on the Company's condensed consolidated balance sheet as of June 30, 2018 and December 31, 2017, respectively. We currently estimate incurring additional restructuring and related expenses in 2018 of approximately $10.0 to $60.0 related to the 2017 restructuring activities, primarily related to other costs. We expect to pay all accrued amounts related to this restructuring within the

next nine months.

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Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Note Regarding Forward-Looking Statements

This quarterly report on Form 10-Q contains forward-looking statements that have been made pursuant to the provisions of the Private Securities Litigation Reform Act of 1995. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "committed," variations of such words and similar expressions are intended to identify such forward-looking statements, although not all forward-looking statements contain these identifying words.

Forward-looking statements are not guarantees of future performance and are subject to certain risks, uncertainties, and assumptions that are difficult to predict; therefore, actual results may differ materially from those expressed or forecasted in any such statements. Such forward-looking statements are based on current expectations, estimates and projections about our industry, management's beliefs, and certain assumptions made by our management, and may include, but are not limited to, statements regarding:

- the potential benefits and commercial potential of Soliris®, Strensiq® and Kanuma® for approved indications and any expanded uses, timing and effect of sales of our products in various markets worldwide, pricing for our products, level of insurance coverage and reimbursement for our products, level of future product sales and collections, timing regarding development and regulatory approvals for additional indications or in additional territories;
- the medical and commercial potential of additional indications for Soliris;
- costs, expenses and capital requirements, interest rates, cash outflows, operating expenses, capital investment, cash from operations, investment in certain facilities, status of reimbursement, price approval and funding processes in various countries worldwide;
- adequacy of cash resources to fund operations, as well as payment of future contingent consideration obligations and payments under license agreements;
- progress in developing interest about our products and our product candidates in the patient, physician and payer communities;
- the safety and efficacy of our products and our product candidates;
- the date of completion of construction and the regulatory approval of certain manufacturing and fill/finish facilities;
- expected impact of delay in collecting accounts receivable;
- estimates of the potential markets and estimated commercialization dates for our products and our product candidates around the world;
- sales and marketing plans, any changes in the current or anticipated market demand or medical need for our products or our product candidates;
- status of our ongoing clinical trials for eculizumab, ALXN1210 and our other product candidates, commencement dates for new clinical trials, clinical trial results, evaluation of our clinical trial results by regulatory agencies, the adequacy of our pharmacovigilance and drug safety reporting processes, prospects for regulatory approval of our products and our product candidates, need for additional research and testing, the uncertainties involved in the drug development process and manufacturing;
- performance and reliance on third party service providers;
- our future research and development activities, plans for acquired programs, business development actions, our ability to develop and commercialize products with our collaborators;
- assessment of competitors and potential competitors;
- anticipated completion of tax audits;
- recoverability of the cost basis of certain debt securities;
- periods of patent, regulatory and market exclusivity for our products;
- estimated amortization expense for certain intangible assets;
- the scope of our intellectual property and the outcome of any challenges or opposition to our intellectual property;
- assertion or potential assertion by third parties that the manufacture, use or sale of our products infringes their intellectual property;

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- the impact of new accounting standards and certain provisions of the Tax Act on the Company's results of operations;
- compliance improvements;
- estimates of the capacity of manufacturing and other service facilities to support our products and our product candidates;
- the expected benefits and the estimates of additional restructuring and related expenses and the timing of the payment of such amounts; and
- potential costs resulting from product liability or other third party claims, the sufficiency of our existing capital resources and projected cash needs.

Such risks and uncertainties include, but are not limited to, the possibility that expected tax benefits will not be realized, assessment of impact of recent accounting pronouncements, potential declines in sovereign credit ratings or sovereign defaults in countries where we sell our products, delay of collection or reduction in reimbursement due to adverse economic conditions or changes in government and private insurer regulations and approaches to reimbursement, uncertainties surrounding legal proceedings, company investigations and government investigations, including our Securities and Exchange Commission (SEC) and U.S. Department of Justice (DOJ) investigations, the securities class action litigation filed in December 2016, the inquiry by the U.S. Attorney's Office for the District of Massachusetts requesting documents relating generally to our support of patient assistance programs, the investigation of our Brazilian operations by Brazilian authorities, risks related to potential disruptions to our business as a result of the leadership changes and transition announced in December 2016 and March 2017, the anticipated effects of the company-wide restructuring initiated in the first quarter 2017 and operational plan initiated in the third quarter 2017, including relocation of our global headquarters, the short and long-term effects of other government healthcare measures, and the effect of shifting foreign exchange rates, as well as those risks and uncertainties discussed later in this report under the section entitled “Risk Factors.” Unless required by law, we undertake no obligation to update publicly any forward-looking statements, whether because of new information, future events or otherwise. However, readers should carefully review the risk factors set forth in this and other reports or documents we file from time to time with the SEC.

Overview

Alexion Pharmaceuticals, Inc. (Alexion, the Company, we, our or us) is a global biopharmaceutical company focused on serving patients and families affected by rare diseases through the innovation, development and commercialization of life-changing therapies.

We are the global leader in complement inhibition and have developed and commercialize the first and only approved complement inhibitor to treat patients with paroxysmal nocturnal hemoglobinuria (PNH), atypical hemolytic uremic syndrome (aHUS), and anti-acetylcholine receptor (AChR) antibody-positive generalized myasthenia gravis (gMG). In addition, Alexion has two highly innovative enzyme replacement therapies for patients with life-threatening and ultra-rare metabolic disorders, hypophosphatasia (HPP) and lysosomal acid lipase deficiency (LAL-D).

As the leader in complement biology for over 20 years, Alexion focuses its research efforts on novel molecules and targets in the complement cascade, and its development efforts on the core therapeutic areas of hematology, nephrology, neurology, and metabolic disorders.

