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, 2020

Commission File Number 001-38332

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): ☐

QIAGEN N.V.

Form 6-K

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OTHER INFORMATION

For the three and six months ended June 30, 2020, 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.

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: August 4, 2020

EXHIBIT INDEX

Exhibit No.	Exhibit
99.1	U.S. GAAP Quarterly Report for the Period Ended June 30, 2020

Exhibit 99.1

QIAGEN N.V. AND SUBSIDIARIES

U.S. GAAP QUARTERLY REPORT FOR THE PERIOD ENDED JUNE 30, 2020

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QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands)

	Note	June 30, 2020 (unaudited)	December 31, 2019
Assets			
Current assets:			
Cash and cash equivalents		**$ 688,264**	$ 623,647
Restricted cash		**3,942**	5,743
Short-term investments		**55,981**	129,586
Accounts receivable, net of allowance of $22,656 and $12,115 in 2020 and 2019, respectively		**372,473**	385,117
Income taxes receivable		**32,158**	42,119
Inventories, net	**(11)**	**202,804**	170,704
Fair value of derivative instruments - current	**(8)**	**150,962**	107,868
Prepaid expenses and other current assets (of which $21,882 and $13,697 in 2020 and 2019 due from related parties, respectively)	**(8)**	**129,014**	105,464
Total current assets		**1,635,598**	1,570,248
Long-term assets:			
Property, plant and equipment, net of accumulated depreciation of $581,240 and $699,130 in 2020 and 2019, respectively		**475,099**	455,243
Goodwill	**(6)**	**2,134,810**	2,140,503
Intangible assets, net of accumulated amortization of $735,244 and $776,520 in 2020 and 2019, respectively	**(6)**	**600,713**	632,434
Deferred income tax assets		**62,500**	56,542
Fair value of derivative instruments - long-term	**(8)**	**203,529**	192,266
Other long-term assets (of which $16,170 and $16,830 in 2020 and 2019 due from related parties, respectively)	**(5)**	**182,264**	188,380
Total long-term assets		**3,658,915**	3,665,368
Total assets		**$ 5,294,513**	$ 5,235,616

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except par value)

	Note	June 30, 2020	December 31, 2019
		(unaudited)	
Liabilities and equity			
Current liabilities:			
Current portion of long-term debt	(7)	$ 305,776	$ 285,244
Accrued and other current liabilities (of which $1,420 and $15,404 in 2020 and 2019 due to related parties, respectively)	(8, 9, 13)	345,542	444,303
Fair value of derivative instruments - current	(8)	147,156	103,175
Accounts payable		94,850	84,767
Income taxes payable		63,359	33,856
Total current liabilities		956,683	951,345
Long-term liabilities:			
Long-term debt, net of current portion	(7)	1,400,179	1,421,108
Fair value of derivative instruments - long-term	(8)	191,070	196,929
Other long-term liabilities	(9)	103,858	106,201
Deferred income tax liabilities		21,872	23,442
Total long-term liabilities		1,716,979	1,747,680
Commitments and contingencies	(15)		
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 shares in 2020 and in 2019	(12)	2,702	2,702
Additional paid-in capital	(12)	1,793,521	1,777,017
Retained earnings		1,262,077	1,178,457
Accumulated other comprehensive loss	(12)	(351,611)	(309,619)
Less treasury shares at cost— 2,343 and 3,077 shares in 2020 and 2019, respectively	(12)	(85,838)	(111,966)
Total equity		2,620,851	2,536,591
Total liabilities and equity		$ 5,294,513	$ 5,235,616

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except share data)

	Note	Three months ended June 30, 2020	Three months ended June 30, 2019
		(unaudited)	
Net sales	**(13)**	**$ 443,252**	$ 381,612
Cost of sales:			
Cost of sales		**133,340**	115,969
Acquisition-related intangible amortization		**14,942**	19,728
Total cost of sales		**148,282**	135,697
Gross profit		**294,970**	245,915
Operating expenses:			
Research and development		**31,818**	40,827
Sales and marketing		**94,376**	100,686
General and administrative		**23,863**	29,590
Acquisition-related intangible amortization		**5,022**	8,687
Restructuring, acquisition, integration and other, net	**(1, 4)**	**21,121**	4,805
Long-lived asset impairments	**(4)**	**75**	1,144
Total operating expenses		**176,275**	185,739
Income from operations		**118,695**	60,176
Other income (expense):			
Interest income		**3,497**	5,163
Interest expense		**(17,440)**	(18,226)
Other income, net		**4,000**	4,711
Total other expense, net		**(9,943)**	(8,352)
Income before income taxes		**108,752**	51,824
Income tax expense		**18,988**	7,096
Net income		**$ 89,764**	$ 44,728
Basic earnings per common share		**$ 0.39**	$ 0.20
Diluted earnings per common share		**$ 0.38**	$ 0.19
Weighted-average shares outstanding			
Basic		**228,391**	226,650
Diluted		**234,027**	232,712

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except share data)

	Note	Six months ended June 30, 2020	Six months ended June 30, 2019
		(unaudited)	
Net sales	**(13)**	**$ 815,349**	$ 730,266
Cost of sales:			
Cost of sales		**246,787**	222,306
Acquisition-related intangible amortization		**30,054**	37,205
Total cost of sales		**276,841**	259,511
Gross profit		**538,508**	470,755
Operating expenses:			
Research and development		**66,630**	81,615
Sales and marketing		**190,133**	196,572
General and administrative		**52,057**	58,226
Acquisition-related intangible amortization		**10,113**	18,013
Restructuring, acquisition, integration and other, net	**(1, 4)**	**32,532**	13,743
Long-lived asset impairments	**(4)**	**1,034**	1,258
Total operating expenses		**352,499**	369,427
Income from operations		**186,009**	101,328
Other income (expense):			
Interest income		**6,681**	13,251
Interest expense		**(36,362)**	(38,616)
Other (expense) income, net		**(1,246)**	4,319
Total other expense, net		**(30,927)**	(21,046)
Income before income taxes		**155,082**	80,282
Income taxes		**25,489**	6,034
Net income		**$ 129,593**	$ 74,248
Basic earnings per common share		**$ 0.57**	$ 0.33
Diluted earnings per common share		**$ 0.56**	$ 0.32
Weighted-average shares outstanding			
Basic		**228,200**	226,410
Diluted		**233,119**	233,160

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)

	Note	Three months ended June 30, 2020	Three months ended June 30, 2019
		(unaudited)	
Net income		**$ 89,764**	$ 44,728
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:			
Losses on cash flow hedges, net of tax benefit of $1.1 million in 2020 and $0.3 million in 2019	**(8)**	**(3,889)**	(1,007)
Reclassification adjustments on cash flow hedges, net of tax expense of $0.9 million in 2020 and $0.7 million in 2019	**(8)**	**3,411**	1,958
Cash flow hedges, net of tax		**(478)**	951
Net investment hedge	**(8)**	**(6,154)**	(3,695)
Foreign currency translation adjustments, net of tax expense of $0.2 million in 2020 and $0.1 million in 2019		**42,550**	7,258
Total other comprehensive income		**35,918**	4,514
Comprehensive income		**$ 125,682**	$ 49,242

	Note	Six months ended June 30, 2020	Six months ended June 30, 2019
		(unaudited)	
Net income		**$ 129,593**	$ 74,248
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:			
Gains on cash flow hedges, net of tax expense of $3.0 million in 2020 and $1.1 million in 2019	**(8)**	**10,873**	3,251
Reclassification adjustments on cash flow hedges, net of tax expense of $0.1 million in 2020 and $0.3 million in 2019	**(8)**	**(507)**	(945)
Cash flow hedges, net of tax		**10,366**	2,306
Net investment hedge	**(8)**	**917**	1,784
Foreign currency translation adjustments, net of tax expense of $0.6 million in 2020 and $0.3 million in 2019		**(53,275)**	(7,536)
Total other comprehensive loss		**(41,992)**	(3,446)
Comprehensive income		**$ 87,601**	$ 70,802

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in thousands)

		Common Shares					Treasury Shares		
(unaudited)	Note	Shares	Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Shares	Amount	Total Equity
Balance at March 31, 2020		**230,829**	**$ 2,702**	**$ 1,785,696**	**$ 1,187,644**	**$ (387,529)**	**(2,666)**	**$ (96,898)**	**$ 2,491,615**
Net Income		—	—	—	**89,764**	—	—	—	**89,764**
Unrealized loss, net on hedging contracts	**(8)**	—	—	—	—	**(10,043)**	—	—	**(10,043)**
Realized loss, net on hedging contracts	**(8)**	—	—	—	—	**3,411**	—	—	**3,411**
Translation adjustment, net	**(12)**	—	—	—	—	**42,550**	—	—	**42,550**
Issuance of common shares in connection with stock plan		—	—	—	**(15,331)**	—	**472**	**17,600**	**2,269**
Tax withholding related to vesting of stock awards	**(16)**	—	—	—	—	—	**(149)**	**(6,540)**	**(6,540)**
Share-based compensation	**(16)**	—	—	**7,825**	—	—	—	—	**7,825**
Balance at June 30, 2020		**230,829**	**$ 2,702**	**$ 1,793,521**	**$ 1,262,077**	**$ (351,611)**	**(2,343)**	**$ (85,838)**	**$ 2,620,851**
Balance at March 31, 2019		230,829	$ 2,702	$ 1,722,185	$ 1,342,409	$ (318,604)	(3,863)	$ (142,636)	$ 2,606,056
Net income		—	—	—	44,728	—	—	—	44,728
Conversion of warrants		—	—	(175)	(321)	—	14	496	—
Unrealized loss, net on hedging contracts	(8)	—	—	—	—	(4,702)	—	—	(4,702)
Realized loss, net on hedging contracts	(8)	—	—	—	—	1,958	—	—	1,958
Translation adjustment, net	(12)	—	—	—	—	7,258	—	—	7,258
Purchase of treasury shares	(12)	—	—	—	—	—	(791)	(30,021)	(30,021)
Issuance of common shares in connection with stock plan		—	—	—	(15,371)	—	450	16,488	1,117
Tax withholding related to vesting of stock awards	(16)	—	—	—	—	—	(169)	(6,414)	(6,414)
Share-based compensation	(16)	—	—	12,411	—	—	—	—	12,411
Balance at June 30, 2019		230,829	$ 2,702	$ 1,734,421	$ 1,371,445	$ (314,090)	(4,359)	$ (162,087)	$ 2,632,391

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(in thousands)

		Common Shares					Treasury Shares		
(unaudited)	Note	Shares	Amount	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Shares	Amount	Total Equity
Balance at December 31, 2019		**230,829**	**$ 2,702**	**$ 1,777,017**	**$ 1,178,457**	**$ (309,619)**	**(3,077)**	**$ (111,966)**	**$ 2,536,591**
ASC 326 impact of change in accounting policy	**(2)**	**—**	**—**	**—**	**(15,074)**	**—**	**—**	**—**	**(15,074)**
Net income		**—**	**—**	**—**	**129,593**	**—**	**—**	**—**	**129,593**
Unrealized gain, net on hedging contracts	**(8)**	**—**	**—**	**—**	**—**	**11,790**	**—**	**—**	**11,790**
Realized gain, net on hedging contracts	**(8)**	**—**	**—**	**—**	**—**	**(507)**	**—**	**—**	**(507)**
Translation adjustment, net	**(12)**	**—**	**—**	**—**	**—**	**(53,275)**	**—**	**—**	**(53,275)**
Issuance of common shares in connection with stock plan		**—**	**—**	**—**	**(30,899)**	**—**	**1,036**	**38,280**	**7,381**
Tax withholding related to vesting of stock awards	**(16)**	**—**	**—**	**—**	**—**	**—**	**(302)**	**(12,152)**	**(12,152)**
Share-based compensation	**(16)**	**—**	**—**	**16,504**	**—**	**—**	**—**	**—**	**16,504**
Balance at June 30, 2020		**230,829**	**$ 2,702**	**$ 1,793,521**	**$ 1,262,077**	**$ (351,611)**	**(2,343)**	**$ (85,838)**	**$ 2,620,851**
Balance at December 31, 2018		230,829	$ 2,702	$ 1,742,191	$ 1,379,624	$ (310,644)	(5,320)	$ (178,903)	$ 2,634,970
ASC 842 impact of change in accounting policy		—	—	—	(316)	—	—	—	(316)
Net income		—	—	—	74,248	—	—	—	74,248
Conversion of warrants	(12)	—	—	(30,980)	(37,570)	—	2,051	68,546	(4)
Unrealized gain, net on hedging contracts	(8)	—	—	—	—	5,035	—	—	5,035
Realized gain, net on hedging contracts	(8)	—	—	—	—	(945)	—	—	(945)
Translation adjustment, net	(12)	—	—	—	—	(7,536)	—	—	(7,536)
Purchase of treasury shares	(12)	—	—	—	—	—	(1,987)	(74,394)	(74,394)
Issuance of common shares in connection with stock plan		—	—	—	(44,541)	—	1,508	46,230	1,689
Tax withholding related to vesting of stock awards	(16)	—	—	—	—	—	(611)	(23,566)	(23,566)
Share-based compensation	(16)	—	—	23,210	—	—	—	—	23,210
Balance at June 30, 2019		230,829	$ 2,702	$ 1,734,421	$ 1,371,445	$ (314,090)	(4,359)	$ (162,087)	$ 2,632,391

