

QIAGEN NV
Form 6-K
July 31, 2017

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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2017
Commission File Number 0-28564

QIAGEN N.V.

Hulsterweg 82
5912 PL Venlo
The Netherlands

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:
Form 20-F Form 40-F

Indicate by check mark whether the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T
Rule 101(b)(1):

Indicate by check mark whether the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T
Rule 101(b)(7):

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QIAGEN N.V.

Form 6-K

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OTHER INFORMATION

For the three- and six-month periods ended June 30, 2017, QIAGEN N.V. prepared its quarterly report under United States generally accepted accounting principles (U.S. GAAP). This quarterly report is furnished herewith as Exhibit 99.1 and incorporated by reference herein.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

QIAGEN N.V.

BY: /s/ Roland Sackers
 Roland Sackers
 Chief Financial Officer

Date: July 28, 2017

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EXHIBIT INDEX

Exhibit Exhibit
No.

99.1 U.S. GAAP Quarterly Report for the Period Ended June 30, 2017

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Exhibit 99.1

QIAGEN N.V. AND SUBSIDIARIES

U.S. GAAP QUARTERLY REPORT FOR THE PERIOD ENDED JUNE 30, 2017

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QIAGEN N.V. AND SUBSIDIARIES
 CONDENSED CONSOLIDATED BALANCE SHEETS
 (in thousands)

	Note	June 30, 2017 (unaudited)	December 31, 2016
Assets			
Current assets:			
Cash and cash equivalents		\$542,841	\$ 439,180
Short-term investments		66,006	92,999
Accounts receivable, net of allowance for doubtful accounts of \$7,326 and \$7,614 in 2017 and 2016, respectively		278,392	278,244
Income taxes receivable		31,489	23,795
Inventories, net	(11)	155,667	136,552
Prepaid expenses and other current assets		84,859	66,799
Total current assets		1,159,254	1,037,569
Long-term assets:			
Property, plant and equipment, net of accumulated depreciation of \$515,191 and \$451,160 in 2017 and 2016, respectively		465,547	436,655
Goodwill	(6)	1,995,807	1,925,518
Intangible assets, net of accumulated amortization of \$1,040,697 and \$948,072 in 2017 and 2016, respectively	(6)	546,841	557,159
Deferred income taxes		66,078	68,384
Other long-term assets (of which \$13,645 and \$13,067 in 2017 and 2016 due from related parties, respectively)	(5, 7, 16)	322,595	282,909
Total long-term assets		3,396,868	3,270,625
Total assets		\$4,556,122	\$ 4,308,194

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

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QIAGEN N.V. AND SUBSIDIARIES
 CONDENSED CONSOLIDATED BALANCE SHEETS
 (in thousands, except par value)

	Note	June 30, 2017 (unaudited)	December 31, 2016
Liabilities and equity			
Current liabilities:			
Accounts payable		\$48,500	\$ 51,218
Accrued and other current liabilities (of which \$3,132 and \$3,926 in 2017 and 2016 due to related parties, respectively)	(16)	241,603	230,305
Income taxes payable		10,678	26,906
Total current liabilities		300,781	308,429
Long-term liabilities:			
Long-term debt	(9)	1,383,830	1,067,096
Deferred income taxes		41,613	40,621
Other long-term liabilities (of which \$3,132 and \$5,889 in 2017 and 2016 due to related parties, respectively)	(7, 16)	324,524	284,952
Total long-term liabilities		1,749,967	1,392,669
Commitments and contingencies	(14)		
Equity:			
Preference shares, 0.01 EUR par value, authorized—450,000 shares, no shares issued and outstanding		—	—
Financing preference shares, 0.01 EUR par value, authorized—40,000 shares, no shares issued and outstanding		—	—
Common Shares, 0.01 EUR par value, authorized—410,000 shares, issued—230,829 and 239,707 shares in 2017 and in 2016, respectively	(12)	2,702	2,812
Additional paid-in capital	(12)	1,569,404	1,794,665
Retained earnings		1,241,764	1,263,464
Accumulated other comprehensive loss	(12)	(244,791)	(333,839)
Less treasury shares at cost— 2,595 and 5,147 shares in 2017 and in 2016, respectively	(12)	(63,705)	(120,006)
Total equity		2,505,374	2,607,096
Total liabilities and equity		\$4,556,122	\$ 4,308,194

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

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QIAGEN N.V. AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF INCOME
 (in thousands, except share data)

	Three months ended June 30,	
	2017	2016
	(unaudited)	
Net sales	\$ 348,990	\$ 334,412
Cost of sales	124,433	123,600
Gross profit	224,557	210,812
Operating expenses:		
Research and development	38,787	42,008
Sales and marketing	103,867	98,727
General and administrative, integration and other	49,857	30,497
Acquisition-related intangible amortization	9,681	9,739
Total operating expenses	202,192	180,971
Income from operations	22,365	29,841
Other income (expense):		
Interest income	1,718	1,502
Interest expense	(10,581)	(9,408)
Other (expense) income, net	(1,111)	1,017
Total other expense, net	(9,974)	(6,889)
Income before income taxes	12,391	22,952
Income taxes	(1,560)	1,686
Net income	13,951	21,266
Net income attributable to the owners of QIAGEN N.V.	\$ 13,951	\$ 21,266
Basic earnings per common share attributable to the owners of QIAGEN N.V.	\$ 0.06	\$ 0.09
Diluted earnings per common share attributable to the owners of QIAGEN N.V.	\$ 0.06	\$ 0.09
Weighted-average shares outstanding		
Basic	227,963	234,760
Diluted	232,681	238,667

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

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QIAGEN N.V. AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF INCOME
 (in thousands, except share data)

	Six months ended	
	June 30,	
	2017	2016
	(unaudited)	
Net sales	\$656,696	\$632,791
Cost of sales	236,294	237,206
Gross profit	420,402	395,585
Operating expenses:		
Research and development	76,618	81,584
Sales and marketing	196,205	192,101
General and administrative, integration and other	82,105	56,010
Acquisition-related intangible amortization	19,358	19,536
Total operating expenses	374,286	349,231
Income from operations	46,116	46,354
Other income (expense):		
Interest income	3,628	3,018
Interest expense	(20,743)	(18,744)
Other (expense) income, net	(127)	2,334
Total other expense, net	(17,242)	(13,392)
Income before income taxes	28,874	32,962
Income taxes	(2,728)	(3,968)
Net income	31,602	36,930
Net loss attributable to noncontrolling interest	—	(47)
Net income attributable to the owners of QIAGEN N.V.	\$31,602	\$36,977
Basic earnings per common share attributable to the owners of QIAGEN N.V.	\$0.14	\$0.16
Diluted earnings per common share attributable to the owners of QIAGEN N.V.	\$0.14	\$0.16
Weighted-average shares outstanding		
Basic	228,968	234,423
Diluted	233,781	238,515

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QIAGEN N.V. AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
 (in thousands)

	Three Months Ended June 30,	
	2017	2016
	(unaudited)	
Net income	\$13,951	\$21,266
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:		
(Losses) gains on cash flow hedges	(7) (13,851)	11,570
Reclassification adjustments on cash flow hedges	(7) 12,978	(5,094)
Cash flow hedges	(873)	6,476
Net investment hedge	(7) (6,228)	—
Losses on marketable securities	(3,714)	(845)
Foreign currency translation adjustments	59,719	(37,123)
Other comprehensive income (loss), before tax	48,904	(31,492)
Income tax relating to components of other comprehensive income (loss)	1,501	(1,471)
Total other comprehensive income (loss), after tax	50,405	(32,963)
Comprehensive income (loss)	64,356	(11,697)
Comprehensive loss attributable to the noncontrolling interest	—	(87)
Comprehensive income (loss) attributable to the owners of QIAGEN N.V.	\$64,356	\$(11,610)
	Six Months Ended	
	June 30,	
	2017	2016
	(unaudited)	
Net income	\$31,602	\$36,930
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:		
Losses on cash flow hedges	(7) (13,841)	(4,825)
Reclassification adjustments on cash flow hedges	(7) 15,678	3,870
Cash flow hedges	1,837	(955)
Net investment hedge	(7) (6,228)	—
Losses on marketable securities	(38)	(1,189)
Foreign currency translation adjustments, before tax	94,061	12,906
Other comprehensive income, before tax	89,632	10,762
Income tax relating to components of other comprehensive (loss) income	(584)	73
Total other comprehensive income, after tax	89,048	10,835
Comprehensive income	120,650	47,765
Comprehensive income attributable to the noncontrolling interest	—	503
Comprehensive income attributable to the owners of QIAGEN N.V.	\$120,650	\$47,262

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

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QIAGEN N.V. AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
 (in thousands)

(unaudited)	Note	Common Shares		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Shares		Equity Attributable to the Owners of QIAGEN N.V.	Non-controlling Interest
		Shares	Amount				Shares	Amount		
BALANCE AT DECEMBER 31, 2016		239,707	\$2,812	\$1,794,665	\$1,263,464	\$(333,839)	(5,147)	\$(120,006)	\$2,607,096	\$—
Net income		—	—	—	31,602	—	—	—	31,602	—
Capital repayment	(12)	(8,878)	(110)	(244,319)	—	—	191	—	(244,429)	—
Unrealized loss, net on hedging contracts	(7)	—	—	—	—	(16,609)	—	—	(16,609)	—
Realized loss, net on hedging contracts	(7)	—	—	—	—	11,759	—	—	11,759	—
Unrealized loss, net on marketable securities	(5)	—	—	—	—	(168)	—	—	(168)	—
Translation adjustment, net	(12)	—	—	—	—	94,066	—	—	94,066	—
Issuance of common shares in connection with stock plan		—	—	—	(53,302)	—	2,361	56,301	2,999	—
Share-based compensation	(15)	—	—	19,058	—	—	—	—	19,058	—
BALANCE AT JUNE 30, 2017		230,829	\$2,702	\$1,569,404	\$1,241,764	\$(244,791)	(2,595)	\$(63,705)	\$2,505,374	\$—
BALANCE AT DECEMBER 31, 2015		239,707	\$2,812	\$1,765,595	\$1,209,197	\$(259,156)	(6,702)	\$(152,412)	\$2,566,036	\$2,034
Acquisition of QIAGEN Marseille S.A. shares from non-controlling interests		—	—	—	—	—	—	—	—	(2,624)
Acquisition of Exiqon A/S		—	—	—	—	—	—	—	—	5,519
		—	—	—	36,977	—	—	—	36,977	(47)

Net income (loss)										
Unrealized loss, net on hedging contracts	—	—	—	—	(3,619)	—	—	(3,619)	—	(
Realized loss, net on hedging contracts	—	—	—	—	2,902	—	—	2,902	—	2
Unrealized loss, net on marketable securities	—	—	—	—	(1,189)	—	—	(1,189)	—	(
Translation adjustment, net	—	—	—	—	12,191	—	—	12,191	550	1
Issuance of common shares in connection with stock plan	—	—	—	(19,506)	—	995	20,544	1,038	—	1
Share-based compensation	—	—	13,880	—	—	—	—	13,880	—	1
Excess tax benefit of employee stock plans	—	—	74	—	—	—	—	74	—	7
BALANCE AT JUNE 30, 2016	239,707	\$2,812	\$1,779,549	\$1,226,668	\$(248,871)	(5,707)	\$(131,868)	\$2,628,290	\$5,432	S

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

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QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

		Six months ended June 30,	
	Note	2017	2016
		(unaudited)	
Cash flows from operating activities:			
Net income		\$31,602	\$36,930
Adjustments to reconcile net income to net cash provided by operating activities, net of effects of businesses acquired:			
Depreciation and amortization		111,348	103,289
Non-cash impairments	(5)	3,122	—
Amortization of debt discount and issuance costs		10,432	10,152
Share-based compensation expense	(15)	19,058	12,408
Excess tax benefits from share-based compensation		—	(74)
Deferred income taxes		(2,101)	(7,999)
Gain (loss) on marketable securities		1,055	(1,360)
Changes in fair value of contingent consideration		—	(5,501)
Other items, net including fair value changes in derivatives		(4,384)	(142)
Net changes in operating assets and liabilities:			
Accounts receivable		13,480	25,720
Inventories		(18,750)	(5,805)
Prepaid expenses and other		(7,259)	2,887
Other long-term assets		(1,676)	4,617
Accounts payable		(4,404)	(9,053)
Accrued and other current liabilities		2,856	(16,623)
Income taxes		(24,425)	2,175
Other long-term liabilities		(438)	(3,853)
Net cash provided by operating activities		129,516	147,768
Cash flows from investing activities:			
Purchases of property, plant and equipment		(37,907)	(39,840)
Proceeds from sale of equipment		42	20
Purchases of intangible assets	(6)	(18,116)	(7,167)
Purchases of investments		(584)	(21,287)
Cash paid for acquisitions, net of cash acquired		(49,678)	(90,490)
Purchases of short-term investments		(36,209)	(355,051)
Proceeds from sales of short-term investments		65,234	409,103
Other investing activities		(2,296)	(2,424)
Net cash used in investing activities		(79,514)	(107,136)
Cash flows from financing activities:			
Proceeds from long-term debt, net of issuance costs	(9)	300,155	—
Capital repayment	(12)	(243,945)	—
Principal payments on capital leases		(674)	(556)
Excess tax benefits from share-based compensation		—	74
Proceeds from issuance of common shares		2,999	1,038
Other financing activities		(10,187)	(5,519)
Net cash provided by (used in) financing activities		48,348	(4,963)
Effect of exchange rate changes on cash and cash equivalents		5,311	2,477

Net increase in cash and cash equivalents	103,661	38,146
Cash and cash equivalents, beginning of period	439,180	290,011
Cash and cash equivalents, end of period	\$542,841	\$328,157

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

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QIAGEN N.V. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(unaudited)

1. Corporate Information

QIAGEN N.V. is a public limited liability company ('naamloze vennootschap') under Dutch law with a registered office at Hulsterweg 82, 5912 PL Venlo, The Netherlands. QIAGEN N.V., a Netherlands holding company, and subsidiaries (we, our or the Company) is the leading global provider of Sample to Insight solutions to transform biological materials into valuable molecular insights. Our sample technologies isolate and process DNA, RNA and proteins from blood, tissue and other materials. Assay technologies make these biomolecules visible and ready for analysis. Bioinformatics software and knowledge bases interpret data to report relevant, actionable insights. Automation solutions tie these together in seamless and cost-effective molecular testing workflows. We provide these workflows to four major customer classes: Molecular Diagnostics (human healthcare), Applied Testing (forensics, veterinary testing and food safety), Pharma (pharmaceutical and biotechnology companies) and Academia (life sciences research). We market our products in more than 130 countries.