Recent Developments

In May 2018, we completed the acquisition of more than 97% of the equity interests of Wilson Therapeutics AB (publ), a biopharmaceutical company based in Stockholm, Sweden (Wilson Therapeutics), pursuant to a recommended public cash offer to all Wilson Therapeutics AB shareholders. Wilson Therapeutics develops novel therapies for patients with rare copper-mediated disorders and, pursuant to the acquisition, we added WTX101, a highly innovative drug candidate that is currently in the early stages of Phase III clinical trials for the treatment of patients with Wilson disease, to our clinical pipeline.

In June 2018, we submitted a Biologics License Application (BLA) to the U.S. Food and Drug Administration (FDA) for approval of ALXN1210, our investigational long-acting C5 complement inhibitor, for the treatment of patients with paroxysmal nocturnal hemoglobinuria (PNH). Also in June 2018, we submitted a Marketing Authorization Application to the European Medicines Agency (EMA) for ALXN1210 for the treatment of patients with PNH.

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On June 7, 2018, we entered into an Amended and Restated Credit Agreement (the Credit Agreement), with Bank of America, N.A. as Administrative Agent. The Credit Agreement amends and restates our credit agreement dated as of June 22, 2015 (the Prior Credit Agreement). Among other things, the Credit Agreement provides that the maturity date of the revolving credit facility and the term loan facility are extended to June 7, 2023.

Products and Development Programs

We focus our product development programs on life-transforming therapeutics for rare diseases for which current treatments are either non-existent or inadequate.

Marketed Products

Our marketed products consist of the following:

Product	Development Area	Indication
	Hematology	Paroxysmal Nocturnal Hemoglobinuria (PNH)
	Hematology/Nephrology	Atypical Hemolytic Uremic Syndrome (aHUS)
	Neurology	Generalized Myasthenia Gravis (gMG)
	Metabolic Disorders	Hypophosphatasia (HPP)
	Metabolic Disorders	Lysosomal Acid Lipase Deficiency (LAL-D)

Soliris (eculizumab)

Soliris is designed to inhibit a specific aspect of the complement component of the immune system and thereby treat inflammation associated with chronic disorders in several therapeutic areas, including hematology, nephrology and neurology. Soliris is a humanized monoclonal antibody that effectively blocks terminal complement activity at the doses currently prescribed. The initial indication for which we received approval for Soliris is PNH.

Paroxysmal Nocturnal Hemoglobinuria (PNH)

PNH is a debilitating and life-threatening, ultra-rare genetic blood disorder defined by chronic uncontrolled complement activation leading to the destruction of red blood cells (hemolysis). The chronic hemolysis in patients with PNH may be associated with life-threatening thromboses, recurrent pain, kidney disease, disabling fatigue, impaired quality of life, severe anemia, pulmonary hypertension, shortness of breath and intermittent episodes of dark-colored urine (hemoglobinuria). We continue to work with researchers to expand the base of knowledge in PNH and the utility of Soliris to treat patients with PNH. Soliris is approved for the treatment of PNH in the U.S., Europe, Japan and in several other countries. We are sponsoring a

multinational registry to gather information regarding the natural history of patients with PNH and the longer term outcomes during Soliris treatment. In addition, Soliris has been granted orphan drug designation for the treatment of PNH in the U.S., Europe, Japan and several other countries.

Atypical Hemolytic Uremic Syndrome (aHUS)

aHUS is a severe and life-threatening, ultra-rare genetic disease characterized by chronic uncontrolled complement activation and thrombotic microangiopathy (TMA), the formation of blood clots in small blood vessels throughout the body, causing a reduction in platelet count (thrombocytopenia) and life-threatening damage to the kidney, brain, heart and other vital organs. Soliris is approved for the treatment of pediatric and adult patients with aHUS in the U.S., Europe, Japan and in several other countries. We are sponsoring a multinational registry to gather information regarding the natural history of patients with aHUS and the longer-term outcomes during Soliris treatment. In addition, the U.S. Food and Drug Administration (FDA) and European Commission (EC) have granted Soliris orphan drug designation for the treatment of patients with aHUS.

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Generalized Myasthenia Gravis (gMG)

Myasthenia Gravis (MG) is a debilitating, complement-mediated neuromuscular disease in which patients suffer profound muscle weakness throughout the body, resulting in slurred speech, impaired swallowing and choking, double vision, upper and lower extremity weakness, disabling fatigue, shortness of breath due to respiratory muscle weakness and episodes of respiratory failure. Soliris has received orphan drug designation for the treatment of patients with MG in the U.S. and Europe, and for the treatment of patients with refractory gMG, a subset of MG, in Japan.

In August 2017, we announced that the EC approved the extension of the indication for Soliris to include the treatment of refractory gMG in adults who anti-acetylcholine receptor (AChR) antibody-positive. In October 2017, the FDA approved the Company's supplemental Biologics License Application to extend the indication for Soliris as a potential treatment for adult patients with gMG who are AChR antibody-positive. In December 2017, the Ministry of Health, Labour and Welfare (MHLW) in Japan approved Soliris as a treatment for patients with gMG who are AChR antibody-positive and whose symptoms are difficult to control with high-dose intravenous immunoglobulin therapy or plasmapheresis.

Strensiq (asfotase alfa)

Hypophosphatasia (HPP)

HPP is an ultra-rare genetic and progressive metabolic disease in which patients experience devastating effects on multiple systems of the body, leading to debilitating or life-threatening complications. HPP is characterized by defective bone mineralization that can lead to deformity of bones and other skeletal abnormalities, as well as systemic complications such as profound muscle weakness, seizures, pain, and respiratory failure leading to premature death in infants.

