
**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 March 31, 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 months ended March 31, 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: May 7, 2020

EXHIBIT INDEX

Exhibit No.	Exhibit
99.1	U.S. GAAP Quarterly Report for the Period Ended March 31, 2020

QIAGEN N.V. AND SUBSIDIARIES

U.S. GAAP QUARTERLY REPORT FOR THE PERIOD ENDED MARCH 31, 2020

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

	Note	March 31, 2020 (unaudited)	December 31, 2019
Assets			
Current assets:			
Cash and cash equivalents		\$ 656,819	\$ 623,647
Restricted cash		4,957	5,743
Short-term investments		87,865	129,586
Accounts receivable, net of allowance of \$23,101 and \$12,115 in 2020 and 2019, respectively		362,048	385,117
Income taxes receivable		33,016	42,119
Inventories, net	(11)	169,340	170,704
Fair value of derivative instruments - current	(8)	153,277	107,868
Prepaid expenses and other current assets (of which \$19,660 and \$13,697 in 2020 and 2019 due from related parties, respectively)	(8)	112,603	105,464
Total current assets		1,579,925	1,570,248
Long-term assets:			
Property, plant and equipment, net of accumulated depreciation of \$555,688 and \$699,130 in 2020 and 2019, respectively		450,701	455,243
Goodwill	(6)	2,102,844	2,140,503
Intangible assets, net of accumulated amortization of \$697,900 and \$776,520 in 2020 and 2019, respectively	(6)	603,690	632,434
Deferred income tax assets		61,415	56,542
Fair value of derivative instruments - long-term	(8)	203,636	192,266
Other long-term assets (of which \$15,857 and \$16,830 in 2020 and 2019 due from related parties, respectively)	(5)	178,741	188,380
Total long-term assets		3,601,027	3,665,368
Total assets		\$ 5,180,952	\$ 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	March 31, 2020 (unaudited)	December 31, 2019
Liabilities and equity			
Current liabilities:			
Current portion of long-term debt	(7)	\$ 325,291	\$ 285,244
Accrued and other current liabilities (of which \$1,975 and \$15,404 in 2020 and 2019 due to related parties, respectively)	(8, 9, 13)	400,841	444,303
Fair value of derivative instruments - current	(8)	158,864	103,175
Accounts payable		71,139	84,767
Income taxes payable		41,060	33,856
Total current liabilities		997,195	951,345
Long-term liabilities:			
Long-term debt, net of current portion	(7)	1,387,316	1,421,108
Fair value of derivative instruments - long-term	(8)	187,262	196,929
Other long-term liabilities	(9)	95,585	106,201
Deferred income tax liabilities		21,979	23,442
Total long-term liabilities		1,692,142	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)	1,785,696	1,777,017
Retained earnings		1,187,644	1,178,457
Accumulated other comprehensive loss	(12)	(387,529)	(309,619)
Less treasury shares at cost— 2,666 and 3,077 shares in 2020 and 2019, respectively	(12)	(96,898)	(111,966)
Total equity		2,491,615	2,536,591
Total liabilities and equity		\$ 5,180,952	\$ 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 March 31,	
		2020	2019
(unaudited)			
Net sales	(13)	\$ 372,097	\$ 348,654
Cost of sales:			
Cost of sales		113,447	106,336
Acquisition-related intangible amortization		15,112	17,478
Total cost of sales		<u>128,559</u>	<u>123,814</u>
Gross profit		<u>243,538</u>	224,840
Operating expenses:			
Research and development		34,813	40,788
Sales and marketing		95,757	95,886
General and administrative		28,194	28,636
Acquisition-related intangible amortization		5,090	9,326
Restructuring, acquisition, integration and other, net	(4)	11,412	8,938
Long-lived asset impairments	(4)	958	114
Total operating expenses		<u>176,224</u>	<u>183,688</u>
Income from operations		<u>67,314</u>	41,152
Other income (expense):			
Interest income		3,184	8,088
Interest expense		(18,922)	(20,390)
Other expense, net		(5,247)	(392)
Total other expense, net		<u>(20,985)</u>	<u>(12,694)</u>
Income before income taxes		46,329	28,458
Income tax expense (benefit)		6,500	(1,062)
Net income		<u>\$ 39,829</u>	<u>\$ 29,520</u>
Basic earnings per common share		<u>\$ 0.17</u>	<u>\$ 0.13</u>
Diluted earnings per common share		<u>\$ 0.17</u>	<u>\$ 0.13</u>
Weighted-average shares outstanding			
Basic		228,008	226,170
Diluted		232,211	233,607

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

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

	Note	Three months ended	
		March 31,	
		2020	2019
		(unaudited)	
Net income		\$ 39,829	\$ 29,520
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:			
Gains on cash flow hedges, before tax	(8)	18,854	5,677
Reclassification adjustments on cash flow hedges, before tax	(8)	(5,004)	(3,870)
Cash flow hedges, before tax		13,850	1,807
Net investment hedge	(8)	7,071	5,479
Foreign currency translation adjustments, before tax		(96,289)	(15,048)
Other comprehensive loss, before tax		(75,368)	(7,762)
Income tax relating to components of other comprehensive (loss) income		(2,542)	(198)
Total other comprehensive loss, after tax		(77,910)	(7,960)
Comprehensive (loss) income		<u>\$ (38,081)</u>	<u>\$ 21,560</u>

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)

