
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2022
Commission File Number 001-38332



QIAGEN N.V.
Hulsterweg 82
5912 PL Venlo
The Netherlands

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

Form 20-F Form 40-F

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

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

QIAGEN N.V.

Form 6-K

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Other Information

For the three and six months ended June 30, 2022, 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: July 28, 2022

Exhibit Index

Exhibit No.	Exhibit
99.1	U.S. GAAP Quarterly Report for the Period Ended June 30, 2022

QIAGEN N.V. and Subsidiaries
U.S. GAAP Quarterly Report for the Period Ended June 30, 2022
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Condensed Consolidated Financial Statements

QIAGEN N.V. and Subsidiaries Condensed Consolidated Balance Sheets

(in thousands)	Notes	June 30, 2022 (unaudited)	December 31, 2021
Assets			
Current assets:			
Cash and cash equivalents		\$706,534	\$880,516
Short-term investments		604,429	184,785
Accounts receivable, net of allowance for credit losses of \$26,385 and \$23,124 in 2022 and 2021, respectively		334,573	362,131
Inventories, net	(4)	322,831	327,525
Prepaid expenses and other current assets (of which \$17,677 and \$16,956 in 2022 and 2021 due from related parties, respectively)	(8)	176,730	354,645
Total current assets		2,145,097	2,109,602
Long-term assets:			
Property, plant and equipment, net of accumulated depreciation of \$481,341 and \$632,416 in 2022 and 2021, respectively		619,192	638,183
Goodwill	(5)	2,341,123	2,350,763
Intangible assets, net of accumulated amortization of \$717,335 and \$806,787 in 2022 and 2021, respectively	(5)	594,439	627,436
Fair value of derivative instruments	(8)	235,315	190,430
Other long-term assets	(6)	148,277	157,644
Deferred tax assets		70,242	72,896
Total long-term assets		4,008,588	4,037,352
Total assets		\$6,153,685	\$6,146,954

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)	Notes	June 30, 2022 (unaudited)	December 31, 2021
Liabilities and equity			
Current liabilities:			
Current portion of long-term debt	(7)	\$460,267	\$847,626
Accrued and other current liabilities	(3, 8, 9)	417,442	568,620
Accounts payable		85,195	101,224
Total current liabilities		962,904	1,517,470
Long-term liabilities:			
Long-term debt, net of current portion	(7)	1,475,255	1,094,144
Fair value of derivative instruments	(8)	223,168	191,879
Other long-term liabilities	(3, 9)	175,354	209,320
Deferred tax liabilities		34,593	37,591
Total long-term liabilities		1,908,370	1,532,934
Commitments and contingencies	(14)		
Equity:			
Preference shares, 0.01 EUR par value, authorized—450,000 shares, no shares issued and outstanding		—	—
Financing preference shares, 0.01 EUR par value, authorized—40,000 shares, no shares issued and outstanding		—	—
Common Shares, 0.01 EUR par value, authorized—410,000 shares, issued—230,829 shares in 2022 and 2021, respectively	(12)	2,702	2,702
Additional paid-in capital		1,841,757	1,818,508
Retained earnings		1,990,596	1,791,740
Accumulated other comprehensive loss	(12)	(391,421)	(326,670)
Less treasury shares, at cost—3,135 and 3,755 shares in 2022 and 2021, respectively		(161,223)	(189,730)
Total equity		3,282,411	3,096,550
Total liabilities and equity		\$6,153,685	\$6,146,954

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

QIAGEN N.V. and Subsidiaries Condensed Consolidated Statements of Income (Unaudited)

(in thousands, except per share data)	Notes	Three months ended		Six months ended	
		June 30,	2021	June 30,	2021
		2022		2022	
Net sales	(3)	\$515,512	\$567,308	\$1,143,903	\$1,134,514
Cost of sales:					
Cost of sales		169,381	180,388	367,499	359,362
Acquisition-related intangible amortization		15,113	17,732	30,416	35,373
Total cost of sales		184,494	198,120	397,915	394,735
Gross profit		331,018	369,188	745,988	739,779
Operating expenses:					
Research and development		49,896	52,150	96,272	99,583
Sales and marketing		118,890	110,394	237,394	224,154
General and administrative		32,528	31,018	66,878	64,821
Acquisition-related intangible amortization		2,799	5,320	5,716	10,728
Restructuring, acquisition, integration and other, net		4,748	9,035	10,500	15,424
Total operating expenses		208,861	207,917	416,760	414,710
Income from operations		122,157	161,271	329,228	325,069
Other (expense) income:					
Interest income		4,338	2,093	6,560	3,711
Interest expense		(13,659)	(13,907)	(27,195)	(27,445)
Other income, net		2,688	442	2,453	7,664
Total other expense, net		(6,633)	(11,372)	(18,182)	(16,070)
Income before income taxes		115,524	149,899	311,046	308,999
Income tax expense		18,863	28,848	59,073	58,725
Net income		\$96,661	\$121,051	\$251,973	\$250,274
Basic earnings per common share		\$0.42	\$0.53	\$1.11	\$1.10
Diluted earnings per common share		\$0.42	\$0.52	\$1.09	\$1.08
Weighted-average shares outstanding:					
Basic		227,589	228,518	227,571	228,385
Diluted		229,938	231,950	230,229	232,122

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

QIAGEN N.V. and Subsidiaries Condensed Consolidated Statements of Comprehensive Income (Unaudited)

(in thousands)	Notes	Three months ended	
		June 30,	
		2022	2021
Net income		\$96,661	\$121,051
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:			
Gains (losses) on cash flow hedges, net of tax of \$4,001 in 2022 and \$509 in 2021	(8)	11,505	(1,530)
Reclassification adjustments on cash flow hedges, net of tax of \$3,316 in 2022 and \$716 in 2021	(8)	(9,536)	2,146
Cash flow hedges, net of tax		1,969	616
Net investment hedge	(8)	15,713	(3,503)
Foreign currency translation adjustments, net of tax of \$335 in 2022 and \$137 in 2021		(75,281)	8,166
Total other comprehensive (loss) income		(57,599)	5,279
Comprehensive income		\$39,062	\$126,330

(in thousands)	Notes	Six months ended	
		June 30,	
		2022	2021
Net income		\$251,973	\$250,274
Other comprehensive income (loss) to be reclassified to profit or loss in subsequent periods:			
Gains on cash flow hedges, net of tax of \$3,668 in 2022 and \$1,620 in 2021	(8)	10,549	4,861
Reclassification adjustments on cash flow hedges, net of tax of \$4,361 in 2022 and \$1,741 in 2021	(8)	(12,541)	(5,225)
Cash flow hedges, net of tax		(1,992)	(364)
Net investment hedge	(8)	20,676	12,444
Foreign currency translation adjustments, net of tax of \$612 in 2022 and \$542 in 2021		(83,435)	(29,224)
Total other comprehensive loss		(64,751)	(17,144)
Comprehensive income		\$187,222	\$233,130

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 (Unaudited)

(in thousands)	Notes	Common Shares		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Shares		Total Equity
		Shares	Amount				Shares	Amount	
Balance at March 31, 2022		230,829	\$2,702	\$1,830,591	\$1,913,660	(\$333,822)	(3,377)	(\$172,993)	\$3,240,138
Net income		—	—	—	96,661	—	—	—	96,661
Unrealized gain, net on hedging contracts	(8)	—	—	—	—	27,218	—	—	27,218
Realized gain, net on hedging contracts	(8)	—	—	—	—	(9,536)	—	—	(9,536)
Translation adjustment, net	(12)	—	—	—	—	(75,281)	—	—	(75,281)
Issuance of common shares in connection with stock plan		—	—	—	(19,725)	—	416	19,803	78
Tax withholding related to vesting of stock awards	(11)	—	—	—	—	—	(174)	(8,033)	(8,033)
Share-based compensation	(11)	—	—	11,166	—	—	—	—	11,166
Balance at June 30, 2022		230,829	\$2,702	\$1,841,757	\$1,990,596	(\$391,421)	(3,135)	(\$161,223)	\$3,282,411
Balance at March 31, 2021		230,829	\$2,702	\$1,789,805	\$1,430,528	(\$266,245)	(2,422)	(\$107,014)	\$2,849,776
Net income		—	—	—	121,051	—	—	—	121,051
Unrealized loss, net on hedging contracts	(8)	—	—	—	—	(5,033)	—	—	(5,033)
Realized loss, net on hedging contracts	(8)	—	—	—	—	2,146	—	—	2,146
Translation adjustment, net	(12)	—	—	—	—	8,166	—	—	8,166
Issuance of common shares in connection with stock plan		—	—	—	(14,094)	—	394	14,297	203
Tax withholding related to vesting of stock awards	(11)	—	—	—	—	—	(163)	(8,046)	(8,046)
Share-based compensation	(11)	—	—	9,609	—	—	—	—	9,609
Balance at June 30, 2021		230,829	\$2,702	\$1,799,414	\$1,537,485	(\$260,966)	(2,191)	(\$100,763)	\$2,977,872

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 (Unaudited)

(in thousands)	Notes	Common Shares		Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Shares		Total Equity
		Shares	Amount				Shares	Amount	
Balance at December 31, 2021		230,829	\$2,702	\$1,818,508	\$1,791,740	(\$326,670)	(3,755)	(\$189,730)	\$3,096,550
Net income		—	—	—	251,973	—	—	—	251,973
Unrealized gain, net on hedging contracts	(8)	—	—	—	—	31,225	—	—	31,225
Realized gain, net on hedging contracts	(8)	—	—	—	—	(12,541)	—	—	(12,541)
Translation adjustment, net	(12)	—	—	—	—	(83,435)	—	—	(83,435)
Issuance of common shares in connection with stock plan		—	—	—	(53,117)	—	1,136	53,223	106
Tax withholding related to vesting of stock awards	(11)	—	—	—	—	—	(516)	(24,716)	(24,716)
Share-based compensation	(11)	—	—	23,249	—	—	—	—	23,249
Balance at June 30, 2022		230,829	\$2,702	\$1,841,757	\$1,990,596	(\$391,421)	(3,135)	(\$161,223)	\$3,282,411
Balance at December 31, 2020		230,829	\$2,702	\$1,834,169	\$1,323,091	(\$243,822)	(2,844)	(\$118,301)	\$2,797,839
ASU 2020-06 impact of change in accounting policy	(7)	—	—	(54,052)	263	—	—	—	(53,789)
Net income		—	—	—	250,274	—	—	—	250,274
Unrealized gain, net on hedging contracts	(8)	—	—	—	—	17,305	—	—	17,305
Realized gain, net on hedging contracts	(8)	—	—	—	—	(5,225)	—	—	(5,225)
Translation adjustment, net	(12)	—	—	—	—	(29,224)	—	—	(29,224)
Issuance of common shares in connection with stock plan		—	—	—	(36,143)	—	1,074	38,856	2,713
Tax withholding related to vesting of stock awards	(11)	—	—	—	—	—	(421)	(21,318)	(21,318)
Share-based compensation	(11)	—	—	19,297	—	—	—	—	19,297
Balance at June 30, 2021		230,829	\$2,702	\$1,799,414	\$1,537,485	(\$260,966)	(2,191)	(\$100,763)	\$2,977,872