2. Basis of Presentation and Accounting Policies

Basis of Presentation

The condensed consolidated financial statements include the accounts of QIAGEN N.V., its wholly-owned subsidiaries and any partially owned subsidiaries that the Company has the ability to control. All significant intercompany accounts and transactions have been eliminated in consolidation. All amounts are presented in U.S. dollars, unless otherwise indicated. Investments in companies where we exercise significant influence over the operations but do not have control, and where we are not the primary beneficiary, are accounted for using the equity method. All other investments are accounted for under the cost method. When there is a portion of equity in an acquired subsidiary not attributable, directly or indirectly, to the Company, we record the fair value of the noncontrolling interests at the acquisition date and classify the amounts attributable to noncontrolling interests separately in equity in the condensed consolidated financial statements. Any subsequent changes in the Company's ownership interest while the Company retains its controlling financial interest in its subsidiary are accounted for as equity transactions.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) for interim financial information and generally in accordance with the instructions to Form 10-Q and Article 10 of Regulation S-X. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to the Securities and Exchange Commission (SEC) rules and regulations. In the opinion of management, all adjustments (which include only normal recurring adjustments) necessary for a fair presentation have been included.

On January 6, 2017, we acquired OmicSoft Corporation, located in Cary, North Carolina (U.S.) and on June 28, 2016, we acquired Exiqon A/S, located in Vedbaek, Denmark. Accordingly, at the acquisition dates, all the assets acquired and liabilities assumed were recorded at their respective fair values and our consolidated results of operations include the operating results from the acquired companies from the acquisition dates.

Certain prior year amounts for the six-month period ended June 30, 2016 have been revised to reflect a change in attribution method of share-based compensation. See further discussion in the Revision of Previously Issued Financial Statements for Change in Attribution Method section of Note 20 - Share-Based Compensation as disclosed in our Annual Report on Form 20-F for the year ended December 31, 2016.

We operate as one operating segment in accordance with the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 280, Segment Reporting. We have a common basis of organization and our products and services are offered globally. Our chief operating decision maker (CODM) makes decisions based on the Company as a whole. Accordingly, we operate and make decisions as one reporting unit.

The results of operations for an interim period are not necessarily indicative of results that may be expected for any other interim period or for the full year. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's Annual Report on Form 20-F for the year ended December 31, 2016.

Summary of Significant Accounting Policies

The interim condensed consolidated financial statements were prepared based on the same accounting policies as those applied and described in the consolidated financial statements as of December 31, 2016 including the adoption of new standards and interpretations as of January 1, 2017.

Adoption of New Accounting Standards

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The following new FASB Accounting Standards Updates (ASU) were effective for the first quarter of 2017: ASU 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory requires in scope inventory, including inventory measured using first-in, first out (FIFO) or average cost, to be measured at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. ASU 2015-11 became effective for us on January 1, 2017 and did not have a material impact on our consolidated financial statements.

ASU 2016-07, Investments - Equity Method and Joint Ventures (Topic 323): Simplifying the Transition to the Equity Method of Accounting eliminates the requirement to retroactively adopt the equity method of accounting when an investment qualifies for use of the equity method as a result of an increase in the level of ownership or degree of influence. The new guidance became effective for us beginning on January 1, 2017 and had no impact on our consolidated financial statements.

ASU 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting is intended to simplify several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The new guidance became effective for us on January 1, 2017. The impact of the adoption of ASU 2016-09 is limited to the recording of any windfall or shortfall benefit directly to the tax provision and the reclassification of certain items in our statement of cash flows, which have adopted on a prospective basis. We will continue estimating stock-based compensation award forfeitures in determining the amount of compensation cost to be recognized each period. We expect an increase to our cash flows from operating activities and a decrease to cash flows from financing activities. As a result of this adoption, we expect volatility in our effective tax rate as any windfall or shortfall tax benefits related to our share-based compensation will be recorded directly into our results of operations. During the first half of 2017, \$4.8 million of excess tax benefit was recognized directly to the tax provision.

New Accounting Standards Not Yet Adopted

The following new FASB Accounting Standards Updates, which are not yet adopted, have been grouped by their required effective dates:

First Quarter of 2018

ASU 2014-09, Revenue from Contracts with Customers (Topic 606) affects any entity that either enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets unless those contracts are within the scope of other standards (e.g., insurance contracts or lease contracts). In August 2015, the FASB issued Accounting Standards Update No. 2015-14 (ASU 2015-14), Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date which defers the effective date of ASU 2014-09 to interim and annual reporting periods beginning after December 15, 2017. The FASB has continued to issue accounting standards updates to clarify and provide implementation guidance related to Revenue from Contracts with Customers, including ASU 2016-08 Revenue from Contract with Customers: Principal versus Agent Considerations, ASU 2016-10 Revenue from Contracts with Customers: Identifying Performance Obligations and Licensing, and ASU 2016-12 Revenue from Contracts with Customers: Narrow-Scope Improvements and Practical Expedients. An entity should apply the amendments either retrospectively to each prior reporting period presented and the entity may elect certain practical expedients (the full retrospective method of adoption); or, retrospectively with the cumulative effect of initially applying this ASU recognized at the date of initial application (the modified retrospective method of adoption). We have not experienced significant issues in our implementation process and based on the analysis to date, we currently do not expect the adoption to have a material impact on our existing revenue accounting policies or on the recognition of revenue from product sales. However, we continue to evaluate the impact the guidance may have in connection with collaboration and license agreements and other revenue sources. We anticipate adopting this standard on its effective date, January 1, 2018. We have not yet determined the method of adoption, but assuming the impact is not material, we expect to adopt the new standard using the modified retrospective method with an adjustment to beginning retained earnings for the cumulative effect of the change.

ASU 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities will impact certain aspects of recognition, measurement, presentation and disclosure of

financial instruments. The new guidance makes targeted improvements to existing U.S. GAAP by:

- requiring equity investments (except those accounted for under the equity method of accounting, or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income;
- requiring public business entities to use the exit price notion when measuring the fair value of financial instruments for disclosure purposes;
- requiring separate presentation of financial assets and financial liabilities by measurement category and form of financial asset (i.e., securities or loans and receivables) on the balance sheet or the accompanying notes to the financial statements;
- eliminating the requirement for public business entities to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet; and
- requiring a reporting organization to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk (also referred to as “own credit”) when

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the organization has elected to measure the liability at fair value in accordance with the fair value option for financial instruments.

The amendments will become effective for our financial statements beginning in the first quarter of 2018. The implementation of the amendments is expected to increase the volatility of net income; however the extent of any volatility will be dependent upon the significance of the equity investments at the time of adoption. At June 30, 2017, we had a net unrealized loss of \$0.3 million net of tax, and at December 31, 2016, we had a net unrealized loss, net of tax, of \$0.2 million from equity investments recorded in equity, respectively. At adoption of this standard, the cumulative amounts recorded in other accumulated comprehensive income will be reclassified to retained earnings, and gains or losses in future periods will be recognized in net income.

ASU No. 2016-15, Statement of Cash Flows (Topic 320): Classification of Certain Cash Receipts and Cash Payments (a consensus of the FASB Emerging Issues Task Force), addresses eight classification issues related to the statement of cash flows:

- debt prepayment or debt extinguishment costs;
- settlement of zero-coupon bonds;
- contingent consideration payments made after a business combination;
- proceeds from the settlement of insurance claims;
- proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies;
- distributions received from equity method investees;
- beneficial interests in securitization transactions; and
- separately identifiable cash flows and application of the predominance principle.

ASU 2016-15 will become effective for us for annual and interim periods in fiscal years beginning after December 15, 2017. Early adoption is permitted, including adoption in an interim period. We will be required to apply this ASU using a retrospective transition method to each period presented other than for issues where application would be impracticable in which case we will be permitted to apply the amendments for those issues prospectively as of the earliest date practicable. We are currently evaluating the potential impact of ASU 2016-15 on our consolidated financial statements.

ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory, aims to improve the accounting for the income tax consequences of intra-entity transfers of assets other than inventory. This amendment requires an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The amendments in this update should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. This update is effective for annual periods beginning after December 15, 2017, and interim periods within those fiscal years with early adoption permitted, including adoption in an interim period. We are currently evaluating the impact the adoption of this new standard will have on our financial position and results of operations.

ASU 2016-18, Statement of Cash Flows (Topic 320): Restricted Cash, requires entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. The amendments in this update should be applied using a retrospective transition method to each period presented. This update is effective for annual periods beginning after December 15, 2017, and interim periods within those fiscal years with early adoption permitted, including adoption in an interim period. We are currently evaluating the impact the adoption of this new standard will have on our financial position and results of operations.

ASU 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business, clarifies and provides a more robust framework to use in determining when a set of assets and activities is a business. The amendments in this update should be applied prospectively on or after the effective date. This update is effective for annual periods beginning after December 15, 2017, and interim periods within those periods. Early adoption is permitted for acquisition or deconsolidation transactions occurring before the issuance date or effective date and only when the transactions have not been reported in issued or made available for issuance financial statements. We are currently

evaluating the impact the adoption of this new standard will have on our financial position and results of operations. ASU 2017-09, Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting, clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. The guidance is effective prospectively for annual periods beginning on or after December 15, 2017. We will adopt the standard on January 1, 2018.

First Quarter of 2019

ASU 2016-02, Leases (Topic 842) aims to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. ASU 2016-02 will become effective for us beginning in the first quarter of 2019 and requires modified retrospective application for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. We do not plan to early adopt this standard and

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we anticipate that the adoption of this standard will require changes to our systems and processes. We expect this standard to increase total assets and total liabilities, however, we are currently evaluating the potential size of the impact that ASU 2016-02 may have on our consolidated financial statements.

First Quarter of 2020

ASU 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, provides financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. To achieve this objective, the amendments in ASU 2016-13 replace the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The new guidance will become effective for us beginning on January 1, 2020. We are currently evaluating the potential impact ASU 2016-13 may have on our consolidated financial statements.

ASU 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment, removes Step 2 of the goodwill impairment test. A goodwill impairment will now be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. ASU 2017-04 is effective for us for annual periods beginning January 1, 2020 and early adoption is permitted. The new guidance is required to be applied on a prospective basis. We are currently evaluating the impact the adoption of this new standard will have on our financial position and results of operations.

3. Acquisitions

Acquisitions have been accounted for as business combinations, and the acquired companies' results have been included in the accompanying condensed consolidated statements of income from their respective dates of acquisition. Our acquisitions have historically been made at prices above the fair value of the acquired net assets, resulting in goodwill, due to expectations of synergies of combining the businesses. These synergies include use of our existing infrastructure, such as sales force, shared service centers, distribution channels and customer relations; to expand sales of an acquired business' products; use of the infrastructure of the acquired businesses to cost-effectively expand sales of our products; and elimination of duplicative facilities, functions and staffing.

2017 Acquisition

On January 6, 2017, we acquired OmicSoft Corporation, a leading provider of omics data management solutions located in Cary, North Carolina (U.S.). This acquisition was not significant to the overall consolidated financial statements and as of June 30, 2017, the allocation of the purchase price remains preliminary.

2016 Acquisition

During the second quarter of 2016, we acquired a majority shareholding in Exiqon A/S (Exiqon), a publicly traded Danish company headquartered in Vedbaek, Denmark, which is a leading provider of RNA analysis solutions with a proprietary Locked Nucleic Acid (LNA) technology. The acquisition will expand our leadership position in Sample to Insight solutions for RNA analysis. On June 28, 2016, we paid DKK 627.4 million (\$95.2 million) for approximately 94.52% of the outstanding Exiqon common shares. On the acquisition date, the fair value of the remaining shares was \$5.5 million. The fair value of this noncontrolling share was based on reference to quoted market values of Exiqon stock. Since the acquisition date, we have acquired the remaining Exiqon shares for \$5.5 million in cash, which is included in other financing activities in the accompanying condensed consolidated statements of cash flows, and as of June 30, 2017, we held 100% of Exiqon's shares.

The changes between the final purchase price allocation as of June 30, 2017 and the preliminary purchase price allocation as of June 30, 2016 include a \$9.4 million increase in developed technology, a \$9.2 million increase in deferred tax asset on tax loss carry forwards, a \$2.8 million decrease in customer relationships, a \$1.2 million increase of long-term deferred tax liability, a \$0.4 million increase in prepaid expenses and other current assets and a \$0.3 million increase of other opening balance sheet liabilities. The corresponding impact for these adjustments was a decrease to goodwill of \$14.7 million. These changes were not material to the condensed consolidated financial statements.

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(in thousands)	Exiqon acquisition
Purchase Price:	
Cash consideration	\$ 95,163
Fair value of remaining shares	5,519
	\$ 100,682
Final Allocation:	
Cash and cash equivalents	\$ 4,824
Accounts receivable	3,581
Inventory	1,553
Prepaid expenses and other current assets	1,853
Accounts payable	(1,289)
Accruals and other current liabilities	(11,587)
Debt assumed	(6,068)
Other long term liabilities	(197)
Deferred tax asset on tax loss carry forwards	10,016
Fixed and other long term assets	2,870
Developed technology	18,500
Customer relationships	3,800
Tradenames	1,400
Goodwill	76,807
Deferred tax liability on fair value of identifiable intangible assets acquired	(5,381)
	\$ 100,682

The weighted average amortization period for the intangible assets is 11.1 years. The goodwill acquired is not deductible for tax purposes.

Revenue and earnings in the reporting periods since the acquisition date have not been significant. No pro forma financial information has been provided herein as the acquisition of Exiqon did not have a material impact to net sales, net income or earnings per share on a pro forma basis.