(unaudited)	Note	Common Shares				Accumulated Other Comprehensive Loss	Treasury Shares		Total Equity
		Shares	Amount	Additional Paid-In Capital	Retained Earnings		Shares	Amount	
Balance at December 31, 2019		<u>230,829</u>	<u>\$ 2,702</u>	<u>\$ 1,777,017</u>	<u>\$ 1,178,457</u>	<u>\$ (309,619)</u>	<u>(3,077)</u>	<u>\$ (111,966)</u>	<u>\$ 2,536,591</u>
ASC 326 impact of change in accounting policy	(2)	—	—	—	(15,074)	—	—	—	(15,074)
Net Income		—	—	—	39,829	—	—	—	39,829
Unrealized gain, net on hedging contracts	(8)	—	—	—	—	21,833	—	—	21,833
Realized gain, net on hedging contracts	(8)	—	—	—	—	(3,918)	—	—	(3,918)
Translation adjustment, net	(12)	—	—	—	—	(95,825)	—	—	(95,825)
Issuance of common shares in connection with stock plan		—	—	—	(15,568)	—	564	20,680	5,112
Tax withholding related to vesting of stock awards	(16)	—	—	—	—	—	(153)	(5,612)	(5,612)
Share-based compensation	(16)	—	—	8,679	—	—	—	—	8,679
Balance at March 31, 2020		<u>230,829</u>	<u>\$ 2,702</u>	<u>\$ 1,785,696</u>	<u>\$ 1,187,644</u>	<u>\$ (387,529)</u>	<u>(2,666)</u>	<u>\$ (96,898)</u>	<u>\$ 2,491,615</u>
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		—	—	—	29,520	—	—	—	29,520
Conversion of warrants		—	—	(30,805)	(37,249)	—	2,037	68,050	(4)
Unrealized gain, net on hedging contracts	(8)	—	—	—	—	9,737	—	—	9,737
Realized gain, net on hedging contracts	(8)	—	—	—	—	(2,903)	—	—	(2,903)
Translation adjustment, net	(12)	—	—	—	—	(14,794)	—	—	(14,794)
Purchase of treasury shares	(12)	—	—	—	—	—	(1,196)	(44,373)	(44,373)
Issuance of common shares in connection with stock plan		—	—	—	(29,170)	—	1,057	29,741	571
Tax withholding related to vesting stock awards	(16)	—	—	—	—	—	(441)	(17,151)	(17,151)
Share-based compensation	(16)	—	—	10,799	—	—	—	—	10,799
Balance at March 31, 2019		<u>230,829</u>	<u>\$ 2,702</u>	<u>\$ 1,722,185</u>	<u>\$ 1,342,409</u>	<u>\$ (318,604)</u>	<u>(3,863)</u>	<u>\$ (142,636)</u>	<u>\$ 2,606,056</u>

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	Three months ended March 31,	
		2020	2019
(unaudited)			
Cash flows from operating activities:			
Net income		\$ 39,829	\$ 29,520
Adjustments to reconcile net income to net cash provided by operating activities, net of effects of businesses acquired:			
Depreciation and amortization		48,476	59,260
Non-cash impairments	(4, 5)	958	114
Amortization of debt discount and issuance costs	(7)	9,723	12,117
Share-based compensation expense	(16)	8,679	10,800
Deferred income tax (benefit) expense		(5,336)	(1,067)
Loss on marketable securities		—	855
Loss on sale of investment		2,250	—
Other items, net including fair value changes in derivatives		9,251	(1,268)
Net changes in operating assets and liabilities:			
Accounts receivable		103	6,983
Inventories		(12,671)	(10,391)
Prepaid expenses and other current assets		(25,426)	(3,512)
Other long-term assets		1,491	1,321
Accounts payable		(12,021)	(5,315)
Accrued and other current liabilities		(67,623)	(35,135)
Income taxes		16,929	(16,466)
Other long-term liabilities		1,301	(3,082)
Net cash provided by operating activities		<u>15,913</u>	<u>44,734</u>
Cash flows from investing activities:			
Purchases of property, plant and equipment		(19,999)	(23,409)
Purchases of intangible assets	(6)	(7,927)	(129,379)
Returns (purchases) of investments, net		62	(4,296)
Cash paid for acquisitions, net of cash acquired	(3)	(133)	(24,371)
Purchases of short-term investments		(24,877)	—
Proceeds from redemptions of short-term investments		65,000	5,239
Cash (paid) received for collateral asset		(1,017)	5,610
Other investing activities		2,010	10
Net cash provided by (used in) investing activities		<u>13,119</u>	<u>(170,596)</u>
Cash flows from financing activities:			
Proceeds from exercise of call option related to cash convertible notes		—	133,665
Payment of intrinsic value of cash convertible notes		—	(133,763)
Repayment of long-term debt	(7)	—	(433,400)
Proceeds from issuance of common shares		5,112	571
Tax withholding related to vesting of stock awards	(16)	(5,933)	(2,307)
Purchase of treasury shares	(12)	—	(44,373)
Cash received for collateral liability		10,207	53
Other financing activities		—	(850)
Net cash provided by (used in) financing activities		<u>9,386</u>	<u>(480,404)</u>
Effect of exchange rate changes on cash, cash equivalents and restricted cash		<u>(6,032)</u>	<u>44</u>
Net increase (decrease) in cash, cash equivalents and restricted cash		<u>32,386</u>	<u>(606,222)</u>
Cash, cash equivalents and restricted cash, beginning of period		<u>629,390</u>	<u>1,159,079</u>
Cash, cash equivalents and restricted cash, end of period		<u>\$ 661,776</u>	<u>\$ 552,857</u>

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

QIAGEN N.V. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

1. Corporate Information

QIAGEN N.V. is a public limited liability company ('naamloze vennootschap') under Dutch law with 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 5,100 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 per share in cash. The transaction values QIAGEN at approximately \$11.5 billion (at March 3, 2020 exchange rates), which includes the assumption of approximately \$1.4 billion of net debt. The transaction is subject to the satisfaction of customary closing conditions, including the receipt of applicable regulatory approvals, the adoption of certain resolutions relating to the transaction at an Extraordinary General Meeting of QIAGEN's shareholders, and completion of the tender offer.