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

QIAGEN N.V. and Subsidiaries Condensed Consolidated Statements of Cash Flows (Unaudited)

(in thousands)	Notes	Six months ended June 30,	
		2022	2021
Cash flows from operating activities:			
Net income		\$251,973	\$250,274
Adjustments to reconcile net income to net cash provided by operating activities, net of effects of businesses acquired:			
Depreciation and amortization		103,408	110,669
Non-cash impairments		153	—
Amortization of debt discount and issuance costs	(7)	16,650	15,986
Share-based compensation expense	(11)	23,249	19,297
Deferred income taxes		(3,950)	(30,993)
Gain on marketable securities	(6)	—	(2,090)
Gain on sale of investment	(6)	—	(442)
Other items, net including fair value changes in derivatives		7,467	7,445
Net changes in operating assets and liabilities:			
Accounts receivable		1,975	4,081
Inventories		(23,877)	(68,864)
Prepaid expenses and other current assets		8,340	1,848
Other long-term assets		263	186
Accounts payable		(8,453)	(11,249)
Accrued and other current liabilities		(21,712)	(64,432)
Income taxes		37,858	49,413
Other long-term liabilities		(13,981)	3,897
Net cash provided by operating activities		379,363	285,026
Cash flows from investing activities:			
Purchases of property, plant and equipment		(61,367)	(90,001)
Purchases of intangible assets	(5)	(14,657)	(11,253)
Purchases of investments, net	(6)	(958)	(1,645)
Cash paid for acquisitions, net of cash acquired	(1)	(63,651)	—
Purchases of short-term investments		(653,114)	(136,683)
Proceeds from sales of short-term investments	(6)	224,751	117,967
Cash received for collateral asset	(8)	11,100	42,890
Other investing activities		107	43
Net cash used in investing activities		(557,789)	(78,682)

QIAGEN N.V. and Subsidiaries Condensed Consolidated Statements of Cash Flows (Unaudited)

(in thousands)	Note	Six months ended June 30,	
		2022	2021
Cash flows from financing activities:			
Repayment of long-term debt	(7)	—	(41,345)
Proceeds from issuance of common shares		106	2,714
Tax withholding related to vesting of stock awards	(11)	(16,684)	(13,291)
Cash paid for contingent consideration	(9)	(4,572)	—
Cash received for collateral liability		33,699	10,100
Other financing activities		—	(1,656)
Net cash provided by (used in) financing activities		12,549	(43,478)
Effect of exchange rate changes on cash and cash equivalents			
Net (decrease) increase in cash and cash equivalents		(8,105)	(1,803)
Cash and cash equivalents, beginning of period		(173,982)	161,063
Cash and cash equivalents, end of period		880,516	597,984
		\$706,534	\$759,047

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

Notes to the Condensed Consolidated Financial Statements (unaudited)

June 30, 2022

1. Corporate Information

QIAGEN N.V. (QIAGEN) 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 a leading global provider of Sample to Insight solutions that enable customers to gain valuable molecular insights from samples containing the building blocks of life. Our sample technologies isolate and process DNA, RNA and proteins from blood, tissue and other materials. Assay technologies make these biomolecules visible and ready for analysis. Bioinformatics software and knowledge bases interpret data to report relevant, actionable insights. Automation solutions tie these together in seamless and cost-effective workflows. We provide solutions to more than 500,000 customers around the world in Molecular Diagnostics (human healthcare) and Life Sciences (academia, pharma R&D and industrial applications, primarily forensics). As of June 30, 2022, we had more than 6,100 employees in over 35 locations worldwide.

2. Basis of Presentation and Accounting Policies

Basis of Presentation

The condensed consolidated financial statements include the accounts of QIAGEN 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.

As of April 1, 2022, the results of our subsidiary in Turkey are reported under highly inflationary accounting as the prior three-years cumulative inflation rate exceeded 100 percent.

QIAGEN has a subsidiary in Moscow, Russia. Due to uncertainties related to the war in Ukraine, and although not material to our condensed consolidated results of operations, during the three and six months ended June 30, 2022, we recorded a combination of credit losses, write-offs and impairments related to our business in Russia totaling \$0.8 million and \$4.0 million, respectively. These charges are included in the line item restructuring, acquisition, integration and other, net in the accompanying condensed consolidated statements of income. We have suspended activities in Russia and also with our former commercial partner in Belarus.

In May 2022, we acquired BLIRT S.A., a supplier of standardized and customized solutions for proteins and enzymes as well as molecular biology reagents located in Gdańsk, Poland. Its offering includes proteins and enzymes that are critical to the life sciences industry and diagnostic kit manufacturers. The cash consideration, net of cash acquired was \$63.7 million. The acquisition was not significant to the overall condensed consolidated financial statements and as of June 30, 2022, the allocation of the purchase price was preliminary. At the acquisition date, all the assets acquired and liabilities assumed were recorded at their respective fair values

and our condensed consolidated results of operations include the operating results from the acquired company from the acquisition date. The acquisition did not have a material impact to net sales, net income or earnings per share and therefore no proforma information has been provided herein.

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 changing conditions regarding the war in Ukraine and the COVID-19 pandemic present additional uncertainty, we continue to use the best information available to form our estimates. Actual results could differ from those estimates.

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, 2021.

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, 2021.

Adoption of New Accounting Standards in 2022

ASU 2021-08, *Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, creates an exception to the recognition and measurement principles in ASC 805, *Business Combinations*. The amendments require an acquirer to use the guidance in ASC 606, *Revenue from Contracts with Customers*, rather than using fair value, when recognizing and measuring contract assets and contract liabilities related to customer contracts assumed in a business combination. We early adopted ASU 2021-08 on January 1, 2022. The amended guidance applies on a prospective basis to business combinations that occur after the adoption date.

New Accounting Standards Not Yet Adopted

As of June 30, 2022, there are no recently issued but not yet adopted accounting pronouncements that are expected to materially impact our consolidated financial statements.

3. 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, as a practical expedient, not to disclose the value of remaining performance obligations associated with these types of contracts.

However, we have certain companion diagnostic co-development contracts to provide research and development activities in which our performance obligations extend over multiple years. As of June 30, 2022, we had \$68.1 million of remaining performance obligations for which the transaction price is not constrained related to these contracts which we expect to recognize over the next 12 to 18 months.

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

Contract Balances

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

Contract assets as of June 30, 2022 and December 31, 2021 totaled \$17.0 million and \$14.1 million, respectively, and are included in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheets and relate to the companion diagnostic co-development contracts discussed above.

Contract liabilities primarily relate to non-cancellable advances or deposits received from customers before revenue is recognized and is primarily related to instrument service and Software as a Service (SaaS) arrangements. As of June 30, 2022 and December 31, 2021, contract liabilities totaled \$75.9 million and \$74.7 million, respectively, of which \$63.9 million and \$63.4 million are included in accrued and other current liabilities, respectively, and \$11.9 million and \$11.3 million are included in other long-term liabilities, respectively. During the three and six months ended June 30, 2022 and 2021, we satisfied the associated performance obligations and recognized revenue of \$16.7 million and \$40.1 million, and \$13.9 million and \$35.3 million, respectively, related to advance customer payments previously received.

Disaggregation of Revenue

We disaggregate our revenue based on product type and customer class, product category and geography as shown in the tables below for the three- and six-month periods ended June 30, 2022 and 2021:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Consumables and related revenues	\$231,853	\$238,079	\$558,118	\$484,879
Instruments	22,777	33,592	53,027	66,114
Total Molecular Diagnostics	\$254,630	\$271,671	\$611,145	\$550,993
Consumables and related revenues	\$221,098	\$260,012	\$455,792	\$511,420
Instruments	39,784	35,625	76,966	72,101
Total Life Sciences	\$260,882	\$295,637	\$532,758	\$583,521
Total	\$515,512	\$567,308	\$1,143,903	\$1,134,514

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Sample technologies	\$177,742	\$202,590	\$442,920	\$429,762
Diagnostic solutions	156,812	154,187	331,238	303,949
PCR / Nucleic acid amplification	105,169	108,705	220,970	225,391
Genomics / NGS	57,201	79,504	113,328	129,923
Other	18,588	22,322	35,447	45,489
Total	\$515,512	\$567,308	\$1,143,903	\$1,134,514

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2022	2021	2022	2021
Americas	\$252,334	\$256,598	\$505,389	\$500,922
Europe, Middle East and Africa	160,643	202,103	409,726	420,609
Asia Pacific and Rest of World	102,535	108,607	228,788	212,983
Total	\$515,512	\$567,308	\$1,143,903	\$1,134,514

4. Inventories

The components of inventories consist of the following as of June 30, 2022 and December 31, 2021:

(in thousands)	June 30, 2022	December 31, 2021
Raw materials	\$87,020	\$94,748
Work in process	77,904	67,679
Finished goods	157,907	165,098
Total inventories, net	\$322,831	\$327,525

5. Intangible Assets

The following table sets forth the intangible assets by major asset class as of June 30, 2022 and December 31, 2021:

(in thousands)	June 30, 2022		December 31, 2021	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortized Intangible Assets:				
Patent and license rights	\$234,403	(\$152,510)	\$297,986	(\$202,569)
Developed technology	783,802	(388,774)	810,420	(400,021)
Customer base, non-compete agreements and trademarks	232,206	(176,051)	263,878	(204,197)
Total amortized intangible assets	\$1,250,411	(\$717,335)	\$1,372,284	(\$806,787)
Unamortized Intangible Assets:				
In-process research and development	\$61,363		\$61,939	
Goodwill	2,341,123		2,350,763	
Total unamortized intangible assets	\$2,402,486		\$2,412,702	

During 2022, certain fully amortized intangible assets were retired.