4. Restructuring

2016 Restructuring

During the fourth quarter of 2016, we implemented initiatives to support faster sales momentum while improving efficiency and accountability. The objective with these actions is to ensure that we grow sustainably and consistently in the coming years. Measures include simplifying our geographic presence with site reductions, focusing resources to shared service centers, and streamlining selected organizational structures. During 2017, we expanded the scope of these programs, to focus on capturing greater benefits from shared service centers and digitization. We expect to complete the program in 2017 at a total cost of approximately \$100 million, of which \$96.4 million has been incurred to date including \$17.4 million in the six-month period ended June 30, 2017.

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The following table summarizes the cash components of the restructuring activity.

(in thousands)	Personnel Related	Facility Related	Contract and Other Costs	Total
Costs incurred in 2016	\$21,252	\$7,165	\$8,315	\$36,732
Payments	(2,742)	(601)	(2,391)	(5,734)
Facility deferred rent reclassified to restructuring liability	—	1,326	—	1,326
Foreign currency translation adjustment	(30)	(8)	19	(19)
Liability at December 31, 2016	18,480	7,882	5,943	32,305
Costs incurred in 2017	9,083	1,807	8,832	19,722
Release of excess accrual	(366)	(1,268)	—	(1,634)
Payments	(15,454)	(6,540)	(8,834)	(30,828)
Facility deferred rent reclassified to restructuring liability	—	241	—	241
Foreign currency translation adjustment	715	42	105	862
Liability at June 30, 2017	\$12,458	\$2,164	\$6,046	\$20,668

Of the net charges recorded in 2017, \$0.9 million is recorded in cost of sales, \$1.8 million is recorded in research and development, including a \$0.7 million reduction in costs as a result of forfeitures of share-based compensation in connection with terminations, \$8.5 million is recorded in sales and marketing and \$6.2 million is recorded in general and administrative, integration and other.

At June 30, 2017, a restructuring accrual of \$19.8 million was included in accrued and other current liabilities and \$0.9 million was included in other long-term liabilities in the accompanying condensed consolidated balance sheet. At December 31, 2016, \$27.6 million of the liability was included in accrued and other current liabilities and \$4.7 million was included in other long-term liabilities in the accompanying condensed consolidated balance sheet.

Since 2016, we have incurred cumulative costs totaling \$96.4 million related to this restructuring program that have been recorded as follows:

(in thousands)	Personnel Related	Facility Related	Contract and Other Costs	Asset Impairments & Disposals	Total
Cost of sales	\$ 1,970	\$ 205	\$171	\$ 10,490	\$12,836
Research and development	4,081	3,487	204	20,370	28,142
Sales and marketing	19,257	3,264	9,886	1,046	33,453
General and administrative, integration and other	1,893	747	6,885	1,547	11,072
Other expense	—	—	—	10,946	10,946
Total cumulative costs	\$ 27,201	\$ 7,703	\$17,146	\$ 44,399	\$96,449

5. Investments

We have made strategic investments in certain companies that are accounted for using the equity- or cost-method of accounting. The method of accounting for an investment depends on the level of influence. We monitor changes in circumstances that may require a reassessment of the level of influence. We periodically review the carrying value of these investments for impairment, considering factors such as the most recent stock transactions and book values from the recent financial statements. The fair value of cost and equity-method investments is estimated when there are identified events or changes in circumstances that may have an impact on the fair value of the investment.

Additionally, we hold investments in marketable equity securities that have readily determinable fair values that are classified as available-for-sale. These investments are reported at fair value, with unrealized gain and losses recorded in accumulated other comprehensive income (loss) in equity.

Equity Method Investments

As of June 30, 2017 and December 31, 2016, we had a total of equity-method investments in non-publicly traded companies of \$13.5 million and \$10.8 million, respectively, which are included in other long-term assets in the accompanying condensed consolidated balance sheets.

In connection with the 2016 restructuring activities discussed in Note 4, we transferred the research and development activities of our instrumentation business to a new company, Hombrechtikon Systems Engineering AG (HSE), in which we acquired a 19% interest for a total obligation of \$9.8 million as of December 31, 2016 payable over three years. As of June 30, 2017, a \$6.2 million obligation

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remains with \$3.1 million included in accrued and other current liabilities and \$3.1 million included in other long-term liabilities in the accompanying condensed consolidated balance sheets. HSE is a variable interest entity and we are not the primary beneficiary as we do not hold the power to direct the activities that most significantly impact the economic performance of HSE. Therefore, HSE is not consolidated. As of June 30, 2017, the investment has a carrying value of \$1.6 million, which is included in other long-term assets in the condensed consolidated balance sheets, representing our maximum exposure to loss.

During the second quarter of 2017, we sold our interest in an equity-method investee, which had no book value, for \$3.5 million and recorded a corresponding gain in other (expense) income, net in the accompanying condensed consolidated statement of income.

Cost Method Investments

As of June 30, 2017 and December 31, 2016, we had a total of cost-method investments in non-publicly traded companies with carrying amounts of \$35.3 million and \$38.2 million, respectively, which are included in other long-term assets in the accompanying condensed consolidated balance sheets. During the second quarter of 2017, we recorded an impairment charge of \$3.1 million in other (expense) income, net in the accompanying condensed consolidated statement of income, following changes in the investee's circumstances that indicated the carrying value was no longer recoverable. Accordingly, the investment was fully impaired.

Marketable Equity Securities

During 2016, we made an investment in shares of HTG Molecular Diagnostics, Inc., a publicly traded company, that is classified as a long-term marketable security. At June 30, 2017, we held 833,333 shares with a cost basis of \$2.0 million. As of June 30, 2017 and December 31, 2016, the fair market value of these shares was \$2.2 million and \$1.9 million, respectively. Additionally, we hold 320,712 shares of Curetis N.V. with a cost basis of \$2.3 million. As of June 30, 2017 and December 31, 2016, the fair market value of these shares was \$1.8 million and \$2.2 million, respectively, included in other long-term assets in the accompanying condensed consolidated balance sheets.

6. Intangible Assets

The following table sets forth the intangible assets by major asset class as of June 30, 2017 and December 31, 2016:

(in thousands)	June 30, 2017		December 31, 2016	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortized Intangible Assets:				
Patent and license rights	\$396,287	\$(258,190)	\$373,609	\$(233,406)
Developed technology	760,467	(514,638)	708,825	(469,312)
Customer base, non-compete agreements and trademarks	430,784	(267,869)	422,797	(245,354)
	\$1,587,538	\$(1,040,697)	\$1,505,231	\$(948,072)
Unamortized Intangible Assets:				
Goodwill	\$1,995,807		\$1,925,518	

The changes in intangible assets in 2017 are summarized as follows:

(in thousands)	Intangibles	Goodwill
Balance at December 31, 2016	\$557,159	\$1,925,518
Additions	12,101	—
Acquisitions	28,400	26,364
Amortization	(71,269)	—
Disposals	(69)	—
Foreign currency translation adjustments	20,519	43,925
Balance at June 30, 2017	\$546,841	\$1,995,807

Cash paid for purchases of intangible assets during the six-month period ended June 30, 2017 totaled \$18.1 million, of which \$10.6 million is related to current year payments for licenses that were accrued as of December 31, 2016 and \$2.0 million is related to prepayments recorded in other long term assets in the accompanying condensed consolidated

balance sheet as of June 30, 2017. Intangible asset additions of \$12.1 million includes \$5.5 million of cash paid during the six-month period ended June 30, 2017, \$3.9 million of additions which were accrued as of June 30, 2017 together with \$2.7 million of additions which were previously recorded as prepayments.

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The changes in the carrying amount of goodwill for the six months ended June 30, 2017 resulted from the acquisition of OmicSoft as further discussed in Note 3, "Acquisitions" and changes in foreign currency translation.

For the three- and six-month periods ended June 30, 2017 and 2016, amortization expense on intangible assets totaled approximately \$35.9 million and \$71.3 million, and \$34.1 million and \$67.9 million, respectively. Amortization of intangibles for the next five years is expected to be approximately:

Year	Annual Amortization (in millions)
2018	\$ 106.8
2019	\$ 85.1
2020	\$ 69.6
2021	\$ 49.7
2022	\$ 38.6

7. Derivatives and Hedging

In the ordinary course of business, we use derivative instruments, including swaps, forwards and/or options, to manage potential losses from foreign currency exposures and interest bearing assets or liabilities. The principal objective of such derivative instruments is to minimize the risks and/or costs associated with our global financial and operating activities. We do not utilize derivative or other financial instruments for trading or other speculative purposes. We recognize all derivatives as either assets or liabilities on the balance sheet on a gross basis, measure those instruments at fair value and recognize the change in fair value in earnings in the period of change, unless the derivative qualifies as an effective hedge that offsets certain exposures. We have agreed with almost all of our counterparties with whom we had entered into cross-currency swaps, interest rate swaps or foreign exchange contracts, to enter into bilateral collateralization contracts under which we will receive or provide cash collateral, as the case may be, for the net position with each of these counterparties. As of June 30, 2017, we had an asset of \$3.5 million recorded in prepaid and other assets in the accompanying condensed consolidated balance sheet. As of December 31, 2016, we had a liability position of \$7.0 million recorded in accrued and other current liabilities and \$1.2 million recorded in prepaid and other current assets in the accompanying condensed consolidated balance sheet. In June 2017, we entered into a foreign currency non-derivative hedging instrument that is designated and qualifies as net investment hedge. The objective of the hedge is to protect part of the net investment in foreign operations against adverse changes in the exchange rate between the Euro and the functional currency of the U.S. dollar. The non-derivative hedging instrument ("Schuldschein") was issued in the total amount of \$301.2 million as described in Note 9 "Debt." Of the \$301.2 million, which is held in both U.S. dollars and Euro, €230.0 million is designated as the hedging instrument against a portion of our Euro net investments in our foreign operations. The relative changes in both the hedged item and hedging instrument are calculated by applying the change in spot rate between two assessment dates against the respective notional amount. The effective portion of the hedge is recorded in the cumulative translation adjustment account within other accumulated comprehensive income (loss). Based on the spot rate method, the unrealized loss recorded in equity as of June 30, 2017 is \$6.2 million. Since we are using the debt as the hedging instrument, which is also remeasured based on the spot rate method, there is no hedge ineffectiveness related to the net investment hedge as of June 30, 2017.

As of June 30, 2017 and December 31, 2016, we held derivative instruments that are designated and qualify as cash flow hedges, where the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive income (loss) and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. In 2017 and in 2016, we did not record any hedge ineffectiveness related to any cash-flow hedges in earnings. Based on their valuation as of June 30, 2017, we expect approximately \$6.2 million of derivative losses included in accumulated other comprehensive loss will be reclassified into income during the next 12 months. The cash flows derived from derivatives are classified in the condensed consolidated statements of cash flows in the same category as the

condensed consolidated balance sheet account of the underlying item.

As of June 30, 2017 and December 31, 2016, we held derivative instruments that qualify for hedge accounting as fair value hedges. For derivative instruments that are designated and qualify as a fair value hedge, the effective portion of the gain or loss on the derivative is reflected in earnings. This earnings effect is offset by the change in the fair value of the hedged item attributable to the risk being hedged that is also recorded in earnings. In 2017 and in 2016, there was no ineffectiveness. The cash flows derived from derivatives are classified in the condensed consolidated statements of cash flows in the same category as the condensed consolidated balance sheet account of the underlying item.

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Interest Rate Derivatives

We use interest rate derivative contracts to align our portfolio of interest bearing assets and liabilities with our risk management objectives. These contracts are measured and reported at fair value on a recurring basis, within Level 2 of the fair value hierarchy. During 2015, we entered into five cross currency interest rate swaps through 2025 for a total notional amount of €180.0 million which qualify for hedge accounting as cash flow hedges. We determined that no ineffectiveness exists related to these swaps. As of June 30, 2017, the €180.0 million notional swap amount had a fair value of \$12.5 million recorded in other long-term liabilities and a related interest receivable of \$1.4 million which is recorded in prepaid expenses and other current assets, respectively, in the accompanying condensed consolidated balance sheet. As of December 31, 2016, this swap had a fair value of \$1.4 million and accrued and unpaid interest of \$1.7 million which are recorded in other long-term assets and prepaid expenses and other current assets, respectively, in the accompanying condensed consolidated balance sheet.

During 2014, we entered into interest rate swaps, which effectively fixed the fair value of \$200.0 million of our fixed rate private placement debt and qualify for hedge accounting as fair value hedges. We determined that no ineffectiveness exists related to these swaps. As of June 30, 2017, the \$200.0 million notional swap amount had a fair value of \$3.2 million and accrued and unpaid interest of \$0.4 million which are recorded in other long-term assets and prepaid expenses and other current assets, respectively, in the accompanying condensed consolidated balance sheet. As of December 31, 2016, this swap had a fair value of \$3.1 million and accrued and unpaid interest of \$0.6 million which are recorded in other long-term assets and prepaid expenses and other current assets, respectively, in the accompanying condensed consolidated balance sheet.

Call Options

We entered into Call Options during 2014 which, along with the sale of the Warrants, represent the Call Spread Overlay entered into in connection with the Cash Convertible Notes and which are more fully described in Note 9, "Debt." We used \$105.2 million of the proceeds from the issuance of the Cash Convertible Notes to pay the premium for the Call Options, and simultaneously received \$68.9 million, (net of issuance costs) from the sale of the Warrants, for a net cash outlay of \$36.3 million for the Call Spread Overlay. The Call Options are intended to offset cash payments in excess of the principal amount due upon any conversion of the Cash Convertible Notes.

Aside from the initial payment of a premium of \$105.2 million for the Call Options, we will not be required to make any cash payments under the Call Options. We will however be entitled to receive under the terms of the Call Options an amount of cash generally equal to the amount by which the market price per share of our common stock exceeds the exercise price of the Call Options during the relevant valuation period. The exercise price under the Call Options is equal to the conversion price of the Cash Convertible Notes.