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 three months ended March 31, 2020 are as follows:

(in thousands)	2020
Balance at beginning of year	\$ 12,115
ASC 326 adoption impact	8,089
Additions charged to expense	3,589
Deductions from allowance	(421)
Currency translation adjustments and other	(271)
Balance at end of period	\$ 23,101

For the three months ended March 31, 2020, we recorded an increase in the allowance for expected credit losses of \$3.6 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 included in prepaid expenses and other current assets and \$1.3 million for loan receivables included in other long-term assets in the accompanying condensed consolidated balance sheet as of March 31, 2020. 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 in current GAAP 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.

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.

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. We intend to adopt the ASU on the effective date of January 1, 2021 and are evaluating the potential impact ASU 2020-01 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 are 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 and will pay future milestone payments of \$135.9 million in 2020. As of March 31, 2020, \$135.4 million is included in accrued and other current liabilities in the accompanying consolidated balance sheet for the present value of the future expected payments. In April 2020, \$80.9 million was paid based on milestones achievements.

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 three months ended March 31, 2020 and cumulative program charges since September 30, 2019.

Consolidated Statement of Income Classification and Type of Charge (in thousands)	Three months ended March 31, 2020	Cumulative charges since September 30, 2019
Restructuring, acquisition, integration and other, net		
Personnel related ⁽¹⁾	\$ 645	\$ 71,223
Contract termination costs ⁽¹⁾	(104)	41,995
Consulting fees	975	11,125
Accounts receivable ⁽²⁾	(517)	10,308
Inventories	29	12,365
Prepaid expenses and other assets ⁽²⁾	36	17,048
	1,064	164,064
Long-lived asset impairments		
Property, plant and equipment	958	99,430
Intangible assets	—	40,301
	958	139,731
Other (expense) income, net		
Equity method investment impairment	—	4,799
	—	4,799
Total	\$ 2,022	\$ 308,594

(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, \$23.6 million and \$60.2 million are accrued as of March 31, 2020 and December 31, 2019, respectively, in accrued and other current liabilities in the accompanying condensed consolidated balance sheet 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	<u>\$ 27,999</u>	<u>\$ 24,298</u>	<u>\$ 7,935</u>	<u>\$ 60,232</u>
Additional costs in 2020	2,087	152	1,016	3,255
Release of excess accrual	(1,442)	(256)	(41)	(1,739)
Payments	(11,909)	(17,234)	(8,126)	(37,269)
Foreign currency translation adjustment	(585)	(295)	(35)	(915)
Liability at March 31, 2020	<u>\$ 16,150</u>	<u>\$ 6,665</u>	<u>\$ 749</u>	<u>\$ 23,564</u>

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 March 31, 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	\$ 216	\$ 271	\$ 339
Total cumulative unrealized gain (loss)	\$ 216	\$ (1,729)	\$ 339

(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 was recorded as a gain in other expense, net. 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 March 31, 2020 and 2019, losses recognized for the change in fair market value of all marketable equity securities totaled \$0.3 million and \$0.1 million, respectively, recognized in other expense, 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 March 31, 2020, we had total non-marketable investments that were accounted for as equity method investments of \$10.9 million, of which \$11.6 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 March 31, 2020, these investments had a total carrying value representing our maximum exposure to loss totaled \$1.7 million, of which \$2.5 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 March 31, 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 \$68.3 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 March 31, 2020 and December 31, 2019.

The changes in non-marketable investments not accounted for under the equity method during the three months ended March 31, 2020 and 2019 are as follows:

(in thousands)	2020	2019
Balance at beginning of year	\$ 70,849	\$ 59,484
Cash investments in equity securities	112	4,296
Sale of equity securities	(250)	—
Loss on sale of equity securities	(2,250)	—
Foreign currency translation adjustments	(159)	(54)
Balance at end of period	<u>\$ 68,302</u>	<u>\$ 63,726</u>

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 statements of income for the three months ended March 31, 2020. Also, we made additional investments of \$0.1 million in non-marketable investments not accounted for under the equity method during the three months ended March 31, 2020. During the three months ended March 31, 2019, we made additional investments of \$4.3 million in non-marketable investments not accounted for under the equity method.

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 March 31, 2020 and December 31, 2019:

(in thousands)	March 31, 2020		December 31, 2019	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortized Intangible Assets:				
Patent and license rights	\$ 264,668	\$ (163,030)	\$ 320,406	\$ (216,554)
Developed technology	724,970	(321,956)	766,966	(346,085)
Customer base, non-compete agreements and trademarks	305,240	(212,914)	314,638	(213,881)
	<u>\$ 1,294,878</u>	<u>\$ (697,900)</u>	<u>\$ 1,402,010</u>	<u>\$ (776,520)</u>
Unamortized Intangible Assets:				
In-process research and development	\$ 6,712		\$ 6,944	
Goodwill	2,102,844		2,140,503	
	<u>\$ 2,109,556</u>		<u>\$ 2,147,447</u>	

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
Additions	5,126	—
Amortization	(24,307)	—
Disposals	(243)	—
Foreign currency translation adjustments	(9,320)	(37,659)
Balance at March 31, 2020	\$ 603,690	\$ 2,102,844

Cash paid for purchases of intangible assets during the three months ended March 31, 2020 totaled \$7.9 million, of which \$5.1 million relates to current period cash payments for intangible assets, \$2.5 million is related to current year payments for licenses 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.

The changes in the carrying amount of goodwill for the three months ended March 31, 2020 resulted from changes in foreign currency translation.

For the three-month periods ended March 31, 2020 and 2019, amortization expense on intangible assets totaled approximately \$24.3 million and \$32.6 million, respectively. Amortization of intangibles for the next five years is expected to be approximately:

Year	Annual Amortization (in millions)
2021	\$ 87.0
2022	\$ 74.9
2023	\$ 72.7
2024	\$ 68.7
2025	\$ 57.4

7. Debt

Our credit facilities available and undrawn at March 31, 2020 total €426.6 million (approximately \$467.4 million). This includes a €400.0 million syndicated multi-currency revolving credit facility expiring December 2021 of which no amounts were utilized at March 31, 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 March 31, 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 March 31, 2020. The credit facilities are for general corporate purposes.