In-process research and development is from the acquisitions of NeuMoDx in 2020 and 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.

The changes in intangible assets in 2022 are summarized as follows:

(in thousands)	Intangibles	Goodwill
Balance at December 31, 2021	\$627,436	\$2,350,763
Business combinations	17,247	42,201
Additions	11,319	—
Amortization	(45,779)	—
Disposals	(35)	—
Impairments	(22)	—
Foreign currency translation adjustments	(15,727)	(51,841)
Balance at June 30, 2022	\$594,439	\$2,341,123

Cash paid for purchases of intangible assets in the accompanying condensed consolidated statement of cash flows during the six months ended June 30, 2022 totaled \$14.7 million, of which \$2.8 million is related to current year payments for assets that were accrued as of December 31, 2021 and \$3.9 million is related to prepayments recorded in other long-term assets in the accompanying condensed consolidated balance sheet. Intangible asset additions of \$11.3 million in the table above includes \$8.0 million of cash paid during the six months ended June 30, 2022, together with \$3.3 million of additions which were previously recorded as prepayments.

The changes in the carrying amount of goodwill for the six months ended June 30, 2022 resulted primarily from the acquisition of BLIRT S.A. in May 2022 and changes in foreign currency translation.

For the three- and six-month periods ended June 30, 2022, amortization expense on intangible assets decreased to \$22.7 million and \$45.8 million, respectively, following the full amortization of certain assets as compared to amortization expense of \$27.8 million and \$55.6 million in the same periods of 2021, respectively.

Amortization of intangibles for the next five years is expected to be approximately:

Year	Annual Amortization (in millions)
2023	\$88.0
2024	\$84.7
2025	\$73.7
2026	\$65.8
2027	\$59.9

6. Investments

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

Non-Marketable Investments

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

Non-Marketable Investments Accounted for Under the Equity Method

As of June 30, 2022 and December 31, 2021, we had total non-marketable investments that were accounted for as equity method investments of \$24.7 million and \$21.5 million, respectively, included in other long-term assets.

Some of our equity method investments are variable interest entities. We are not considered the primary beneficiary of these investments as we do not hold the power to direct the activities that most significantly impact the economic performance of these entities, and therefore, these investments are not consolidated. As of June 30, 2022, these investments had a total net carrying value of \$9.1 million, of which \$9.4 million, representing our maximum exposure to loss, is included in other long-term assets and \$0.3 million, where we are committed to fund losses, is included in other long-term liabilities. As of December 31, 2021, these investments totaled a net \$8.0 million, of which \$8.4 million is included in other long-term assets and \$0.4 million is included in other long-term liabilities.

During the six months ended June 30, 2021, we made additional investments of \$1.6 million in non-marketable investments accounted for under the equity method.

One of our investments, TVM Life Science Ventures III (TVM), is a limited partnership, and we account for our 3.1% investment under the equity method as we have the ability to exercise significant influence over the limited partnership. This investment is valued at net asset value (NAV) reported by the counterparty. During 2022, we made additional cash payments of \$1.1 million to TVM, and as of June 30, 2022, we have \$9.2 million of unfunded commitments through 2029 related to this investment. We do not have the right to redeem these funds under the normal course of operations of this partnership.

Non-Marketable Investments Not Accounted for Under the Equity Method

At June 30, 2022 and December 31, 2021, we had investments in non-publicly traded companies that do not have readily determinable fair values with carrying amounts that totaled \$3.5 million and \$3.9 million, respectively, which are included in other long-term assets. 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 price changes are recognized in the statements of income during the period the change is identified.

The changes in non-marketable investments not accounted for under the equity method during the six months ended June 30, 2022 and 2021 are as follows:

(in thousands)	2022	2021
Balance at beginning of year	\$3,945	\$4,142
Cash (receipts from) investments in equity securities, net	(145)	117
Foreign currency translation adjustments	(268)	(112)
Balance at end of period	\$3,532	\$4,147

Marketable Investments

As of June 30, 2022, we did not hold any investments in marketable equity securities with a readily determinable fair value. All marketable investments were sold in 2021. As of June 30, 2021, we held such investments which were reported at fair value with gains and losses recorded in earnings.

The changes in marketable equity securities during the six months ended June 30, 2021 were as follows:

(in \$ thousands, except shares data)	Invitae Corporation (Invitae)		OncoCyte Corporation (OncoCyte)		Oncimmune Holdings plc		HTG Molecular Diagnostics, Inc.	
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount
Balance at December 31, 2020	2,769,189	\$115,780	88,101	\$211	560,416	\$1,258	55,556	\$266
Shares received upon milestone achievement	—	—	30,152	147	86,218	220	—	—
Gain on change in fair value	—	2,091	—	321	—	147	—	57
Sale of investment	(2,769,189)	(117,871)	—	—	(36,500)	(98)	—	—
Balance at June 30, 2021	—	\$—	118,253	\$679	610,134	\$1,527	55,556	\$323

In the second quarter of 2021, we received additional shares in Oncimmune and in July 2021, we sold the balance of 610,134 Oncimmune shares for \$1.4 million and recognized a loss of \$0.1 million on the sale.

In the first quarter of 2021, we sold 2.8 million shares of Invitae that were received as part of the consideration for the 2020 sale of our ArcherDX shares. As a result, we received \$117.9 million in cash and recognized a \$2.1 million gain in other income, net in the accompanying condensed consolidated statement of income for the six months ended June 30, 2021 for the change in fair market value since December 31, 2020. We are entitled to up to 0.6 million Invitae shares upon achievement of certain milestones.

Also during the first quarter of 2021, we received 30,152 shares in OncoCyte with a fair value of \$0.1 million on the date of receipt as further consideration from the 2020 sale of a non-marketable investment not accounted for under the equity method. Upon achievement of certain milestones, we could receive up to approximately \$3.0 million from OncoCyte.

During the three and six months ended June 30, 2021, total losses and gains recognized for the change in fair market value of all marketable equity securities resulted in a loss of \$19.0 thousand and a gain of \$0.5 million, respectively, recognized in other income, net in the accompanying condensed consolidated statements of income.

7. Debt

At June 30, 2022 and December 31, 2021, total long-term debt, net of debt issuance costs, consists of the following:

(in thousands)	June 30, 2022	December 31, 2021
0.500% Senior Unsecured Cash Convertible Notes due 2023	\$382,280	\$375,149
1.000% Senior Unsecured Cash Convertible Notes due 2024	455,312	446,503
0.000% Senior Unsecured Convertible Notes due 2027	497,070	496,804
3.75% Series B Senior Notes due October 16, 2022	300,004	301,843
3.90% Series C Senior Notes due October 16, 2024	26,973	26,967
German Private Placement (Schuldschein)	273,883	294,504
Total long-term debt	1,935,522	1,941,770
Less: current portion	460,267	847,626
Long-term portion	\$1,475,255	\$1,094,144

The notes are all unsecured obligations that rank pari passu.

As of December 31, 2021, the 2023 Notes were classified as current due to contingent conversion features as discussed below. No Contingent Conversion Conditions were triggered as of June 30, 2022.

Repayments of long-term debt for the six months ended June 30, 2021 consisted of:

(in thousands)	June 30, 2021
German Private Placement (Schuldschein)	\$41,145
0.875% Senior Unsecured Cash Convertible Notes due 2021	200
Total repayments of long-term debt	\$41,345

The principal amount, carrying amount and fair values of long-term debt instruments are summarized below:

(in thousands)	As of June 30, 2022				
	Principal Amount	Unamortized debt discount and issuance costs	Carrying Amount	Fair Value	
				Amount	Leveling
Cash Convertible Notes due 2023	\$400,000	(\$17,720)	\$382,280	\$466,844	Level 1
Cash Convertible Notes due 2024	500,000	(44,688)	455,312	555,125	Level 1
Convertible Notes due 2027	500,000	(2,930)	497,070	431,830	Level 1
U.S. Private Placement ⁽¹⁾	327,055	(78)	326,977	326,257	Level 2
German Private Placement	274,033	(150)	273,883	272,082	Level 2
	\$2,001,088	(\$65,566)	\$1,935,522	\$2,052,138	

(in thousands)	As of December 31, 2021				
	Principal Amount	Unamortized debt discount and issuance costs	Carrying Amount	Fair Value	
				Amount	Leveling
Cash Convertible Notes due 2023	\$400,000	(\$24,851)	\$375,149	\$547,256	Level 1
Cash Convertible Notes due 2024	500,000	(53,497)	446,503	647,100	Level 1
Convertible Notes due 2027	500,000	(3,196)	496,804	536,400	Level 1
U.S. Private Placement ⁽¹⁾	328,971	(161)	328,810	331,566	Level 2
German Private Placement	294,738	(234)	294,504	296,587	Level 2
	\$2,023,709	(\$81,939)	\$1,941,770	\$2,358,909	

⁽¹⁾ The principal amount of the U.S. Private Placement includes \$0.1 million and \$2.0 million as of June 30, 2022 and December 31, 2021, respectively, for the impact of the interest rate swaps which qualify for hedge accounting as fair value hedges which are further discussed in Note 8 "Derivatives and Hedging".

Interest expense related to the convertible notes for the three and six months ended June 30, 2022 and 2021 was comprised of the following:

(in thousands)	Three months ended		Six months ended	
	June 30,	2021	June 30,	2021
Coupon interest	2022	2021	2022	2021
	\$1,750	\$1,750	\$3,500	\$3,500
Amortization of original issuance discount	7,500	7,176	14,918	14,272
Amortization of debt issuance costs	646	628	1,287	1,252
Total interest expense related to the convertible notes	\$9,896	\$9,554	\$19,705	\$19,024

Convertible Notes due 2027

On December 17, 2020, we issued zero coupon convertible notes in an aggregate principal amount of \$500.0 million with a maturity date of December 17, 2027 (2027 Notes). The 2027 Notes carry no coupon interest. The net proceeds of the 2027 Notes totaled \$497.6 million, after payment of debt issuance costs of \$3.7 million.