The Call Options, for which our common stock are the underlying security, are a derivative asset that requires mark-to-market accounting treatment due to the cash settlement features until the Call Options settle or expire. The Call Options are measured and reported at fair value on a recurring basis, within Level 2 of the fair value hierarchy. For further discussion of the inputs used to determine the fair value of the Call Options, refer to Note 8, "Fair Value Measurements." The fair value of the Call Options at June 30, 2017 and December 31, 2016 was approximately \$224.0 million and \$185.8 million, respectively, which is recorded in other long-term assets in the accompanying condensed consolidated balance sheet.

The Call Options do not qualify for hedge accounting treatment. Therefore, the change in fair value of these instruments is recognized immediately in our condensed consolidated statements of income in other income, net. For the six months ended June 30, 2017 and June 30, 2016, the change in the fair value of the Call Options resulted in gains of \$38.3 million and losses of \$94.3 million, respectively. Because the terms of the Call Options are substantially similar to those of the Cash Convertible Notes' embedded cash conversion option, discussed below, we expect the effect on earnings from those two derivative instruments to mostly offset each other.

Cash Convertible Notes Embedded Cash Conversion Option

The embedded cash conversion option within the Cash Convertible Notes is required to be separated from the Cash Convertible Notes and accounted for separately as a derivative liability, with changes in fair value reported in our condensed consolidated statements of income in other income, net until the cash conversion option settles or expires. For further discussion of the Cash Convertible Notes, refer to Note 9, "Debt." The initial fair value liability of the

embedded cash conversion option was \$105.2 million, which simultaneously reduced the carrying value of the Cash Convertible Notes (effectively an original issuance discount). The embedded cash conversion option is measured and reported at fair value on a recurring basis, within Level 2 of the fair value hierarchy. For further discussion of the inputs used to determine the fair value of the embedded cash conversion option, refer to Note 8, "Fair Value Measurements." The fair value of the embedded cash conversion option at June 30, 2017 and December 31, 2016 was approximately \$225.1 million and \$187.5 million, respectively, and is included in other long-term liabilities in the accompanying condensed consolidated balance sheet. For the six months ended June 30, 2017 and June 30, 2016, the change in the fair value of the embedded cash conversion option resulted in losses of \$37.6 million and gains of \$95.2 million, respectively, recognized in our condensed consolidated statements of income in other income, net.

Foreign Currency Derivatives

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As a globally active enterprise, we are subject to risks associated with fluctuations in foreign currencies in our ordinary operations. This includes foreign currency-denominated receivables, payables, debt, and other balance sheet positions including intercompany items. We manage balance sheet exposure on a group-wide basis using foreign exchange forward contracts, foreign exchange options and cross-currency swaps.

Undesignated Derivative Instruments

We are party to various foreign exchange forward, option and swap arrangements which had, at June 30, 2017, an aggregate notional value of \$382.2 million and fair value of \$4.7 million included in prepaid and other assets and \$4.1 million included in accrued and other current liabilities, which expire at various dates through February 2018. We were party to various foreign exchange forward and swap arrangements which had, at December 31, 2016, an aggregate notional value of \$347.6 million and fair values of \$3.2 million included in prepaid and other assets and \$6.1 million included in accrued and other current liabilities, which expire at various dates through December 2017. The transactions have been entered into to offset the effects from balance sheet exposure to foreign currency exchange risk. Changes in the fair value of these arrangements have been recognized in other income, net.

Fair Values of Derivative Instruments

The following table summarizes the fair value amounts of derivative instruments reported in the condensed consolidated balance sheets as of June 30, 2017 and December 31, 2016:

(in thousands)	Derivatives in Asset Positions		Derivatives in Liability Positions	
	6/30/2017	12/31/2016	6/30/2017	12/31/2016
Derivative instruments designated as hedges				
Interest rate contracts ⁽¹⁾	\$4,978	\$ 6,655	\$ (12,473)	\$ —
Total derivative instruments designated as hedges	\$4,978	\$ 6,655	\$ (12,473)	\$ —
Undesignated derivative instruments				
Call spread overlay	\$224,006	\$ 185,750	\$ (225,131)	\$ (187,546)
Foreign exchange contracts	4,673	3,154	(4,069)	(6,089)
Total undesignated derivative instruments	\$228,679	\$ 188,904	\$ (229,200)	\$ (193,635)

⁽¹⁾ The fair value amounts for the interest rate contracts include accrued interest.

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Gains and Losses on Derivative and Non-derivative Instruments

The following tables summarize the locations and gains and losses on derivative and non-derivative instruments for the three- and six-month periods ended June 30, 2017 and 2016:

Three months ended June 30, 2017 (in thousands)	Gain/(loss) recognized in AOCI	Location of gain / loss in income statement	(Gain) loss reclassified from AOCI into income	Gain (loss) recognized in income
Non-derivative instruments				
Net investment hedge	\$ (6,228)	Other (expense) income, net	—	n/a
Cash flow hedges				
Interest rate contracts	\$ (13,851)	Other (expense) income, net	\$ 12,978	n/a
Fair value hedges				
Interest rate contracts	\$ —	Other (expense) income, net	\$ —	\$ 742
Undesignated derivative instruments				
Call spread overlay	n/a	Other (expense) income, net	n/a	\$ 138
Foreign exchange contracts	n/a	Other (expense) income, net	n/a	744
				\$ 882
Three months ended June 30, 2016 (in thousands)	Gain/(loss) recognized in AOCI	Location of gain / loss in income statement	(Gain) loss reclassified from AOCI into income	Gain (loss) recognized in income
Cash flow hedges				
Interest rate contracts	\$ 11,570	Other (expense) income, net	\$ (5,094)	n/a
Fair value hedges				
Interest rate contracts	\$ —	Other (expense) income, net	\$ —	\$ 1,918
Undesignated derivative instruments				
Call spread overlay	n/a	Other (expense) income, net	n/a	\$ 239
Foreign exchange contracts	n/a	Other (expense) income, net	n/a	(1,795)
				\$ (1,556)

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Six months ended June 30, 2017 (in thousands)	Gain/(loss) recognized in AOCI	Location of (gain) loss in income statement	(Gain) loss reclassified from AOCI into income	Gain (loss) recognized in income
Non-derivative instruments				
Net investment hedge	\$ (6,228)	Other (expense) income, net	—	n/a
Cash flow hedges				
Interest rate contracts	\$ (13,841)	Other (expense) income, net	\$ 15,678	n/a
Fair value hedges				
Interest rate contracts	\$ —	Other (expense) income, net	\$ —	\$ 110
Undesignated derivative instruments				
Call spread overlay	n/a	Other (expense) income, net	n/a	\$ 671
Foreign exchange contracts	n/a	Other (expense) income, net	n/a	6,534
				\$ 7,205
Six months ended June 30, 2016 (in thousands)	Gain/(loss) recognized in AOCI	Location of (gain) loss in income statement	(Gain) loss reclassified from AOCI into income	Gain (loss) recognized in income
Cash flow hedges				
Interest rate contracts	\$ (4,825)	Other (expense) income, net	\$ 3,870	n/a
Fair value hedges				
Interest rate contracts	\$ —	Other (expense) income, net	\$ —	\$ 7,739
Undesignated derivative instruments				
Call spread overlay	n/a	Other (expense) income, net	n/a	\$ 894
Foreign exchange contracts	n/a	Other (expense) income, net	n/a	(3,125)
				\$ (2,231)

The amounts noted in the table above for accumulated other comprehensive income (AOCI) do not include any adjustment for the impact of deferred income taxes.

8. Fair Value Measurements

Assets and liabilities are measured at fair value according to a three-tier fair value hierarchy which prioritizes the inputs used in measuring fair value as follows:

Level 1. Observable inputs, such as quoted prices in active markets;

Level 2. Inputs, other than the quoted price in active markets, that are observable either directly or indirectly; and

Level 3. Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Our assets and liabilities measured at fair value on a recurring basis consist of marketable securities as discussed in Note 5 and short-term investments, which are classified in Level 1 and Level 2 of the fair value hierarchy, derivative contracts used to hedge currency and interest rate risk, derivative financial instruments entered into in connection with the Cash Convertible Notes discussed in Note 9, which are classified in Level 2 of the fair value hierarchy, and

contingent consideration accruals which are classified in Level 3 of the fair value hierarchy and are shown in the tables below. There have been no transfers between levels.

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In determining fair value for Level 2 instruments, we apply a market approach, using quoted active market prices relevant to the particular instrument under valuation, giving consideration to the credit risk of both the respective counterparty to the contract and the Company. To determine our credit risk, we estimated our credit rating by benchmarking the price of outstanding debt to publicly-available comparable data from rated companies. Using the estimated rating, our credit risk was quantified by reference to publicly-traded debt with a corresponding rating. The Level 2 derivative financial instruments include the Call Options asset and the embedded conversion option liability. See Note 9, "Debt", and Note 7, "Derivatives and Hedging," for further information. The derivatives are not actively traded and are valued based on an option pricing model that uses observable market data for inputs. Significant market data inputs used to determine fair values as of June 30, 2017 included our common stock price, the risk-free interest rate, and the implied volatility of our common stock. The Call Options asset and the embedded cash conversion option liability were designed with the intent that changes in their fair values would substantially offset, with limited net impact to our earnings. Therefore, the sensitivity of changes in the unobservable inputs to the option pricing model for such instruments is substantially mitigated.

Our Level 3 instruments include contingent consideration liabilities. We value contingent consideration liabilities using unobservable inputs, applying the income approach, such as the discounted cash flow technique, or the probability-weighted scenario method. Contingent consideration arrangements obligate us to pay the sellers of an acquired entity if specified future events occur or conditions are met such as the achievement of technological or revenue milestones. We use various key assumptions, such as the probability of achievement of the milestones (0% to 100%) and the discount rate (between 2.2% and 7.7%), to represent the non-performing risk factors and time value when applying the income approach. We regularly review the fair value of the contingent consideration and reflect any change in the accrual in the condensed consolidated statements of income in the line items commensurate with the underlying nature of milestone arrangements.

The following table presents our hierarchy for our financial assets and liabilities measured at fair value on a recurring basis as of June 30, 2017 and December 31, 2016:

(in thousands)	As of June 30, 2017				As of December 31, 2016			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Short-term investments	\$4,005	\$62,001	\$—	\$66,006	\$3,699	\$89,300	\$—	\$92,999
Marketable securities	4,028	—	—	4,028	4,064	—	—	4,064
Call option	—	224,006	—	224,006	—	185,750	—	185,750
Foreign exchange contracts	—	4,673	—	4,673	—	3,154	—	3,154
Interest rate contracts	—	4,978	—	4,978	—	6,655	—	6,655
	\$8,033	\$295,658	\$—	\$303,691	\$7,763	\$284,859	\$—	\$292,622
Liabilities:								
Foreign exchange contracts	\$—	\$(4,069)	\$—	\$(4,069)	\$—	\$(6,089)	\$—	\$(6,089)
Interest rate contracts	—	(12,473)	—	(12,473)	—	—	—	—
Cash conversion option	—	(225,131)	—	(225,131)	—	(187,546)	—	(187,546)
Contingent consideration	—	—	(10,053)	(10,053)	—	—	(8,754)	(8,754)
	\$—	\$(241,673)	\$(10,053)	\$(251,726)	\$—	\$(193,635)	\$(8,754)	\$(202,389)

For liabilities with Level 3 inputs, the following table summarizes the activity for the six months ended June 30, 2017:

(in thousands)	Contingent Consideration
Beginning Balance at December 31, 2016	\$(8,754)
Additions from acquisitions	(4,000)
Additions	(799)
Payments	3,500
Ending balance at June 30, 2017	\$(10,053)

As of June 30, 2017, of the total \$10.1 million accrued for contingent consideration, \$4.1 million is included in other long-term liabilities and \$6.0 million is included in accrued and other current liabilities in the accompanying

condensed consolidated balance sheet.

The carrying values of financial instruments, including cash and equivalents, accounts receivable, accounts payable and other accrued liabilities, approximate their fair values due to their short-term maturities. The estimated fair value of long-term debt, as disclosed in Note 9, was based on current interest rates for similar types of borrowings. The estimated fair values may not represent actual values of the financial instruments that could be realized as of the balance sheet date or that will be realized in the future. There were no

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adjustments in the six-month periods ended June 30, 2017 and 2016 for nonfinancial assets or liabilities required to be measured at fair value on a nonrecurring basis.

9. Debt

Our credit facilities available and undrawn at June 30, 2017 total €436.6 million (approximately \$498.2 million). This includes a €400.0 million syndicated multi-currency revolving credit facility expiring December 2021 of which no amounts were utilized at June 30, 2017 or at December 31, 2016, and four other lines of credit amounting to €36.6 million with no expiration date, none of which were utilized as of June 30, 2017 or as of December 31, 2016. The €400.0 million facility can be utilized in Euro, British pounds sterling, Swiss franc or U.S. dollar and bears interest of 0.4% to 1.2% above three months EURIBOR, or LIBOR in relation to any loan not in euro, and is offered with interest periods of one, two, three, or six months. The commitment fee is calculated based on 35% of the applicable margin. The revolving facility agreement contains certain financial and non-financial covenants, including but not limited to, restrictions on the encumbrance of assets and the maintenance of certain financial ratios. We were in compliance with these covenants at June 30, 2017. The credit facilities are for general corporate purposes.

At June 30, 2017 and December 31, 2016, long-term debt, net of debt issuance costs of \$7.9 million and \$8.1 million, respectively, consists of the following:

(in thousands)	2017	2016
0.375% Senior Unsecured Cash Convertible Notes due 2019	\$408,781	\$402,806
0.875% Senior Unsecured Cash Convertible Notes due 2021	266,527	262,371
3.19% Series A Senior Notes due October 2019	73,300	73,408
3.75% Series B Senior Notes due October 2022	301,922	301,601
3.90% Series C Senior Notes due October 2024	26,916	26,910
Schuldschein Private Placement	306,384	—
Total long-term debt	\$1,383,830	\$1,067,096

The notes are all unsecured obligations that rank pari passu.