Strensiq, a targeted enzyme replacement therapy, is the first and only approved therapy for patients with HPP and is designed to directly address underlying causes of HPP by aiming to restore the genetically defective metabolic process, thereby preventing or reversing the severe and potentially life-threatening complications in patients with HPP. In 2015, the FDA approved Strensiq for patients with perinatal-, infantile- and juvenile-onset HPP, the EC granted marketing authorization for Strensiq for the treatment of patients with pediatric-onset HPP, and the MHLW approved Strensiq for the treatment of patients with HPP. We are sponsoring a multinational registry to gather information regarding the natural history of patients with HPP and the longer-term outcomes during Strensiq treatment.

Kanuma (sebelipase alfa)

Lysosomal Acid Lipase Deficiency (LAL Deficiency or LAL-D)

LAL-D is a serious, life-threatening ultra-rare disease associated with premature mortality and significant morbidity. LAL-D is a chronic disease in which genetic mutations result in decreased activity of the LAL enzyme that leads to marked accumulation of lipids in vital organs, blood vessels, and other tissues, resulting in progressive and systemic organ damage including hepatic fibrosis, cirrhosis, liver failure, accelerated atherosclerosis, cardiovascular disease, and other devastating consequences.

Kanuma, a recombinant form of the human LAL enzyme, is the only enzyme-replacement therapy that is approved for the treatment for patients with LAL-D. In 2015, the FDA approved Kanuma for the treatment of patients with LAL-D and the EC granted marketing authorization of Kanuma for long-term enzyme replacement therapy in patients of all ages with LAL-D. In 2016, the MHLW approved Kanuma for the treatment of patients of all ages in Japan with LAL-D. We are sponsoring a multinational registry to gather information regarding the natural history of patients with LAL-D and the longer-term outcomes during Kanuma treatment.

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Clinical Development Programs
Our clinical development programs include the following:

Product	Development Area	Phase I	Phase II	Phase III	Filed
ALXN1210 (IV)	Hematology	Paroxysmal Nocturnal Hemoglobinuria (PNH)			
	Hematology/Nephrology	Atypical Hemolytic Uremic Syndrome (aHUS)			
	Neurology	Generalized Myasthenia Gravis (gMG)			
ALXN1210 (Subcutaneous)	Hematology	PNH			
	Hematology/Nephrology	aHUS			
Soliris (eculizumab)	Neurology	Relapsing Neuromyelitis Optica Spectrum Disorder (NMOSD)			
WTX101	Metabolics	Wilson disease			

ALXN1210
ALXN1210 is an innovative, long-acting C5 inhibitor discovered and developed by Alexion that works by inhibiting the C5 protein in the terminal complement cascade. In early studies, ALXN1210 demonstrated rapid, complete, and sustained reduction of free C5 levels.
Paroxysmal Nocturnal Hemoglobinuria (PNH)
Chronic hemolysis in patients with PNH may be associated with life-threatening thromboses, recurrent pain, kidney disease, disabling fatigue, impaired quality of life, severe anemia, pulmonary hypertension, shortness of breath and intermittent episodes of dark-colored urine (hemoglobinuria).
In May 2016 and January 2017, the Committee for Orphan Medicinal Products and the FDA, respectively, granted orphan drug designation to ALXN1210, for the treatment of patients with PNH.
In February 2018, we began enrolling in a Phase III, open-label, single-arm multicenter study to evaluate the PK/PD, safety, and efficacy of ALXN1210 administered by IV infusion to pediatric patients with PNH, including patients who have never received treatment with a complement inhibitor and those who enter the study stabilized on Soliris.
On March 15, 2018, we announced that the pivotal Phase III, open-label, randomized, active-controlled multicenter study to evaluate the safety and efficacy of ALXN1210 versus Soliris administered by intravenous (IV) infusion every 8 weeks to adult patients with PNH who have never received treatment with a complement inhibitor demonstrated non-inferiority to Soliris in complement inhibitor treatment-naïve patients with PNH based on the co-primary endpoints of transfusion avoidance and normalization of LDH levels, a direct marker of complement-mediated hemolysis in PNH. The study also demonstrated non-inferiority on all four key secondary endpoints: percentage change from baseline in LDH levels, change from baseline in quality of life as

assessed by the Functional Assessment of Chronic Illness Therapy (FACIT)-Fatigue scale, proportion of patients with breakthrough hemolysis, and proportion of patients with stabilized hemoglobin levels. In addition, numeric results for

all six endpoints favored ALXN1210. There were no notable differences in the safety profiles for ALXN1210 and Soliris in the study.

On April 26, 2018, we announced the results of a Phase III study of ALXN1210 to evaluate the safety and efficacy of ALXN1210 versus Soliris in patients with PNH who have been treated with Soliris for at least the past 6 months. The study demonstrated non-inferiority of ALXN1210 to Soliris in patients with PNH who had been stable on Soliris based on the primary endpoint of change in LDH levels, a direct marker of complement-mediated hemolysis in PNH. The study also demonstrated non-inferiority on all four key secondary endpoints: the proportion of patients with breakthrough hemolysis, the change from baseline in quality of life as assessed via the FACIT-Fatigue Scale, the proportion of patients avoiding transfusion, and the proportion of patients with stabilized hemoglobin levels. In addition, numeric results for all five endpoints favored ALXN1210. In the study, ALXN had a safety profile that is consistent with that for Soliris.

On June 18, 2018, we submitted a BLA to the FDA for approval of ALXN1210 for the treatment of patients with PNH. The submission uses a rare disease priority review voucher, which designates the BLA for an expedited eight-month review by the FDA instead of the standard twelve-month review.

On June 27, 2018, we submitted an MAA to the EMA for approval of ALXN1210 for the treatment of patients with PNH.

Atypical Hemolytic Uremic Syndrome (aHUS)

In patients with aHUS, complement-mediated TMA leads to life-threatening damage to the kidney, brain, heart and other vital organs.