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

QIAGEN N.V. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Note	Six months ended June 30, 2020	2019
Cash flows from operating activities:		(unaudited)	
Net income		$ **129,593**	$ 74,248
Adjustments to reconcile net income to net cash provided by operating activities, net of effects of businesses acquired:			
Depreciation and amortization		**97,016**	121,625
Non-cash impairments	**(4, 5)**	**1,034**	1,258
Amortization of debt discount and issuance costs	**(7)**	**20,099**	21,576
Share-based compensation expense	**(16)**	**16,504**	23,210
Deferred income tax benefit		**(6,592)**	(7,319)
Loss on marketable securities		**167**	897
Reversals of contingent consideration	**(9)**	**—**	(7,433)
Loss on sale of investment		**2,250**	—
Other items, net including fair value changes in derivatives		**2,586**	(5,250)
Net changes in operating assets and liabilities:			
Accounts receivable		**(8,479)**	(16,291)
Inventories		**(48,126)**	(15,672)
Prepaid expenses and other current assets		**(34,388)**	656
Other long-term assets		**897**	376
Accounts payable		**(1,197)**	(10,600)
Accrued and other current liabilities		**(63,828)**	(41,945)
Income taxes		**38,333**	(13,113)
Other long-term liabilities		**4,726**	993
Net cash provided by operating activities		**150,595**	127,216
Cash flows from investing activities:			
Purchases of property, plant and equipment		**(50,179)**	(54,359)
Purchases of intangible assets	**(6)**	**(99,697)**	(134,434)
Returns (purchases) of investments, net		**229**	(4,385)
Cash paid for acquisitions, net of cash acquired	**(3)**	**(133)**	(24,371)
Purchases of short-term investments		**(24,877)**	(181,696)
Proceeds from redemptions of short-term investments		**98,229**	254,734
Cash received for collateral asset		**2,683**	16,150
Other investing activities		**6,855**	10
Net cash used in investing activities		**(66,890)**	(128,351)
Cash flows from financing activities:			
Proceeds from exercise of call option related to cash convertible notes		**—**	134,676
Payment of intrinsic value of cash convertible notes		**(11,125)**	(133,763)
Repayment of long-term debt	**(7)**	**(23,000)**	(433,400)
Proceeds from issuance of common shares		**7,380**	1,689
Tax withholding related to vesting of stock awards	**(16)**	**(6,441)**	(17,172)
Purchase of treasury shares	**(12)**	**—**	(74,394)
Cash received for collateral liability		**20,169**	1,200
Other financing activities		**(3,381)**	(12,935)
Net cash used in financing activities		**(16,398)**	(534,099)
Effect of exchange rate changes on cash, cash equivalents and restricted cash		**(4,491)**	771
Net increase (decrease) in cash, cash equivalents and restricted cash		**62,816**	(534,463)
Cash, cash equivalents and restricted cash, beginning of period		**629,390**	1,159,079
Cash, cash equivalents and restricted cash, end of period		$ **692,206**	$ 624,616

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

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 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 that are used by over 500,000 customers worldwide to transform biological samples into valuable molecular insights. Our sample technologies are used to isolate and process DNA, RNA and proteins - the building blocks of life - from blood, tissue and other materials. Assay technologies are used to make these biomolecules visible and ready for analysis. Bioinformatics software and knowledge bases are used to analyze and interpret complex genomic data to report relevant, actionable insights. Automation solutions are used to tie these technologies together in seamless and cost-effective workflows. We provide this portfolio to two major customer classes: Molecular Diagnostics (human healthcare) and Life Sciences comprised of Academia / Applied Testing (life sciences research, forensics and food safety) and Pharma. With approximately 5,200 employees in over 35 locations worldwide, we market our products in more than 130 countries.

Announced Merger with Thermo Fisher Scientific Inc.

On March 3, 2020, QIAGEN and Thermo Fisher Scientific Inc. (NYSE: TMO) announced that their boards of directors, as well as the Managing Board of QIAGEN N.V., unanimously approved Thermo Fisher's proposal to acquire QIAGEN for €39.00 per share in cash. On July 16, 2020, Thermo Fisher and QIAGEN entered into an amendment to the Business Combination Agreement dated as of March 3, 2020 whereby Quebec B.V., the wholly-owned subsidiary of Thermo Fisher making the public tender offer, will increase the cash consideration offered per QIAGEN share from €39.00 to €43.00, which represents a premium of approximately 35% to the closing price of QIAGEN's ordinary shares on the Frankfurt Prime Standard on March 2, 2020, the last trading day prior to the announcement of the acquisition agreement and Thermo Fisher's intention to commence the offer. The amendment also provides for a reduction of the minimum acceptance threshold from 75% to 66.67% of QIAGEN's issued and outstanding ordinary share capital at the end of the acceptance period on August 10, 2020, as well as a $95.0 million expense reimbursement payable by QIAGEN to Thermo Fisher if the minimum acceptance threshold is not met. The transaction is subject to the satisfaction of customary closing conditions, including the receipt of applicable regulatory approvals and completion of the tender offer. During the three- and six-months ended June 30, 2020, we incurred acquisition expenses of $17.2 million and $20.9 million, respectively, included within restructuring, acquisition, integration and other, net in the accompanying condensed consolidated statements of income related to the announced acquisition.

2. Basis of Presentation and Accounting Policies

Basis of Presentation

The condensed consolidated financial statements include the accounts of QIAGEN N.V. and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. All amounts are presented in U.S. dollars, unless otherwise indicated. Investments in either common stock or in-substance common stock of 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 at our initial cost, minus any impairment, plus or minus changes from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

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.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. While the COVID-19 pandemic presents additional uncertainty, we continue to use the best information available to form our estimates. Actual results could differ from those estimates.

We undertake business combinations to complement our own internal product development activities. In 2019, we completed three immaterial acquisitions, including the January 2019 acquisition of N-of-One, Inc, a privately-held U.S. molecular decision support company and pioneer in clinical interpretation services for complex genomic data located in Concord, Massachusetts. Accordingly, at their respective 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.

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, 2019.

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, 2019 except for the changes described below in connection with the adoption of ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* as of January 1, 2020.

Accounts Receivable and Allowance for Credit Losses

Our accounts receivable consist of unsecured customer obligations and we are at risk to the extent such amounts become uncollectible. Accounts receivable are carried at face value less an allowance for doubtful accounts as of December 31, 2019, and following the adoption of ASU 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,* less an allowance for expected credit losses. We continually monitor accounts receivable balances, and until December 31, 2019, provided for an allowance for doubtful accounts at the time collection became questionable based on payment history or age of the receivable. Subsequent to January 1, 2020, we maintain allowances for credit losses resulting from the expected failure or inability of our customers to make required payments. We recognize the allowance for expected credit losses at inception and reassess regularly considering historical experience with bad debts, the aging of the receivables, credit quality of the customer base, current economic conditions and other reasonable and supportable expectations for future conditions, if applicable. Once a receivable is determined to be uncollectible, the balance is charged against the allowance.

We sell our products worldwide through sales subsidiaries and distributors. There is no concentration of credit risk with respect to trade accounts receivable as we have a large number of internationally dispersed customers. Trade accounts receivable are non-interest bearing and mostly have payment terms of 30-90 days.

The changes in the allowance for credit losses on accounts receivable for the six months ended June 30, 2020 are as follows:

(in thousands)		**2020**
Balance at beginning of year	**$**	**12,115**
ASC 326 adoption impact		**8,089**
Additions charged to expense		**3,759**
Deductions from allowance		**(585)**
Currency translation adjustments and other		**(722)**
Balance at end of period	**$**	**22,656**

For the six months ended June 30, 2020, we recorded an increase in the allowance for expected credit losses of $3.8 million primarily reflecting the forward-looking expected impact of the global economic uncertainty caused by COVID-19.

Loans and Other Receivables and Allowance for Credit Losses

Prepaid expenses and other current assets include other short-term receivables and other long-term assets include long-term loan receivables. Following the adoption of Topic 326, we are required to use the new forward-looking expected credit loss model that replaced the previous incurred credit loss model. The new model generally results in earlier recognition of allowances for credit losses and requires consideration of a broader range of information to estimate expected credit losses over the entire lifetime of the assets. Accordingly, with the adoption of Topic 326, we recorded allowances for credit losses of $10.2 million for other receivables and $1.3 million for loan receivables. As of June 30, 2020, allowances for credit losses of $10.1 million for other receivables are included in prepaid expenses and other current assets and $1.2 million for loan receivables are included in other long-term assets in the accompanying condensed consolidated balance sheet. The allowances reflect the forward-looking expected impact of non-payment of the contractual amounts due.

Adoption of New Accounting Standards

The following new FASB Accounting Standards Updates (ASU) were adopted in 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 with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to form credit loss estimates. The measurement of expected credit losses under Topic 326 is applicable to financial assets measured at amortized cost, including loan receivables and held-to-maturity debt securities. It also applies to off-balance sheet credit exposures not accounted for as insurance (loan commitments, standby letters of credit, financial guarantees, and other similar instruments) and net investments in leases recognized by a lessor in accordance with Topic 842 on leases. In addition, Topic 326 made changes to the accounting for available-for-sale debt securities. One such change is to require credit losses to be presented as an allowance rather than as a write-down on available-for-sale debt securities management does not intend to sell or believes is more likely than not they will be required to sell.

We adopted Topic 326 on January 1, 2020 using the modified retrospective approach by recognizing the effect of initially applying Topic 326 as an after-tax $15.1 million ($19.6 million pre-tax) adjustment to the opening balance of retained earnings at January 1, 2020 for credit losses on loans, notes and accounts receivable. The adoption did not have an impact on our condensed consolidated statements of income or cash flows.

ASU 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606*, precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer of that transaction. The guidance amends ASC 808 to refer to unit-of-account guidance in ASC 606 and requires it to be used only when assessing whether a transaction is in the scope of ASC 606. ASU 2018-18 is effective for us for annual periods beginning on January 1, 2020. Entities are required to apply the amendments retrospectively to the date they initially applied ASC 606. We adopted ASU 2018-18 on January 1, 2020 without any cumulative effect.

ASU 2020-03, *Codification Improvements to Financial Instruments Codification Improvements to Financial Instruments,* was issued to improve and clarify various financial instrument topics, including Topic 326 issued in 2016. The ASU includes seven issues that describe areas of improvement and the related amendments to GAAP. They are intended to make the standards easier to understand and apply and to eliminate inconsistencies. They are narrow in scope and are not expected to significantly change practice for most entities. The amendments have different effective dates with early adoption permitted. We adopted ASU 2020-03 on January 1, 2020 without any effect.

ASU 2020-01, *Investments-Equity Securities (Topic 321), Investments-Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)-Clarifying the Interactions between Topic 321, Topic 323, and Topic 815*, addresses accounting for the transition into and out of the equity method and measuring certain purchased options and forward contracts to acquire investments. The ASU is effective on January 1, 2021. Early adoption is permitted, including early adoption in an interim period. We adopted ASU 2020-01 on June 30, 2020 without any impact.

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 2021

ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*, removes certain exceptions for recognizing deferred taxes for investments, performing intraperiod tax allocations and calculating income taxes in interim periods. The ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating income taxes to members of a consolidated group. ASU 2019-12 is effective for annual periods beginning on January 1, 2021, with earlier adoption permitted. We intend to adopt the ASU on the effective date of January 1, 2021 and are evaluating the potential impact ASU 2019-12 may have on our consolidated financial statements.

Through December 31, 2022

ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting,* provides companies with optional guidance to ease the potential accounting burden associated with transitioning away from reference rates that are expected to be discontinued. Companies can apply the ASU immediately. However, the guidance will only be available for a limited time, generally through December 31, 2022. We are evaluating the potential impact that ASU 2020-04 may have on our consolidated financial statements.

3. Acquisitions and Divestitures

Business Combinations and Asset Acquisitions

For acquisitions which have been accounted for as business combinations, the acquired companies' results have been included in the accompanying 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.

If the acquired net assets do not constitute a business under the acquisition method of accounting, the transaction is accounted for as an asset acquisition and no goodwill is recognized. In an asset acquisition, the amount allocated to acquired in-process research and development with no alternative future use is charged to expense at the acquisition date.

2019 Business Combinations

In January 2019, we completed the acquisition of N-of-One, Inc., a privately-held U.S. molecular decision support company and pioneer in clinical interpretation services for complex genomic data located in Concord, Massachusetts. The cash consideration, net of cash acquired, was $24.5 million. This acquisition was not significant to the overall consolidated financial statements and as of December 31, 2019, the allocation of the purchase price was final. The acquisition did not have a material impact to net sales, net income or earnings per share and therefore no pro forma information has been provided herein.