Cash Convertible Notes due 2019 and 2021

On March 19, 2014, we issued \$730.0 million aggregate principal amount of Cash Convertible Senior Notes of which \$430.0 million is due in 2019 (2019 Notes) and \$300.0 million is due in 2021 (2021 Notes). We refer to the 2019 Notes and 2021 Notes, collectively as the “Cash Convertible Notes.” The aggregate net proceeds of the Cash Convertible Notes were \$680.7 million, after payment of the net cost of the Call Spread Overlay described below and transaction costs. Additionally, we used \$372.5 million of the net proceeds to repay the 2006 Notes and related subscription right.

Interest on the Cash Convertible Notes is payable semi-annually in arrears on March 19 and September 19 of each year, at rates of 0.375% and 0.875% per annum for the 2019 Notes and 2021 Notes, respectively, commencing on September 19, 2014. The 2019 Notes will mature on March 19, 2019 and the 2021 Notes will mature on March 19, 2021, unless repurchased or converted in accordance with their terms prior to such date.

The Cash Convertible Notes are convertible into cash in whole, but not in part, at the option of noteholders in the following circumstances: (a) from April 29, 2014 through September 18, 2018 for the 2019 Notes, and through September 18, 2020 for the 2021 Notes (Contingent Conversion Period), under any of the Contingent Conversion Conditions and (b) at any time following the Contingent Conversion Period through the fifth business day immediately preceding the applicable maturity date. Upon conversion, noteholders will receive an amount in cash equal to the Cash Settlement Amount, calculated as described below. The Cash Convertible Notes are not convertible into shares of our common stock or any other securities.

Noteholders may convert their Cash Convertible Notes into cash at their option at any time during the Contingent Conversion Period only under the following circumstances (Contingent Conversion Conditions):

during any calendar quarter commencing after the calendar quarter ending on March 31, 2014 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;

if we undergo certain fundamental changes;
during the five business day period immediately after any ten consecutive trading day period in which the quoted price for the 2019 Notes or the 2021 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day;

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if we elect to distribute assets or property to all or substantially all of the holders of our common stock and those assets or other property have a value of more than 25% of the average daily volume-weighted average trading price of our common stock for the prior 20 consecutive trading days;

if we elect to redeem the Cash Convertible Notes; or

if we experience certain customary events of default, including defaults under certain other indebtedness.

As adjusted by the synthetic share repurchase discussed in Note 12, the conversion rate is 7,063.1647 shares of our common stock per \$200,000 principal amount of Cash Convertible Notes (reflecting an adjusted conversion price of approximately \$28.32 per share of common stock). Upon conversion, holders are entitled to a cash payment (Cash Settlement Amount) equal to the average of the conversion rate multiplied by the daily volume-weighted average trading price for our common stock over a 50-day period. The conversion rate is subject to adjustment in certain instances but will not be adjusted for any accrued and unpaid interest. In addition, following the occurrence of certain corporate events that may occur prior to the applicable maturity date, we may be required to pay a cash make-whole premium by increasing the conversion rate for any holder who elects to convert Cash Convertible Notes in connection with the occurrence of such a corporate event.

We may redeem the 2019 Notes or 2021 Notes in their entirety at a price equal to 100% of the principal amount of the applicable Cash Convertible Notes plus accrued interest at any time 20% or less of the aggregate principal amount of the applicable Cash Convertible Notes originally issued remain outstanding.

Because the Cash Convertible Notes contain an embedded cash conversion option, we have determined that the embedded cash conversion option is a derivative financial instrument, which is required to be separated from the Cash Convertible Notes and accounted for separately as a derivative liability, with changes in fair value reported in our consolidated statements of operations until the cash conversion option transaction settles or expires. The initial fair value liability of the embedded cash conversion option was \$105.2 million, which simultaneously reduced the carrying value of the Cash Convertible Notes (effectively an original issuance discount). For further discussion of the derivative financial instruments relating to the Cash Convertible Notes, refer to Note 7, "Derivatives and Hedging." As noted above, the reduced carrying value on the Cash Convertible Notes resulted in a debt discount that is amortized to the principal amount through the recognition of non-cash interest expense over the expected life of the debt, which is five and seven years for the 2019 Notes and 2021 Notes, respectively. This resulted in our recognition of interest expense on the Cash Convertible Notes at an effective rate approximating what we would have incurred had nonconvertible debt with otherwise similar terms been issued. The effective interest rate of the 2019 and 2021 Notes is 2.937% and 3.809%, respectively, which is imputed based on the amortization of the fair value of the embedded cash conversion option over the remaining term of the Cash Convertible Notes. As of June 30, 2017, we expect the 2019 Notes to be outstanding until their 2019 maturity date and the 2021 Notes to be outstanding until their 2021 maturity date, for remaining amortization periods of approximately three and five years, respectively. Based on an estimation using available over-the-counter market information on the Cash Convertible Notes, the Level 2 fair value of the 2019 Notes was \$530.2 million and \$485.9 million and the fair value of the 2021 Notes was \$386.1 million and \$349.6 million, at June 30, 2017 and December 31, 2016, respectively.

In connection with the issuance of the Cash Convertible Notes, we incurred approximately \$13.1 million in transaction costs. Such costs have been allocated to the Cash Convertible Notes and are being amortized over the terms of the Cash Convertible Notes.

Interest expense related to the Cash Convertible Notes for the three- and six-month periods ended June 30, 2017 and 2016 is comprised of the following:

	Three months ended June 30,	
(in thousands)	2017	2016
Coupon interest	\$ 1,059	\$ 1,059
Amortization of original issuance discount	4,504	4,358
Amortization of debt issuance costs	583	568
Total interest expense related to the Cash Convertible Notes	\$ 6,146	\$ 5,985

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(in thousands)	Six months ended	
	June 30,	
	2017	2016
Coupon interest	\$2,119	\$2,119
Amortization of original issuance discount	8,970	8,679
Amortization of debt issuance costs	1,162	1,132
Total interest expense related to the Cash Convertible Notes	\$12,251	\$11,930

Cash Convertible Notes Call Spread Overlay

Concurrent with the issuance of the Cash Convertible Notes, we entered into privately negotiated hedge transactions (Call Options) with, and issued warrants to purchase shares of our common stock (Warrants) to, certain financial institutions. We refer to the Call Options and Warrants collectively as the "Call Spread Overlay". The Call Options are intended to offset any cash payments payable by us in excess of the principal amount due upon any conversion of the Cash Convertible Notes. We used \$105.2 million of the proceeds from the issuance of the Cash Convertible Notes to pay for the Call Options, and simultaneously received \$69.4 million from the sale of the Warrants, for a net cash outlay of \$35.8 million for the Call Spread Overlay. The Call Options are derivative financial instruments and are discussed further in Note 7, "Derivatives and Hedging." The Warrants are equity instruments and are further discussed in Note 12, "Equity."

Aside from the initial payment of a premium of \$105.2 million for the Call Option, we will not be required to make any cash payments under the Call Options, and will be entitled to receive an amount of cash, generally equal to the amount by which the market price per share of our common stock exceeds the exercise price of the Call Options during the relevant valuation period. The exercise price under the Call Options is initially equal to the conversion price of the Cash Convertible Notes.

The Warrants cover an aggregate of 25.8 million shares of our common stock (subject to anti-dilution adjustments under certain circumstances) and following the completion of the synthetic share repurchase, have an exercise price of \$32.0558 per share, subject to customary adjustments. The Warrants expire as follows: Warrants to purchase 15.2 million shares expire over a period of 50 trading days beginning on December 27, 2018 and Warrants to purchase 10.6 million shares expire over a period of 50 trading days beginning on December 29, 2020. The Warrants are European-style (exercisable only upon expiration). The Warrants could have a dilutive effect to the extent that the price of our common stock exceeds the applicable strike price of the Warrants. For each Warrant that is exercised, we will deliver to the holder a number of shares of our common stock equal to the amount by which the settlement price exceeds the exercise price, divided by the settlement price, plus cash in lieu of any fractional shares. We will not receive any additional proceeds if the Warrants are exercised.

Private Placement

In October 2012, we completed a private placement through the issuance of new senior unsecured notes at a total amount of \$400 million with a weighted average interest rate of 3.66% (settled on October 16, 2012). The notes were issued in three series: (1) \$73 million 7-year term due in 2019 (3.19%); (2) \$300 million 10-year term due in 2022 (3.75%); and (3) \$27 million 12-year term due in 2024 (3.90%). We paid \$2.1 million in debt issuance costs which are being amortized through interest expense over the lifetime of the notes. The note purchase agreement contains certain financial and non-financial covenants, including but not limited to, restrictions on priority indebtedness and the maintenance of certain financial ratios. We were in compliance with these covenants at June 30, 2017. Based on an estimation using the changes in the U.S. Treasury rates, the Level 2 fair value of these senior notes as of June 30, 2017 and December 31, 2016 was approximately \$398.5 million and \$397.1 million, respectively. During 2014, we entered into interest rate swaps, which effectively fixed the fair value of \$200.0 million of this debt and qualify for hedge accounting as fair value hedges as described in Note 7 "Derivatives and Hedging."

German Private Placement (Schuldschein)

In June 2017, we completed a German private placement bond ("Schuldschein") which was issued in several tranches totaling \$301.2 million due in various periods through 2027. The Schuldschein consists of U.S. dollar and Euro denominated tranches. The Euro tranches are designated as a foreign currency non-derivative hedging instrument that

qualifies as a net investment hedge as described in Note 7 "Derivatives and Hedging". Based on the spot rate method, the change in the carrying value of the Euro denominated tranches attributed to the net investment hedge as of June 30, 2017 totaled \$6.2 million and is recorded in equity. We paid \$1.1 million in debt issuance costs which are being amortized through interest expense over the lifetime of the notes. A summary of the tranches as of June 30, 2017 is as follows:

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Currency	Notional Amount	Interest Rate	Maturity	Carrying Value as of June 30, 2017 (in thousands)
EUR	€11.5 million	Fixed 0.4%	March 2021	\$ 13,077
EUR	€23.0 million	Floating EURIBOR + 0.4%	March 2021	26,155
EUR	€21.5 million	Fixed 0.68%	October 2022	24,449
EUR	€64.5 million	Floating LIBOR + 0.5%	October 2022	73,347
USD	\$45.0 million	Floating LIBOR + 1.2%	October 2022	44,837
EUR	€64.0 million	Fixed 1.09%	June 2024	72,778
EUR	€31.0 million	Floating EURIBOR + 0.7%	June 2024	35,252
EUR	€14.5 million	Fixed 1.61%	June 2027	16,489
				\$ 306,384

The Schuldschein loan agreements contain customary negative pledge language but no covenants regarding the maintenance of any financial ratios. At June 30, 2017, we were in compliance with the applicable undertakings.

10. Income Taxes

The quarterly provision for income taxes is based upon the estimated annual effective tax rates for the year, applied to the current period ordinary income before tax plus the tax effect of any discrete items. Our operating subsidiaries are exposed to effective tax rates ranging from zero to more than 40%. Fluctuations in the distribution of pre-tax (loss) income among our operating subsidiaries can lead to fluctuations of the effective tax rate in the consolidated financial statements. In the second quarters of 2017 and 2016, our effective tax rates were (12.6)% and 7.3%, respectively. In the six-month periods ended June 30, 2017 and June 30, 2016, the effective tax rates were (9.4)% and (11.9)%, respectively. During the three-and six-month periods ended June 30, 2016, we released \$0.2 million and \$6.8 million, respectively, of unrecognized tax benefits due to the closure of a tax audit or lapse of statute of limitations.

Additionally, in 2017 and 2016, tax expense on foreign operations was favorably impacted by lower income tax rates and partial tax exemptions on foreign income primarily derived from operations in Germany, Singapore, Luxembourg, Ireland and Switzerland. These foreign tax benefits are due to a combination of favorable tax laws, rules, rulings, and exemptions in these jurisdictions. In particular, we have pre-tax income in Germany which is statutorily exempt from trade tax on intercompany foreign royalty income. Further, we have intercompany financing arrangements through Luxembourg and Ireland in which the intercompany income is partially exempt.

We assess uncertain tax positions in accordance with ASC 740 (ASC 740-10 Accounting for Uncertainties in Tax). At June 30, 2017, our net unrecognized tax benefits totaled approximately \$20.5 million which, if recognized, would favorably impact our effective tax rate in the periods in which they are recognized. It is possible that approximately \$8.5 million of the unrecognized tax benefits may be released during the next 12 months due to lapse of statutes of limitations or settlements with tax authorities. We cannot reasonably estimate the range of the potential outcomes of these matters.

We conduct business globally and, as a result, file numerous consolidated and separate income tax returns in The Netherlands, Germany, Switzerland and the U.S. federal jurisdiction, as well as in various other state and foreign jurisdictions. In the normal course of business, we are subject to examination by taxing authorities throughout the world. Our subsidiaries are generally no longer subject to income tax examinations by tax authorities for years before 2012. During the first quarter of 2016, the U.S. tax authority (Internal Revenue Service) concluded its federal audit of our U.S. tax returns for 2011 and 2012 without any adjustments. In February 2016, German tax authorities began the audit of the German tax returns for the 2010 through 2013 tax years. This audit is currently in process and we expect to close the audit in 2017.

As of June 30, 2017, residual Netherlands income taxes have not been provided on the undistributed earnings of the majority of our foreign subsidiaries as these earnings are considered to be either permanently reinvested or can be

repatriated tax free under the Dutch participation exemption.

11. Inventories

The components of inventories consist of the following as of June 30, 2017 and December 31, 2016:

(in thousands)	June 30, 2017	December 31, 2016
Raw materials	\$25,755	\$ 29,402
Work in process	31,246	28,123
Finished goods	98,666	79,027
Total inventories	\$ 155,667	\$ 136,552

12. Equity

Issuance of Warrants

In March 2014, in connection with the issuance of our Cash Convertible Notes, we issued warrants (as described in Note 9, "Debt") for approximately 25.8 million shares of our common stock (subject to antidilution adjustments under certain circumstances) with an exercise price of \$32.0558 per share, subject to customary adjustments. The proceeds from the sale of the Warrants, net of issuance costs of approximately \$68.9 million are included as additional paid in capital in the accompanying condensed consolidated balance sheets. The Warrants expire as follows: Warrants to purchase 15.2 million shares expire over a period of 50 trading days beginning on December 27, 2018 and Warrants to purchase 10.6 million shares expire over a period of 50 trading days beginning on December 29, 2020. The Warrants are exercisable only upon expiration. For each Warrant that is exercised, we will deliver to the holder a number of shares of our common stock equal to the amount by which the settlement price exceeds the exercise price, divided by the settlement price, plus cash in lieu of any fractional shares. The Warrants could separately have a dilutive effect on shares of our common stock to the extent that the market value per share of our common stock exceeds the applicable exercise price of the Warrants (as measured under the terms of the Warrants).