Enrollment was completed in late May 2018 in a Phase III, single arm, multicenter study to evaluate

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the safety and efficacy of ALXN1210 administered by IV infusion every 8 weeks to adolescent and adult patients with aHUS who have never been treated with a complement inhibitor. A second Phase III, single arm, multicenter study to evaluate the safety, efficacy, pharmacokinetics (PK), and pharmaco-dynamics of ALXN1210 administered by IV infusion every 8 weeks in pediatric patients with aHUS who have never been treated with a complement inhibitor is ongoing.

Generalized Myasthenia Gravis (gMG)

Myasthenia Gravis (MG) is a debilitating, complement-mediated neuromuscular disease in which patients suffer profound muscle weakness throughout the body, resulting in slurred speech, impaired swallowing and choking, double vision, upper and lower extremity weakness, disabling fatigue, shortness of breath due to respiratory muscle weakness and episodes of respiratory failure.

Alexion plans to initiate a study with ALXN1210 administered by intravenous (IV) infusion every 8 weeks to adult patients for the treatment of gMG, a debilitating, chronic and progressive autoimmune neuromuscular disease, in late 2018.

Subcutaneous (SC) Delivery

Data from a Phase I study in healthy volunteers to evaluate ALXN1210 delivered subcutaneously supports progressing the development of a subcutaneous formulation of ALXN1210. In late 2018, Alexion plans to initiate a single, PK-based Phase III study of ALXN1210 delivered subcutaneously once per week to PNH patients to support registration in both PNH and aHUS.

In October 2017, the FDA granted orphan drug designation to the subcutaneous formulation of ALXN1210 for the treatment of aHUS.

Soliris (eculizumab)

Relapsing Neuromyelitis Optica Spectrum Disorder (NMOSD)

Relapsing NMOSD is a severe and ultra-rare autoimmune disease of the central nervous system that primarily affects the optic nerves and spinal cord. The disease leads to severe weakness, paralysis, respiratory failure, loss of bowel and bladder function, blindness and premature death. Patient enrollment and dosing is complete in a global, randomized, double-blind, placebo-controlled trial to evaluate eculizumab as a treatment for patients with relapsing NMOSD. The FDA, EC, and MHLW have each granted orphan designation for eculizumab as a treatment for patients with relapsing NMOSD.

WTX101

Wilson's Disease

Wilson disease is a rare disorder that can lead to severe liver disease, including cirrhosis and acute liver failure, as well as debilitating neurological morbidities such as impaired movement, gait, speech, swallowing, and psychiatric disorders. WTX101, an innovative product candidate that addresses the underlying cause of Wilson disease, is a first-in-class oral copper-binding agent with a unique mechanism of action and ability to access and bind copper from serum and promote its removal from the liver.

WTX101 is in Phase III development as a treatment for Wilson disease. In addition, WTX101 has received Fast Track designation in the U.S. and Orphan Drug Designation for the treatment of Wilson disease in the U.S. and EU.

Other Programs

cPMP (ALXN1101)

Molybdenum Cofactor Deficiency (MoCD) Disease Type A (MoCD Type A)

MoCD Type A is an ultra-rare metabolic disorder characterized by severe and rapidly progressive neurologic damage and death in newborns. MoCD Type A results from a genetic deficiency in cyclic Pyranopterin Monophosphate (cPMP), a molecule that is a precursor to molybdenum cofactor, which enables the function of certain enzymes and the absence of which allows neurotoxic sulfite to accumulate in the brain. To date, there is no approved therapy available for MoCD Type A. There has been some early clinical experience with the recombinant cPMP replacement therapy in a small number of children with MoCD Type A, and we have completed enrollment in a natural history

study in patients with MoCD Type A. cPMP has received Breakthrough Therapy Designation from the FDA for the treatment of patients with MoCD Type A. Enrollment in a multi-center, multinational open-label clinical trial of synthetic cPMP (ALXN1101) in patients with MoCD Type A switched from treatment with recombinant cPMP and a multi-center, multinational open-label clinical trial of ALXN1101 in patients newly diagnosed with MoCD Type A has been placed on hold. Patients currently enrolled in both trials will continue to receive therapy. No additional studies are currently planned. In June 2018, we entered into an agreement to sell ALXN1101 to a third party.

Samalizumab (ALXN6000)
Samalizumab is a first-in-class immunomodulatory humanized monoclonal antibody that blocks CD200, a key immune checkpoint protein expressed in both hematologic and solid malignancies. The safety and efficacy of samalizumab

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were being evaluated in patients with advanced solid tumors and in conjunction with the Leukemia and Lymphoma Society, in patients with acute myeloid leukemia (AML). The solid tumor Phase I trial has been terminated and no new patients will be added to the multi-arm AML study, referred to as the BEAT AML Master Trial. Out-licensing opportunities are being pursued for samalizumab.

Manufacturing

We currently rely on internal manufacturing facilities and third party contract manufacturers, including Lonza Group AG and its affiliates (Lonza), to supply clinical and commercial quantities of our commercial products and product candidates. Our internal manufacturing facilities include our Ireland manufacturing facilities, and facilities in Massachusetts and Georgia. We also utilize third party contract manufacturers for other manufacturing services including purification, product filling, finishing, packaging, and labeling.

We have various agreements with Lonza through 2028, with remaining total non-cancellable commitments of approximately $1,086.8. If we terminate certain supply agreements with Lonza without cause, we will be required to pay for product scheduled for manufacture under our arrangements. Under an existing arrangement with Lonza, we also pay Lonza a royalty on sales of Soliris that was manufactured at our Rhode Island Manufacturing Facility (ARIMF) and a payment with respect to sales of Soliris manufactured at Lonza facilities. During 2015, we entered into a new supply agreement with Lonza whereby Lonza will construct a new manufacturing facility dedicated to Alexion manufacturing at one of its existing facilities.