In accounting for the issuance of the 2027 Notes in 2020 prior to the adoption of ASU 2020-06, we separated the 2027 Notes into liability and equity components. We allocated \$445.9 million of the 2027 Notes to the liability component, representing the fair value of a similar debt instrument that does not have an associated convertible feature; and \$54.1 million to the equity component, representing the conversion option, which did not meet the criteria for separate accounting as a

derivative as it is indexed to our own stock. ASU 2020-06 was adopted on January 1, 2021, and this resulted in a decrease of \$54.1 million to additional paid in capital and an increase of \$0.3 million to retained earnings for the conversion feature related to the liability for the 2027 Notes.

The effective interest rate of the 2027 Notes is 1.65%, which is imputed based on the amortization of the fair value of the embedded conversion option over the remaining term of the 2027 Notes.

The 2027 Notes are convertible into common shares based on an initial conversion rate, subject to adjustment, of 2,477.65 shares per \$200,000 principal amount of notes (which represents an initial conversion price of \$80.7218 per share, or 6.2 million underlying shares). At conversion, we will settle the 2027 Notes by repaying the principal portion in cash and any excess of the conversion value over the principal amount in common shares.

The 2027 Notes may be redeemed at the option of each noteholder at their principal amount on December 17, 2025 or in connection with a change of control or delisting event (as further described in the 2027 Notes).

The 2027 Notes are convertible in whole, but not in part, at the option of the noteholders on a net share settlement basis, at the prevailing conversion price in the following circumstances beginning after January 27, 2021 through June 16, 2027:

- if the last reported sale price of our common shares 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; or
- if we undergo certain fundamental changes, including a change of control, as defined in the agreement; or
- if parity event or trading price unavailability event, as the case may be occurs during the period of 10 days, including the first business day following the relevant trading price notification date; or
- if we distribute assets or property to all or substantially all of the holders of our common shares 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 shares for the prior 20 consecutive trading days; or
- in case of early redemption in respect of the outstanding notes at our option, where the conversion date falls in the period from (and including) the date on which the call notice is published to (and including) the 45th business day prior to the redemption date; or
- if we experience certain customary events of default, including defaults under certain other indebtedness, until such event of default has been cured or waived.

The noteholders may convert their notes at any time, without condition, on or after June 17, 2027 until the 45th business day prior to December 17, 2027.

No Contingent Conversion Conditions were triggered for the 2027 Notes as of June 30, 2022 or December 31, 2021.

Cash Convertible Notes due 2023 and 2024

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

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

We refer to the 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 respective maturity dates unless repurchased or converted with their terms prior to such dates. The interest rate and corresponding maturity of each Cash Convertible 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
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 shares 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; or
- if we undergo certain fundamental changes, including a change of control, as defined in the agreement; or
- if parity event or trading price unavailability event, as the case may be occurs during the period of 10 days, including the first business day following the relevant trading price notification date; or
- if we elect to distribute assets or property to all or substantially all the holders of our common shares 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 shares for the prior 20-consecutive trading days; or
- 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 Cash Convertible Notes have been accelerated.

No Contingent Conversion Conditions were triggered for the 2023 Notes as of June 30, 2022. As of December 31, 2021, the 2023 Notes were contingently convertible. No Contingent Conversion Conditions were triggered for the 2024 Notes as of June 30, 2022 or December 31, 2021.

The Contingent Conversion Conditions in the 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 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.

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 shares 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 condensed consolidated statements of income until the cash conversion option transaction settles or expires. The initial fair value liability of the

embedded cash conversion options was \$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 serving as 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, six years for both 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 is 3.997% for the 2023 Notes and 4.782% for the 2024 Notes, 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.

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

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. 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, 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 common share exceeds the exercise price of the Call Options during the relevant valuation period. The exercise price under the Call Options is initially equal to the conversion price of the Cash Convertible Notes.

The Warrants that were issued with our Cash Convertible Notes could have a dilutive effect to the extent that the price of our common shares exceeds the applicable strike price of the Warrants. For each Warrant that is exercised, we will deliver to the holder a number of common shares equal to the amount by which the settlement price exceeds the exercise price, plus cash in lieu of any fractional shares. We will not receive any proceeds if the Warrants are exercised.

U.S. Private Placement

In October 2012, we completed a private placement through the issuance of new senior unsecured notes at a total amount of \$400.0 million with a weighted average interest rate of 3.66% (settled on October 16, 2012). The notes were issued in three series: (1) \$73.0 million 7-year term due and paid in 2019 (3.19%); (2) \$300.0 million 10-year term due in October 16, 2022 (3.75%); and (3) \$27.0 million 12-year term due in October 16, 2024 (3.90%). We paid \$2.1 million in debt issuance costs which will be amortized through interest expense using the effective interest method over the lifetime of the notes. The note purchase agreement contains certain financial and non-financial covenants, including but not limited to, restrictions on priority indebtedness and the maintenance of certain financial ratios. We were in compliance with these covenants at June 30, 2022. 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. In the first quarter of 2021, we repaid \$41.1 million for two tranches that matured. The Schuldschein consists of U.S. dollar and euro denominated tranches. The euro tranches are designated as a foreign currency non-derivative hedging instrument that qualifies as a net investment hedge as described in Note 8 "Derivatives and Hedging." Based on the spot rate method, the change in the carrying value of the euro denominated tranches attributed to the net investment hedge as of June 30, 2022 totaled \$18.6 million of unrealized gain and is recorded in equity. We paid \$1.2 million in debt issuance costs which are being amortized through interest expense using the effective interest method over the lifetime of the notes.

A summary of the tranches as of June 30, 2022 and December 31, 2021 is as follows:

Currency	Notional Amount	Interest Rate	Maturity	Carrying Value (in thousands) as of	
				June 30, 2022	December 31, 2021
EUR	€21.5 million	Fixed 0.68%	October 2022	\$22,328	\$24,340
EUR	€64.5 million	Floating EURIBOR + 0.5%	October 2022	66,985	73,020
USD	\$45.0 million	Floating LIBOR + 1.2%	October 2022	44,990	44,976
EUR	€25.0 million	Floating EURIBOR + 0.5%	October 2022	25,960	28,298
EUR	€64.0 million	Fixed 1.09%	June 2024	66,414	72,405
EUR	€31.0 million	Floating EURIBOR + 0.7%	June 2024	32,169	35,071
EUR	€14.5 million	Fixed 1.61%	June 2027	15,037	16,394
				\$273,883	\$294,504

The financial markets regulators in the United Kingdom and the Eurozone have passed regulations wherein non-dollar LIBORs and one-week and two-month USD LIBOR ended as of December 31, 2021, while the remaining USD LIBOR tenors will end as of June 30, 2023. Market participants and regulators are working on establishing new interest rate benchmarks. While the outcome of this work is not clear yet, the USD tranche of the Schuldschein and our interest rate swaps continue to make reference to the current LIBOR benchmark rate. These agreements contain language for the determination of interest rates in case the benchmark rate is not available. However, as the maturity date for the USD tranche of the Schuldschein and related interest rate swaps is in October 2022, these instruments will be settled before the LIBOR end date of June 30, 2023. Therefore we currently do not anticipate any impact from the LIBOR phase out.

In July 2022, we completed another German private placement bond (2022 Schuldschein) which was issued in several tranches totaling €300.0 million due in various periods through 2032. The 2022 Schuldschein consists of only euro denominated tranches.

A summary of the tranches issued on July 13, 2022 is as follows:

Currency	Notional Amount	Interest Rate	Maturity
EUR	€51.5 million	Floating 6M EURIBOR + 0.55%	July 2025
EUR	€62.0 million	Fixed 2.741%	July 2027
EUR	€29.5 million	Floating 6M EURIBOR + 0.70%	July 2027
EUR	€37.0 million	Fixed 3.044%	July 2029
EUR	€103.0 million	Floating 6M EURIBOR + 0.85%	July 2029
EUR	€9.5 million	Fixed 3.386%	July 2032
EUR	€7.5 million	Floating 6M EURIBOR + 1.0%	July 2032

Revolving Credit Facility

Our credit facilities available and undrawn at June 30, 2022 total €427.0 million (approximately \$443.5 million). This includes a €400.0 million syndicated ESG-linked revolving credit facility expiring December 2024 and three other lines of credit amounting to €27.0 million with no expiration date. The €400.0 million facility can be utilized in euro and bears interest of 0.550% to 1.500% above EURIBOR, and is offered with interest periods of one, three or six months. The commitment fee is calculated based on 35% of the applicable margin. The revolving facility agreement contains certain financial and non-financial covenants, including but not limited to, restrictions on the encumbrance of assets and the maintenance of certain financial ratios. We were in compliance with these covenants at June 30, 2022. The credit facilities are for general corporate purposes and no amounts were utilized at June 30, 2022.

8. Derivatives and Hedging

Objective and Strategy

In the ordinary course of business, we use derivative instruments, including swaps, forwards and/or options, to manage potential losses from foreign currency exposures and interest bearing assets or liabilities. The principal objective of such derivative instruments is to minimize the risks and/or costs associated with our global financial and operating activities. We do not utilize derivative or other financial instruments for trading or other speculative purposes. We recognize all derivatives as either assets or liabilities on the balance sheet on a gross basis, measure those instruments at fair value and recognize the change in fair value in earnings in the period of change, unless the derivative qualifies as an effective hedge that offsets certain exposures. We have agreed with almost all of our counterparties with whom we had entered into cross-currency swaps, interest rate swaps or foreign exchange contracts, to enter into bilateral collateralization contracts under which we will receive or provide cash collateral, as the case may be, for the net position with each of these counterparties. As of June 30, 2022, cash collateral positions consisted of \$42.9 million recorded in accrued and other current liabilities and \$0.1 million recorded in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheet. As of December 31, 2021, we had cash collateral positions consisting of \$9.2 million recorded in accrued and other current liabilities and \$11.2 million recorded in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheet.

Non-Derivative Hedging Instrument

Net Investment Hedge

We are party to 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) issued in 2017, and €220.5 million of such bond 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 as of June 30, 2022 was \$18.6 million and unrealized loss in equity as of December 31, 2021 was \$2.1 million. Since we are using the debt as the hedging instrument, which is also remeasured based on the spot rate method, there is no hedge ineffectiveness related to the net investment hedge as of June 30, 2022 and December 31, 2021.