Share Repurchase Programs

On April 27, 2016, we announced the launch of our fourth \$100 million share repurchase program which is expected to be completed by the end of 2017.

The cost of repurchased shares is included in treasury stock and reported as a reduction in total equity when a repurchase occurs. Repurchased shares will be held in treasury in order to satisfy various obligations, which include exchangeable debt instruments, warrants and employee share-based remuneration plans.

Synthetic Share Repurchase Program

In August 2016, we announced our plan to return approximately \$250 million to shareholders through a synthetic share repurchase program that combines a direct capital repayment with a reverse stock split. These actions have been used previously by other large, multinational Dutch companies as an efficient way to provide return of capital to shareholders. No Dutch dividend withholding tax is expected to be applicable as a result of these transactions. The synthetic share repurchase was implemented through a series of amendments to our Articles of Association which were approved by our shareholders at an Extraordinary General Meeting (EGM) held on October 26, 2016. The first amendment involved an increase in share capital by an increase in the nominal value per common share from EUR 0.01 to EUR 1.04 and a corresponding reduction in additional paid in capital. The second amendment involved a reduction in stock whereby 27 existing common shares with a nominal value of EUR 1.04 each were consolidated into 26 new common shares with a nominal value of EUR 1.08 each. The third amendment was a reduction of the nominal value per common share from EUR 1.08 to EUR 0.01. As a result of these amendments, which in substance constitute a synthetic share buyback, \$243.9 million was repaid to our shareholders and the outstanding number of common shares was reduced by 8.9 million, or 3.7%. The capital repayment program was completed in January 2017. Expenses incurred related to the capital repayment and share consolidation amounted to \$0.5 million and were charged to equity.

Accumulated Other Comprehensive Income (Loss)

The following table is a summary of the components of accumulated other comprehensive loss as of June 30, 2017 and December 31, 2016:

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(in thousands)	June 30, 2017	December 31, 2016
Net unrealized loss on hedging contracts, net of tax	\$(12,450)	\$(7,600)
Net unrealized loss on marketable securities, net of tax	(324)	(156)
Net unrealized loss on pension, net of tax	(1,498)	(1,498)
Foreign currency effects from intercompany long-term investment transactions, net of tax of \$7.7 million in 2017 and 2016	(15,870)	(15,901)
Foreign currency translation adjustments	(214,649)	(308,684)
Accumulated other comprehensive loss	\$(244,791)	\$(333,839)

13. Earnings per Common Share

We present basic and diluted earnings per share. Basic earnings per share is calculated by dividing the net income attributable to the owners of QIAGEN N.V. by the weighted average number of common shares outstanding. Diluted earnings per share reflect the potential dilution that would occur if all “in the money” securities to issue common shares were exercised. The following table for the three- and six-month periods ended June 30, 2017 and 2016 summarizes the information used to compute earnings per common share:

(in thousands, except per share data)	Three months ended June 30,	
	2017	2016
Net income attributable to the owners of QIAGEN N.V.	\$13,951	\$21,266
Weighted average number of common shares used to compute basic net income per common share	227,963	234,760
Dilutive effect of stock options and restricted stock units	4,718	3,907
Weighted average number of common shares used to compute diluted net income per common share	232,681	238,667
Outstanding options and awards having no dilutive effect, not included in above calculation	188	391
Outstanding warrants having no dilutive effect, not included in above calculation	25,800	25,800
Basic earnings per common share attributable to the owners of QIAGEN N.V.	\$0.06	\$0.09
Diluted earnings per common share attributable to the owners of QIAGEN N.V.	\$0.06	\$0.09

(in thousands, except per share data)	Six months ended June 30,	
	2017	2016
Net income attributable to the owners of QIAGEN N.V.	\$31,602	\$36,977
Weighted average number of common shares used to compute basic net income per common share	228,968	234,423
Dilutive effect of stock options and restricted stock units	4,813	4,092
Weighted average number of common shares used to compute diluted net income per common share	233,781	238,515
Outstanding options and awards having no dilutive effect, not included in above calculation	94	436
Outstanding warrants having no dilutive effect, not included in above calculation	25,800	25,800
Basic earnings per common share attributable to the owners of QIAGEN N.V.	\$0.14	\$0.16
Diluted earnings per common share attributable to the owners of QIAGEN N.V.	\$0.14	\$0.16

14. Commitments and Contingencies

Contingent Consideration Commitments

Pursuant to the purchase agreements for certain acquisitions, we could be required to make additional contingent cash payments totaling up to \$27.6 million based on the achievement of certain revenue and operating results milestones as follows: \$15.5 million in the remainder of 2017, \$5.1 million in 2019 and \$7.0 million payable in any 12-month period from now through 2029 based on the

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accomplishment of certain revenue or diagnostic approval targets. Of the \$27.6 million total contingent obligation, we have assessed the fair value at June 30, 2017 to be \$10.1 million, of which \$4.1 million is included in other long-term liabilities and \$6.0 million is included in accrued and other current liabilities in the accompanying condensed consolidated balance sheet.

Preacquisition Contingencies

In connection with certain acquisitions, amounts were paid into escrow accounts to cover certain preacquisition contingencies assumed in the acquisition. The escrow amounts that are likely to be claimed by QIAGEN amount to \$2.5 million as of June 30, 2017 and December 31, 2016 and are recorded as an asset in other long-term assets in the accompanying condensed consolidated balance sheets.

Contingencies

In the ordinary course of business, we provide a warranty to customers that our products are free of defects and will conform to published specifications. Generally, the applicable product warranty period is one year from the date of delivery of the product to the customer or of site acceptance, if required. Additionally, we typically provide limited warranties with respect to our services. From time to time, we also make other warranties to customers, including warranties that our products are manufactured in accordance with applicable laws and not in violation of third-party rights. We provide for estimated warranty costs at the time of the product sale. We believe our warranty reserves of \$2.9 million and \$2.8 million as of June 30, 2017 and December 31, 2016, respectively, appropriately reflect the estimated cost of such warranty obligations.

Litigation

From time to time, we may be party to legal proceedings incidental to our business. As of June 30, 2017, we had accruals for settlement losses related to various acquisition-related litigation matters, primarily related to PCR-based biomarker disputes, which were settled during the second quarter of 2017 totaling \$17.3 million recorded in accrued and other current liabilities in the accompanying condensed consolidated balance sheet of which \$13.4 million was recorded to general and administrative, integration and other expense during the second quarter of 2017 and \$3.9 million was recorded as a license right.

As of June 30, 2017, certain claims, suits or legal proceedings arising out of the normal course of business have been filed or were pending against QIAGEN or our subsidiaries. These matters have arisen in the ordinary course and conduct of business, as well as through acquisition. Although it is not possible to predict the outcome of such litigation, we assess the degree of probability and evaluate the reasonably possible losses that we could incur as a result of these matters. We accrue for any estimated loss when it is probable that a liability has been incurred and the amount of probable loss can be estimated. In case of any loss where the plaintiff is also a customer, we would evaluate if there is an identifiable benefit that can be reliably measured and that is separate from the customer's purchase of our products in determining the classification of the loss. Based on the facts known to us and after consultation with legal counsel, management believes that such legal proceedings will not have a material adverse effect on our financial position or results of operations.

15. Share-Based Compensation

Stock Units

Stock units represent rights to receive our common shares at a future date and include restricted stock units which are subject to time-based vesting only and performance stock units which include performance conditions in addition to time-based vesting. During the three- and six-month periods ended June 30, 2017, we granted 1.2 million and 1.9 million stock awards, respectively, compared to 0.2 million and 1.0 million stock awards, respectively for the three- and six-month periods ended June 30, 2016.

At June 30, 2017, there was \$104.9 million remaining in unrecognized compensation expense, less estimated forfeitures, related to these awards which will be recognized over a weighted-average period of 2.77 years.

Share-Based Compensation Expense

Total share-based compensation expense for the three- and six-month periods ended June 30, 2017 and 2016 is comprised of the following:

	Three months ended June 30,	
	2017	2016
Compensation Expense (in thousands)		
Cost of sales	\$729	\$664
Research and development	1,668	1,471
Sales and marketing	2,736	1,738
General and administrative, integration and other	5,019	3,728
Share-based compensation expense before taxes	10,152	7,601
Less: income tax benefit	2,422	1,748
Net share-based compensation expense	\$7,730	\$5,853

	Six months ended June 30,	
	2017	2016
Compensation Expense (in thousands)		
Cost of sales	\$1,364	\$1,184
Research and development	2,449	2,590
Sales and marketing	4,770	2,232
General and administrative, restructuring, integration and other	10,475	6,401
Share-based compensation expense before taxes	19,058	12,407
Less: income tax benefit	4,382	2,755
Net share-based compensation expense	\$14,676	\$9,652

Total share-based compensation expense for the three- and six-month periods ended June 30, 2017 was higher compared to the same periods in 2016 due to a reassessment on stock units with performance criteria in 2016 which lowered 2016 expense. No compensation cost was capitalized in inventory at June 30, 2017 or December 31, 2016 as the amounts were not material.

16. Related Party Transactions

From time to time, we engage in transactions with companies in which we hold interests all of which are individually and in the aggregate immaterial except for certain transactions as discussed below.

In 2016, we increased an existing loan bearing interest of 6% and a maturity date of January 2020 with a company in which we hold an ownership interest from \$5.0 million to \$10.0 million. As of June 30, 2017 this loan balance is \$11.0 million including accrued interest. In 2015, we entered into a €2.0 million (\$2.7 million as of June 30, 2017 including accrued interest) loan agreement, bearing interest of 7% and due in June 2019, with another company in which we hold an ownership interest. The loans were made for general business purposes and no amounts have been repaid. These loans are included in other long-term assets in the accompanying condensed consolidated balance sheet as of June 30, 2017.

During 2016, we acquired a 19.0% interest in Hombrechtikon Systems Engineering AG (HSE) for a total obligation of \$9.8 million as of December 31, 2016, which is payable over three years. During the first quarter of 2017, \$3.9 million was paid and as of June 30, 2017, \$3.1 million was included in accrued and other current liabilities and \$3.1 million was included in other long-term liabilities in the accompanying consolidated balance sheet. HSE is a variable interest entity and we are not the primary beneficiary, therefore HSE is not consolidated.

OPERATING AND FINANCIAL REVIEW AND PROSPECTS

This section contains a number of forward-looking statements. These statements are based on current management expectations, and actual results may differ materially. Among the factors that could cause actual results to differ from management's expectations are those described in "Risk Factors" and "Forward-looking and Cautionary Statements" below.

Forward-looking and Cautionary Statements

This report contains forward-looking statements that are subject to risks and uncertainties. These statements can be identified by the use of forward-looking terminology, such as “believe,” “hope,” “plan,” “intend,” “seek,” “may,” “will,” “could,” “should,” “would,” “expect,” “anticipate,” “estimate,” “continue” or other similar words. Such statements are based on management’s current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those

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described in the forward-looking statements. We caution investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements as a result of various factors, including, but not limited to, the following: risks associated with our expansion of operations, including the acquisition of new businesses; variability in our operating results from quarter to quarter; management of growth, international operations, and dependence on key personnel; intense competition; technological change; our ability to develop and protect proprietary products and technologies and to enter into and maintain collaborative commercial relationships; our future capital requirements; general economic conditions and capital market fluctuations; and uncertainties as to the extent of future government regulation of our business. As a result, our future success involves a high degree of risk. For further information, refer to the more specific risks and uncertainties discussed in Part 1, Item 3 "Key Information" of our Annual Report on Form 20-F for the year ended December 31, 2016 and under the heading "Risk Factors" below.

Results of Operations

Overview

We are a leading global provider of Sample to Insight solutions to transform biological materials into valuable molecular insights. QIAGEN sample technologies isolate and process DNA, RNA and proteins from any biological sample, such as blood or tissue. Assay technologies make these biomolecules visible and ready for analysis, such as identifying the DNA of a virus or a mutation of a gene. Bioinformatics solutions integrate software and cloud-based resources to interpret increasing volumes of biological data and report relevant, actionable insights. Our automation solutions tie these together in seamless and cost-effective molecular testing workflows.

We sell our products - consumables, automated instrumentation systems using those technologies, and bioinformatics to analyze and interpret the data - to four major customer classes:

• **Molecular Diagnostics** - healthcare providers engaged in many aspects of patient care including Prevention, Profiling of diseases, Personalized Healthcare and Point of Need testing

• **Applied Testing** - government or industry customers using molecular technologies in fields such as forensics, veterinary diagnostics and food safety testing

• **Pharma** - pharmaceutical and biotechnology companies using molecular testing to support drug discovery, translational medicine and clinical development efforts

• **Academia** - researchers exploring the secrets of life such as the mechanisms and pathways of diseases, and in some cases translating that research into drug targets or commercial applications

We market products in more than 130 countries, mainly through subsidiaries in markets we believe have the greatest sales potential in Europe, Asia, the Americas and Australia. We also work with specialized independent distributors and importers. As of June 30, 2017, we employed approximately 4,600 people in more than 35 locations worldwide. Sustaining growth trajectory with Sample to Insight portfolio

QIAGEN continues to capture growth opportunities with differentiated Sample to Insight solutions enabling molecular testing across the continuum from basic research to clinical healthcare. Among recent developments:

• **QuantiFERON-TB Gold Plus (QFT-Plus)**, the fourth generation of the market-leading blood test for detecting latent tuberculosis (TB) infection, was approved in June 2017 by the U.S. Food and Drug Administration (FDA). QIAGEN submitted a pre-market approval (PMA) supplement in late 2016, and U.S. commercialization is expected to begin later this year. The FDA approval follows the launch and successful uptake of QFT-Plus in more than 75 countries across Europe, the Middle East, Africa, Asia and Latin America. The QuantiFERON-TB franchise continues to grow rapidly as global TB control efforts embrace the value of screening to prevent progression to active TB. Recent approval by France's Ministry of Health and Social Affairs of the reimbursement of QFT-Plus by the national health insurance system was among the important advances so far in 2017 in screening of at-risk individuals for latent TB infection.