In addition, we have non-cancellable commitments of approximately $28.4 through 2020 with other third party manufacturers.

In April 2014, we purchased a fill/finish facility in Athlone, Ireland, which has been refurbished to become our first company-owned fill/finish facility. In July 2016, we announced plans to construct a new biologics manufacturing facility at this site, which is expected to be completed and receive regulatory approval in 2019.

In May 2015, we announced plans to construct a new biologics manufacturing facility on our existing property in Dublin, Ireland, which is expected to be completed and receive regulatory approval in 2020.

Critical Accounting Policies and the Use of Estimates

The significant accounting policies and basis of preparation of our consolidated financial statements are described in Note 1, “Business Overview and Summary of Significant Accounting Policies” of the Consolidated Financial Statements included in our Form 10-K for the year ended December 31, 2017. Under accounting principles generally accepted in the U.S., we are required to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and disclosure of contingent assets and liabilities in our financial statements. Actual results could differ materially from those estimates.

We believe the judgments, estimates and assumptions associated with the following critical accounting policies have the greatest potential impact on our consolidated financial statements:

- Revenue recognition;
- Contingent liabilities;
- Inventories;
- Share-based compensation;
- Valuation of goodwill, acquired intangible assets and in-process research and development;
- Valuation of contingent consideration; and
- Income taxes.

For a complete discussion of these critical accounting policies, refer to “Critical Accounting Policies and Use of Estimates” within “Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations” included within our Form 10-K for the year ended December 31, 2017. Updates to our critical accounting policy for revenue recognition, including impacts from the adoption of the new revenue accounting standard, are discussed within Note 14, Revenue Recognition.

New Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (FASB) issued a new standard requiring that the rights and obligations arising from leases be recognized on the balance sheet by recording a right-of-use (ROU) asset and corresponding lease liability. The new standard also requires qualitative and quantitative disclosures to understand the amount, timing, and uncertainty of cash flows arising from leases, as well as significant management estimates utilized. The standard is effective for interim and annual periods beginning after December 15, 2018 and requires a modified retrospective adoption. We have substantially completed the process of collecting and analyzing the Company’s lease contracts and have selected a leasing software system. Our lease accounting

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software implementation efforts are ongoing. While our assessment of the standard remains open, the standard may have a material impact on the Company's Condensed Consolidated Balance Sheets due to the requirement to recognize lease ROU assets and corresponding liabilities related to leases on the Company's Condensed Consolidated Balance Sheets.

In June 2016, the FASB issued a new standard intended to improve reporting requirements specific to loans, receivables and other financial instruments. The new standard requires that credit losses be reported based on expected losses compared to the current incurred loss model. The new standard also requires enhanced disclosure of credit risk associated with respective assets. The standard is effective for interim and annual periods beginning after December 15, 2019 with early adoption permitted. We are currently assessing the impact of this standard on our financial condition and results of operations.

In February 2018, the FASB issued a new standard that would permit entities to make a one time reclassification from accumulated other comprehensive income (AOCI) to retained earnings for the stranded tax effects resulting from the newly enacted corporate tax rates under the Tax Cuts and Jobs Act (the Tax Act), effective for the year ended December 31, 2017. The amount of the reclassification is calculated on the basis of the difference between the historical tax rate and newly enacted tax rate. The standard is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. We are currently assessing the impact of this standard on our financial condition.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued a comprehensive new standard which amends revenue recognition principles and provides a single set of criteria for revenue recognition among all industries. The new standard provides a five-step framework whereby revenue is recognized when promised goods or services are transferred to a customer at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted the new standard on January 1, 2018.

In January 2017, the FASB issued a new standard that clarifies the definition of a business and determines when an integrated set of assets and activities is not a business. This framework requires that if substantially all of the fair value of gross assets acquired or disposed of is concentrated in a single asset or group of similar identifiable assets, the assets would not represent a business. We adopted the new standard on January 1, 2018 and will apply the new guidance prospectively to transactions occurring after adoption. We anticipate

that the adoption of this new standard will likely result in more transactions, to the extent that such transactions are undertaken by the Company, being accounted for as asset acquisitions.

In January 2016, the FASB issued a new standard that changes accounting for equity investments, financial liabilities under the fair value option, and presentation and disclosure requirements for financial instruments. In addition, the FASB clarified guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale debt securities. Equity investments with readily determinable fair values will be measured at fair value with changes in fair value recognized in net income. Companies have the option to either measure equity investments without readily determinable fair values at fair value, or at cost adjusted for changes in observable prices minus impairment. We adopted the new standard on January 1, 2018, and have elected to measure our current equity investments without readily determinable fair values at cost adjusted for changes in observable prices minus impairment. In connection with the adoption of the new standard, we reclassified an immaterial amount of unrealized gains on equity securities from other comprehensive income to retained earnings. The guidance related to equity investments without readily determinable fair values was applied prospectively to equity investments that existed as of the date of adoption. We will assess our equity investments without readily determinable fair values for observable price changes and impairment on a quarterly basis. Refer to Note 10, Other Investments, for further details.

In March 2017, the FASB issued a new standard that improves the presentation of net periodic pension cost and net periodic post retirement benefit cost by requiring the bifurcation of net benefit cost. Under the new standard, the service cost component of net benefit cost will be presented with other employee costs in operating expenses; while

other components will be reported separately in other income and expense. We adopted the new standard on January 1, 2018. The adoption of this standard did not have a material impact on our condensed consolidated statements of operations.

In November 2016, the FASB issued a new standard that clarifies how entities should present restricted cash in the statement of cash flows. Under the new standard, changes in total cash, inclusive of restricted cash, should be reflected in the statement of cash flows. As a result, transfers between cash and restricted cash will no longer be reflected as activity within the statement of cash flows. We adopted the new standard on January 1, 2018. The adoption of this standard did not have a material

impact on our condensed consolidated statements of cash flows.