Derivatives Designated as Hedging Instruments

Cash Flow Hedges

As of June 30, 2022 and December 31, 2021, we held derivative instruments that are designated and qualify as cash flow hedges, where the effective portion of the gain or loss on the derivative is reported as a component of other comprehensive loss and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings. To date, we have not recorded any hedge ineffectiveness related to any cash-flow hedges in earnings. Based on their valuation as of June 30, 2022, we expect approximately \$1.4 million of derivative loss 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. We are party to five cross currency interest rate swaps through 2025 for a total notional amount of €180.0 million which qualify for hedge accounting as cash flow hedges. We determined that no ineffectiveness exists related to these swaps. As of June 30, 2022 and December 31, 2021, interest receivables of \$1.7 million and \$1.4 million, respectively are recorded in prepaid expenses and other current assets in the accompanying condensed consolidated balance sheets.

Fair Value Hedges

As of June 30, 2022 and December 31, 2021, 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 a portion of our fixed rate private placement debt and qualify for hedge accounting as fair value hedges. We determined that no ineffectiveness exists related to these swaps. As of June 30, 2022 and December 31, 2021, interest receivables of \$0.4 million and \$0.6 million, respectively, are 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. Accordingly, the derivative is presented as either current or long-term based upon the classification of the related debt. As of December 31, 2021, the 2023 Notes were classified as current due to contingent conversion features as discussed in Note 7 "Debt". Accordingly, the related call options were classified as current as of December 31, 2021. As of June 30, 2022, the 2023 Notes may no longer be surrendered for conversion and therefore the related call options have been reclassified to long-term.

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 common share 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 shares are the underlying security, are derivative assets that require mark-to-market accounting treatment. The Call Options are measured and reported at fair value on a recurring basis, within Level 2 of the fair value hierarchy. The change in fair value is recognized immediately in our condensed consolidated statements of income in other income, net.

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 income, 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.

Because the terms of the Cash Convertible Notes' embedded cash conversion option are substantially similar to those of the Call Options, discussed above, we expect the effect on earnings from these two derivative instruments to mostly offset each other.

Foreign Exchange Contracts

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

We are party to various foreign exchange forward, option and swap arrangements which had, at June 30, 2022 and December 31, 2021, aggregate notional values of \$1.0 billion and \$1.3 billion, respectively, which expire at various dates through December 2022. 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 income, net.

Fair Values of Derivative Instruments

The following table summarizes the fair value amounts of derivative instruments as of June 30, 2022 and December 31, 2021. The current assets are included in prepaid expenses and other current assets and the current liabilities are included in accrued and other current liabilities in the accompanying condensed consolidated balance sheets.

(in thousands)	As of June 30, 2022		As of December 31, 2021	
	Current Asset	Long-Term Asset	Current Asset	Long-Term Asset
Assets:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge ⁽¹⁾	\$—	\$13,590	\$—	\$—
Interest rate contracts - fair value hedge ⁽¹⁾	55	—	1,971	—
Total derivative instruments designated as hedges	\$55	\$13,590	\$1,971	\$—
Undesignated derivative instruments				
Equity options	\$—	\$221,725	\$162,141	\$190,430
Foreign exchange forwards and options	28,466	—	11,172	—
Total undesignated derivative instruments	\$28,466	\$221,725	\$173,313	\$190,430
Total Derivative Assets	\$28,521	\$235,315	\$175,284	\$190,430

(in thousands)	As of June 30, 2022		As of December 31, 2021	
	Current Liability	Long-Term Liability	Current Liability	Long-Term Liability
Liabilities:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge ⁽¹⁾	\$—	\$—	\$—	(\$628)
Total derivative instruments designated as hedges	\$—	\$—	\$—	(\$628)
Undesignated derivative instruments				
Equity options	\$—	(\$223,168)	(\$162,608)	(\$191,251)
Foreign exchange forwards and options	(2,790)	—	(19,250)	—
Total undesignated derivative instruments	(\$2,790)	(\$223,168)	(\$181,858)	(\$191,251)
Total Derivative Liabilities	(\$2,790)	(\$223,168)	(\$181,858)	(\$191,879)

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

Gains and Losses on Derivative Instruments

The following tables summarize the gains and losses on derivative instruments for the three- and six-month periods ended June 30, 2022 and 2021:

(in thousands)	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Other income, net	Other income, net	Other income, net	Other income, net	Other 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	\$2,688	\$442	\$2,453	\$7,664
Gains (Losses) on Derivatives in Cash Flow Hedges				
Interest rate contracts				
Amount of loss reclassified from accumulated other comprehensive loss	(\$12,852)	\$2,862	(\$16,902)	(\$6,966)
Amounts excluded from effectiveness testing	—	—	—	—
Gains (Losses) on Derivatives in Fair Value Hedges				
Interest rate contracts				
Hedged item	667	638	1,916	1,427
Derivatives designated as hedging instruments	(667)	(638)	(1,916)	(1,427)
Gains (Losses) Derivatives Not Designated as Hedging Instruments				
Equity options	(49,327)	(22,037)	(130,846)	(113,756)
Cash convertible notes embedded cash conversion option	49,139	22,393	130,690	118,274
Foreign exchange forwards and options	37,620	(11,622)	50,875	11,881
Total gains (losses)	\$24,580	(\$8,404)	\$33,817	\$9,433

Balance Sheet Line Items in which the Hedged Item is Included

The following tables summarizes the balance sheet line items in which the hedged item is included as of June 30, 2022 and December 31, 2021:

(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)	
	June 30, 2022	December 31, 2021	June 30, 2022	December 31, 2021
Current portion of long-term debt	(\$127,033)	(\$128,916)	\$55	\$1,971

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.

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 June 30, 2022				As of December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Cash equivalents	\$269,460	\$214,040	\$—	\$483,500	\$366,117	\$179,844	\$—	\$545,961
Short-term investments	267,611	336,818	—	604,429	—	139,785	—	139,785
Non-marketable equity securities	—	—	3,532	3,532	—	—	3,945	3,945
Equity options	—	221,725	—	221,725	—	352,571	—	352,571
Foreign exchange forwards and options	—	28,466	—	28,466	—	11,172	—	11,172
Interest rate contract - cash flow hedge	—	13,590	—	13,590	—	—	—	—
Interest rate contracts - fair value hedge	—	55	—	55	—	1,971	—	1,971
Total assets	\$537,071	\$814,694	\$3,532	\$1,355,297	\$366,117	\$685,343	\$3,945	\$1,055,405
Liabilities:								
Foreign exchange forwards and options	\$—	(\$2,790)	\$—	(\$2,790)	\$—	(\$19,250)	\$—	(\$19,250)
Interest rate contracts - cash flow hedge	—	—	—	—	—	(628)	—	(628)
Cash conversion option	—	(223,168)	—	(223,168)	—	(353,859)	—	(353,859)
Contingent consideration	—	—	(17,961)	(17,961)	—	—	(24,100)	(24,100)
Total liabilities	\$—	(\$225,958)	(\$17,961)	(\$243,919)	\$—	(\$373,737)	(\$24,100)	(\$397,837)

The carrying values of financial instruments, including cash and cash equivalents, short-term deposits, accounts receivable, accounts payable and other accrued liabilities, approximate their fair values due to their short-term maturities.

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, 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, contingent consideration accruals which are classified in Level 3 of the fair value hierarchy, and are shown in the tables below, and non-marketable equity securities remeasured as of June 30, 2022 and December 31, 2021 which are classified within Level 3 in the fair value hierarchy. There were no transfers between levels during the six months ended June 30, 2022.

In determining fair value for Level 2 instruments, we apply a market approach, using quoted active market prices relevant to the particular instrument under valuation, giving consideration to the credit risk of both the respective counterparty to the contract and the Company. To determine our credit risk, we estimated our credit rating by benchmarking the price of outstanding debt to publicly-available comparable data from rated companies. Using the estimated rating, our credit risk was quantified by reference to publicly-traded debt with a corresponding rating. The Level 2 derivative financial instruments include the Call Options asset and the embedded conversion option liability. See Note 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 share price, the risk-free interest rate, and the implied volatility of our common shares. 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. 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 6.5% and 6.6%), 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.

Refer to Note 6 "Investments" for the change in non-marketable equity securities with Level 3 inputs during the six-month periods ended June 30, 2022 and 2021. For contingent consideration liabilities with Level 3 inputs, the following table summarizes the activity for the six-month periods ended June 30, 2022 and 2021, all of which is related to the 2018 acquisition of STAT-Dx:

(in thousands)	2022	2021
Balance at beginning of year	(\$24,100)	(\$23,593)
Changes in fair value	239	(52)
Payments	5,900	—
Balance at end of period	(\$17,961)	(\$23,645)

As of June 30, 2022, \$18.0 million was accrued for contingent consideration, of which \$8.1 million is included in accrued and other current liabilities and \$9.9 million is included in other long-term liabilities in the accompanying condensed consolidated balance sheet.

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 fair values of the financial instruments are presented in Note 7 "Debt" and were determined as follows:

Cash Convertible Notes and Convertible Notes: Fair value is based on an estimation using available over-the-counter market information on the Cash Convertible Notes due in 2023 and 2024 as well as the Convertible Notes due in 2027.

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.

There were no adjustments in the three- and six-month periods ended June 30, 2022 and 2021 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 rate 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%. Fluctuations in the distribution of pre-tax loss or income among our operating subsidiaries can lead to fluctuations of the effective tax rate in the condensed consolidated financial statements. In the second quarters of 2022 and 2021, our effective tax rates were 16.3% and 19.2%, respectively. The effective tax rate in 2022 reflects the release of uncertain tax positions following the conclusion of tax audits covering the 2014 to 2016 years in the second quarter 2022. Additionally, we record partial tax exemptions on foreign income primarily derived from operations in Germany and the Netherlands. 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 in which the intercompany income is nontaxable in Dubai.

We assess uncertain tax positions in accordance with ASC 740 (ASC 740-10 Accounting for Uncertainties in Tax). At June 30, 2022, our gross unrecognized tax benefits totaled approximately \$65.4 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 \$16.8 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 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 2010 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 2018 tax year. Our subsidiaries, with few exceptions, are no longer open to income tax examinations by tax authorities for years before 2017. The German tax authorities have commenced an audit for the 2017-2019 tax years.

As of June 30, 2022, 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. Share-Based Compensation

Stock Units

Stock units represent rights to receive our common shares at a future date and include restricted stock units which are subject to time-based vesting only and performance stock units which include performance conditions in addition to time-based vesting. Shares are issued on the vesting dates net of the applicable statutory tax withholding to be paid by us on behalf of our employees. As a result, fewer shares are issued than the number of stock units outstanding. We record a liability for the tax withholding to be paid by us as a reduction to treasury shares.