In the third quarter of 2019, we acquired two additional companies for total cash consideration, net of cash acquired, of $43.5 million. The purchase price allocations for these acquisitions were final as of March 31, 2020. These acquisitions were not significant to the overall consolidated financial statements and the acquisitions did not have a material impact to net sales, net income or earnings per share. Thus, no pro forma information has been provided herein.

2019 Asset Acquisition

On January 31, 2019, we acquired the digital PCR asset of Formulatrix, Inc., a developer of laboratory automation solutions. We paid Formulatrix $125.0 million in cash upon closing. We paid an additional $80.9 million in the second quarter of 2020 and will pay future milestone payments of $55.0 million in the second half of 2020. As of June 30, 2020, $54.8 million is included in accrued and other current liabilities in the accompanying consolidated balance sheet for the present value of the future expected payments. Of the amount accrued as of June 30, 2020, $38.3 million was paid in July 2020.

Divestitures

In the fourth quarter of 2019, we sold a portfolio of protein catalysation products for $1.0 million. An immaterial gain was recorded on the sale.

4. Restructuring and Impairments

As part of our restructuring activities, we incur expenses that qualify as exit and disposal costs under U.S. GAAP including severance and employee costs as well as contract and other costs, primarily contract termination costs, as well as inventory write-offs and other implementation costs primarily related to consulting fees. Personnel related costs primarily relate to cash severance and other termination benefits including accelerated share-based compensation. We also incur expenses that are an integral component of, and are directly attributable to, our restructuring activities which do not qualify as exit and disposal costs under U.S. GAAP, which consist of asset-related costs such as intangible asset impairments and other asset related write-offs.

Personnel costs are primarily determined based on established benefit arrangements, local statutory requirements, or historical benefit practices. We recognize these benefits when payment is probable and estimable. Other benefits which require future service and are associated to non-recurring benefits are recognized ratably over the future service period. Other assets, including inventory, are impaired or written-off if the carrying value exceeds the fair value. All other costs are recognized as incurred.

2019 Restructuring

In the second half of 2019, we decided to suspend development of NGS-related instrument systems and entered into a new strategic partnership with Illumina to commercialize IVD kits worldwide on Illumina's diagnostic sequencers. In order to align our business with this new strategy, we began restructuring initiatives to target resource allocation to growth opportunities in our Sample to Insight portfolio.

Impairments to property, plant and equipment primarily impacted computer software and machinery and equipment. Costs incurred to either purchase software or produce software products and the software components of products to be sold, leased or marketed after technological feasibility is established were previously capitalized during the development of certain NGS-related instrument systems. These long-lived assets were fully impaired due to the decision to suspend further development. In addition to computer software, certain machinery and equipment assets were fully impaired given that these assets had no alternative use following the changes announced for this program and it was estimated that no value was recoverable in a market disposal.

Due to the suspended development, intangible assets associated to this initiative were also assessed for recoverability. The abandoned assets include developed technology related to the suspended projects as well as the termination of licenses which were used exclusively in connection with this program. As a result, we recorded intangible asset impairment charges due to the conclusion that the identified assets have no alternative use outside of the suspended program and thus are fully impaired.

We also conducted an impairment review of inventory and prepaid and other assets and recorded the charges noted in the table below. As these charges, including inventory, are a direct result of the decision to suspend further development of NGS-related instrument systems and are not related to external market factors, the impairment charges were recorded in the line item restructuring, acquisition, integration and other, net in the condensed consolidated statements of income due to the assets being deemed excess and no longer utilized due to the discontinued development and related actions discussed above.

In addition, we have initiated measures to:

- shift Commercial Operations activities into Business Areas;
- transition manufacturing activities into a regional structure; and
- expand the scope of activities at QIAGEN Business Services (QBS) centers in Wroclaw, Poland and Manila, Philippines

The following is a summary of the charges recorded during the six months ended June 30, 2020 and cumulative program charges since September 30, 2019.

Consolidated Statement of Income Classification and Type of Charge **(in thousands)**	**Six months ended June 30, 2020**	**Cumulative charges since September 30, 2019**
Restructuring, acquisition, integration and other, net		
Personnel related[1]	**$ 298**	$ 70,876
Contract termination costs[1]	**(473)**	41,626
Consulting fees	**1,057**	11,207
Accounts receivable[2]	**(622)**	10,203
Inventories	**1,023**	13,359
Prepaid expenses and other current assets[2]	**54**	17,066
	1,337	164,337
Long-lived asset impairments		
Property, plant and equipment	**1,034**	99,506
Intangible assets	**—**	40,301
	1,034	139,807
Other (expense) income, net		
Equity method investment impairment	**—**	4,799
Total	**$ 2,371**	$ 308,943

(1) For the year ended December 31, 2019, personnel related and contract termination costs include $2,956 and $15,676, respectively, due to related parties.
(2) For the year ended December 31, 2019, accounts receivable and prepaid expenses and other assets includes $5,984 and $2,270, respectively due from related parties.

Of the total costs incurred, $14.4 million and $60.2 million are accrued as of June 30, 2020 and December 31, 2019, respectively, in accrued and other current liabilities in the accompanying condensed consolidated balance sheets as summarized in the following table that includes the cash components of the restructuring activity.

(in thousands)		Personnel Related		Contract Termination		Consulting Fees		Total
Costs incurred in 2019	$	44,640	$	42,099	$	10,150	$	96,889
Payments		(17,272)		(18,294)		(2,162)		(37,728)
Foreign currency translation adjustment		631		493		(53)		1,071
Liability at December 31, 2019	$	27,999	$	24,298	$	7,935	$	60,232
Additional costs incurred in 2020		**2,499**		**234**		**1,428**		**4,161**
Release of excess accrual		**(2,201)**		**(707)**		**(371)**		**(3,279)**
Payments		**(19,738)**		**(17,969)**		**(8,304)**		**(46,011)**
Foreign currency translation adjustment		**(431)**		**(282)**		**(37)**		**(750)**
Liability at June 30, 2020	**$**	**8,128**	**$**	**5,574**	**$**	**651**	**$**	**14,353**

Future pre-tax costs between $10 - $20 million are expected to be incurred primarily related to personnel, consulting, contract termination and facilities including impacts to operating lease right-of-use assets before completion of the program in 2020.

5. Investments

The following discusses our marketable investments, non-marketable investments and the realized and unrealized gains and losses on these investments.

Marketable Equity Securities

A summary of our investments in marketable equity securities that have readily determinable fair values that are classified as available-for-sale follows below. These investments are reported at fair value with realized and unrealized gains and losses recorded in earnings.

(in thousands, except shares held)	As of June 30, 2020					
		OncoCyte Corporation (OncoCyte)		HTG Molecular Diagnostics, Inc (HTGM)		Oncimmune Holdings plc (Oncimmune)
Shares held		**88,101**		**833,333**		**560,416**
Cost basis	**$**	**—**	**$**	**2,000**	**$**	**—**
Fair value	**$**	**168**	**$**	**600**	**$**	**870**
Total cumulative unrealized gain (loss)	**$**	**168**	**$**	**(1,400)**	**$**	**870**

(in thousands, except shares held)	As of December 31, 2019			
		HTGM		Oncimmune
Shares held		833,333		560,416
Cost basis	$	2,000	$	—
Fair value	$	585	$	285
Total cumulative unrealized (loss) gain	$	(1,415)	$	285

In the first quarter of 2020, as part of consideration received upon the sale of a non-marketable investment not accounted for under the equity method, we received 88,101 shares in OncoCyte. On the date of receipt, these shares had a fair value of $0.2 million and is included in other long-term assets in the accompanying condensed consolidated balance sheet. In the first quarter of 2019, we received shares in Oncimmune in settlement of a zero-book value financial instrument held with a third party. On the date of receipt, these shares had a fair value of $0.7 million which was recorded as a gain in other expense, net.

During the three months ended June 30, 2020 and 2019, total gains and losses recognized for the change in fair market value of all marketable equity securities totaled a gain of $0.8 million and a loss of $0.7 million, respectively, recognized in other income, net in the accompanying condensed consolidated statements of income. During the six months ended June 30, 2020 and 2019 , total gains and losses recognized for the change in fair market value of all marketable equity securities totaled a gain of $0.5 million and a loss of $0.8 million recognized in other (expense) income, net in the accompanying condensed consolidated statements of income.

Non-Marketable Investments

We have made strategic investments in certain privately-held companies without readily determinable market values.

Non-Marketable Investments Accounted for Under the Equity Method

As of June 30, 2020, we had total non-marketable investments that were accounted for as equity method investments of $12.0 million, of which $12.7 million is included in other long-term assets and $0.7 million, where we are committed to fund losses, is included in other long-term liabilities in the accompanying condensed consolidated balance sheet. As of December 31, 2019, these investments totaled $9.7 million, of which $10.5 million is included in other long-term assets and $0.8 million is included in other long-term liabilities.

Three of our equity method investments are variable interest entities and we are not considered the primary beneficiary as we do not hold the power to direct the activities that most significantly impact the economic performance of these entities and therefore, these investments are not consolidated. As of June 30, 2020, these investments had a total carrying value representing our maximum exposure to loss totaled $2.1 million, of which $2.8 million is included in other long-term assets and $0.7 million is included in other long-term liabilities in the accompanying condensed consolidated balance sheet. As of December 31, 2019, these investments totaled $1.2 million, of which $1.9 million is included on other long-term assets and $0.8 million is included in other long-term liabilities.

Non-Marketable Investments Not Accounted for Under the Equity Method

At June 30, 2020 and December 31, 2019, we had investments in non-publicly traded companies that do not have readily determinable fair values with carrying amounts that totaled $68.5 million and $70.8 million, respectively, which are included in other long-term assets in the accompanying condensed consolidated balance sheets. These investments are measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Changes resulting from impairment and observable prices changes are recognized in the statements of income during the period the change is identified. Of the total carrying amounts above, investments in variable interest entities total $41.0 million and represents our maximum exposure to loss as of both June 30, 2020 and December 31, 2019.

The changes in non-marketable investments not accounted for under the equity method during the six months ended June 30, 2020 and 2019 are as follows:

(in thousands)	**2020**	**2019**
Balance at beginning of year	**$ 70,849**	$ 59,484
Cash investments in equity securities	**200**	179
Net increases due to observable price changes	**—**	4,305
Sale of equity securities	**(250)**	—
Loss on sale of equity securities	**(2,250)**	—
Foreign currency translation adjustments	**(15)**	(16)
Balance at end of period	**$ 68,534**	$ 63,952

During the second quarter of 2020, an intended business combination was announced between ArcherDX, Inc. (ArcherDX), a company in which we hold approximately an 8% investment, and Invitae Corporation (Invitae). This business combination agreement calls for upfront consideration of $325.0 million in cash and 30 million Invitae shares. An additional 27 million Invitae shares are due upon achievement of certain milestones. The Invitae / ArcherDX business combination is subject to certain closing conditions, including, among other things, approval by the stockholders of Invitae. Therefore, no observable price change in an ordinary transaction has yet occurred which would result in a change in the value of this investment as of June 30, 2020.

As of June 30, 2020, we hold a 19.9% investment in NeuMoDx Molecular, Inc (NeuMoDx) originally acquired during 2018. This investment is part of a strategic partnership with NeuMoDx to commercialize two fully integrated systems for automation of PCR (polymerase chain reaction) testing. In July 2020, we reached an amended agreement to acquire the remaining 80.1% stake in NeuMoDx at the predetermined price of approximately $234 million. Should the merger agreement be terminated, we will be required to pay a break up fee of $12.9 million. The timing of closing is dependent upon the outcome of Thermo Fisher's announced plans to fully acquire QIAGEN. The acquisition of NeuMoDx requires customary regulatory approvals and clearances.

During the first quarter of 2020, we sold an investment in equity securities with a carrying amount of $2.5 million in exchange for $0.3 million including the shares in OncoCyte, as discussed above. A corresponding loss of $2.3 million was recognized in other expense, net in the accompanying condensed consolidated statement of income for the six months ended June 30, 2020.

During the second quarter of 2019, we recognized a gain of $4.3 million in other income, net in the accompanying consolidated statement of income due to upward adjustments resulting from an observable price change. This adjustment was due to an equity offering at a higher price from the issuer in an orderly transaction for a similar investment as those we hold. Also, we made additional investments of $0.2 million in non-marketable investments not accounted for under the equity method during the six months ended June 30, 2020.

Since adoption of ASU 2016-01, upward adjustments in the carrying value of these investments have been recognized for observable price changes totaling $20.9 million due to equity offerings at a higher price from the issuer in orderly transactions for identical or similar investments as those we hold.