In August 2017, the FASB issued a new standard intended to improve and simplify certain aspects of the accounting for hedges. The new standard is intended to more closely align hedge accounting with companies' risk management strategies, simplify the application of hedge accounting, and increase transparency as to the scope and results of hedging programs. It also amends the presentation and disclosure requirements and changes how companies assess effectiveness. The standard is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. We early adopted the new standard in the second quarter 2018 using the modified retrospective method. The adoption of this standard did not have a material impact on our condensed consolidated financial statements.

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Results of Operations
Net Product Sales
Net product sales by significant geographic region for the three and six months ended June 30, 2018 and 2017 are as follows:

	Three months ended June 30,			Six months ended June 30,		
	2018	2017	% Change	2018	2017	% Change
Soliris						
United States	$395.8	$317.8	24.5 %	$731.8	$605.9	20.8 %
Europe	253.4	248.5	2.0 %	504.2	489.9	2.9 %
Asia Pacific	93.6	80.8	15.8 %	179.1	159.6	12.2 %
Rest of World	155.4	166.2	(6.5)%	283.2	341.4	(17.0)%
Total	$898.2	$813.3	10.4 %	$1,698.3	$1,596.8	6.4 %
Strensiq						
United States	$99.9	$70.0	42.7 %	$189.1	$133.3	41.9 %
Europe	16.4	8.6	90.7 %	30.4	13.7	121.9 %
Asia Pacific	6.3	4.4	43.2 %	12.0	8.1	48.1 %
Rest of World	2.5	0.6	316.7 %	4.3	2.1	104.8 %
Total	$125.1	$83.6	49.6 %	$235.8	$157.2	50.0 %
Kanuma						
United States	13.0	11.1	17.1 %	24.9	19.8	25.8 %
Europe	5.8	3.3	75.8 %	11.7	5.1	129.4 %
Asia Pacific	1.1	0.6	83.3 %	2.1	1.1	90.9 %
Rest of World	1.5	0.3	400.0 %	2.3	1.3	76.9 %
Total	$21.4	$15.3	39.9 %	$41.0	$27.3	50.2 %
Total Net Product Sales	$1,044.7	$912.2	14.5 %	$1,975.1	$1,781.3	10.9 %

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Results of Operations
Net Product Sales
Net product sales by product and significant geographic region are as follows for the three and six months ended June 30, 2018 and 2017:

United States	Asia Pacific		
Europe	Rest of World		

Soliris net product sales

United States	Asia Pacific		
Europe	Rest of World		

Strensiq net product sales

United States	Asia Pacific		
Europe	Rest of World		

Kanuma net product sales

United States	Asia Pacific		
Europe	Rest of World		

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The components of the increase in revenues are as follows:
The increase in net product sales for the three and six months ended June 30, 2018, as compared to the same periods in 2017, was primarily due to an increase in unit volumes of 15.6% and 12.1%, respectively. This increase in unit volumes is primarily due to increased global demand for Soliris therapy including sales to patients with gMG, which received regulatory approval in the second half of 2017. Additional unit volume increases were due to increased sales of Strensiq and Kanuma during 2018 as a result of our continuing efforts to identify and reach more patients with HPP and LAL-D globally.
These increases for the six months ended June 30, 2018 were offset in part by a decrease in unit volumes within rest of world for Soliris therapy for patients in Latin America. The decrease in volumes was related to the timing of ordering patterns in 2018 as compared to the six months ended of 2017.
As discussed above, we adopted the new revenue recognition guidance in the first quarter of 2018. The adoption of this standard did not have a material impact on the sales recognized in 2018 as compared to the three and six months ended 2017.
Cost of Sales
Cost of sales includes manufacturing costs as well as actual and estimated royalty expenses associated with sales of our products.

The following table summarizes cost of sales and cost of sales as a percent of net product sales for the three and six months ended June 30, 2018 and 2017:

2018 Cost of Sales
2017 Cost of Sales
Cost of sales as a percentage of net product sales
The increase in cost of sales as a percentage of net product sales to 9.5% for the six months ended June 30, 2018, compared to 8.6% for the same period in 2017 is primarily attributable to changes in the product mix of sales as compared to the same period in 2017, as well as additional asset related charges associated with the closure of the ARIMF facility that was announced in the third quarter of 2017 as part of the restructuring.
Research and Development Expense
Our research and development expense includes personnel, facility and direct costs associated with the research and development (R&D) of our product candidates, as well as product development costs.
R&D expenses are comprised of costs paid for clinical development, product development and discovery research, as well as costs associated with certain strategic licensing agreements we have entered into with third parties. Clinical development costs are comprised of costs to conduct and manage clinical trials related to eculizumab, ALXN1210 and other product candidates. Product development costs are those incurred in performing duties related to manufacturing development and regulatory functions, including manufacturing of material for clinical and research activities, milestone expenses related to our licensing agreements and collaborations and other administrative costs incurred during product development. Discovery research costs are incurred in conducting laboratory studies and performing

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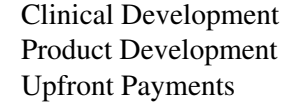
preclinical research for other uses of our products and other product candidates. Upfront payments include upfront payments related to licenses and collaborations. Clinical development costs have been accumulated and allocated to each of our programs, while product development and discovery research costs have not been allocated.

Other R&D expenses consist of costs to compensate personnel, to maintain our facilities and equipment, and other occupancy costs associated with our research and development efforts. These costs relate to efforts on our clinical and preclinical products, our product development and our discovery research efforts. These costs have not been allocated directly to each program.