During the three- and six-month periods ended June 30, 2022, we granted 0.5 million and 0.8 million stock awards compared to 0.5 million and 0.7 million stock awards granted for the three- and six-month periods ended June 30, 2021.

At June 30, 2022, there was \$94.8 million remaining in unrecognized compensation expense, less estimated forfeitures, related to these awards which will be recognized over a weighted-average period of 2.04 years.

Share-Based Compensation Expense

For the three- and six-month periods ended June 30, 2022 and 2021, share-based compensation expense was as follows:

(in thousands)	Three months ended		Six months ended	
	June 30,	2021	June 30,	2021
	2022		2022	
Cost of sales	\$83	\$709	\$826	\$1,347
Research and development	1,773	1,048	3,046	1,647
Sales and marketing	3,609	3,398	7,482	6,855
General and administrative	5,701	4,454	11,895	9,448
Share-based compensation expense before taxes	11,166	9,609	23,249	19,297
Less: income tax benefit	2,610	2,277	5,348	4,384
Net share-based compensation expense	\$8,556	\$7,332	\$17,901	\$14,913

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 condensed consolidated balance sheets.

The Warrants are exercisable only upon expiration. For each Warrant that is exercised, we will deliver to the holder a number of common shares 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 common shares to the extent that the market value per common share exceeds the applicable exercise price of the Warrants (as measured under the terms of the Warrants).

Cash convertible notes	Issued on	Number of share warrants (in millions)	Weighted Average 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
2023	September 13, 2017	9.7	\$49.9775	\$45.3	June 26, 2023
2024	November 13, 2018	10.9	\$50.2947	\$72.4	August 27, 2024

Accumulated Other Comprehensive Loss

The following table is a summary of the components of accumulated other comprehensive loss as of June 30, 2022 and December 31, 2021:

(in thousands)	June 30, 2022	December 31, 2021
Net unrealized gain on hedging contracts, net of tax	\$19,929	\$1,245
Net unrealized loss on pension, net of tax	(588)	(588)
Foreign currency effects from intercompany long-term investment transactions, net of tax benefit of \$13.0 million and \$12.4 million in 2022 and 2021, respectively	(32,191)	(30,768)
Foreign currency translation adjustments	(378,571)	(296,559)
Accumulated other comprehensive loss	(\$391,421)	(\$326,670)

13. Earnings per Common Share

We present basic and diluted earnings per share. Basic earnings per share is calculated by dividing the net income by the weighted average number of common shares outstanding. Diluted earnings per share reflect the potential dilution that would occur if all "in the money" securities to issue common shares were exercised.

The following table for the three- and six-month periods ended June 30, 2022 and 2021 summarizes the information used to compute earnings per common share:

(in thousands, except per share data)	Three months ended		Six months ended	
	June 30,	2021	June 30,	2021
Net income	\$96,661	\$121,051	\$251,973	\$250,274
Weighted average number of common shares used to compute basic net income per common share	227,589	228,518	227,571	228,385
Dilutive effect of stock options and restricted stock units	2,349	3,415	2,650	3,650
Dilutive effect of outstanding warrants	—	17	8	87
Weighted average number of common shares used to compute diluted net income per common share	229,938	231,950	230,229	232,122
Outstanding options and awards having no dilutive effect, not included in above calculation	427	8	249	5
Outstanding warrants having no dilutive effect, not included in above calculation	20,560	20,544	20,325	20,473
Basic earnings per common share	\$0.42	\$0.53	\$1.11	\$1.10
Diluted earnings per common share	\$0.42	\$0.52	\$1.09	\$1.08

For purposes of considering the 2027 Notes in determining diluted earnings per common share, only an excess of the conversion value over the principal amount would have a dilutive impact using the treasury stock method. Since the 2027 Notes were out of the money and anti-dilutive during the period from January 1, 2021 through June 30, 2022, they were excluded from the diluted earnings per common share calculations in 2021 and 2022.

14. Commitments and Contingencies

Contingent Consideration Commitments

We could be required to make additional contingent cash payments for a previous business combination based on the achievement of certain FDA approval milestones. These potential milestone payments, which may be triggered by the end of 2023, total \$20.7 million, of which \$8.1 million is included in accrued and other current liabilities and \$9.9 million is included in other long-term liabilities in the accompanying condensed consolidated balance sheet as of June 30, 2022.

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. We provide for estimated warranty costs at the time of the product sale. Product warranty obligations are included in accrued and other current liabilities in the accompanying condensed consolidated balance sheets. We believe our warranty reserves of \$6.1 million and \$6.3 million as of June 30, 2022 and December 31, 2021, respectively, appropriately reflect the estimated cost of such warranty obligations.

Litigation

From time to time, we may be party to legal proceedings incidental to our business. As of June 30, 2022, 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. Because litigation is inherently unpredictable and unfavorable resolutions could occur, assessing litigation contingencies is highly subjective and requires judgments about future events. 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 \$5.6 million and \$5.7 million as of June 30, 2022 and December 31, 2021, respectively.

We are not party to any material legal proceeding as of the date of this report except for the matters listed below.

Patent Litigation

Archer DX

In 2018, ArcherDX (a company which spun out as an independent company in conjunction with QIAGEN's acquisition of Enzymatics in 2015 and was later acquired by Invitae in 2021) and Massachusetts General Hospital (MGH) sued QIAGEN for patent infringement. In August 2021, a federal jury ruled that QIAGEN infringed two patents owned by ArcherDX and awarded damages of \$4.7 million which were accrued in 2021 and remain accrued as of June 30, 2022 in accrued and other current liabilities in the accompanying condensed consolidated balance sheet. We plan to appeal the verdict as soon as the final verdict is entered.

Bio-Rad Laboratories, Inc.

In April 2022, QIAGEN filed a lawsuit in a U.S. federal court against Bio-Rad Laboratories, Inc. (Bio-Rad) seeking a declaratory judgment of non-infringement of certain Bio-Rad patents related to digital PCR technology. We are seeking judgment that we have not infringed and do not infringe any claims of the Bio-Rad patents, and have not made, used, sold, offered for sale, or imported any products that infringe any of the patents' claims, directly or indirectly. We are also seeking attorneys' fees, costs, and expenses and any other relief determined by the court.

Other litigation matters

For all other matters, a total of \$0.9 million and \$1.0 million remained accrued as of June 30, 2022 and December 31, 2021, respectively. The estimated range of possible losses for these other matters as of June 30, 2022 is between zero and \$1.8 million.

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.

15. Subsequent Events

In July 2022, we completed a €300.0 million German private placement bond as further described in Note 7 "Debt".

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.

In the tables presented below, results may not sum and percentages may not recalculate due to rounding.

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, 2021 and under the heading "Risk Factors" below.

Results of Operations

Selected Operating Performance

- While net sales from non-COVID product portfolio grew 4% in the second quarter of 2022, total net sales declined 9% in the second quarter of 2022 over the year-ago period, reflecting a 42% decline in net sales from COVID-19 products. Net sales were adversely impacted by about five percentage points from unfavorable currency movements against the U.S. dollar in the second quarter of 2022.
- Operating income margin declined to 23.7% in the second quarter of 2022 from 28.4% in year-ago period. The decreased operating income margin reflects lower sales contributions as well as higher expenses from recent production capacity expansion projects, investments in research and development and resumption of commercial activities after the end of pandemic measures.
- Net cash provided by operating activities rose 33% to \$379.4 million in the first half of 2022 from \$285.0 million in the year-ago period.

QIAGEN has a subsidiary in Moscow, Russia. Due to the ongoing uncertainties related to the war in Ukraine, and although not material to our condensed consolidated results of operations, during the three and six months ended June 30, 2022, we recorded a combination of credit losses, write-offs and impairments related to our business in Russia totaling \$0.8 million and \$4.0 million, respectively. These are included in the line item restructuring, acquisition, integration and other, net in the accompanying condensed consolidated statement of income. We have suspended activities in Russia and also with our former commercial partner in Belarus.

In May 2022, we acquired BLIRT S.A., a supplier of standardized and customized solutions for proteins and enzymes as well as molecular biology reagents located in Gdańsk, Poland. Its offering includes proteins and enzymes that are critical to the life sciences industry and diagnostic kit manufacturers, especially for non-COVID applications. The acquisition was not significant to the overall condensed consolidated financial statements.

Outlook and COVID-19

We expect demand for our non-COVID product portfolio to continue to grow during the second half of 2022, while taking a cautious view on expectations for a significant decline in COVID-19 test sales for the year. The growth in our non-COVID portfolio is expected to be driven by opportunities in the research environment amid increases in national governmental funding programs as well as a resumption in regular clinical testing for molecular diagnostics. Investments have been made

to strengthen our portfolio, including manufacturing upscaling projects and within research and development for menu expansion of our key platforms. These are expected to support the transition of our installed base of instruments and systems into non-COVID applications. At the same time, QIAGEN remains prepared to continue supporting the global response to the pandemic.

Three- and Six-Month Periods Ended June 30, 2022 compared to Three- and Six-Month Periods Ended June 30, 2021

Net Sales

(in millions)	Second quarter			First six months		
	2022	2021		2022	2021	
Product type	Net sales	Net sales	% change	Net sales	Net sales	% change
Consumables and related revenues	\$453.0	\$498.1	-9%	\$1,013.9	\$996.3	+2%
Instruments	62.6	69.2	-10%	130.0	138.2	-6%
Net Sales	\$515.5	\$567.3	-9%	\$1,143.9	\$1,134.5	+1%
Customer class						
Molecular Diagnostics	\$254.6	\$271.7	-6%	\$611.1	\$551.0	+11%
Life Sciences	260.9	295.6	-12%	532.8	583.5	-9%
Net Sales	\$515.5	\$567.3	-9%	\$1,143.9	\$1,134.5	+1%
Non-COVID and COVID-19 product groups						
Non-COVID product groups	\$423.5	\$407.6	+4%	\$823.2	\$771.7	+7%
COVID-19 product groups	92.0	159.7	-42%	320.7	362.9	-12%
Net Sales	\$515.5	\$567.3	-9%	\$1,143.9	\$1,134.5	+1%

Consumables and related revenues declined by 9% and increased by 2% for the three and six months ended June 30, 2022, respectively, as compared to the prior year periods, as lower COVID-19 sales overshadowed solid trends in the non-COVID portfolio. Instrument sales also declined by 10% and 6% for the three and six months ended June 30, 2022, respectively, as compared to the strong results in the year ago periods. Net sales were adversely impacted by about five percentage points from unfavorable currency movements against the U.S. dollar in the second quarter of 2022.