6. Intangible Assets

The following sets forth the intangible assets by major asset class as of June 30, 2020 and December 31, 2019:

(in thousands)	June 30, 2020 Gross Carrying Amount	June 30, 2020 Accumulated Amortization	December 31, 2019 Gross Carrying Amount	December 31, 2019 Accumulated Amortization
Amortized Intangible Assets:				
Patent and license rights	**$ 273,820**	**$ (170,853)**	$ 320,406	$ (216,554)
Developed technology	**747,031**	**(343,665)**	766,966	(346,085)
Customer base, non-compete agreements and trademarks	**308,246**	**(220,726)**	314,638	(213,881)
	$ 1,329,097	**$ (735,244)**	$ 1,402,010	$ (776,520)
Unamortized Intangible Assets:				
In-process research and development	**$ 6,860**		$ 6,944	
Goodwill	**2,134,810**		2,140,503	
	$ 2,141,670		$ 2,147,447	

The in-process research and development is associated to the acquisition of STAT-Dx in 2018. The estimated fair value of acquired in-process research and development projects which have not reached technological feasibility at the date of acquisition are capitalized and subsequently tested for impairment through completion of the development process, at which point the capitalized amounts are amortized over their estimated useful life. If a project is abandoned rather than completed, all capitalized amounts are written-off immediately.

Developed technology includes the digital PCR asset from Formulatrix as discussed in Note 3 "Acquisitions and Divestitures" which is being amortized over 10 years.

The changes in intangible assets in 2020 are summarized as follows:

(in thousands)	Intangibles	Goodwill
Balance at December 31, 2019	**$ 632,434**	**$ 2,140,503**
Purchase adjustments	**—**	**3,382**
Additions	**21,590**	**—**
Amortization	**(48,325)**	**—**
Disposals	**(238)**	**—**
Foreign currency translation adjustments	**(4,748)**	**(9,075)**
Balance at June 30, 2020	**$ 600,713**	**$ 2,134,810**

Cash paid for purchases of intangible assets during the six months ended June 30, 2020 totaled $99.7 million, of which $85.8 million is related to current year payments for assets that were accrued as of December 31, 2019 and $0.3 million for prepayments recorded in other long-term assets in the accompanying condensed consolidated balance sheet. Intangible asset additions of $21.6 million includes $13.6 million of cash paid during the year and $8.0 million of additions that were accrued as of June 30, 2020.

The decrease in the carrying amount of goodwill for the six months ended June 30, 2020 resulted from changes in foreign currency translation partially offset by purchase adjustments.

For the three- and six-month periods ended June 30, 2020 and 2019, amortization expense on intangible assets totaled approximately $24.0 million and $48.3 million and $34.0 million and $66.6 million, respectively. Amortization of intangibles for the next five years is expected to be approximately:

Year	Annual Amortization (in millions)
2021	$ 89.6
2022	$ 76.9
2023	$ 74.7
2024	$ 70.7
2025	$ 59.2

7. Debt

Our credit facilities available and undrawn at June 30, 2020 total €426.6 million (approximately $477.7 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, 2020 or at December 31, 2019, and three other lines of credit amounting to €26.6 million with no expiration date, none of which were utilized as of June 30, 2020 or as of December 31, 2019. 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, 2020. The credit facilities are for general corporate purposes.

During the second quarter of 2020, $23.2 million of the 2021 Cash Convertible Notes was converted during the contingent conversion period as discussed further below. Of this amount, $23.0 million was repaid during the second quarter of 2020 and $0.2 million was included in accrued and other current liabilities as of June 30, 2020.

During 2019, we repaid $506.4 million of long-term debt including $430.0 million for the amount due for the 2019 Cash Convertible Notes, $73.0 million for amounts due for the U.S. Private Placement and $3.4 million for a portion of the 2021 Cash Convertible Notes which was converted during the contingent conversion period as discussed further below.

At June 30, 2020 and December 31, 2019, total current long-term debt, net of debt issuance costs of $9.2 million and $10.8 million, respectively, consists of the following:

(in thousands)	June 30, 2020	December 31, 2019
0.875% Senior Unsecured Cash Convertible Notes due 2021	**$ 267,167**	$ 285,244
0.500% Senior Unsecured Cash Convertible Notes due 2023	**354,584**	347,995
1.000% Senior Unsecured Cash Convertible Notes due 2024	**421,288**	413,272
3.75% Series B Senior Notes due October 16, 2022	**305,928**	302,040
3.90% Series C Senior Notes due October 16, 2024	**26,950**	26,944
German Private Placement (Schuldschein)	**330,038**	330,857
Total long-term debt	**$ 1,705,955**	$ 1,706,352
Less: current portion	**305,776**	285,244
Long-term portion	**$ 1,400,179**	$ 1,421,108

At June 30, 2020, the $305.8 million current portion of long-term debt includes the $267.2 million 2021 Cash Convertible Notes (2021 Notes) and $38.6 million of German Private Placement bond (Schuldschein), both due in the first quarter of 2021. At December 31, 2019, the 2021 Notes were included in the current portion of long-term debt as these were convertible pursuant to the indenture as discussed below.

The notes are all unsecured obligations that rank pari passu.

Cash Convertible Notes due 2019, 2021, 2023 and 2024

On March 19, 2014, we issued $730.0 million aggregate principal amount of Cash Convertible Senior Notes in two tranches consisting of $430.0 million due in 2019 (2019 Notes) and $300.0 million due in 2021 (2021 Notes). The aggregate net proceeds of the 2019 Notes and 2021 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 other debt. During the first quarter of 2019, $430.0 million of the 2019 Notes was paid at maturity and $3.4 million of the 2021 Notes was redeemed. During the second quarter of 2020, $23.0 million of the 2021 Notes was redeemed and in July 2020, another $0.2 million was redeemed.

On September 13, 2017, we issued $400.0 million aggregate principal amount of Cash Convertible Senior Notes which is due in 2023 (2023 Notes). The net proceeds of the 2023 Notes were $365.6 million, after payment of transaction costs and the net cost of the Call Spread Overlay described below.

On November 13, 2018, we issued $500.0 million aggregate principal amount of Cash Convertible Senior Notes which is due in 2024 (2024 Notes). The net proceeds of the 2024 Notes were $468.9 million, after payment of transaction costs and the net cost of the Call Spread Overlay described below.

We refer to the 2019 Notes, 2021 Notes 2023 Notes and 2024 Notes, collectively as the “Cash Convertible Notes.”

Interest on the Cash Convertible Notes is payable semi-annually in arrears and will mature on the maturity date unless repurchased or converted with their terms prior to such date. The interest rate and corresponding maturity of each Note are summarized in the table below. The Cash Convertible Notes are solely convertible into cash in whole, but not in part, at the option of noteholders under the circumstances described below and during the contingent conversion periods as shown in the table below.

Cash Convertible Notes	Annual Interest Rate	Date of Interest Payments	Maturity Date	Contingent Conversion Period	Conversion Rate per $200,000 Principal Amount
2021 Notes	0.875%	March 19 and September 19	March 19, 2021	April 29, 2014 to September 18, 2020	7,063.1647
2023 Notes	0.500%	March 13 and September 13	September 13, 2023	October 24, 2017 to March 13, 2023	4,829.7279
2024 Notes	1.000%	May 13 and November 13	November 13, 2024	December 24, 2018 to August 2, 2024	4,360.3098

Additionally, conversion may occur at any time following a 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 the Cash Convertible Notes into cash at their option at any time during the Contingent Conversion Periods described above only under the following circumstances (Contingent Conversion Conditions):

- if the last reported sale price of our common stock for at least 20-consecutive trading days 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, including a change of control, as defined in the agreement;
- during the five-business day period immediately after any 10-consecutive trading day period in which the quoted price for 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;
- if parity event or trading price unavailability event, as the case maybe occurs for the 2023 Notes and 2024 Notes during the period of 10 days, including the first business day following the relevant trading price notification date.
- if we elect to distribute assets or property to all or substantially all 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 until such event has been cured or waived or the payment of the Notes have been accelerated.

The Contingent Conversion Conditions in the 2021 Notes, 2023 Notes and 2024 Notes noted above have been analyzed under ASC 815, *Derivatives and Hedging*, and, based on our analysis, we determined that each of the embedded features listed above are clearly and closely related to the 2021 Notes, 2023 Notes and 2024 Notes (i.e., the host contracts). As a result, pursuant to the accounting provisions of ASC 815, *Derivatives and Hedging*, these features noted above are not required to be bifurcated as separate instruments.

From January 1, 2020 through the close of business on September 30, 2020, the 2021 Notes are convertible pursuant to Section 12.01(b)(iv) of the indenture because the arithmetic mean of the last reported sales prices of our common stock, in each trading day in at least one 20-consecutive trading day period during the 30-consecutive trading day period ending on the last trading day of the preceding fiscal quarter, was greater than 130% of the conversion price in effect on such last trading day. In June 2020, we converted $23.0 million of 2021 Notes for a conversion notice we received on March 30, 2020 and in July 2020, another $0.2 million of 2021 Notes for a conversion notice we received on April 14, 2020.

No Contingent Conversion Conditions were triggered for the 2023 Notes and 2024 Notes as of June 30, 2020.

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 Cash Convertible 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 when 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 income until the cash conversion option transaction settles or expires. The initial fair value liability of the embedded cash conversion options for the 2019 Notes and 2021 Notes was $51.2 million and $54.0 million, respectively, $74.5 million for the 2023 Notes, and $98.5 million for the 2024 Notes, 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 8 "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 using the effective interest method over the expected life of the debt, which is five years for the 2019 Notes, seven years for the 2021 Notes, and six years for the 2023 Notes and 2024 Notes. 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 Notes, 2021 Notes, 2023 Notes and 2024 Notes is 2.937%, 3.809%, 3.997% and 4.782%, 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.

In connection with the issuance of the 2019 Notes and 2021 Notes, we incurred approximately $13.1 million in transaction costs. We incurred approximately $6.2 million and $5.7 million in transaction costs for the 2023 Notes and 2024 Notes, respectively. Such costs have been allocated to the Cash Convertible Notes and deferred and are being amortized to interest expense over the terms of the Cash Convertible Notes using the effective interest method.

Interest expense related to the Cash Convertible Notes for the three and six months ended June 30, 2020 and 2019 was comprised of the following:

	Three months ended June 30,	
(in thousands)	**2020**	**2019**
Coupon interest	**$ 2,342**	$ 2,396
Amortization of original issuance discount	**9,450**	8,593
Amortization of debt issuance costs	**730**	661
Total interest expense related to the Cash Convertible Notes	**$ 12,522**	$ 11,650

	Six months ended June 30,	
(in thousands)	**2020**	**2019**
Coupon interest	**$ 4,741**	$ 5,156
Amortization of original issuance discount	**18,322**	19,502
Amortization of debt issuance costs	**1,407**	1,676
Total interest expense related to the Cash Convertible Notes	**$ 24,470**	$ 26,334

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. During 2014, we used $105.2 million of the proceeds from the issuance of the 2019 Notes and 2021 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.

During 2017, we used $73.7 million of the proceeds from the issuance of the 2023 Notes to pay for the premium for the Call Option, and simultaneously received $45.3 million from the sale of Warrants, for a net cash outlay of $28.3 million for the Call Spread Overlay. A total of $0.4 million in issuance costs were paid in connection with the Warrant and the Call Option.

In November 2018, we used $97.3 million of the proceeds from the issuance of the 2024 Notes to pay for the premium for the Call Option, and simultaneously received $72.4 million from the sale of Warrants, for a net cash outlay of $24.9 million for the Call Spread Overlay. A total of $0.9 million in issuance costs were paid in connection with the Warrant and the Call Option.

The Call Options are derivative financial instruments and are discussed further in Note 8 "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 (2019 Notes and 2021 Notes), $73.7 million (2023 Notes), and $97.3 million (2024 Notes) for the Call Options, 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.

During the first quarter of 2019, we received $133.2 million in cash upon the exercise of the call options in connection with the repayment of the 2019 Notes. In the same transaction, we paid $132.7 million for the intrinsic value of the 2019 Notes' embedded cash conversion option. Not all of the 2019 Note holders tendered the required conversion notice, and as a result the net effect of the cash paid and received of $0.5 million was recognized as a gain in other expense, net in the accompanying condensed consolidated statement of income for the six-month period ended June 30, 2019.

In connection with the early conversion of a portion of the 2021 Notes during the second quarter of 2020, we recorded $11.9 million in other receivable upon the exercise of the related call options. The intrinsic value of the 2021 Notes' embedded cash conversion option was $11.2 million, of which $11.1 million was paid in the second quarter of 2020 and $0.1 million was included in accrued and other current liabilities in the accompanying condensed consolidated balance sheet as of June 30, 2020. As a result of these early conversions, a gain of $0.7 million was recognized in other (expense) income, net in the accompanying condensed consolidated statement of income for the three- and six-month periods ended June 30, 2020.

In connection with the early conversion of a portion of the 2021 Notes during the first quarter of 2019, we received $0.4 million in cash and recorded an other receivable of $0.7 million upon the exercise of the related call options. In the same transaction, we paid $1.1 million for the intrinsic value of the 2021 Notes' embedded cash conversion option. During the second quarter of 2019, we collected the $0.7 million receivable balance and received $0.4 million in cash upon the exercise of additional call options. As a result of these early conversions, a gain of $0.4 million was recognized in other expense, net.