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 March 31, 2020 and December 31, 2019, total current long-term debt, net of debt issuance costs of \$10.0 million and \$10.8 million, respectively, consists of the following:

(in thousands)	March 31, 2020	December 31, 2019
0.875% Senior Unsecured Cash Convertible Notes due 2021	\$ 287,531	\$ 285,244
0.500% Senior Unsecured Cash Convertible Notes due 2023	351,273	347,995
1.000% Senior Unsecured Cash Convertible Notes due 2024	417,256	413,272
3.75% Series B Senior Notes due October 16, 2022	305,776	302,040
3.90% Series C Senior Notes due October 16, 2024	26,947	26,944
German Private Placement (Schuldschein)	323,824	330,857
Total long-term debt	\$ 1,712,607	\$ 1,706,352
Less: current portion	325,291	285,244
Long-term portion	<u>\$ 1,387,316</u>	<u>\$ 1,421,108</u>

At March 31, 2020, the \$325.3 million current portion of long-term debt includes the \$287.5 million 2021 Cash Convertible Notes (2021 Notes) and \$37.8 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.

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 the net cost of the Call Spread Overlay described below and transaction costs paid.

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 the net cost of the Call Spread Overlay described below and transaction costs paid through March 31, 2020.

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.

Beginning on January 1, 2020 and ending at the close of business on March 31, 2020 and beginning on April 1, 2020 and ending at the close of business on June 30, 2020, the 2021 Notes became convertible pursuant to the indenture. The 2021 Notes became 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. On March 30, 2020, we received a notice of conversion for \$23.0 million of the 2021 Notes with conversion expected during the second quarter. The total number of common shares issued in connection with the conversion of warrants will be calculated based on the terms and conditions of conversion based on the notice received.

No Contingent Conversion Conditions were triggered for the 2023 Notes and 2024 Notes as of March 31, 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 in transaction costs for the 2023 Notes. For the 2024 Notes, we incurred \$5.7 million transaction costs of which \$0.2 million remained accrued as of March 31, 2020. 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 months ended March 31, 2020 and 2019 was comprised of the following:

(in thousands)	Three months ended	
	March 31,	
	2020	2019
Coupon interest	\$ 2,399	\$ 2,760
Amortization of original issuance discount	8,873	10,909
Amortization of debt issuance costs	677	1,015
Total interest expense related to the Cash Convertible Notes	\$ 11,949	\$ 14,684

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 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. Issuance costs incurred in connection with the Warrant and the Call Option were \$0.3 million and \$0.1 million respectively.

In November 2018, we used \$97.3 million of the proceeds from the 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. Issuance costs incurred in connection with the Warrant and the Call Option were \$0.5 million and \$0.5 million respectively, of which \$48 thousand remained accrued as of March 31, 2020.

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 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 March 31, 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 March 31, 2020 totaled \$6.7 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 March 31, 2020 and December 31, 2019 is as follows:

Currency	Notional Amount	Interest Rate	Maturity	Carrying Value (in thousands) as of	
				March 31, 2020	December 31, 2019
EUR	€11.5 million	Fixed 0.4%	March 2021	\$ 12,587	\$ 12,905
EUR	€23.0 million	Floating EURIBOR + 0.4%	March 2021	25,173	25,811
EUR	€21.5 million	Fixed 0.68%	October 2022	23,517	24,112
EUR	€64.5 million	Floating EURIBOR + 0.5%	October 2022	70,550	72,335
USD	\$45.0 million	Floating LIBOR + 1.2%	October 2022	44,926	44,919
EUR	€25.0 million	Floating EURIBOR + 0.5%	October 2022	27,356	28,026
EUR	€64.0 million	Fixed 1.09%	June 2024	69,974	71,747
EUR	€31.0 million	Floating EURIBOR + 0.7%	June 2024	33,894	34,753
EUR	€14.5 million	Fixed 1.61%	June 2027	15,847	16,249
				\$ 323,824	\$ 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 March 31, 2020, cash collateral positions consisted of \$11.6 million recorded in accrued and other current liabilities and \$3.7 million recorded in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheets. 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 \$6.7 million as of March 31, 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 March 31, 2020 and December 31, 2019.

Derivatives Designated as Hedging Instruments

Cash Flow Hedges

As of March 31, 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 March 31, 2020, we expect approximately \$9.0 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 March 31, 2020 and December 31, 2019, interest receivables of \$0.5 million and \$1.5 million, respectively are recorded in prepaid expenses and other current assets in the accompanying consolidated balance sheets.

Fair Value Hedges

As of March 31, 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 March 31, 2020 and December 31, 2019, an interest receivable of \$0.9 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. The embedded conversion option within the convertible note is 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 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".