Product group (in millions)	Second quarter			First six months		
	2022	2021		2022	2021	
	Net sales	Net sales	% change	Net sales	Net sales	% change
Sample technologies	\$177.7	\$202.6	-12%	\$442.9	\$429.8	+3%
Diagnostic solutions	156.8	154.2	+2%	331.2	303.9	+9%
PCR / Nucleic acid amplification	105.2	108.7	-3%	221.0	225.4	-2%
Genomics / NGS	57.2	79.5	-28%	113.3	129.9	-13%
Other	18.6	22.3	-17%	35.4	45.5	-22%
Net Sales	\$515.5	\$567.3	-9%	\$1,143.9	\$1,134.5	+1%

Sample technologies represent products, including both COVID-19 and non-COVID products, involved in the first step in any molecular lab process. In the second quarter of 2022, sales of sample technologies declined by 12% compared to the prior year period due to the sharp decline in COVID-19 testing demand. The QIASymphony system reached over 3,000 cumulative placements along with ongoing solid placements of the QIACube Connect and EZ 2 systems. Sales of sample technologies were adversely impacted by five percentage points from unfavorable currency movements against the U.S. dollar in the second quarter and first six months of 2022.

Diagnostic solutions include molecular testing platforms and products as well as Precision Medicine and companion diagnostic co-development revenues. Sales of diagnostic solutions during the second quarter of 2022 was 2% higher than the year-ago period, led by QuantiFERON-TB latent TB sales as well as higher consumables sales for QIAstat-Dx. Sales for NeuMoDx remained in line with the full-year goal considering reduced demand for COVID-19 testing. Sales of diagnostic solutions were adversely impacted by five percentage points from unfavorable currency movements against the U.S. dollar in the second quarter and first six months of 2022.

PCR / Nucleic acid amplification involves research and applied PCR solutions and components. Sales of PCR / Nucleic acid amplification declined in the second quarter and first six months of 2022 on the decline in COVID-19 product group sales and included three percentage points from unfavorable currency movements against the U.S. dollar. QIAcuity digital PCR sales rose compared to the second quarter of 2021 led by strong placements as well as improving consumables utilization rates. The acquisition of BLIRT S.A. in May 2022 provided about \$1 million of sales in the second quarter of 2022, expanding our capacity for our "OEM by QIAGEN" business that delivered solid growth.

Genomics / NGS includes universal NGS solutions as well as the full QIAGEN Digital Insights portfolio. The decrease in Genomics / NGS sales during 2022 compared to the prior year periods sales primarily reflects the \$20 million sale of patents and technology license during the second quarter of 2021. Growth in non-COVID products were driven by solid growth in universal NGS consumables which more than offset lower QIAGEN Digital Insights sales. Genomics / NGS sales were adversely impacted by five percentage points from unfavorable currency movements against the U.S. dollar in the second quarter and first six months of 2022.

Geographic region (in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
	Net sales	Net sales	% change	Net sales	Net sales	% change
Americas	\$252.3	\$256.6	-2 %	\$505.4	\$500.9	+1 %
Europe, Middle East and Africa	160.6	202.1	-21 %	409.7	420.6	-3 %
Asia Pacific, Japan and Rest of World	102.5	108.6	-6 %	228.8	213.0	+7 %
Net Sales	\$515.5	\$567.3	-9%	\$1,143.9	\$1,134.5	+1%

The 2% decline in the Americas region compared to the prior year reflects higher non-COVID product group sales in the U.S. which were more than offset by lower COVID-19 testing demand. Canada reported gains against lower sales in Brazil and Mexico compared to the year-ago period.

Net sales in the Europe, Middle East and Africa (EMEA) region lower than the prior periods partially due to the adverse impact of by eleven percentage points from unfavorable currency movements against the U.S. dollar in the three and six months ended June 30, 2022. Results in the EMEA region reflected growth in Spain and the Netherlands, while sales declined in the United Kingdom, France and Switzerland compared to the year-ago period.

Net sales in the Asia Pacific, Japan and Rest of World region during the second quarter of 2022 were 6% lower than the prior period reflecting mixed demand among customer classes in light of forecasted lockdown measures. Australia and South Korea grew more than offsetting the decline in Japan. Sales in this region were adversely impacted by six percentage points from unfavorable currency movements against the U.S. dollar in the second quarter of 2022 and five percentage points in the six-month period then ended.

Gross Profit

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Gross Profit	\$331.0	\$369.2	-10%	\$746.0	\$739.8	+1%
Gross Margin	64.2 %	65.1 %		65.2 %	65.2 %	

The gross margin in 2022 reflects the changes in individual product sales. In 2022, the gross margin included lower margin consumables, notably the QuantiFERON latent TB test, and lower margin instruments, such as QIAstat-Dx and NeuMoDx, all of which experienced increased sales during the quarter. The gross margin in 2022 also included higher costs related to minimum royalty payments and higher product costs incurred for certain supply commitments. The unfavorable margin

impact was offset by favorable margin impacts from growth in higher margin consumables, namely QIAprep&. Generally, our consumables and related products have a higher gross margin than our instrumentation products and service arrangements and fluctuations in the sales levels of these products and services can result in fluctuations in gross margin between periods.

In the second quarter of 2022, the amortization expense on acquisition-related intangibles within cost of sales decreased to \$15.1 million compared to \$17.7 million in the same period of 2021; and in the first six months of 2022, the amortization expense on acquisition-related intangibles within cost of sales decreased to \$30.4 million from \$35.4 million in the first six months of 2021. The lower expense reflects the full amortization of certain assets. Our acquisition-related intangible amortization will increase in the event of future acquisitions.

Research and Development

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Research and development	\$49.9	\$52.2	-4%	\$96.3	\$99.6	-3%
% of net sales	9.7 %	9.2 %		8.4 %	8.8 %	

Research and development expense declined 4% and 3% during the three and six months ended June 30, 2022, respectively, compared to the prior year periods. The overall decrease in research and development expense in the three and six months ended June 30, 2022 include \$4.3 million and \$6.4 million, respectively, of favorable currency exchange impact and reflects our continued focus on our five pillars of growth, including investments in NeuMoDx, QIAstat-Dx and QIAcuity. These investments are targeting new applications within our five pillars of growth to drive sustainable post-pandemic expansion. 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

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Sales and marketing	\$118.9	\$110.4	+8%	\$237.4	\$224.2	+6%
% of net sales	23.1 %	19.5 %		20.8 %	19.8 %	

Sales and marketing expenses increased by 8% and 6% during the three and six months ended June 30, 2022, respectively, compared to the prior year periods. The overall increase in sales and marketing expenses primarily reflects higher freight and other logistics expenses as well as favorable currency exchange impacts of \$8.2 million and \$12.6 million in the three and six months ended June 30, 2022, respectively. Sales and marketing expenses are primarily associated with personnel, commissions, advertising, trade shows, publications, freight and logistics expenses, and other promotional expenses, including travel costs which were higher in 2022 compared to 2021 mainly due to post-pandemic commercial activities. The increased use of digital customer engagement capabilities efforts initiated during the COVID-19 pandemic continue to build on the new habits of customers. We expect to continue building out our digital customer engagement channels and intend to closely monitor the development of sales and marketing expenses as pandemic restrictions are lifted.

General and Administrative

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
General and administrative	\$32.5	\$31.0	+5%	\$66.9	\$64.8	+3%
% of net sales	6.3 %	5.5 %		5.8 %	5.7 %	

General and administrative expenses increased by 5% and 3% during the three and six months ended June 30, 2022, respectively, compared to the prior year periods. General and administrative costs include favorable currency impacts of \$2.9 million and \$4.6 million in the three and six months ended June 30, 2022, respectively, and reflect higher licensing and information technology outsourcing costs as well as increased consulting costs as we move forward with investments in our information technology systems. We anticipate continued investments in cyber security and other investments in information technology systems including upgraded enterprise resource planning (ERP) systems.

Acquisition-Related Intangible Amortization

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Acquisition-related intangible amortization	\$2.8	\$5.3	-47%	\$5.7	\$10.7	-47%
% of net sales	0.5 %	0.9 %		0.5 %	0.9 %	

Amortization expenses related to acquisition-related intangibles decreased by 47% during both the three and six months ended June 30, 2022 compared to the prior year periods. Compared to the year-ago period, amortization expense on acquisition-related intangibles within operating expense decreased following the full amortization of assets previously acquired. 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. Our acquisition-related intangible amortization recorded in operating expenses will increase in the event of future acquisitions.

Restructuring, Acquisition, Integration and Other, net

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Restructuring, acquisition, integration and other, net	\$4.7	\$9.0	-47%	\$10.5	\$15.4	-32%
% of net sales	0.9 %	1.6 %		0.9 %	1.4 %	

Restructuring, acquisition, integration and other, net expenses included costs related to our acquisitions of BLIRT S.A. and NeuMoDx Molecular, Inc., and impairments and charges related to our business in Russia, Ukraine and Belarus, during the three and six months ended June 30, 2022, respectively. In 2021, restructuring, acquisition, integration and other expenses, net were primarily associated with the continued integration of NeuMoDx.

Other Expense, net

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Interest income	\$4.3	\$2.1	+107%	\$6.6	\$3.7	+77%
Interest expense	(13.7)	(13.9)	-2%	(27.2)	(27.4)	-1%
Other income, net	2.7	0.4		2.5	7.7	
Total other expense, net	(\$6.6)	(\$11.4)	-42%	(\$18.2)	(\$16.1)	+13%

Interest income includes interest earned on cash, cash equivalents and short-term investments, income related to certain interest rate derivatives as discussed in Note 8 "Derivatives and Hedging" and other components including the interest portion of operating lease transactions. The increase in 2022 compared to the year-ago periods is attributable to the duration and level of short-term investments held during the period.

Interest expense primarily relates to debt, discussed in Note 7 "Debt" in the accompanying notes to the condensed consolidated financial statements.