The Warrants that were issued with our Cash Convertible Notes, 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, plus cash in lieu of any fractional shares. We will not receive any proceeds if the Warrants are exercised.

U.S. Private Placement

In October 2012, we completed a private placement through the issuance of new senior unsecured notes at a total amount of $400.0 million with a weighted average interest rate of 3.66% (settled on October 16, 2012). The notes were issued in three series: (1) $73.0 million 7-year term due and paid in 2019 (3.19%); (2) $300.0 million 10-year term due in October 16, 2022 (3.75%); and (3) $27.0 million 12-year term due in October 16, 2024 (3.90%). We paid $2.1 million in debt issuance costs which will be amortized through interest expense using the effective interest method 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, 2020. During 2014, we entered into interest rate swaps, which effectively fixed the fair value of $200.0 million of this debt, which was reduced to $127.0 million following the 2019 $73.0 million repayment. These interest rate swaps qualify for hedge accounting as fair value hedges as described in Note 8 "Derivatives and Hedging".

German Private Placement (Schuldschein)

In 2017, we completed a German private placement bond ("Schuldschein") which was issued in several tranches totaling $331.1 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 8 "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, 2020 totaled $0.5 million of unrealized gain and is recorded in equity. We paid $1.2 million in debt issuance costs which are being amortized through interest expense using the effective interest method over the lifetime of the notes. A summary of the tranches as of June 30, 2020 and December 31, 2019 is as follows:

Currency	Notional Amount	Interest Rate	Maturity	Carrying Value (in thousands) as of June 30, 2020	December 31, 2019
EUR	€11.5 million	Fixed 0.4%	March 2021	$ **12,870**	$ 12,905
EUR	€23.0 million	Floating EURIBOR + 0.4%	March 2021	**25,739**	25,811
EUR	€21.5 million	Fixed 0.68%	October 2022	**24,041**	24,112
EUR	€64.5 million	Floating EURIBOR + 0.5%	October 2022	**72,124**	72,335
USD	$45.0 million	Floating LIBOR + 1.2%	October 2022	**44,933**	44,919
EUR	€25.0 million	Floating EURIBOR + 0.5%	October 2022	**27,951**	28,026
EUR	€64.0 million	Fixed 1.09%	June 2024	**71,532**	71,747
EUR	€31.0 million	Floating EURIBOR + 0.7%	June 2024	**34,648**	34,753
EUR	€14.5 million	Fixed 1.61%	June 2027	**16,200**	16,249
				$ **330,038**	$ 330,857

The financial markets regulators in the United Kingdom and the Eurozone have passed regulations that will become effective in 2021 under which LIBOR and EURIBOR in their current form will not be compliant. Market participants and regulators are working on establishing new interest rate benchmarks. While the outcome of this work is not clear yet, the Schuldschein, our syndicated loan facility, and our interest rate swaps continue to make reference to the current LIBOR and EURIBOR benchmark rates. These agreements contain language for the determination of interest rates in case the benchmark rate is not available. However, it appears likely that the agreements will need to be adjusted in line with still to be developed market practice once new benchmark rates become available.

8. Derivatives and Hedging

Objective and Strategy

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, 2020, cash collateral positions consisted of $21.6 million recorded in accrued and other current liabilities. As of December 31, 2019, we had cash collateral positions consisting of $1.4 million recorded in accrued and other current liabilities and $2.7 million recorded in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheets.

Non-Derivative Hedging Instrument

Net Investment Hedge

In 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 is the German private corporate bond ("Schuldschein") which was issued in the total amount of $331.1 million as described in Note 7 "Debt." Of the $331.1 million, which is held in both U.S. dollars and Euros, €255.0 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 loss. Based on the spot rate method, the unrealized gain recorded in equity was $0.5 million as of June 30, 2020 and an unrealized loss in equity of $0.4 million as of December 31, 2019. 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, 2020 and December 31, 2019.

Derivatives Designated as Hedging Instruments

Cash Flow Hedges

As of June 30, 2020 and December 31, 2019, 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 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. To date, we have not recorded any hedge ineffectiveness related to any cash-flow hedges in earnings. Based on their valuation as of June 30, 2020, we expect approximately $8.5 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 sheets account of the underlying item.

We use interest rate derivative contracts to align our portfolio of interest bearing assets and liabilities with our risk management objectives. 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 both June 30, 2020 and December 31, 2019, interest receivables of $1.5 million are recorded in prepaid expenses and other current assets in the accompanying consolidated balance sheets.

Fair Value Hedges

As of June 30, 2020 and December 31, 2019, 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 effect on earnings 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. To date, there has been 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 sheets account of the underlying item.

We hold interest rate swaps which effectively fix 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, 2020 and December 31, 2019, an interest receivable of $0.3 million and $0.1 million, respectively, is recorded in prepaid and other current assets in the accompanying condensed consolidated balance sheets.

Derivatives Not Designated as Hedging Instruments

Call Options

We entered into Call Options 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 7 "Debt." In these transactions, the Call Options are intended to address the equity price risk inherent in the cash conversion feature of each instrument by offsetting cash payments in excess of the principal amount due upon any conversion of the Cash Convertible Notes.

Aside from the initial payment of premiums 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 is the underlying security, are derivative assets 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 9 "Financial Instruments and Fair Value Measurements."

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 expense, net. 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 the 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 discussed in Note 7 "Debt" 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 expense, net until the cash conversion option settles or expires. 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 9 "Financial Instruments and Fair Value Measurements."

Embedded Conversion Option

During 2017, we purchased a convertible note for $3.0 million from a publicly listed company considered a related party. During the three months ended June 30, 2020, $3.2 million was collected including the principal including accrued interest. The embedded conversion option within the convertible note was required to be separated from the convertible note and accounted for separately as a derivative liability, with changes in fair value reported in our condensed consolidated statements of income in other expense, net. The embedded cash conversion option was measured and reported at fair value on a recurring basis, within Level 2 of the fair value hierarchy as of December 31, 2019. For further discussion of the inputs used to determine the fair value of the embedded cash conversion option, refer to Note 9 "Financial Instruments and Fair Value Measurements".

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 balance sheet exposure on a group-wide basis using foreign exchange forward contracts, foreign exchange options and cross-currency swaps.

We are party to various foreign exchange forward, option and swap arrangements which had, at June 30, 2020 and December 31, 2019, aggregate notional values of $361.4 million and $701.4 million, respectively which expire at various dates through December 2020. The transactions have been entered into to offset the effects from short-term balance sheet exposure to foreign currency exchange risk. Changes in the fair value of these arrangements have been recognized in other expense, 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, 2020 and December 31, 2019:

	As of June 30, 2020		As of December 31, 2019	
(in thousands)	**Current Asset**	**Long-Term Asset**	**Current Asset**	**Long-Term Asset**
Assets:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge [(1)]	**$ —**	**$ 7,859**	$ —	$ —
Interest rate contracts - fair value hedge [(1)]	**—**	**6,286**	—	2,474
Total derivative instruments designated as hedges	**$ —**	**$ 14,145**	$ —	$ 2,474
Undesignated derivative instruments				
Call options	**$ 145,916**	**$ 189,384**	$ 101,179	$ 189,792
Foreign exchange contracts and options	**5,046**	**—**	6,689	—
Total undesignated derivative instruments	**$ 150,962**	**$ 189,384**	$ 107,868	$ 189,792
Total Derivative Assets	**$ 150,962**	**$ 203,529**	$ 107,868	$ 192,266

	As of June 30, 2020		As of December 31, 2019	
(in thousands)	**Current Liability**	**Long-Term Liability**	**Current Liability**	**Long-Term Liability**
Liabilities:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge [(1)]	**$ —**	**$ —**	$ —	$ (6,027)
Total derivative instruments designated as hedges	**$ —**	**$ —**	$ —	$ (6,027)
Undesignated derivative instruments				
Cash convertible notes embedded conversion option	**$ (146,181)**	**$ (191,070)**	$ (101,361)	$ (190,902)
Foreign exchange contracts and options	**(975)**	**—**	(1,814)	—
Total undesignated derivative instruments	**$ (147,156)**	**$ (191,070)**	$ (103,175)	$ (190,902)
Total Derivative Liabilities	**$ (147,156)**	**$ (191,070)**	$ (103,175)	$ (196,929)

[(1)] The fair value amounts for the interest rate contracts do not include accrued interest.

Gains and Losses on Derivative Instruments

The following tables summarize the gains and losses on derivative instruments for the three- and six-month periods ended June 30, 2020 and 2019:

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
(in thousands)	Other (expense) income, net	Other (expense) income, net	Other (expense) income, net	Other (expense) income, net
Total amounts presented in the Condensed Consolidated Statements of Income in which the effects of cash flow and fair value hedges are recorded	**$ 4,000**	$ 4,711	**$ (1,246)**	$ 4,319
Gains (Losses) on Derivatives in Cash Flow Hedges				
Interest rate contracts				
Amount of gain (loss) reclassified from accumulated other comprehensive loss	**$ 4,356**	$ 2,610	**$ (648)**	$ (1,260)
Amounts excluded from effectiveness testing	**—**	—	**—**	—
Gains (Losses) on Derivatives in Fair Value Hedges				
Interest rate contracts				
Hedged item	**(114)**	(2,360)	**(3,812)**	(3,766)
Derivatives designated as hedging instruments	**114**	2,360	**3,812**	3,766
Gains (Losses) Derivatives Not Designated as Hedging Instruments				
Embedded conversion option	**—**	(91)	**—**	(348)
Call options	**1,180**	(57,452)	**44,329**	(63,878)
Cash convertible notes embedded cash conversion option	**86**	59,057	**(44,988)**	65,736
Foreign exchange contracts and options	**4,238**	(2,149)	**(16,003)**	(1,189)
Total gain (loss)	**$ 9,860**	$ 1,975	**$ (17,310)**	$ (939)

Balance Sheet Line Items in which the Hedged Item is Included

The following tables summarizes the balance sheet line items in which the hedged item is included as of June 30, 2020 and December 31, 2019:

	Carrying Amount of the Hedged Assets (Liabilities)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of Hedged Assets (Liabilities)	
(in thousands)	June 30, 2020	December 31, 2019	June 30, 2020	December 31, 2019
Long-term debt	**$ (133,135)**	$ (129,290)	**$ 6,286**	$ 2,474

9. Financial Instruments and 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 short-term investments, which are classified Level 2 of the fair value hierarchy, marketable securities discussed in Note 5 "Investments", which are classified in Level 1, derivative contracts used to hedge currency and interest rate risk and derivative financial instruments entered into in connection with the Cash Convertible Notes discussed in Note 7 "Debt", which are classified in Level 2 of the fair value hierarchy, and contingent consideration accruals and non-marketable equity security investments which are both classified in Level 3 of the fair value hierarchy, and are shown in the tables below. There were no transfers between levels during the six months ended June 30, 2020.

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, considering 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 7 "Debt" and Note 8 "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 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 non-marketable equity security investments for which we estimate the value based on valuation methods using the observable transaction price at the transaction date and other unobservable inputs. These investments are carried at fair value or under the measurement alternative. Under the measurement alternative, the carrying value is measured at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer. Adjustments are determined primarily based on a market approach as of the transaction date.

Our Level 3 instruments also 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 2.4% and 6.9%), 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 fair value hierarchy for our financial assets and liabilities measured at fair value on a recurring basis:

	As of June 30, 2020				As of December 31, 2019			
(in thousands)	**Level 1**	**Level 2**	**Level 3**	**Total**	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:								
Short-term investments	**$ —**	**$ 55,981**	**$ —**	**$ 55,981**	$ —	$ 129,586	$ —	$ 129,586
Marketable equity securities	**1,638**	**—**	**—**	**1,638**	870	—	—	870
Non-marketable equity securities	**—**	**—**	**68,534**	**68,534**	—	—	70,849	70,849
Call option	**—**	**335,300**	**—**	**335,300**	—	290,971	—	290,971
Foreign exchange contracts and options	**—**	**5,046**	**—**	**5,046**	—	6,689	—	6,689
Interest rate contracts	**—**	**14,145**	**—**	**14,145**	—	2,474	—	2,474
	$ 1,638	**$ 410,472**	**$ 68,534**	**$ 480,644**	$ 870	$ 429,720	$ 70,849	$ 501,439
Liabilities:								
Foreign exchange contracts and options	**$ —**	**$ (975)**	**$ —**	**$ (975)**	$ —	$ (1,814)	$ —	$ (1,814)
Interest rate contracts	**—**	**—**	**—**	**—**	—	(6,027)	—	(6,027)
Cash conversion option	**—**	**(337,251)**	**—**	**(337,251)**	—	(292,263)	—	(292,263)
Contingent consideration	**—**	**—**	**(83,521)**	**(83,521)**	—	—	(162,160)	(162,160)
	$ —	**$(338,226)**	**$ (83,521)**	**$(421,747)**	$ —	$(300,104)	$(162,160)	$(462,264)

Refer to Note 5 "Investments" for the change in non-marketable equity securities with Level 3 inputs during the three-month period ended June 30, 2020 and 2019. For contingent consideration liabilities with Level 3 inputs, the following table summarizes the activity for the six-month period ended June 30, 2020:

(in thousands)	2020
Balance at beginning of year	$ (162,160)
Additions	(2,231)
Payments	80,870
Balance at end of period	$ (83,521)

As of June 30, 2020, of the total $83.5 million accrued for contingent consideration, $60.7 million is included in accrued and other current liabilities and $22.8 million is included in other long-term liabilities in the accompanying condensed consolidated balance sheet. For the six-month period ended June 30, 2020, the $2.2 million of additions is related to the time value increases of existing contingent consideration liabilities, primarily the asset acquisition of Formulatrix discussed in Note 3 "Acquisitions and Divestitures."