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 March 31, 2020 and December 31, 2019, aggregate notional values of \$404.3 million and \$701.4 million, respectively which expire at various dates through May 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 March 31, 2020 and December 31, 2019:

(in thousands)	As of March 31, 2020		As of December 31, 2019	
	Current Asset	Long-Term Asset	Current Asset	Long-Term Asset
Assets:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge ⁽¹⁾	\$ —	\$ 12,827	\$ —	\$ —
Interest rate contracts - fair value hedge ⁽¹⁾	—	6,172	—	2,474
Total derivative instruments designated as hedges	\$ —	\$ 18,999	\$ —	\$ 2,474
Undesignated derivative instruments				
Call options	\$ 149,483	\$ 184,637	\$ 101,179	\$ 189,792
Foreign exchange contracts	3,794	—	6,689	—
Total undesignated derivative instruments	\$ 153,277	\$ 184,637	\$ 107,868	\$ 189,792
Total Derivative Assets	\$ 153,277	\$ 203,636	\$ 107,868	\$ 192,266

(in thousands)	As of March 31, 2020		As of December 31, 2019	
	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	\$ (150,076)	\$ (187,262)	\$ (101,361)	\$ (190,902)
Foreign exchange contracts	(8,788)	—	(1,814)	—
Total undesignated derivative instruments	\$ (158,864)	\$ (187,262)	\$ (103,175)	\$ (190,902)
Total Derivative Liabilities	\$ (158,864)	\$ (187,262)	\$ (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-month periods ended March 31, 2020 and 2019:

(in thousands)	Three months ended	
	March 31,	
	2020	2019
	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	\$ (5,247)	\$ (392)
Gains (Losses) on Derivatives in Cash Flow Hedges		
Interest rate contracts		
Amount of loss reclassified from accumulated other comprehensive income	\$ (5,004)	\$ (3,870)
Amounts excluded from effectiveness testing	—	—
Gains (Losses) on Derivatives in Fair Value Hedges		
Interest rate contracts		
Hedged item	(3,698)	(1,406)
Derivatives designated as hedging instruments	3,698	1,406
Gains (Losses) Derivatives Not Designated as Hedging Instruments		
Embedded conversion option	—	(258)
Call options	43,148	(6,426)
Cash convertible notes embedded cash conversion option	(45,075)	6,679
Foreign exchange contracts	(20,241)	960
Total losses	\$ (27,172)	\$ (2,915)

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 March 31, 2020 and December 31, 2019:

(in thousands)	Carrying Amount of the Hedged Assets (Liabilities)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of Hedged Assets (Liabilities)	
	March 31, 2020	December 31, 2019	March 31, 2020	December 31, 2019
	Long-term debt	\$ (133,005)	\$ (129,290)	\$ 6,172

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 in Level 1 and 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 three month period ending March 31, 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:

(in thousands)	As of March 31, 2020				As of December 31, 2019			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Short-term investments	\$ —	\$ 87,865	\$ —	\$ 87,865	\$ —	\$ 129,586	\$ —	\$ 129,586
Marketable equity securities	826	—	—	826	870	—	—	870
Non-marketable equity securities	—	—	68,302	68,302	—	—	70,849	70,849
Call option	—	334,120	—	334,120	—	290,971	—	290,971
Foreign exchange contracts	—	3,794	—	3,794	—	6,689	—	6,689
Interest rate contracts	—	18,999	—	18,999	—	2,474	—	2,474
	<u>\$ 826</u>	<u>\$ 444,778</u>	<u>\$ 68,302</u>	<u>\$ 513,906</u>	<u>\$ 870</u>	<u>\$ 429,720</u>	<u>\$ 70,849</u>	<u>\$ 501,439</u>
Liabilities:								
Foreign exchange contracts	\$ —	\$ (8,788)	\$ —	\$ (8,788)	\$ —	\$ (1,814)	\$ —	\$ (1,814)
Interest rate contracts	—	—	—	—	—	(6,027)	—	(6,027)
Cash conversion option	—	(337,338)	—	(337,338)	—	(292,263)	—	(292,263)
Contingent consideration	—	—	(164,020)	(164,020)	—	—	(162,160)	(162,160)
	<u>\$ —</u>	<u>\$(346,126)</u>	<u>\$(164,020)</u>	<u>\$(510,146)</u>	<u>\$ —</u>	<u>\$(300,104)</u>	<u>\$(162,160)</u>	<u>\$(462,264)</u>

Refer to Note 5 "Investments" for the change in non-marketable equity securities with Level 3 inputs during the three-month period ended March 31, 2020 and 2019. For contingent consideration liabilities with Level 3 inputs, the following table summarizes the activity for the three-month period ended March 31, 2020:

(in thousands)	2020
Balance at beginning of year	\$ (162,160)
Additions	(1,860)
Balance at end of period	<u>\$ (164,020)</u>

As of March 31, 2020, of the total \$164.0 million accrued for contingent consideration, \$149.1 million is included in accrued and other current liabilities and \$14.9 million is included in other long-term liabilities in the accompanying condensed consolidated balance sheet. For the three-month period ended March 31, 2020, the \$1.9 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.

(in thousands)	As of March 31, 2020			As of December 31, 2019		
	Carrying Amount	Level 1	Level 2	Carrying Amount	Level 1	Level 2
Long-term debt including current portion:						
Cash convertible notes	\$ 1,056,060	\$ 1,382,493	\$ —	\$ 1,046,511	\$ 1,296,334	\$ —
U.S. private placement	332,723	—	339,386	328,984	—	329,157
German private placement	323,824	—	327,577	330,857	—	334,371
	<u>\$ 1,712,607</u>	<u>\$ 1,382,493</u>	<u>\$ 666,963</u>	<u>\$ 1,706,352</u>	<u>\$ 1,296,334</u>	<u>\$ 663,528</u>

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-month periods ended March 31, 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 first quarters of 2020 and 2019, our effective tax rates were 14.0% and (3.7)%, respectively. The effective tax rate for the first quarter of 2020 was higher compared to the first quarter 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 March 31, 2020, our gross unrecognized tax benefits totaled approximately \$57.2 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 \$30.6 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 March 31, 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 March 31, 2020 and December 31, 2019:

(in thousands)	March 31, 2020	December 31, 2019
Raw materials	\$ 26,558	\$ 26,077
Work in process	41,486	45,729
Finished goods	101,296	98,898
Total inventories, net	<u>\$ 169,340</u>	<u>\$ 170,704</u>

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 first quarter of 2019, we repurchased 2.0 million QIAGEN shares for \$74.5 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 March 31, 2020 and December 31, 2019:

(in thousands)	March 31, 2020	December 31, 2019
Net unrealized gain (loss) on hedging contracts, net of tax	\$ 15,626	\$ (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 \$10.2 million and \$9.7 million in 2020 and 2019, respectively	(24,461)	(22,587)
Foreign currency translation adjustments	(378,133)	(284,182)
Accumulated other comprehensive loss	<u>\$ (387,529)</u>	<u>\$ (309,619)</u>

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 March 31, 2020, we had \$17.9 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 March 31, 2020 and December 31, 2019 totaled \$6.1 million and \$5.5 million, respectively, and are included in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheet 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 March 31, 2020 and December 31, 2019, contract liabilities totaled \$56.6 million and \$56.2 million, respectively, of which \$48.7 million and \$48.5 million is included in accrued and other current liabilities, respectively, and \$7.9 million and \$7.7 million is included in other long-term liabilities, respectively. During the three months ended March 31, 2020 and 2019, we satisfied the associated performance obligations and recognized revenue of \$21.2 million, and \$19.1 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 March 31, 2020			Three Months Ended March 31, 2019		
	Consumables and related	Instruments	Total	Consumables and related	Instruments	Total
Molecular Diagnostics	\$ 151,381	\$ 24,225	\$ 175,606	\$ 153,887	\$ 14,162	\$ 168,049
Life Sciences	174,562	21,929	196,491	158,939	21,666	180,605
<i>Academia / Applied Testing</i>	<i>107,594</i>	<i>15,771</i>	<i>123,365</i>	<i>94,618</i>	<i>14,985</i>	<i>109,603</i>
<i>Pharma</i>	<i>66,968</i>	<i>6,158</i>	<i>73,126</i>	<i>64,321</i>	<i>6,681</i>	<i>71,002</i>
Total	<u>\$ 325,943</u>	<u>\$ 46,154</u>	<u>\$ 372,097</u>	<u>\$ 312,826</u>	<u>\$ 35,828</u>	<u>\$ 348,654</u>

(in thousands)	Three Months Ended March 31,	
	2020	2019
Americas	\$ 173,800	\$ 169,581
Europe, Middle East and Africa	128,449	109,366
Asia Pacific and Rest of World	69,848	69,707
Total	<u>\$ 372,097</u>	<u>\$ 348,654</u>

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-month periods ended March 31, 2020 and 2019 summarizes the information used to compute earnings per common share:

(in thousands, except per share data)	Three months ended March 31,	
	2020	2019
Net income	<u>\$ 39,829</u>	<u>\$ 29,520</u>
Weighted average number of common shares used to compute basic net income per common share	228,008	226,170
Dilutive effect of stock options and restricted stock units	2,837	4,593
Dilutive effect of outstanding warrants	1,366	2,844
Weighted average number of common shares used to compute diluted net income per common share	<u>232,211</u>	<u>233,607</u>
Outstanding options and awards having no dilutive effect, not included in above calculation	<u>38</u>	<u>225</u>
Outstanding warrants having no dilutive effect, not included in above calculation	<u>29,717</u>	<u>42,346</u>
Basic earnings per common share	\$ 0.17	\$ 0.13
Diluted earnings per common share	<u>\$ 0.17</u>	<u>\$ 0.13</u>

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 \$176.4 million based on the achievement of certain revenue and operating results milestones as follows:

(in thousands)	Contingent Cash Payments
2020	\$ 143,900
2021	26,550
2022	5,900
	<u>\$ 176,350</u>

Of the \$176.4 million total contingent obligation as discussed further in Note 9 "Financial Instruments and Fair Value Measurements," we have assessed the fair value at March 31, 2020 to be \$164.0 million, of which \$149.1 million is included in accrued and other current liabilities and \$14.9 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 \$3.1 million as of both March 31, 2020 and December 31, 2019, 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 March 31, 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 March 31, 2020 and December 31, 2019. The estimated amount of a range of possible losses as of March 31, 2020, is between \$0.2 million and \$2.0 million. During the three-month period ended March 31, 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-month period ended March 31, 2020, we granted 0.9 million stock awards compared to 1.0 million stock awards granted for the three-month period ended March 31, 2019.

At March 31, 2020, there was \$78.7 million remaining in unrecognized compensation expense, less estimated forfeitures, related to these awards which will be recognized over a weighted-average period of 2.76 years.

Share-Based Compensation Expense

Total share-based compensation expense for the three-month periods ended March 31, 2020 and 2019 is comprised of the following:

(in thousands)	Three months ended	
	March 31,	
	2020	2019
Cost of sales	\$ 641	\$ 805
Research and development	1,715	1,144
Sales and marketing	2,885	2,196
General and administrative	3,438	6,654
Share-based compensation expense before taxes	8,679	10,799
Less: income tax benefit	1,843	2,168
Net share-based compensation expense	<u>\$ 6,836</u>	<u>\$ 8,631</u>

No compensation cost was capitalized at March 31, 2020 or March 31, 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 March 31, 2020, we employed approximately 5,100 people in more than 35 locations worldwide.

The COVID-19 pandemic will have a significant impact on QIAGEN in 2020. Extraordinary demand has emerged for molecular technologies involved in testing for the new pathogen. However, the overall full-year impact is not predictable at this point, as the

significant increase in demand comes at the same time as demand for other products has waned due to the quarantines and other actions in many countries around the world that have disrupted the broader economy and routine healthcare.

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 per share in cash. The transaction values QIAGEN at approximately \$11.5 billion (at March 3, 2020 exchange rates), which includes the assumption of approximately \$1.4 billion of net debt. The transaction is subject to the satisfaction of customary closing conditions, including the receipt of applicable regulatory approvals, the adoption of certain resolutions relating to the transaction at an Extraordinary General Meeting of QIAGEN's shareholders, and completion of the tender offer.