The following graph provides information regarding research and development expenses:



For the three months ended June 30, 2018, the decrease of $24.8 in R&D expense, as compared to the same period in the prior year, was primarily related to the following:

- Decrease of $18.9 in external clinical development expenses related primarily to decreases in various eculizamab clinical studies (see graph below).
- Decrease of $9.9 in payroll and benefits primarily related to headcount reductions

resulting from restructuring activities initiated in 2017.

Partially offset by the following:

- Increase of $11.1 in external product development expenses related primarily to an increase in costs associated with milestone expenses related to our licensing agreements.

For the six months ended June 30, 2018, the decrease of $67.7 in research and development expense, as compared to the same period in the prior year, was primarily related to the following:

- Decrease of $36.3 in external clinical development expenses related primarily to decreases in various eculizamab clinical studies partially offset by an expansion of clinical studies for ALXN1210 (see graph below).
- Decrease of $24.0 in payroll and benefits primarily related to headcount reductions resulting from restructuring activities initiated in 2017.
- Decrease of $12.1 in discovery primarily related to decreases in external research expenses associated with our collaboration agreements.
- Decrease of $8.9 in upfront payment expenses due to the upfront payments on licensing arrangements made in the second quarter 2017. No upfront payments related to licensing arrangements were made for the six months ended 2018.

Partially offset by the following:

- Increase of $20.4 in external product development expenses related primarily to an increase in costs associated with the manufacturing of material for ALXN1210 further driven by an increase in costs associated with milestone expenses. This increase was in part offset by a decrease in costs associated with the manufacturing of material for ALXN6000 clinical research activities as compared to the six months ended 2017.

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The following graph summarizes R&D expenses related to our clinical development programs. Please refer to "Clinical Development Programs" above for a description of each of these programs:

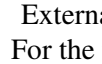
The successful development of our drug candidates is uncertain and subject to a number of risks. We cannot guarantee that results of clinical

trials will be favorable or sufficient to support regulatory approvals for our development programs, even after we expend significant technical and financial resources. We could decide to abandon development or be required to spend considerable resources not otherwise contemplated. For additional discussion regarding the risks and uncertainties regarding our development programs, please refer to Item 1A "Risk Factors" in this Form 10-Q.

Selling, General and Administrative Expense

Our selling, general and administrative expense includes commercial and administrative personnel, corporate facility and external costs required to support the marketing and sales of our commercialized products. These selling, general and administrative costs include: corporate facility operating expenses and depreciation; marketing and sales operations in support of our products; human resources; finance, legal, information technology and support personnel expenses; and other corporate costs such as telecommunications, insurance, audit, government affairs and our global corporate compliance program.

The graph below provides information regarding selling, general and administrative expense:



For the three months ended June 30, 2018, the increase of $11.7 in selling, general and administrative expense, as compared to the same period in the prior year, was primarily related to the following:

- Increase in external selling, general and administrative expenses of $15.4. The increase was primarily due to an increase in professional services and charitable contributions as compared to the same

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period in 2017. The increase was further driven by an increase in asset related charges that were recorded in 2018 related to the previously announced restructuring activities. The increase was offset by decreased distribution expenses as compared to the same period in 2017.

Partially offset by the following:

- Decrease in salary, benefits and other labor expenses of $3.7. The decrease was primarily related to headcount reductions resulting from restructuring activities initiated in 2017. These decreases were partially offset by an increase in commercial activities to support the launch of Soliris for gMG.

For the six months ended June 30, 2018, the increase of $7.0 in selling, general and administrative expense, as compared to the same period in the prior year, was primarily related to the following:

- Increase in external selling, general and administrative expenses of $11.9. The increase was primarily due to an increase in professional services and charitable contributions as compared to the same period in 2017. The increase was further driven by an increase in asset related charges that were recorded in 2018 related to the previously announced restructuring activities. The increase was offset by decreased distribution expenses as compared to the same period in 2017.

Partially offset by the following:

- Decrease in salary, benefits and other labor expenses of $4.9. The decrease was primarily related to headcount reductions resulting from restructuring activities initiated in 2017. These decreases were partially offset by an increase in commercial activities to support the launch of Soliris for gMG.

Acquired In-Process Research and Development

For both the three and six months ended June 30, 2018 we recorded acquired in-process research and development (IPR&D) expense of $803.7. The increase in acquired IPR&D for the three and six months ended 2018, as compared to 2017, is due to the Wilson Therapeutics acquisition completed in the second quarter of 2018. The IPR&D asset associated with the Wilson Therapeutics acquisition has not reached technological feasibility and had no alternative future use as of the acquisition date and was therefore expensed during the second quarter 2018.

Amortization of Purchase Intangible Assets

For both the three and six months ended June 30, 2018 and 2017 we recorded amortization expense of $80.1 and $160.1, respectively, related to purchased intangible assets. Amortization expense is primarily associated with intangible assets related to Strensiq and Kanuma, for which we received regulatory approval in the third quarter 2015.

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Change in Fair Value of Contingent Consideration

For the three and six months ended June 30, 2018, the change in fair value of contingent consideration expense associated with our prior business combinations was $4.7 and $57.4, respectively, as compared to $24.6 and $28.1 for the three and six months ended June 30, 2017, respectively. The change in the expense associated with the fair value of contingent consideration for the three and six months ended June 30, 2018, as compared the same periods in 2017, was primarily due to the timing of increases in the likelihood and anticipated timing of payments for contingent consideration.

Restructuring Expenses

In the first quarter of 2017, we initiated a company-wide restructuring designed to help position the Company for sustainable, long-term growth that we believe will further allow us to fulfill our mission of serving patients and families with rare diseases. The initial restructuring activities primarily focused on a reduction of the Company's global workforce. In September 2017, we committed to an operational plan to re-align the global organization with its refocused corporate strategy. The re-alignment focuses investments in priority growth areas. The re-alignment also included the relocation of the Company's headquarters to Boston, Massachusetts in 2018 which was completed in the second quarter of 2018. Our New Haven, Connecticut site continues to support employees working in the research and

process development laboratories, the clinical supply and quality teams, nurse case management and a number of important enterprise business services. The plan also reduced the Company's global workforce by approximately 20.0%. The restructuring is designed to result in cost savings by focusing the development portfolio, simplifying business structures and processes across the Company's global operations, and closing multiple Alexion sites, including ARIMF and certain regional and country-based offices.