The carrying values of financial instruments, including cash and cash 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 7 "Debt" 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.

The table below presents the carrying values and the estimated fair values of financial instruments not presented in the tables above.

	As of June 30, 2020			As of December 31, 2019		
(in thousands)	Carrying Amount	Level 1	Level 2	Carrying Amount	Level 1	Level 2
Long-term debt including current portion:						
Cash convertible notes	$ 1,043,039	$ 1,415,898	$ —	$ 1,046,511	$ 1,296,334	$ —
U.S. private placement	332,878	—	340,200	328,984	—	329,157
German private placement	330,038	—	334,262	330,857	—	334,371
	$ 1,705,955	$ 1,415,898	$ 674,462	$ 1,706,352	$ 1,296,334	$ 663,528

The fair values of the financial instruments presented in the tables above were determined as follows:

Cash Convertible Notes: Fair value is based on an estimation using available over-the-counter market information on the Cash Convertible Notes due in 2021, 2023 and 2024.

U.S. Private Placement: Fair value of the outstanding bonds is based on an estimation using the changes in the U.S. Treasury rates.

German Private Placement: Fair value is based on an estimation using changes in the euro swap rates.

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 adjustments in the three- and six-month periods ended June 30, 2020 and 2019 for nonfinancial assets or liabilities required to be measured at fair value on a nonrecurring basis.

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 statutory tax rates ranging from zero to 35%. Additionally, we record partial tax exemptions on foreign income primarily derived from operations in Germany, Singapore, Luxembourg, Ireland, Dubai and Switzerland. These foreign tax benefits are due to a combination of favorable tax laws, rules, rulings, and exemptions in these jurisdictions, including intercompany foreign royalty income in Germany which is statutorily exempt from trade tax. Further, we have intercompany financing arrangements through Luxembourg, Dubai and Ireland in which the intercompany income is partially exempt. Therefore, 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 2020 and 2019, our effective tax rates were 17.5% and 13.7%, respectively. In the six-month periods ended June 30, 2020 and 2019, the effective tax rates were 16.4% and 7.5% respectively. The effective tax rate for the second quarter and first six months of 2020 was higher compared to the same periods of 2019 primarily due to higher operating income in 2020 in higher tax rate jurisdictions, including the U.S.

We assess uncertain tax positions in accordance with ASC 740 (ASC 740-10 *Accounting for Uncertainties in Tax*). At June 30, 2020, our gross unrecognized tax benefits totaled approximately $59.0 million which, if recognized, would favorably impact our effective tax rate in the periods in which they are recognized. It is reasonably possible that approximately $31.3 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. However, various events could cause our current expectations to change in the future. While we believe our allowance for all income tax contingencies are adequate, the final resolution of these issues, if unfavorable, could have a material impact on the consolidated financial statements. 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, 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. Tax years in the Netherlands are potentially open back to 2008 for income tax examinations by tax authorities. The U.S. consolidated group is open to Federal and most state income tax examinations by the tax authorities beginning with the year ending December 31, 2017 through the current period. Our subsidiaries, with few exceptions, are no longer open to income tax examinations by tax authorities for years before 2016. The German tax authorities have commenced an audit for the 2014-2016 tax years.

As of June 30, 2020, 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, 2020 and December 31, 2019:

(in thousands)	June 30, 2020	December 31, 2019
Raw materials	**$ 40,267**	$ 26,077
Work in process	**50,574**	45,729
Finished goods	**111,963**	98,898
Total inventories, net	**$ 202,804**	$ 170,704

12. Equity

Issuance and Conversion of Warrants

In connection with the issuance of the Cash Convertible Notes as described in Note 7 "Debt", we issued Warrants as summarized in the table below. The number of warrants and exercise prices are subject to customary adjustments under certain circumstances. The proceeds, net of issuance costs, from the sale of the Warrants are included as additional paid in capital in the accompanying consolidated balance sheets.

Cash convertible notes	Issued on	Number of share warrants (in millions)	Exercise price per share	Proceeds from issuance of warrants, net of issuance costs (in millions)	Warrants expire over a period of 50 trading days beginning on
2019	March 19, 2014	15.2	$32.0560	$40.6	December 27, 2018
2021	March 19, 2014	10.6	$32.0560	$28.3	December 29, 2020
2023	September 13, 2017	9.7	$50.9664	$45.3	June 26, 2023
2024	November 13, 2018	10.9	$52.1639	$72.4	August 27, 2024

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).

During 2019, 2.1 million common shares were issued in connection with the conversion of the 15.2 million warrants related to the 2019 Notes which resulted in a $31.1 million decrease to additional paid in capital, a $37.7 million decrease in retained earnings, a decrease of 68.8 million in treasury shares and an approximately $4 thousand cash payment for fractional shares.

Share Repurchase Programs

On May 6, 2019, we announced our sixth share repurchase program of up to $100 million of our common shares. No shares were repurchased under this program. We do not currently anticipate repurchasing any common shares under this program due to the announced Thermo Fisher merger transaction discussed in Note 1 "Corporate Information".

On January 31, 2018, we announced our fifth share repurchase program of up to $200 million of our common shares. During the three- and six-month periods ended June 30, 2019, we repurchased 0.8 million and 2.0 million QIAGEN shares, respectively for $30.0 million and $74.4 million (including transaction costs), respectively, bringing the total shares repurchased under this program to 4.9 million for $179.1 million (including transaction costs). This program ended on June 30, 2019.

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.

Accumulated Other Comprehensive Loss

The following table is a summary of the components of accumulated other comprehensive loss as of June 30, 2020 and December 31, 2019:

(in thousands)	June 30, 2020	December 31, 2019
Net unrealized gain (loss) on hedging contracts, net of tax	**$ 8,994**	$ (2,289)
Net unrealized loss on pension, net of tax	**(561)**	(561)
Foreign currency effects from intercompany long-term investment transactions, net of tax of $10.4 million and $9.7 million in 2020 and 2019, respectively	**(24,798)**	(22,587)
Foreign currency translation adjustments	**(335,246)**	(284,182)
Accumulated other comprehensive loss	**$ (351,611)**	$ (309,619)

13. Revenue

Contract Estimates

The majority of our revenue is derived from contracts (i) with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount in which we have the right to invoice as product is delivered. We have elected the practical expedient not to disclose the value of remaining performance obligations associated with these types of contracts.

However, we have certain companion diagnostic co-development contracts to provide research and development activities in which our performance obligations extend over multiple years. As of June 30, 2020, we had $17.3 million of remaining performance obligations for which the transaction price is not constrained related to these contracts which we expect to recognize over the next 12 to 18 months.

Revenue expected to be recognized in any future year related to remaining performance obligations, excluding revenue pertaining to contracts that have an original expected duration of one year or less, contracts where revenue is recognized as invoiced and contracts with variable consideration related to undelivered performance obligations, is not material.

Contract Balances

The timing of revenue recognition, billings and cash collections can result in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) in the condensed consolidated balance sheet.

Contract assets as of June 30, 2020 and December 31, 2019 totaled $8.0 million and $5.5 million, respectively, and are included in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheets and relate to the companion diagnostic co-development contracts discussed above.

Contract liabilities primarily relate to non-cancellable advances or deposits received from customers before revenue is recognized and is primarily related to instrument service and software subscription revenue. As of June 30, 2020 and December 31, 2019, contract liabilities totaled $59.5 million and $56.2 million, respectively, of which $51.3 million and $48.5 million is included in accrued and other current liabilities, respectively, and $8.2 million and $7.7 million in included in other long-term liabilities, respectively. During the three and six months ended June 30, 2020 and 2019, we satisfied the associated performance obligations and recognized revenue of $10.9 million and $32.1 million, and $14.8 million and $33.9 million, respectively, related to advance customer payments previously received.

Disaggregation of Revenue

We disaggregate our revenue based on product categories and customer class and geographically as shown in the tables below:

(in thousands)	Three Months Ended June 30, 2020 Consumables and related	Instruments	Total	Three Months Ended June 30, 2019 Consumables and related	Instruments	Total
Molecular Diagnostics	**$ 166,326**	**$ 37,994**	**$ 204,320**	$ 166,894	$ 21,112	$ 188,006
Life Sciences	**209,128**	**29,804**	**238,932**	168,020	25,586	193,606
Academia / Applied Testing	***142,132***	***21,985***	***164,117***	*100,159*	*17,632*	*117,791*
Pharma	***66,996***	***7,819***	***74,815***	*67,861*	*7,954*	*75,815*
Total	**$ 375,454**	**$ 67,798**	**$ 443,252**	$ 334,914	$ 46,698	$ 381,612

(in thousands)	Six Months Ended June 30, 2020 Consumables and related	Instruments	Total	Six Months Ended June 30, 2019 Consumables and related	Instruments	Total
Molecular Diagnostics	**$ 317,707**	**$ 62,219**	**$ 379,926**	$ 320,781	$ 35,274	$ 356,055
Life Sciences	**383,690**	**51,733**	**435,423**	326,959	47,252	374,211
Academia / Applied Testing	***249,726***	***37,756***	***287,482***	*194,777*	*32,617*	*227,394*
Pharma	***133,964***	***13,977***	***147,941***	*132,182*	*14,635*	*146,817*
Total	**$ 701,397**	**$ 113,952**	**$ 815,349**	$ 647,740	$ 82,526	$ 730,266

(in thousands)	Three Months Ended June 30, 2020	2019	Six Months Ended June 30, 2020	2019
Americas	**$ 177,256**	$ 180,658	**$ 351,056**	$ 350,239
Europe, Middle East and Africa	**164,458**	117,551	**292,907**	226,917
Asia Pacific and Rest of World	**101,538**	83,403	**171,386**	153,110
Total	**$ 443,252**	$ 381,612	**$ 815,349**	$ 730,266

14. Earnings per Common Share

We present basic and diluted earnings per share. Basic earnings per share is calculated by dividing the net income 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, 2020 and 2019 summarizes the information used to compute earnings per common share:

(in thousands, except per share data)	Three months ended June 30, 2020	2019
Net income	**$ 89,764**	$ 44,728
Weighted average number of common shares used to compute basic net income per common share	**228,391**	226,650
Dilutive effect of stock options and restricted stock units	**3,105**	4,174
Dilutive effect of outstanding warrants	**2,531**	1,888
Weighted average number of common shares used to compute diluted net income per common share	**234,027**	232,712
Outstanding options and awards having no dilutive effect, not included in above calculation	**8**	—
Outstanding warrants having no dilutive effect, not included in above calculation	**28,552**	29,253
Basic earnings per common share	**$ 0.39**	$ 0.20
Diluted earnings per common share	**$ 0.38**	$ 0.19

(in thousands, except per share data)	Six months ended June 30, 2020	2019
Net income	**$ 129,593**	$ 74,248
Weighted average number of common shares used to compute basic net income per common share	**228,200**	226,410
Dilutive effect of stock options and restricted stock units	**2,971**	4,384
Dilutive effect of outstanding warrants	**1,948**	2,366
Weighted average number of common shares used to compute diluted net income per common share	**233,119**	233,160
Outstanding options and awards having no dilutive effect, not included in above calculation	**23**	113
Outstanding warrants having no dilutive effect, not included in above calculation	**29,135**	35,800
Basic earnings per common share	**$ 0.57**	$ 0.33
Diluted earnings per common share	**$ 0.56**	$ 0.32

15. Commitments and Contingencies

Contingent Consideration Commitments

Pursuant to the purchase agreements for certain acquisitions and other contractual arrangements, we could be required to make additional contingent cash payments totaling up to $87.5 million based on the achievement of certain revenue and operating results milestones as follows:

(in thousands)	Contingent Cash Payments
2020	**$ 55,020**
2021	**5,900**
2022	**26,550**
	$ 87,470

Of the $87.5 million total contingent obligation as discussed further in Note 9 "Financial Instruments and Fair Value Measurements," we have assessed the fair value at June 30, 2020 to be $83.5 million, of which $60.7 million is included in accrued and other current liabilities and $22.8 million is included in other long-term liabilities in the accompanying condensed consolidated balance sheet.

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 $3.6 million and $3.1 million as of June 30, 2020 and December 31, 2019, 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, 2020, 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.