Fully mobilized to support global response to COVID-19 pandemic

QIAGEN has fully mobilized its teams around the world to respond to the COVID-19 pandemic, dramatically ramping up production capacity for solutions being used for testing and working daily with public health authorities and customers to assess their flexibility, timing and needs for specific regional situations in the outbreak. Key elements of the QIAGEN response:

- **RNA extraction kits and instruments:** At the end of April 2020, QIAGEN reached a production capacity of viral RNA extraction reagents to support more than 7 million real-time PCR tests for coronavirus detection, up significantly from the 2019 production level of about 400,000 patient tests per month before the pandemic. QIAGEN is set to reach over 10 million patient tests per month by the end of the second quarter, and expects to reach more than 20 million patient tests per month during the fourth quarter of 2020. QIAGEN is also working to increase the availability of instruments used to process these kits in both research and clinical testing applications.
- **QIAstat-Dx:** In less than three months, QIAGEN also developed and launched the new QIAstat-Dx Respiratory SARS-CoV-2 Panel, a syndromic testing solution designed to differentiate the novel coronavirus from 21 other respiratory pathogens. The syndromic panel delivers test results in about one hour, running on the QIAstat-Dx Analyzer, with an installed base that has surpassed 1,200 systems worldwide in hospitals, clinics and laboratories. The expanded test received CE-IVD registration in Europe, BARDA funding from the U.S. government and FDA Emergency Use Authorization in the U.S. within five weeks. Significant investments are being made to expand test cartridge production capacity, along with increased availability of the QIAstat-Dx instruments.
- **Third-party reagent manufacturing:** QIAGEN teams at sites in the U.S. and Europe are significantly scaling up production capacity of reagents purchased by other diagnostic companies for use in their own COVID-19 testing solutions. These products include individualized components as well as PCR mixes and full kits.
- **Antibody test in development:** QIAGEN is developing a serology test (assessing the body's immune response to the coronavirus via antibodies) that could be complementary to the use of real-time PCR tests, which are used to detect active infections. Serology testing for SARS-CoV-2 is at an increased demand in order to better quantify the number of cases of COVID-19, including patients who may be asymptomatic or have recovered.
- **Dedicated research solutions:** QIAGEN is developing solutions to support the research into vaccines and therapies for the novel coronavirus. These include QIAseq universal NGS products for RNA sequencing and QIAGEN Digital Insights solutions for bioinformatics analysis and interpretation.

Three- Month Period Ended March 31, 2020 compared to Three- Month Period Ended March 31, 2019

Net Sales

In the first quarter of 2020, net sales grew 7% to \$372.1 million compared to \$348.7 million in the first quarter of 2019, and was negatively impacted by two percentage points from adverse currency movements against the U.S. dollar. We experienced significant 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 consumables and related revenues (+4% / 88% of sales) based on the dynamic demand for COVID-19 solutions. The instruments portfolio (+29% / 12% of sales) was led by advanced demand for the QIASymphony automation system, the QIAcube Connect sample processing instrument and the QIAstat-Dx syndromic testing instrument. We currently anticipate sustained and very significant demand for products used in coronavirus testing, while demand for other products is expected to remain weak until quarantine restrictions are relaxed.

Net sales by product category and customer class (in millions)	First quarter 2020		
	Sales	% change	% of sales
Consumables and related revenues	\$326	+4%	88%
Instruments	\$46	+29%	12%
Molecular Diagnostics ⁽¹⁾	\$176	+4%	47%
Life Sciences	\$196	+9%	53%
<i>Academia / Applied Testing</i>	\$123	+13%	33%
<i>Pharma</i>	\$73	+3%	20%

(1) Includes companion diagnostic co-development revenues (Q1 2020: \$6 million, -45%)
Percentage changes are calculated based on the comparative prior year period.

Molecular Diagnostics experienced a 4% increase in the first quarter and represented 47% of sales in the first quarter of 2020. Molecular Diagnostics sales were adversely affected by three percentage points from adverse currency movements compared to the first quarter of 2019. The first quarter of 2020 reflects higher instrument sales as well as 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 and the expected decrease from companion diagnostic co-development project revenues compared to 2019.

During the first quarter of 2020, Life Sciences sales grew by 9% and reflected 53% of sales while currency movements adversely impacted this customer class by one percentage point when compared to the year ago period. Academia/Applied Testing rose 13% with strong sales all regions, in particular both the Americas and EMEA regions. Pharma also experienced higher sales in the Americas and EMEA regions while Asia-Pacific / Japan experienced modest declines.

Net sales by geographic region (in millions)	First quarter 2020		
	Sales	% change	% of sales
Americas	\$174	+2%	47%
Europe / Middle East / Africa (EMEA)	\$128	+17%	34%
Asia-Pacific / Japan	\$69	+1%	19%

Q1 2020: Rest of world represented less than 1% of net sales. Percentage changes are calculated based on the comparative prior year period.

All regions delivered growth, led by the EMEA region with 17% sales growth in the first quarter 2020 due to strong performance in instrument sales, particularly in Molecular Diagnostics. Sales in EMEA were negatively impacted by approximately five percentage points of currency movements compared to 2019. The Americas region experienced 2% sales growth and had continued improvements within Life Sciences. The Asia-Pacific / Japan region experienced a 1% increase in the first quarter of 2020 due to the weak results in China against gains in other countries and were negatively impacted by two percentage points of currency movements compared to 2019.

Gross Profit

Gross profit was \$243.5 million (65% of net sales) for the three-month period ended March 31, 2020, as compared to \$224.8 million (64% of net sales) in the same period in 2019. Generally, our consumables and related products have a higher gross margin than our instrumentation products and service arrangements. Fluctuations in the sales levels of these products and services can result in fluctuations in gross margin between periods. Further, amortization expense related to developed technology and patent and license rights, which have been acquired in business combinations, is included in cost of sales. In the first quarter of 2020, the amortization expense on acquisition-related intangibles within cost of sales decreased to \$15.1 million compared to \$17.5 million in the same period of 2019. Our acquisition-related intangible amortization will increase in the event of future acquisitions.