For the three and six months ended June 30, 2018, we recorded $10.6 and $16.1 of restructuring expenses, respectively, compared to $2.9 and $26.7 for the three and six months ended, June 30, 2017, respectively. Restructuring expenses for the three and six months ended June 30, 2018 primarily include relocation expenses and employee separation costs. Restructuring expenses for the three and six months ended June 30, 2017 primarily include employee separation costs. We currently estimate incurring approximately $10.0 to $60.0 of additional restructuring related expenses in 2018.

Impairment of Intangible Assets

In the second quarter 2017, we recognized an impairment charge of $31.0 related to our SBC-103 acquired in-process research and development asset due to clinical results. No impairments of acquired in-process research and development were recognized for the three and six months ended June 30, 2018.

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Other Income and Expense

The following table provides information regarding other income and expense:

Investment Income
Interest Expense
Other Income

For the six months ended June 30, 2018 and 2017, we recognized investment income of $113.5 and $8.4, respectively. The increase in investment income in 2018 results from the recognition of an unrealized gain of $100.8 on our investment in Moderna Therapeutics, Inc. following it's completion of a new round of equity financing.

Income Taxes

2018 Income Tax Expense
2017 Income Tax Expense
Effective tax rate

During the three and six months ended June 30, 2018, we recorded income tax expense of $38.8 and $141.3 and an effective tax rate of (9.3)% and (210.9)%, respectively, compared to income tax expense of $41.1 and $65.0 and an effective tax rate of 19.9% and 16.2% for the three and six months ended June 30, 2017, respectively.

The income tax expense for the three and six months ended June 30, 2018 is attributable to the U.S. federal, state and foreign income taxes on our profitable operations. The decrease in the effective tax rate for the three and six months ended June 30, 2018 as compared to the same period in the prior year is primarily attributable to the acquisition of Wilson Therapeutics. Absent successful clinical results and regulatory approval, there is no alternative future use of the WTX101 asset acquired. Accordingly, the value of the asset of $803.7 was expensed in acquired in-process research and development during the three and six months ended June 30, 2018, for which no tax benefit has been recognized. The Wilson Therapeutics acquisition resulted in a decrease in the effective tax rate for the three and six months ended June 30, 2018 of approximately 19.4% and 230.1%, respectively. Also included in the six months ended June 30, 2018 is a U.S. tax reform measurement period adjustment to deferred taxes of $38.4. This deferred tax cost increased the effective tax rate for the six months ended June 30, 2018 by approximately 5.2%.

In addition, we continue to benefit from a reduced tax rate as a result of our centralized global supply chain and technical operations in Ireland.

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We continue to maintain a valuation allowance against certain other deferred tax assets where realization is not certain. We periodically evaluate the likelihood of realizing deferred tax assets and reduce the carrying amount of these deferred tax assets by a valuation allowance to the extent we believe a portion will not be realized.

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Financial Condition, Liquidity and Capital Resources

The following table summarizes the components of our financial condition as of June 30, 2018 and December 31, 2017:

	June 30, 2018	December 31, 2017	$ Change
Cash and cash equivalents	$727.5	$ 584.4	$143.1
Marketable securities	$449.5	889.7	(440.2)
Long-term debt (includes current portion)	$2,862.5	2,906.3	(43.8)
Current assets	$2,836.1	2,953.9	(117.8)
Current liabilities	1,044.4	952.5	91.9
Working capital	$1,791.7	2,001.4	(209.7)

The aggregate decrease in cash and cash equivalents and marketable securities was primarily attributable to cash utilized for the purchase of Wilson Therapeutics, repurchases of shares, net payments on our credit facility, and purchases of property, plant, and equipment, partially offset by cash generated from operations.

Excluding the impact of the Wilson Therapeutics acquisition, we expect our annual operating expenses to decrease as a percentage of sales in 2018. We also expect reduced capital investment in 2018 as compared to 2017. We anticipate that cash generated from operations and our existing available cash, cash equivalents and marketable securities should provide us adequate resources to fund our operations as currently planned for at least the next twelve months.

We have financed our operations and capital expenditures primarily through positive cash flows from operations. We expect to continue to be able to fund our operations, including principal and interest payments on our credit facility and contingent payments from our acquisitions principally through our cash flows from operations. We may, from time to time, also seek additional funding through a combination of equity or debt financings or from other sources, if necessary for future acquisitions or other strategic purposes. New sources of financing through equity and/or debt financing(s) may not always be available on acceptable terms, or at all, and we may be required to obtain certain consents in connection with completing such financings.

Financial Instruments

Until required for use in the business, we may invest our cash reserves in money market funds, bank deposits, reverse repurchase agreements, and marketable securities in accordance with our investment policy. The stated objectives of our investment policy are to preserve capital, provide liquidity consistent with forecasted cash flow requirements, maintain appropriate diversification and generate returns relative to these investment objectives and prevailing market conditions.

Financial instruments that potentially expose us to concentrations of credit risk are cash equivalents, marketable securities, accounts receivable and our derivative contracts. At June 30, 2018, three customers accounted for an aggregate of 48.9% of our accounts receivable balance, with these individual customers ranging from 14.0% to 19.4% of the accounts receivable balance. At December 31, 2017, four customers accounted for an aggregate of 57.7% of the accounts receivable balance, with these individual customers ranging from 10.2% to 18.9% of the accounts receivable balance. For the three and six months ended June 30, 2018, four customers accounted for