Litigation accruals recorded in accrued and other current liabilities totaled $0.8 million as of both June 30, 2020 and December 31, 2019. The estimated amount of a range of possible losses as of June 30, 2020, is between $0.3 million and $1.7 million. During the six-month period ended June 30, 2020, no payments related to previous matters were made. Based on the facts known to QIAGEN and after consultation with legal counsel, management believes that such litigation will not have a material adverse effect on our financial position or results of operations above the amounts accrued. However, the outcome of these matters is ultimately uncertain, thus any settlements or judgments against us in excess of management's expectations could have a material adverse effect on our financial position, results of operations or cash flows.

16. 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. Shares are issued on the vesting dates net of the applicable statutory tax withholding to be paid by us on behalf of our employees. As a result, fewer shares are issued than the number of stock units outstanding. We record a liability for the tax withholding to be paid by us as a reduction to treasury shares.

During the three and three- and six-month periods ended June 30, 2020, we granted 24.0 thousand and 1.0 million stock awards compared to 0.4 million and 1.4 million stock awards granted for the three- and six-month periods ended June 30, 2019.

At June 30, 2020, there was $77.6 million remaining in unrecognized compensation expense, less estimated forfeitures, related to these awards which will be recognized over a weighted-average period of 2.71 years.

Share-Based Compensation Expense

Total share-based compensation expense decreased following the 2019 restructuring discussed in Note 4 "Restructuring and Impairments" and for the three- and six-month periods ended June 30, 2020 and 2019 was comprised of the following:

	Three months ended June 30,	
(in thousands)	**2020**	**2019**
Cost of sales	**$ 601**	$ 754
Research and development	**986**	1,608
Sales and marketing	**3,167**	3,120
General and administrative	**3,071**	6,929
Share-based compensation expense before taxes	**7,825**	12,411
Less: income tax benefit	**1,738**	2,571
Net share-based compensation expense	**$ 6,087**	$ 9,840

	Six months ended June 30,	
Compensation Expense (in thousands)	**2020**	**2019**
Cost of sales	**$ 1,242**	$ 1,559
Research and development	**2,701**	2,752
Sales and marketing	**6,052**	5,316
General and administrative	**6,509**	13,583
Share-based compensation expense before taxes	**16,504**	23,210
Less: income tax benefit	**3,581**	4,739
Net share-based compensation expense	**$ 12,923**	$ 18,471

No compensation cost was capitalized at June 30, 2020 or June 30, 2019 as the amounts were not material.

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 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, 2019 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. Digital insights 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 digital insights to analyze and interpret the data - to two major customer classes:

- **Molecular Diagnostics** - healthcare providers engaged in many aspects of patient care requiring accurate diagnosis and insights to guide treatment decisions in oncology, infectious diseases and immune monitoring. Includes Precision Medicine and companion diagnostics.
- **Life Sciences** - customers including government, biotechnology companies and researchers who utilize molecular testing and technologies who are generally served by public funding including areas such as medicine and clinical development efforts, forensics and exploring the secrets of life. Includes Pharma, Academia and Applied Testing customers.

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, 2020, we employed approximately 5,200 people in more than 35 locations worldwide.

The COVID-19 pandemic will continue to have a significant impact on QIAGEN in 2020. Extraordinary demand has emerged for molecular technologies involved in testing for the new pathogen. We expect a continuation of trends from the first six months of 2020 into the third and fourth quarters of the year. Sustained elevated demand for coronavirus test products is expected to more than offset weaker year-over-year sales trends in other areas of the portfolio, which are being adversely impacted by quarantines and lockdown actions in countries around the world.

The Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was enacted on March 27, 2020 in the United States. The CARES Act and related notices include several significant provisions, including delaying certain payroll tax payments, mandatory transition tax payments under the Tax Cuts and Jobs Act, and estimated income tax payments that we expect to defer to future periods. We do not currently expect the CARES Act to have a material impact on our financial results, including on our annual estimated effective tax rate, or on our liquidity. We will continue to monitor and assess the impact the CARES Act and similar legislation in other countries may have on our business and financial results.

Announced Merger with Thermo Fisher Scientific Inc.

On March 3, 2020, QIAGEN and Thermo Fisher Scientific Inc. (NYSE: TMO) announced that their boards of directors, as well as the Managing Board of QIAGEN N.V., unanimously approved Thermo Fisher's proposal to acquire QIAGEN for €39.00 per share in cash. On July 16, 2020, Thermo Fisher and QIAGEN entered into an amendment to the Business Combination Agreement dated as of March 3, 2020 whereby Quebec B.V., the wholly-owned subsidiary of Thermo Fisher making the public tender offer, will increase the cash consideration offered per QIAGEN share from €39.00 to €43.00, which represents a premium of approximately 35% to the closing price of QIAGEN's ordinary shares on the Frankfurt Prime Standard on March 2, 2020, the last trading day prior to the announcement of the acquisition agreement and Thermo Fisher's intention to commence the offer. The amendment also provides for a reduction of the minimum acceptance threshold from 75% to 66.67% of QIAGEN's issued and outstanding ordinary share capital at the end of the acceptance period on August 10, 2020, as well as a $95.0 million expense reimbursement payable by QIAGEN to Thermo Fisher if the minimum acceptance threshold is not met. The transaction is subject to the satisfaction of customary closing conditions, including the receipt of applicable regulatory approvals and completion of the tender offer.

Three- and Six- Month Periods Ended June 30, 2020 compared to Three- and Six- Month Periods Ended June 30, 2019

Net Sales

In the second quarter of 2020, net sales grew 16% to $443.3 million compared to $381.6 million in the second quarter of 2019, and was negatively impacted by approximately three percentage points from adverse currency movements against the U.S. dollar. We experienced increased demand for solutions used in the COVID-19 pandemic against weaker customer demand trends in other areas of the portfolio. Strong sales growth was seen in the instruments portfolio (+45% / 15% of sales) and was led by demand for the QIAsymphony automation system, the QIAstat-Dx syndromic testing instrument as well as the QIAcube family of sample processing instruments. Consumables and related revenues (+12% / 85% of sales) was led by the strong demand for COVID-19 solutions. Net sales grew 12% in the first half of 2020 to $815.3 million from $730.3 million in the year-ago period, and absorbed approximately two percentage points from adverse currency movements against the U.S. dollar.

	Second quarter 2020			First six months 2020		
Net sales by product category and customer class (in millions)	**Sales**	**% change**	**% of sales**	**Sales**	**% change**	**% of sales**
Consumables and related revenues	$375	+12%	85%	$701	+8%	86%
Instruments	$68	+45%	15%	$114	+38%	14%
Molecular Diagnostics (1)	$204	+9%	46%	$380	+7%	47%
Life Sciences	$239	+23%	54%	$435	+16%	53%
Academia / Applied Testing	*$164*	*+39%*	*37%*	*$287*	*+26%*	*35%*
Pharma	*$75*	*-1%*	*17%*	*$148*	*+1%*	*18%*

(1) Includes companion diagnostic co-development revenues (Q2 2020: $7 million, -31% and H1 2020: $14 million, -39%)
Percentage changes are calculated based on the comparative prior year period.

During the second quarter of 2020, Life Sciences sales grew 23% over the second quarter of 2019 and represented 54% of sales, reflecting the strong demand for COVID-19 solutions, while currency movements adversely impacted this customer class by two percentage points compared to the year-ago period. Academia/Applied Testing rose 39% in the second quarter of 2020 compared to the second quarter of 2019, with strong sales in all regions, in particular the EMEA and Asia-Pacific regions. Pharma experienced a 1% decline due in part to weaker sales in EMEA, while the Asia-Pacific / Japan region experienced strong growth. For the first six months of 2020, Life Science sales rose 16% and absorbed two percentage points of adverse currency movements compared to the same period in 2019.

Molecular Diagnostics experienced a 9% increase in sales for the second quarter of 2020 compared to the second quarter of 2019, absorbing three percentage points of adverse currency movements and representing 46% of total sales. Results for the second quarter of 2020 reflected continued strong demand for instruments and consumables, in particular sample preparation solutions used for RNA extraction in COVID-19 testing workflows, cartridges for QIAstat-Dx testing and enzymes sold to other suppliers for use in their own solutions. This more than offset lower sales of QuantiFERON-TB tests for latent tuberculosis (TB) detection that declined 46% compared to the second quarter of 2019 against headwinds in the United States and Europe due to reduced demand, but experienced accelerating trends in regions where quarantines and lockdown measures have been eased. For the first six months of 2020, Molecular Diagnostic sales increased 7% and were adversely affected by three percentage points from currency movements compared to the same period in 2019.

	Second quarter 2020			First six months 2020		
Net sales by geographic region (in millions)	**Sales**	**% change**	**% of sales**	**Sales**	**% change**	**% of sales**
Americas	$177	-2%	40%	$351	0%	43%
Europe / Middle East / Africa (EMEA)	$164	+40%	37%	$293	+29%	36%
Asia-Pacific / Japan	$99	+20%	23%	$168	+11%	21%

Q2 and H1 2020: Rest of world represented less than 1% of net sales. Percentage changes are calculated based on the comparative prior year period.

EMEA led the geographic regions with 40% sales growth in the second quarter of 2020 compared to the second quarter of 2019 due to strong performance in both product categories and across both customer classes. For the first six months of 2020, the EMEA region experienced a 29% increase compared to the first six months of 2019. This region was negatively impacted by four percentage points of currency movements compared to both the second quarter and first six months of 2019. The Asia-Pacific / Japan region experienced continued gains in many countries and improving second quarter trends in China that resulted in 20% growth during the second quarter compared to the second quarter of 2019 while this region grew 11% for the first six months of 2020 compared to the first six months of 2019. The Asia-Pacific / Japan region was negatively impacted by three percentage points of currency movements compared to both the second quarter and six-month periods of 2019. The Americas region experienced a 2% decline against headwinds from decreased demand of QuantiFERON-TB tests against gains in Life Sciences. For the first six months of 2020, the Americas region was flat compared to the first six months of 2019.

Gross Profit

Gross profit was $295.0 million (67% of net sales) for the three-month period ended June 30, 2020, as compared to $245.9 million (64% of net sales) in the same period in 2019. Gross profit for the six-month period ended June 30, 2020 was $538.5 million (66% of net sales) as compared to $470.8 million (64% of net sales) for the same period of 2019. Generally, our consumables and related products have a higher gross margin than our instrumentation products and service arrangements and fluctuations in the sales levels of these products and services can result in fluctuations in gross margin between periods. Gross profit in the three and six months ended June 30, 2020 include the adverse impacts of lower sales of QuantiFERON-TB tests and the shift in product mix where lower margin instrument products advanced at a faster pace than consumable products. These adverse impacts were more than offset by lower amortization expense related to developed technology and patent and license rights, which have been acquired in business combinations, which is included in cost of sales.

In the second quarter of 2020, the amortization expense on acquisition-related intangibles within cost of sales decreased to $14.9 million compared to $19.7 million in the same period of 2019. For the six-month period ended June 30, 2020, the amortization expense on acquisition-related intangibles was $30.1 million compared to $37.2 million in the same period of 2019. The decrease follows the full amortization of assets previously acquired in 2007. Our acquisition-related intangible amortization will increase in the event of future acquisitions.

Research and Development

Research and development expenses decreased to $31.8 million (7% of net sales) in the second quarter of 2020, compared to $40.8 million (11% of net sales) in the same period in 2019. For the six-month period ended June 30, 2020, research and development expenses decreased by 18% to $66.6 million (8% of net sales) compared to $81.6 million (11% of net sales) for the same period in 2019. The overall decrease in research and development costs in 2020 is the result of the suspended development of NGS-related instrument systems in connection with the 2019 restructuring measures discussed in Note 4 "Restructuring and Impairments." In 2020, research and development costs include costs associated with QIAstat menu expansion as well as costs with the launch of digital PCR and QIAcuity. 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. Overall, 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

Sales and marketing expenses decreased to $94.4 million (21% of net sales) in the second quarter of 2020 from $100.7 million (26% of net sales) in the same period of 2019. For the six-month period ended June 30, 2020, sales and marketing expenses were $190.1 million (23% of net sales) compared to $196.6 million (27% of net sales) for the same period in 2019. Sales and marketing expenses are primarily associated with personnel, commissions, advertising, trade shows, publications, freight and logistics expenses, and other promotional expenses. The decreased sales and market expense reflects the limitations resulting from the COVID-19 pandemic, such as restricted travel and postponed trade shows and exhibits while cost for freight and commissions were higher due to higher sales. When pandemic lockdowns and restrictions are lifted, we anticipate that absolute sales and marketing costs will increase, along with increases related to new product introductions.

General and Administrative

General and administrative expenses were $23.9 million (5% of net sales) in the second quarter of 2020 as compared to $29.6 million (8% of net sales) in the second quarter of 2019. During the six-month period ended June 30, 2020, we recorded general and administrative expenses of $52.1 million (6% of net sales) compared to $58.2 million (8% of net sales) for the same period of 2019. The decreases in the three- and six-month periods ended June 30, 2020 reflect lower personnel costs, including share-based compensation, following the 2019 restructuring measures as well as lower costs as a result of COVID-19 protective measures, such as restricted travel.