For the three and six month periods ended June 30, 2022 and 2021, other income, net primarily includes \$2.5 million and \$2.9 million, and \$2.6 million and \$4.5 million, respectively, of income from equity method investments. For the six-month ended June 30, 2021, other income, net includes a \$5.6 million gain recognized

from the sale of the Invitae shares and related hedge. Other income, net also includes gains and losses on foreign currency transactions and fair value changes in investments and derivatives.

Provision for Income Taxes

(in millions)	Second quarter			First six months		
	2022	2021	% change	2022	2021	% change
Income before income taxes	\$115.5	\$149.9	-23%	\$311.0	\$309.0	+1%
Income tax expense	\$18.9	\$28.8	-35%	\$59.1	\$58.7	+1%
Net income	\$96.7	\$121.1		\$252.0	\$250.3	
Effective tax rate	16.3%	19.2%		19.0%	19.0%	

Our effective tax rate differs from the Netherlands statutory tax rate of 25.8% 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. We record partial tax exemptions on foreign income primarily derived from operations in Germany and the Netherlands. 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 in which the intercompany income is nontaxable in Dubai. The effective tax rate in 2022 reflects the release of uncertain tax positions following the conclusion of tax audits covering the 2014 to 2016 years in the second quarter 2022.

In future periods, our effective tax rate may fluctuate from similar or other factors as discussed in "Changes in tax laws or their application of the termination or reduction of certain government tax 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, 2021.

Liquidity and Capital Resources

To date, we have funded our business primarily through internally generated funds, debt and private and public sales of equity. Our primary use of cash has been to support continuing operations and our investing activities, including capital expenditure requirements and acquisitions. As of June 30, 2022, we had cash and cash equivalents of \$706.5 million and short-term investments of \$604.4 million. As of December 31, 2021, we had cash and cash equivalents of \$880.5 million and short-term investments of \$184.8 million. 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 anticipated local working capital needs. At June 30, 2022, cash and cash equivalents had decreased by \$174.0 million from December 31, 2021, primarily as a result of net cash used in investing activities of \$557.8 million partially offset by net cash provided by financing activities of \$12.5 million and cash provided by operating activities of \$379.4 million. As of June 30, 2022 and December 31, 2021, we had working capital of \$1.18 billion and \$592.1 million, respectively, reflecting in part the return of long-term debt and related derivatives to long-term classification following the end of the contingent conversion period.

Cash Flow Summary

(in millions)	First six months	
	2022	2021
Net cash provided by operating activities	\$379.4	\$285.0
Net cash used in investing activities	(\$557.8)	(\$78.7)
Net cash provided by (used in) financing activities	\$12.5	(\$43.5)
Effect of exchange rate changes on cash and cash equivalents	(\$8.1)	(\$1.8)
Net (decrease) increase in cash and cash equivalents	(\$174.0)	\$161.1

Operating Activities

For the six months ended June 30, 2022 and June 30, 2021, we generated net cash from operating activities of \$379.4 million and \$285.0 million, respectively. The increase in net cash provided by operating activities is primarily the result of adjustments for non-cash items. While net income was \$252.0 million for the six months ended June 30, 2022, non-cash components in income included \$103.4 million of depreciation and amortization, \$23.2 million of share-based compensation expense, and \$16.7 million of amortization of debt discount. Operating cash flows include a net decrease in operating assets primarily due to increased inventories to meet the increase in demand and decreased accrued and other liabilities and accounts payable. 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

\$557.8 million of cash was used in investing activities during the six months ended June 30, 2022, compared to \$78.7 million for the same period in 2021. Cash used in investing activities includes \$653.1 million in purchases of short-term investments, \$61.4 million paid for purchases of property, plant and equipment, \$14.7 million for the purchases of intangible assets, and \$63.7 million net cash paid for the acquisition of BLIRT S.A., partially offset by \$224.8 million from the sale of short-term investments and \$11.1 million returned to us from our derivative counterparties in connection with cash we had provided to collateralize our derivative liabilities with them as discussed in Note 8 "Derivatives and Hedging". Cash used in investing activities during the six months ended June 30, 2021 includes \$136.7 million in purchases of short-term investments, \$90.0 million paid for purchases of property, plant and equipment and \$11.3 million for the purchases of intangible assets partially offset by \$118.0 million from the sale of Invitae shares and \$42.9 million returned to us from our derivative counterparties in connection with cash we had provided to collateralize our derivative liabilities with them.

Financing Activities

Net cash provided by financing activities totaled \$12.5 million for the six months ended June 30, 2022 and includes \$33.7 million received from our derivative counterparties to collateralize derivative assets that we hold with them, partially offset by \$16.7 million paid in connection with net share settlement for tax withholding related to the vesting of stock awards and \$4.6 million paid for contingent consideration. Net cash used in financing activities was \$43.5 million for the six months ended June 30, 2021, primarily due to repayments of long-term debt, including \$41.1 million for two tranches of the German Private Placement (Schuldschein) that matured and \$0.2 million for the final amount remaining under our Cash Convertible Senior Notes due in 2021, which were issued on March 19, 2014.

Other Factors Affecting Liquidity and Capital Resources

As of June 30, 2022, we carry a total of \$1.9 billion of long-term debt, of which \$460.3 million is current and \$1.5 billion is long-term.

In July 2022, we completed another German private placement bond (2022 Schuldschein), which was issued in several tranches totaling €300.0 million due in various periods through 2032 as described more fully in Note 7 "Debt".

In December 2020, we issued \$500.0 million aggregate principal amount of zero coupon Convertible Notes due 2027 (2027 Notes). The 2027 Notes will mature on December 17, 2027 unless converted in accordance with their terms prior to such date as described more fully in Note 7 "Debt".

In November 2018, we issued \$500.0 million aggregate principal amount of Cash Convertible Senior Notes due 2024 (2024 Notes). 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 due 2023 (2023 Notes). 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 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 of June 30, 2022, a total of \$273.9 million is outstanding, of which \$160.3 million is due in October 2022. During the first quarter of 2021, we paid \$41.1 million when two tranches matured.

In March 2014, we issued Cash Convertible Senior Notes of which the final \$0.2 million was paid during the three months ended March 31, 2021.

In October 2012, we completed a U.S. private placement with three series at a weighted average interest rate of 3.66%. The following two series remain outstanding at June 30, 2022: (1) \$300 million 10-year term due October 16, 2022 (3.75%); and (2) \$27 million 12-year term due October 16, 2024 (3.90%).

In December 2020, we obtained a €400 million syndicated revolving credit facility with a contractual life of three years with the ability to extend by one year two times. No amounts were utilized at June 30, 2022. The facility can be utilized in euro and bears interest of 0.550% to 1.500% above EURIBOR, and is offered with interest periods of one, three or six months. The interest rate is linked to our environmental, social and governance (ESG) performance. We have additional credit lines totaling €27.0 million with no expiration date, none of which were utilized as of June 30, 2022.

In connection with certain acquisitions, we could be required to make additional contingent cash payments totaling up to \$20.7 million based on the achievement of certain revenue and operating results milestones as further discussed in Note 14 "Commitments and Contingencies".

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

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

Quantitative and Qualitative Disclosures about Market Risk

Our market risk relates primarily to interest rate exposures on cash, marketable securities, and borrowings and foreign currency exposures on intercompany and third-party transactions. The overall objective of our risk management 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, 2021.

Foreign Currency Risk

QIAGEN's functional currency is the U.S. dollar and most of our subsidiaries' functional currencies are the local currencies of the countries in which they are headquartered. All amounts in the financial statements of entities whose functional currency is not the U.S. dollar are translated into U.S. dollar equivalents at exchange rates as follows: (1) assets and liabilities at period-end rates, (2) income statement accounts at average exchange rates for the period, and (3) components of shareholders' equity at historical rates. Translation gains or losses are recorded in shareholders' equity, and transaction gains and losses are reflected in net income. Foreign currency transactions in the three- and six-month periods ended June 30, 2022 resulted in a net gain of \$0.3 million and a net loss of \$0.2 million, respectively, compared to net losses of \$2.7 million and \$4.4 million in the same period of 2021, respectively, and are included in other income, net.

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. At June 30, 2022, we were party to various foreign exchange forward, option and swap arrangements which had an aggregate notional value of \$1.0 billion which expire at various dates through December 2022. Additional information on our foreign exchange contracts is included in Note 8 "Derivatives and Hedging".

We are exposed to currency risks from foreign exchange contracts. If each of the respective currency pairs for derivatives which do not qualify for hedge accounting varied from the rates used for the preparation of the condensed consolidated financial statements, this would have had an effect which would have been almost fully

off-set by corresponding valuation adjustments in the positions which economically had been hedged by these foreign exchange derivatives. Accordingly, the net effect of such variance in currency rates would not have been material.

As of April 1, 2022, we began accounting for our operations in Turkey as highly inflationary as the prior three-years cumulative inflation rate exceeded 100 percent.

Interest Rate Risk

We are exposed to interest rate risk on our short-term investments and our debt. This exposure is managed in the aggregate with a focus on immediate and intermediate liquidity needs.

Interest income earned on our cash investments is affected by changes in the relative levels of market interest rates. We only invest in high-grade investment instruments. A hypothetical adverse 10% movement in market interest rates would not have materially impacted our financial statements.

At June 30, 2022, we have \$1.9 billion in current and long-term debt, of which \$170.1 million is floating rate debt. We use interest rate derivative contracts to align our portfolio of interest bearing assets and liabilities with our risk management objectives. At June 30, 2022 we are party to cross currency interest rate swaps through 2025 for a total notional amount of €180.0 million under which we exchange, at specified intervals, the difference between the euro and USD interest amounts calculated on their respective fixed rates by reference to an agreed-upon euro and USD notional principal amounts. A hypothetical adverse 10% movement in market interest rates would not have materially impacted our financial statements.

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 changing conditions regarding the war in Ukraine and the COVID-19 pandemic present 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, 2021. Actual results in these areas could differ from management's estimates.

Off-Balance Sheet Arrangements

We did not use special purpose entities and did not have off-balance-sheet financing arrangements as of June 30, 2022 and December 31, 2021.

Legal Proceedings

For information on legal proceedings, see Note 14 "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 14, based on information currently available, we believe that the resolution of these matters is unlikely to have a material adverse effect on our financial position or results of future operations for QIAGEN 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, 2021. There have been no material changes from the risk factors disclosed in Item 3 of our Form 20-F.