• **The GeneReader NGS System**, the world's first complete Sample to Insight solution for next-generation sequencing, is gaining momentum in 2017 with new placements and an expanding menu of test content. In addition to the GeneRead QIAact Actionable Insights Tumor Panel for analysis of DNA variances in widespread cancers, QIAGEN has launched the GeneRead QIAact BRCA 1/2 Panel and the GeneRead QIAact Lung DNA Panel. All three panels analyze both FFPE (tissue biopsy) and liquid biopsy samples for use in clinical research. Additional assays are in

development to further improve the unique utility of GeneReader for a broader range of oncology applications. QIAGEN also has started offering customized NGS assays to provide GeneReader customers with access to an extensive panel content portfolio.

Personalized Healthcare continues to expand through collaborations to develop molecular tests providing genomic insights to guide medical decision-making for patients. As announced at the American Society for Cancer Oncology (ASCO) annual meeting in June 2017, QIAGEN and Bristol-Myers Squibb (BMS) signed a groundbreaking collaboration to explore the use of NGS technology to develop gene expression profiles (GEPs) as predictive or prognostic tools for use with novel BMS immuno-oncology (I-O) therapies in cancer treatment. This will leverage the combination of BMS's portfolio with QIAGEN's proven track record in developing and commercializing companion and complementary diagnostics, as well as

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QIAGEN's portfolio of NGS technologies. I-O therapies offer a novel way to treat cancer by using drugs to target the body's immune system to help fight cancer.

To support rapidly growing research in immuno-oncology, QIAGEN acquired the worldwide rights from The Johns Hopkins University to biomarkers to assess microsatellite instability (MSI) and mismatch repair (MMR), along with tumor mutation burden (TMB), which play key roles in identifying cancer patients who could benefit from novel I-O therapies.

- QIASymphony, the premier Sample to Insight automation solution, continues to grow rapidly through global placements toward the goal of more than 2,000 cumulative placements by the end of 2017. During the first half of 2017, the systems' menu offering was expanded with two additional FDA-approved tests, in particular the JAK2 assay for use in blood cancer.

Initiatives to sustain faster sales momentum while delivering margin benefits

QIAGEN announced new initiatives during the fourth quarter of 2016 to sustain faster sales momentum while improving efficiency and accountability to increase margins. Significant efficiency benefits have already been delivered, and targeted actions are continuing during 2017. QIAGEN has expanded the scope of these programs, in particular attempting to capture greater benefits from shared service centers and digitization.

Three- and Six-Month Periods Ended June 30, 2017 compared to Three- and Six-Month Periods Ended June 30, 2016
Net Sales

In the second quarter of 2017, net sales grew 4% to \$349.0 million compared to \$334.4 million in the second quarter of 2016, including two percentage points of adverse currency movements. Excluding the effect of adverse currency movements, organic business expansion contributed four percentage points to total sales growth while two percentage points came from the June 2016 acquisition of Exiqon A/S, a leader in RNA analysis technologies located in Vedbaek, Denmark and to a lesser extent, the January 2017 acquisition of OmicSoft Corporation, a leading provider of omics data solutions located in North Carolina, USA.

Net sales grew 4% to \$656.7 million in the first half of 2017 from \$632.8 million in the year-ago period, including two percentage points of adverse currency movements. Organic expansion provided four percentage points to total growth, while two percentage points came from Exiqon and OmicSoft when excluding the effect of adverse currency movements. Excluding the expected impact of lower U.S. sales of HPV tests, which created approximately one percentage point of headwind, as well as the effect of adverse currency movements, net sales rose approximately 7% in the first half of 2017.

Net sales by product category and customer class	Second quarter 2017			First six months 2017		
	Sales	%	% of	Sales	%	% of
	(In \$ m) change sales			(In \$ m) change sales		
Consumables and related revenues	\$309	6%	88%	\$582	5%	89%
Instruments	\$40	-6%	12%	\$75	-5%	11%
Molecular Diagnostics ⁽¹⁾	\$168	4%	48%	\$310	2%	47%
Applied Testing	\$33	10%	10%	\$62	14%	10%
Pharma	\$70	5%	20%	\$134	5%	20%
Academia	\$77	2%	22%	\$151	2%	23%

(1) Includes companion diagnostic co-development revenues (Q2 2017: \$7 million, 14%) and (H1 2017: \$13 million, 6%) and U.S. HPV sales (Q2 2017: \$8 million, +11%, 2% of sales; H1 2017: \$12 million, -21%, 2% of sales)

Molecular Diagnostics grew 4% in the second quarter of 2017 reflecting adverse currency movements of two percentage points. This growth was led by the QuantiFERON latent test sales as well as gains in the QIASymphony automation system consumables. In the first half of 2017, Molecular Diagnostics advanced 2% including three percentage points of adverse currency movements and one percentage point due to the decline in U.S. HPV test sales. Applied Testing experienced 10% growth in the second quarter of 2017 with adverse currency movements resulting in a loss of two percentage points driven by volume growth in forensics and Human ID testing with all regions contributing to this solid performance. In the first half of 2017, Applied Testing sales increased 14% including adverse currency movements of two percentage points.

Pharma sales rose 5% in the second quarter of 2017 compared to 2016 with adverse currency movements resulting in a loss of three percentage points. Pharma experienced growth in consumables as well as solid gains in sample technologies which offset weaker instrument sales. Sales in the Americas and EMEA regions provided solid growth. Pharma increased 5% including adverse currency movements of three percentage points in the first half of 2017. Academia grew 2% in the second quarter of 2017, with adverse currency movements resulting in a loss of two percentage points. Academia advanced on modest growth for both instruments and consumables and related revenues with the all regions experiencing

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growth during the second quarter. In the first half of 2017, Academia sales increased 2% including adverse currency movements of one percentage point.

Net sales by geographic region	Second quarter 2017			First six months 2017		
	Sales (In \$ m)	% change	% of sales	Sales (In \$ m)	% change	% of sales
Americas	\$163	3%	47%	\$305	3%	46%
Europe / Middle East / Africa	\$112	3%	32%	\$212	2%	32%
Asia-Pacific / Japan	\$74	10%	21%	\$138	10%	21%

Top 7 emerging markets: Brazil, Russia, India, China, South Korea, Mexico and Turkey (Q2 2017: \$58 million, +9%, 17% of sales; H1 2017: \$102 million, +10%, 15% of sales)

Q2 2017 and H1 2017: Rest of world represented less than 1% of net sales.

All regions contributed to the improved performance in the second quarter of 2017. The Asia-Pacific led with 10% growth as South Korea, India and Taiwan drove the results in this region. Solid growth in Brazil and the benefits in the United States from an absence of headwinds from U.S. HPV test sales in the second quarter of 2017 were partially offset by lower sales in Mexico due to national tender timing. Sales in the EMEA region were mixed with growth in France and the United Kingdom against weaker trends in Germany. The top seven emerging markets provided 17% of sales and 9% growth when excluding the loss of three percentage points of sales growth due to adverse currency movements. During the first half of 2017, these top seven emerging markets delivered 10% growth including three percentage points of adverse currency movements.

Gross Profit

Gross profit was \$224.6 million (64% of net sales) for the three-month period ended June 30, 2017, as compared to \$210.8 million (63% of net sales) in the same period in 2016. Gross profit for the six-month period ended June 30, 2017 was \$420.4 million (64% of net sales) as compared to \$395.6 million (63% of net sales) for the same period in 2016. Generally, our consumables and related products have a higher gross margin than our instrumentation products and service arrangements. Fluctuations in the sales levels of these products and services can result in fluctuations in gross margin between periods. The 2017 growth in consumables contributed to the higher margin in the three- and six-month periods ended June 30, 2017. Additionally, during the first half of 2016, we incurred incremental costs in connection with the relocation and centralization of the manufacturing of certain products to our European production site in Hilden, Germany and also in connection with the in-sourcing of the manufacturing of our QuantiFERON product to our U.S. production site in Germantown, Maryland.

Amortization expense related to developed technology and patent and license rights, which have been acquired in business combinations, is included in cost of sales. In the second quarter of 2017, the amortization expense on acquisition-related intangibles within cost of sales increased to \$20.9 million compared to \$20.0 million in the same period of 2016. For the six-month period ended June 30, 2017, the amortization expense on acquisition-related intangible amortization was \$41.5 million compared to \$39.8 million in the same period of 2016. We expect that our acquisition-related intangible amortization will increase as a result of future acquisitions.

Research and Development

Research and development expenses decreased by 8% to \$38.8 million (11% of net sales) in the second quarter of 2017, compared to \$42.0 million (13% of net sales) in the same period of 2016. For the six-month period ended June 30, 2017, research and development expenses decreased by 6% to \$76.6 million (12% of net sales) compared to \$81.6 million (13% of net sales) for the same period in 2016. Lower expense in 2017 reflects reduced personnel costs and efficiency savings in development following the restructuring program initiated in the fourth quarter of 2016 as well as related efforts to concentrate our research and development resources into the highest value creating programs. The reduction in expenses included \$0.7 million reduction in costs as a result of forfeitures of share-based compensation. We continue to invest in research and development as we develop a range of upgrades and enhancements to the GeneReader NGS System to address new applications and market segments. We also plan to introduce additional cancer-related gene panels beyond the three panels already launched, with longer-term expansion of the NGS content menu beyond oncology. Research and development costs during the first half of 2017 also reflect our ongoing investments in our life sciences portfolio, as well as incremental costs due to acquisition of Exiqon in 2016.

As we continue to discover, develop and acquire new products and technologies, we expect to incur additional expenses related to facilities, licenses and employees engaged in research and development. Additionally, research and development costs are expected to increase as a result of seeking regulatory approvals, including U.S. FDA Pre-Market Approval (PMA), U.S. FDA 510(k) clearance and EU CE approval of certain assays or instruments. Further, business combinations, along with the acquisition of new technologies, may increase our research and development costs in the future. We have a strong commitment to innovation and expect to continue to make investments in our research and development efforts.

Sales and Marketing

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Sales and marketing expenses increased by 5% to \$103.9 million (30% of net sales) in the second quarter of 2017 from \$98.7 million (30% of net sales) in the same period of 2016. For the six-month period ended June 30, 2017, sales and marketing expenses increased by 2% to \$196.2 million (30% of net sales) from \$192.1 million (30% of net sales) for the same period in 2016. The increase in the first half of 2017 includes \$8.5 million in restructuring costs related to the internal restructuring activities discussed further in Note 4 which offset the efficiencies provided to date for this program. Additionally, compensation costs were lower in the first six months of 2016 following a reassessment of equity-based incentives which were contingent on performance criteria. Sales and marketing expenses are primarily associated with personnel, commissions, advertising, trade shows, publications, freight and logistics expenses, and other promotional expenses. We anticipate that sales and marketing costs will increase along with new product introductions and growth in sales of our products.

General and Administrative, Integration and Other Costs

General and administrative, integration and other costs were \$49.9 million (14% of net sales) in the second quarter of 2017 as compared to \$30.5 million (9% of net sales) in the second quarter of 2016. During the six-month period ended June 30, 2017, we recorded general and administration, integration and other costs of \$82.1 million (13% of net sales) compared to \$56.0 million (9% of net sales) for the same period in 2016. The increase in the three and six-month periods ended June 30, 2017 compared to the same period of 2016 is due to \$6.2 million in restructuring costs incurred as further discussed in Note 4 as well as \$13.4 million in charges related to settlement of various litigations stemming from prior acquisitions as discussed in Note 14. Further, the six-month period ended June 30, 2016 includes a gain of \$5.5 million in connection with the reduction in the fair value of contingent consideration as well as reduced share based compensation costs which were lower compared to 2017 following a reassessment of stock units with performance criteria. As we further integrate acquired companies and pursue opportunities to gain efficiencies, we expect to continue to incur additional business integration costs in 2017. Over time, we believe the integration activities will reduce expenses as we improve efficiency in the combined operations.

Acquisition-Related Intangible Amortization

Amortization expense related to developed technology and patent and license rights acquired in a business combination is included in cost of sales. Amortization of trademarks, customer base and noncompete agreements acquired in a business combination is recorded in operating expense under the caption "acquisition-related intangible amortization." Amortization expenses of intangible assets not acquired in a business combination are recorded within cost of sales, research and development, or sales and marketing based on the use of the asset. During the quarter ended June 30, 2017, the amortization expense on acquisition-related intangibles within operating expense remained unchanged at \$9.7 million compared to the same period of 2016. We recorded amortization expense on acquisition-related intangibles with operating expense of \$19.4 million during the six-month period ended June 30, 2017 compared to \$19.5 million for the same period of 2016. We expect that our acquisition-related intangible amortization will increase as a result of future acquisitions.

Other Income (Expense)

Total other expense was \$10.0 million and \$17.2 million in the three- and six- month period ended June 30, 2017, respectively, compared to \$6.9 million and \$13.4 million in the same periods of 2016. Total other expense, net is primarily the result of interest expense, partially offset by interest income and other income, including impacts of foreign currency transactions.

Interest expense increased to \$10.6 million during the quarter ended June 30, 2017 compared to \$9.4 million in the same period of 2016. During the six-month periods ended June 30, 2017 and 2016, we recorded interest expense of \$20.7 million and \$18.7 million, respectively. Interest costs primarily relate to debt, discussed in Note 9, "Debt" in the accompanying notes to the condensed consolidated financial statements.

For the three-month periods ended June 30, 2017 and 2016, interest income was \$1.7 million and \$1.5 million, respectively. For the six-month period ended June 30, 2017, interest income increased to \$3.6 million from \$3.0 million in the same period of 2016. Interest income includes interest earned on cash, cash equivalents and short term investments, income related to certain interest rate derivatives as discussed in Note 7 "Derivatives and Hedging" in the accompanying condensed consolidated financial statements and other components including the interest portion of operating lease transactions.