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 and customer base 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.

We recorded amortization expense on acquisition-related intangibles within operating expense of $5.0 million during the quarter ended June 30, 2020 compared to $8.7 million for same period in 2019. We recorded amortization expense on acquisition-related intangibles within operating expense of $10.1 million during the six-month period ended June 30, 2020 compared to $18.0 million for the same period in 2019. The decrease follows the full amortization of assets previously acquired in 2007. Our acquisition-related intangible amortization will increase in the event of future acquisitions.

Restructuring, Acquisition, Integration and Other, net

Restructuring, acquisition, integration and other, net was expense of $21.1 million and $32.5 million during the three- and six-months ended June 30, 2020 as compared to $4.8 million and $13.7 million in the same periods of 2019. During the three- and six-months ended June 30, 2020, we incurred acquisition expenses of $17.2 million and $20.9 million, respectively, related to the announced acquisition by Thermo Fisher. As we continue the process of being acquired by Thermo Fisher, and as we further integrate acquired companies, we expect to incur additional acquisition and integration costs in 2020. During the three- and six-months ended June 30, 2020, we incurred $0.3 million and $1.3 million, respectively, of charges in connection with the 2019 restructuring measures as further discussed in Note 4 "Restructuring and Impairments".

Long-lived Asset Impairments

Impairments to intangible assets and property, plant and equipment during the three- and six-months ended June 30, 2020 totaled $0.1 million and $1.0 million, respectively, incurred in connection with the 2019 restructuring measures as further discussed in Note 4 "Restructuring and Impairments".

Other Expense, net

Total other expense, net was $9.9 million and $30.9 million in the three- and six-month periods ended June 30, 2020 compared to $8.4 million and $21.0 million in the same period in 2019. Total other expense, net is primarily the result of interest expense, partially offset by interest income and includes the impacts of other (expense) income, including impacts of foreign currency transactions.

Interest expense decreased to $17.4 million during the quarter ended June 30, 2020 compared to $18.2 million in the same period of 2019. During the six-month period ended June 30, 2020 and 2019, we recorded interest expense of $36.4 million and $38.6 million, respectively. Interest costs primarily relate to debt, discussed in Note 7 "Debt" in the accompanying notes to the condensed consolidated financial statements.

For the three-month periods ended June 30, 2020 and 2019, interest income was $3.5 million and $5.2 million, respectively. For the six-month period ended June 30, 2020, interest income decreased to $6.7 million from $13.3 million in the same period of 2019. Interest income primarily includes interest earned on cash and cash equivalents, short term investments, and income related to certain interest rate derivatives as discussed in Note 8 "Derivatives and Hedging" in the accompanying condensed consolidated financial statements. Interest income earned in 2019 included interest on higher cash balances following the issuance of cash convertible notes in November 2018.

For the three-month periods ended June 30, 2020 and 2019, other income, net was $4.0 million and $4.7 million, respectively. For the six-month period ended June 30, 2020, other expense, net was $1.2 million compared to other income, net of $4.3 million in the prior year.

For the three-month period ended June 30, 2020, other income, net includes unrealized gains of $0.8 million on investments and $1.1 million of equity method income as discussed further in Note 5 "Investments" as well as a $0.7 million gain recognized due to the early conversion of a portion of the 2021 Cash Convertible Notes further discussed in Note 7 "Debt". For the six-month period ended June 30, 2020, other expense, net includes $2.5 million of net losses on foreign currency transactions as well as the $2.3 million loss recognized upon the sale of an investment in equity securities discussed further in Note 5 partially offset by $2.7 million of equity method income.

Other income in 2019 primarily reflected the unrealized gains, net on investments as discussed further in Note 5, which totaled $3.5 million and $2.7 million for the three and six months ended June 30, 2019, respectively. In addition, we recognized equity method income of $1.2 million and $1.6 million during the three- and six-month periods of 2019, respectively.

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 statutory tax rates ranging from zero to 35%. 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. Additionally, we record partial tax exemptions on foreign income primarily derived from operations in Germany, Singapore, Luxembourg, Ireland, Dubai and Switzerland. These foreign tax benefits are due to a combination of favorable tax laws, rules, rulings, and exemptions in these jurisdictions, including intercompany foreign royalty income in Germany which is statutorily exempt from trade tax. Further, we have intercompany financing arrangements through Luxembourg, Dubai and Ireland in which the intercompany income is partially exempt. In the second quarters of 2020 and 2019, our effective tax rates were 17.5% and 13.7%, respectively. In the six-month periods ended June 30, 2020 and 2019, the effective tax rates were 16.4% and 7.5% respectively. The effective tax rate for the second quarter and first six months of 2020 was higher compared to the same periods of 2019 primarily due to higher operating income in 2020 in higher tax rate jurisdictions, including the U.S.

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 Annual Report on Form 20-F for the year ended December 31, 2019.

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, 2020 and December 31, 2019, we had cash and cash equivalents of $688.3 million and $623.6 million, respectively, and restricted cash of $3.9 million and $5.7 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, 2020, cash, cash equivalents and restricted cash had increased by $62.8 million from December 31, 2019, due to cash provided by operating activities of $150.6 million, partially offset by cash used in investing activities of $66.9 million and cash used in financing activities of $16.4 million. As of June 30, 2020 and December 31, 2019, we had working capital of $678.9 million and $618.9 million, respectively.

Operating Activities. For the six months ended June 30, 2020 and June 30, 2019, we generated net cash from operating activities of $150.6 million and $127.2 million, respectively. While net income was $129.6 million for the six months ended June 30, 2020, non-cash components in income included $97.0 million of depreciation and amortization, $1.0 million of non-cash impairments primarily recorded in connection with the restructuring discussed in Note 4 "Restructuring and Impairments", $20.1 million of amortization of debt discount and issuance costs and $16.5 million of share-based compensation expense. Operating cash flows include a net decrease in working capital of $117.7 million excluding changes in fair values of derivative instruments. The current period change in working capital is primarily due to decreased accrued and other liabilities following cash payments made in connection with the 2019 restructuring measures, increased inventories and prepaid expenses and other current assets, which were partially offset by increased accruals for income taxes compared to the prior period. 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 $66.9 million of cash was used in investing activities during the six months ended June 30, 2020 compared to cash used in investing activities of $128.4 million for the same period in June 30, 2019. Cash used in investing activities during the six months ended June 30, 2020 includes $98.2 million from redemptions of short-term investments which were more than offset by $24.9 million for purchases of short-term investments, $50.2 million paid for purchases of property, plant and equipment and $99.7 million paid for intangible assets. Cash used in investing activities during the six months ended June 30, 2019 includes $134.4 million paid for intangible assets primarily related to the asset acquisition from Formulatrix and $24.4 million cash paid for the acquisition of N-of-One, net of cash acquired as both further discussed in Note 3 "Acquisitions and Divestitures".

Financing Activities. Financing activities used $16.4 million of cash for the six months ended June 30, 2020, primarily due to payment of $34.1 million in total upon early conversion of a portion of the 2021 Notes and $6.4 million paid in connection with net shares settlement for tax withholding related to the vesting of stock awards, which was partially offset by $20.2 million of cash received for collateral liabilities. This compares to cash used in financing activities of $534.1 million for the six months ended June 30, 2019 primarily for of $433.4 million repayment of long-term debt as further discussed in Note 7 "Debt" and the purchase of treasury shares totaling $74.4 million as further discussed in Note 12 "Equity".

Other Factors Affecting Liquidity and Capital Resources

In November 2018, we issued $500.0 million aggregate principal amount of Cash Convertible Senior Notes which is due in 2024 (2024 Notes), which are discussed fully in Note 7 "Debt". Interest on the 2024 Notes is payable semiannually in arrears at a rate of 1.000% per annum. The 2024 Notes will mature on November 13, 2024 unless repurchased or converted in accordance with their terms prior to such date.

In September 2017, we issued $400.0 million aggregate principal amount of Cash Convertible Senior Notes which are due in 2023 (2023 Notes), which are discussed fully in Note 7 "Debt." Interest on the 2023 Notes is payable semiannually in arrears at a rate of 0.500% per annum. The 2023 Notes will mature on September 13, 2023 unless repurchased or converted in accordance with their terms prior to such date.

Additionally in 2017, we completed a German private placement of $329.9 million, net of issuance costs, 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 as described in Note 7 "Debt."

In October 2016, we extended the maturity of our €400 million syndicated revolving credit facility, which now has a contractual lifetime until December 2021 of which no amounts were utilized at June 30, 2020. The facility can be utilized in Euro, British pounds sterling, Swiss franc or U.S. dollar and bears interest of 0.40% 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 or six months. We have additional credit lines totaling €26.6 million with no expiration date, none of which were utilized as of June 30, 2020.

In March 2014, we issued $730.0 million aggregate principal amount of Cash Convertible Senior Notes of which $433.4 million was paid in 2019, $23.0 million was paid in 2020 and $273.6 million is due in 2021 (2021 Notes). Interest on the 2021 Notes is payable semiannually in arrears on September 19 of each year, at a rate of 0.875% per annum commencing on September 19, 2014. The 2021 Notes will mature on March 19, 2021, unless repurchased or converted in accordance with their terms prior to such date.

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 and paid 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%).

As of June 30, 2020, we carry $1.7 billion of long-term debt, of which $305.8 million is current, and $52.7 million of operating lease liabilities, of which $18.2 million is current. We did not hold any material finance leases as of June 30, 2020.

In connection with certain acquisitions, we could be required to make additional contingent cash payments totaling up to $87.5 million based on the achievement of certain revenue and operating results milestones as further discussed in Note 15 "Commitments and Contingencies."

In January 2018, we announced our fifth share repurchase program of up to $200 million of our common shares. During the three- and six-month periods ended June 30, 2019, we repurchased 0.8 million and 2.0 million QIAGEN shares, respectively for $30.0 million and $74.4 million (including transaction costs), respectively, bringing the total shares repurchased under this program to 4.9 million for $179.1 million (including transaction costs). This program ended on June 30, 2019. Repurchased shares will be held in treasury in order to satisfy various obligations, which include employee share-based remuneration plans.

On May 6, 2019, we announced our sixth share repurchase program of up to $100 million of our common shares. No shares were repurchased under this program. We do not currently anticipate repurchasing any common shares under this program due to the announced Thermo Fisher merger transaction discussed in Note 1 "Corporate Information."

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 or debt financing.

We believe that funds from operations, existing cash and cash equivalents 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. The recent outbreak of COVID-19 continues to impact the global economy and markets. At this time, the impact of the outbreak on our business has been mixed as production at our plants is uninterrupted and supply chains and distribution channels are intact yet our production is focused on those products most needed to fight the outbreak. At present, our liquidity remains healthy. However, going forward the COVID-19 outbreak may negatively impact, amongst other things, our supply chain, workforce, operations of our plants, and market demand and liquidity. 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 strategy 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, 2019.

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, 2020 resulted in net losses of $0.2 million and $2.5 million, respectively, and $2.0 million and $3.5 million in the same periods ended 2019, respectively are included in other expense, 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 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. We manage our balance sheet exposure on a group-wide basis primarily using foreign exchange forward contracts, options and cross-currency swaps.

Interest Rate Derivatives. We are using interest rate derivatives to align our portfolio of interest bearing assets and liabilities with our risk management objectives. We have entered into interest rate swaps in which we agreed to exchange, at specified intervals, the difference between fixed and floating interest amounts calculated by reference to an agreed-upon notional principal amount.

We also make use of economic hedges. Further details of our derivative and hedging activities can be found in Note 8 "Derivatives and Hedging" to the accompanying condensed consolidated financial statements.

Recent Authoritative Pronouncements

For information on recent accounting pronouncements impacting our business, see Note 2 "Basis of Presentation and Accounting Policies" in 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. While the COVID-19 pandemic presents additional uncertainty, we continue to use the best information available to form our estimates. Our critical accounting policies are those related to revenue recognition, income taxes, investments, goodwill and other intangible assets, acquisitions 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, 2019. Actual results in these areas could differ from management's estimates.

Off-Balance Sheet Arrangements

We did not use special purpose entities and did not have off-balance-sheet financing arrangements as of June 30, 2020 and December 31, 2019.

Contractual Obligations

Aside from the Company's commitment to pay an expense reimbursement fee of $95.0 million to Thermo Fisher if the minimum acceptance threshold for the tender offer is not met as discussed in Note 1 "Corporate Information" and the potential break up fee of $12.9 million that could become due in connection with the termination of the merger agreement with NeuMoDx discussed in Note 5 "Investments", there were no other material changes at June 30, 2020 from the contractual obligations disclosed in Item 5 of our Annual Report on Form 20-F for the year ended December 31, 2019.

Legal Proceedings

For information on legal proceedings, see Note 15 "Commitments and Contingencies" to the accompanying condensed consolidated financial statements.

While no assurances can be given regarding the outcome of the proceedings described in Note 15, 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 Annual Report on Form 20-F for the year ended December 31, 2019. There have been no material changes from the risk factors disclosed in Item 3 of our Form 20-F.