Research and Development

Research and development expenses decreased to \$34.8 million (9% of net sales) in the first quarter of 2020, compared to \$40.8 million (12% of net sales) in the same period in 2019. The decrease in research and development costs in 2020 reflects impacts from the suspended development of NGS-related instrument systems in connection with the 2019 restructuring measures discussed in Note 4 "Restructuring and Impairments." In 2020, we are moving ahead on research and development projects to develop additional PCR solutions for detection of the SARS-CoV-2 virus, dedicated new tools to provide insights for research into potential vaccines and treatments, and new serology tests for antibodies to assess the impact of the coronavirus on patients. 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 were unchanged at \$95.8 million (26% of net sales) in the first quarter of 2020 from \$95.9 million (28% of net sales) in the same period of 2019. Sales and marketing expenses are primarily associated with personnel, commissions, advertising, trade shows, publications, freight and logistics expenses, and other promotional expenses. We anticipate that absolute sales and marketing costs will increase along with new product introductions and growth in sales of our products, but decrease as a percentage of sales.

General and Administrative

General and administrative expenses were \$28.2 million (8% of net sales) in the first quarter of 2020 as compared to \$28.6 million (8% of net sales) in the first quarter of 2019. Decreases in share-based compensation expense in 2020 were partially offset by increases from continued investments across the organization including information technology improvements and cyber security.

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 \$5.1 million during the quarter ended March 31, 2020 compared to \$9.3 million for 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 \$11.4 million in the first quarter of 2020 as compared to \$8.9 million in the first quarter of 2019. During the three months ended March 31, 2020, \$1.1 million of charges are included as further discussed in Note 4 "Restructuring and Impairments." In addition, we incurred acquisition expenses related to the pending merger with Thermo Fisher Scientific, Inc. 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.

Long-lived Asset Impairments

Impairments to intangible assets and property, plant and equipment during the three-months ended March 31, 2020 totaled \$1.0 million 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 \$21.0 million in the three-month period ended March 31, 2020 compared to \$12.7 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 \$18.9 million during the quarter ended March 31, 2020 compared to \$20.4 million in the same period of 2019. 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 March 31, 2020 and 2019, interest income was \$3.2 million and \$8.1 million, respectively. 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 includes interest on higher cash balances following the issuance of cash convertible notes in November 2018.

Other expense, net of \$5.2 million in the three-month period ended March 31, 2020 compared to \$0.4 million in the same period in 2019. Other expense in 2020 includes \$2.3 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 "Investments". Other expense in 2019 primarily reflects the \$1.4 million of net losses on foreign currency transactions partially offset by the \$0.7 million gain recognized from the receipt of shares in Oncimmune as further discussed in Note 5.

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. 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 first quarters of 2020 and 2019, our effective tax rates were 14.0% and (3.7)%, respectively. The effective tax rate for the first quarter of 2020 was higher compared to the first quarter 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 March 31, 2020 and December 31, 2019, we had cash and cash equivalents of \$656.8 million and \$623.6 million, respectively, and restricted cash of \$5.0 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 March 31, 2020, cash, cash equivalents and restricted cash had increased by \$32.4 million from December 31, 2019, due to cash provided by operating activities of \$15.9 million, cash provided by investing activities of \$13.1 million and cash provided by financing activities of \$9.4 million. As of March 31, 2020 and December 31, 2019, we had working capital of \$582.7 million and \$618.9 million, respectively.

Operating Activities. For the three months ended March 31, 2020 and March 31, 2019, we generated net cash from operating activities of \$15.9 million and \$44.7 million, respectively. While net income was \$39.8 million for the three months ended March 31, 2020, non-cash components in income included \$48.5 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", \$9.7 million of amortization of debt discount and issuance costs and \$8.7 million of share-based compensation expense. Operating cash flows include a net decrease in working capital of \$100.7 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 lower payments 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 \$13.1 million of cash was generated from investing activities during the three months ended March 31, 2020 compared to cash used in investing activities of \$170.6 million for the same period in March 31, 2019. Cash provided by investing activities during the three months ended March 31, 2020 includes \$65.0 million from redemptions of short-term investments partially offset by \$24.9 million for purchases of short-term investments, \$20.0 million paid for purchases of property, plant and equipment and \$7.9 million paid for intangible assets. Cash used in investing activities during the three months ended March 31, 2019 includes \$129.4 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 provided \$9.4 million of cash for the three months ended March 31, 2020, primarily of \$10.2 million of cash received for collateral liabilities. This compares to cash used in financing activities of \$480.4 million for the three months ended March 31, 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 \$44.4 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). The net proceeds of the 2024 Notes were \$470.0 million, after payment of the net cost of the Call Spread Overlay and transaction costs paid through March 31, 2020 as described more 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 March 31, 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 March 31, 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 and \$296.6 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 March 31, 2020, we carry \$1.7 billion of long-term debt, of which \$325.3 million is current, and \$54.0 million of operating lease liabilities, of which \$17.5 million is current. We did not hold any material finance leases as of March 31, 2020.

In connection with certain acquisitions, we could be required to make additional contingent cash payments totaling up to \$176.4 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-month period ended March 31, 2019, we repurchased 1.2 million QIAGEN shares for \$44.4 million (including transaction costs), bringing the total shares repurchased under this program to 4.1 million for \$149.1 million (including transaction costs) through March 31, 2019. 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-month periods ended March 31, 2020 and 2019 resulted in net losses of \$2.3 million, and \$1.4 million, respectively, and 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 March 31, 2020 and December 31, 2019.

Contractual Obligations

There were no material changes at March 31, 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.