Other expense, net was \$1.1 million and \$0.1 million in the three- and six- month period ended June 30, 2017, respectively, compared to other income, net of \$1.0 million and \$2.3 million in the same periods of 2016. For the three- and six- month periods ended June 30, 2017, we recorded net losses on foreign currency transactions of \$2.5 million and \$2.8 million as compared to net gains of \$0.6 million and \$0.9 million in the same periods in 2016 due to foreign currency rate fluctuations.

Provision for Income Taxes

Our effective tax rates differ from The Netherlands statutory tax rate of 25% due in part to our operating subsidiaries being exposed to effective tax rates ranging from zero to more than 40%. Fluctuations in the distribution of pre-tax (loss) income among our operating subsidiaries can lead to fluctuations of the effective tax rate in the consolidated financial statements. In the second quarters of 2017 and 2016, our effective tax rates were (12.6)% and 7.3%, respectively. For the six-month periods ended June 30, 2017 and June 30, 2016, our effective tax rates were (9.4)% and (11.9)%, respectively. During the three- and six- month periods ended June 30, 2016, we

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released \$0.2 million and \$6.8 million, respectively of unrecognized tax benefits due to the closure of a tax audit or lapse of statute of limitations. Additionally, in 2017 and 2016, tax expense on foreign operations was favorably impacted by lower income tax rates and partial tax exemptions on foreign income primarily derived from operations in Germany, Singapore, Luxembourg, Ireland and Switzerland. These foreign tax benefits are due to a combination of favorable tax laws, rules, rulings, and exemptions in these jurisdictions. In particular, we have pre-tax income in Germany which is statutorily exempt from trade tax on intercompany foreign royalty income. Further, we have intercompany financing arrangements through Luxembourg and Ireland in which the intercompany income is partially exempt.

In future periods, our effective tax rate may fluctuate from similar or other factors as discussed in “Changes in tax laws or their application and the termination or reduction of certain government incentives, could adversely impact our overall effective tax rate, results of operations or financial flexibility” in Item 3 Risk Factors of the 2016 Annual Report on Form 20-F for the year ended December 31, 2016.

Liquidity and Capital Resources

To date, we have funded our business primarily through internally generated funds, debt and private and public sales of equity. Our primary use of cash has been to support continuing operations and our investing activities, including capital expenditure requirements and acquisitions. As of June 30, 2017 and December 31, 2016, we had cash and cash equivalents of \$542.8 million and \$439.2 million, respectively. Cash and cash equivalents are primarily held in U.S. dollars and euros, other than those cash balances maintained in the local currency of subsidiaries to meet local working capital needs. At June 30, 2017, cash and cash equivalents had increased by \$103.7 million from December 31, 2016, primarily due to cash provided by operating activities of \$129.5 million and cash provided by financing activities of \$48.3 million, partially offset by cash used in investing activities of \$79.5 million. As of June 30, 2017 and December 31, 2016, we had working capital of \$858.5 million and \$729.1 million, respectively.

Operating Activities. For the six months ended June 30, 2017 and 2016, we generated net cash from operating activities of \$129.5 million and \$147.8 million, respectively. While net income was \$31.6 million for the six months ended June 30, 2017, non-cash components in income included \$111.3 million of depreciation and amortization. Operating cash flows include a \$38.5 million decrease due to changes in working capital excluding changes in fair values of derivative instruments. The current period change in working capital is primarily due to decreased taxes payable and increased inventories which is partially offset by decreased accounts receivable. Because we rely heavily on cash generated from operating activities to fund our business, a decrease in demand for our products, longer collection cycles or significant technological advances of competitors would have a negative impact on our liquidity.

Investing Activities. Approximately \$79.5 million of cash was used in investing activities during the six months ended June 30, 2017 compared to cash used in investing activities of \$107.1 million for the same period in 2016. Cash used in investing activities during the six months ended June 30, 2017 consisted principally of \$37.9 million paid for purchases of property, plant and equipment, as well as \$18.1 million paid for intangible assets and \$36.2 million paid for short-term investments partially offset by \$65.2 million from the sale of short-term investments. Additionally, during 2017 cash paid for acquisitions, net of cash acquired, totaled \$49.7 million.

Financing Activities. Financing activities provided \$48.3 million of cash for the six months ended June 30, 2017 compared to cash used of \$5.0 million for the six months ended June 30, 2016. Cash provided by financing activities during the six months ended June 30, 2017 consisted primarily of \$300.2 million net cash proceeds from the June 2017 German private placement partially offset by the capital repayment of \$243.9 million made to shareholders in connection with the January 2017 synthetic share buyback discussed in Note 12 "Equity." Cash used in other financing activities during the six months ended June 30, 2017 and 2016 consisted primarily of \$3.0 million and \$3.1 million payments made for contingent consideration together with \$7.1 million and \$2.4 million paid in connection with derivative collateral arrangements, respectively.

Other Factors Affecting Liquidity and Capital Resources

In June 2017, we completed a German private placement of \$301.2 million consisting of several tranches denominated in either U.S. dollars or Euro at either floating or fixed rates and due at various dates through June 2027.

In October 2016, we extended the maturity of our €400.0 million syndicated multi-currency revolving credit facility, which now has a contractual life until December 2021 of which no amounts were utilized at June 30, 2017. The

facility can be utilized in euro, British pounds sterling, Swiss franc or U.S. dollar and bears interest of 0.4% to 1.20% above three months EURIBOR, or LIBOR in relation to any loan not in euro, and is offered with interest periods of one, two, three, six or twelve months. We have additional credit lines totaling €36.6 million with no expiration date, none of which were utilized as of June 30, 2017.

In March 2014, we issued \$730.0 million aggregate principal amount of Cash Convertible Senior Notes of which \$430.0 million is due in 2019 (2019 Notes) and \$300.0 million is due in 2021 (2021 Notes). We refer to the 2019 Notes and 2021 Notes, collectively as the "Cash Convertible Notes" which are discussed fully in Note 9 "Debt." Interest on the Cash Convertible Notes is payable semiannually in arrears on March 19 and September 19 of each year, at rates of 0.375% and 0.875% per annum for the 2019 Notes and 2021 Notes, respectively. The 2019 Notes will mature on March 19, 2019 and the 2021 Notes will mature on March 19, 2021, unless repurchased or converted in accordance with their terms prior to such date.

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In October 2012, we completed a U.S. private placement through the issuance of new senior unsecured notes at a total amount of \$400 million with a weighted average interest rate of 3.66% (settled on October 16, 2012). The notes were issued in three series: (1) \$73 million 7-year term due in 2019 (3.19%); (2) \$300 million 10-year term due in 2022 (3.75%); and (3) \$27 million 12-year term due in 2024 (3.90%).

We also have capital lease obligations, including interest, in the aggregate amount of \$2.1 million as of June 30, 2017. In connection with certain acquisitions, we could be required to make additional contingent cash payments totaling up to \$27.6 million based on the achievement of certain revenue and operating results milestones as follows: \$15.5 million in the remainder of 2017, \$5.1 million in 2019 and \$7.0 million payable in any 12-month period from now through 2029 based on the accomplishment of certain revenue or diagnostic approval targets. Of the \$27.6 million total contingent obligation, we have assessed the fair value at June 30, 2017 to be \$10.1 million of which \$4.1 million is included in other long-term liabilities and \$6.0 million is included in accrued and other current liabilities in the accompanying condensed consolidated balance sheet.

In January 2017, we completed a synthetic share repurchase that combined a direct capital repayment with a consolidation of shares. The transaction was announced in August 2016 and involved an approach used by various large, multinational Dutch companies to provide returns to shareholders in a faster and more efficient manner than traditional open-market purchases. \$243.9 million was repaid to shareholders through the transaction and the outstanding number of common shares was reduced by 8.9 million, or 3.7%. As discussed further in Note 12, the capital repayment program was completed in January 2017. We announced additional share repurchases to take place via the open market during the remainder of 2017, with a view to return an aggregate amount of \$300 million to our shareholders.

Repurchased shares will be held in treasury in order to satisfy various obligations, which include the warrants issued in connection with the issuance of our Cash Convertible Notes and employee share-based remuneration plans.

We expect that cash from financing activities will continue to be impacted by issuances of our common shares in connection with our equity compensation plans and that the market performance of our stock will impact the timing and volume of the issuances. Additionally, we may make future acquisitions or investments requiring cash payments, the issuance of additional equity or debt financing.

We believe that funds from operations, existing cash and cash equivalents, together with the proceeds from our public and private sales of equity, and availability of financing facilities, will be sufficient to fund our planned operations and expansion during the coming year. However, any global economic downturn may have a greater impact on our business than currently expected, and we may experience a decrease in the sales of our products, which could impact our ability to generate cash. If our future cash flows from operations and other capital resources are not adequate to fund our liquidity needs, we may be required to obtain additional debt or equity financing or to reduce or delay our capital expenditures, acquisitions or research and development projects. If we could not obtain financing on a timely basis or at satisfactory terms, or implement timely reductions in our expenditures, our business could be adversely affected.

Quantitative and Qualitative Disclosures about Market Risk

Our market risk relates primarily to interest rate exposures on cash, marketable securities, and borrowings and foreign currency exposures on intercompany and third-party transactions. The overall objective of our risk management is to reduce the potential negative earnings effects from changes in interest and foreign currency exchange rates. Exposures are managed through operational methods and financial instruments. We do not use financial instruments for trading or speculative purposes. Our exposure to market risk from changes in interest rates and currency exchange rates has not changed materially from our exposure as discussed in Item 11 of our Annual Report on Form 20-F for the year ended December 31, 2016.

Foreign Currency

QIAGEN N.V.'s functional currency is the U.S. dollar and our subsidiaries' functional currencies are generally the local currencies of the respective countries in which they are located. All amounts in the financial statements of entities whose functional currency is not the U.S. dollar are translated into U.S. dollar equivalents at exchange rates as follows: (1) assets and liabilities at period-end rates, (2) income statement accounts at average exchange rates for the

period, and (3) components of shareholders' equity at historical rates. Translation gains or losses are recorded in shareholders' equity, and transaction gains and losses are reflected in net income. Foreign currency transactions in the three- and six-month periods ended June 30, 2017 resulted in net losses of \$2.5 million and \$2.8 million, respectively compared to net gains of \$0.6 million and \$0.9 million in the same periods ended 2016, respectively, and are included in other income, net.

Derivatives and Hedging

In the ordinary course of business, we use derivative instruments, including swaps, forwards and/or options, to manage potential losses from foreign currency exposures and variable rate debt. The principal objective of such derivative instruments is to minimize the risks and/or costs associated with global financial and operating activities. We do not utilize derivative or other financial instruments for

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trading or speculative purposes. We recognize all derivatives as either assets or liabilities on the balance sheet, measure those instruments at fair value and recognize the change in fair value in earnings in the period of change, unless the derivative qualifies as an effective hedge that offsets certain exposures. In determining fair value, we consider both the counterparty credit risk and our own creditworthiness. To determine our own credit risk, we estimated our own credit rating by benchmarking the price of our outstanding debt to publicly-available comparable data from rated companies. Using the estimated rating, we quantify our credit risk by reference to publicly-traded debt with a corresponding rating.

Foreign Currency Derivatives

As a globally active enterprise, we are subject to risks associated with fluctuations in foreign currencies in our ordinary operations. This includes foreign currency-denominated receivables, payables, debt, and other balance sheet positions including intercompany items. We manage our balance sheet exposure on a group-wide basis using foreign exchange options and cross-currency swaps.

We also make use of economic hedges. Further details of our derivative and hedging activities can be found in Note 7 to the accompanying condensed consolidated financial statements.

Recent Authoritative Pronouncements

For information on recent accounting pronouncements impacting our business, see Note 2 to the accompanying condensed consolidated financial statements.

Application of Critical Accounting Policies, Judgments and Estimates

The preparation of our financial statements in accordance with accounting principles generally accepted in the United States requires management to make assumptions that affect the reported amounts of assets and liabilities and disclosure of contingencies as of the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Critical accounting policies are those that require the most complex or subjective judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain. Thus, to the extent that actual events differ from management's estimates and assumptions, there could be a material impact on the financial statements. In applying our critical accounting policies, at times we used accounting estimates that either required us to make assumptions about matters that were highly uncertain at the time the estimate was made or were reasonably likely to change from period to period, having a material impact on the presentation of our results of operations, financial position or cash flows. Our critical accounting policies are those related to revenue recognition, share-based compensation, income taxes, investments, variable interest entities, goodwill and other intangible assets, purchase price allocation and fair value measurements.

Our critical accounting policies are discussed further in Item 5 of our Annual Report on Form 20-F for the year ended December 31, 2016. Actual results in these areas could differ from management's estimates. There have been no significant changes in our critical accounting policies during 2017.

Off-Balance Sheet Arrangements

We did not use special purpose entities and did not have off-balance-sheet financing arrangements as of June 30, 2017 and December 31, 2016.

Contractual Obligations

There were no material changes at June 30, 2017 from the contractual obligations disclosed in Item 5 of our Annual Report on Form 20-F for the year ended December 31, 2016 other than the German private placement bond ("Schuldschein") issued in June 2017 as further discussed in Note 9 Debt.

Legal Proceedings

For information on legal proceedings, see Note 14 to the accompanying condensed consolidated financial statements. While no assurances can be given regarding the outcome of the proceedings described in Note 14, based on information currently available, we believe that the resolution of these matters is unlikely to have a material adverse

effect on our financial position or results of future operations for QIAGEN N.V. as a whole. However, because of the nature and inherent uncertainties of litigation, should the outcomes be unfavorable, certain aspects of our business, financial condition, and results of operations and cash flows could be materially adversely affected.

Risk Factors

Material risks that may affect our results of operations and financial position appear in Part 1, Item 3 "Key Information" of the 2016 Annual Report on Form 20-F for the year ended December 31, 2016. There have been no material changes from the risk factors disclosed in Item 3 of our Form 20-F.
