QIAGEN N.V.
Venlo, The Netherlands

Interim Financial Report
June 30, 2023
(unaudited)

QIAGEN N.V.

CONDENSED FINANCIAL REPORT PERIOD ENDED JUNE 30, 2023

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QIAGEN N.V. Condensed Consolidated Balance Sheets

(in thousands)	Notes	**June 30, 2023**	December 31, 2022
		(unaudited)	
Assets			
Current assets:			
Cash and cash equivalents		$609,234	$730,271
Current financial assets	(7)	722,352	687,597
Trade accounts receivable		312,599	323,750
Inventories	(5)	391,516	358,487
Other current assets	(4, 9)	250,101	264,002
Total current assets		2,285,802	2,364,107
Non-current assets:			
Property, plant and equipment		502,980	492,582
Goodwill	(6)	2,483,979	2,380,162
Other intangible assets	(6)	808,408	748,648
Right-of-use assets		97,223	93,982
Equity accounted investments	(7)	20,151	18,217
Non-current financial assets	(7)	7,089	5,329
Deferred tax assets		84,747	89,440
Fair value of derivative financial instruments	(9)	97,616	131,354
Other non-current assets		25,487	27,927
Total non-current assets		4,127,680	3,987,641
Total assets		**$6,413,482**	**$6,351,748**

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

QIAGEN N.V. Condensed Consolidated Balance Sheets

(in thousands, except per share data)	Notes	June 30, 2023	December 31, 2022
		(unaudited)	
Liabilities and equity			
Current liabilities:			
Current financial debts	(8)	$500,149	$389,552
Trade and other accounts payable		83,939	98,734
Other current liabilities	(4, 9)	418,558	536,006
Total current liabilities		1,002,646	1,024,292
Non-current liabilities:			
Non-current financial debts	(8)	1,333,886	1,417,847
Deferred tax liabilities		21,045	26,116
Fair value of derivative financial instruments	(9)	266,267	293,725
Other non-current liabilities	(4, 7)	200,665	200,475
Total non-current liabilities		1,821,863	1,938,163
Equity:			
Common Shares, 0.01 EUR par value, authorized—410,000 shares, issued—230,829 shares		2,702	2,702
Share premium		1,938,741	1,921,972
Retained earnings		2,154,889	1,981,498
Net reserves		(373,082)	(356,691)
Less treasury shares at cost—2,647 and 3,113 shares, respectively	(13)	(134,277)	(160,188)
Total equity		3,588,973	3,389,293
Total liabilities and equity		**$6,413,482**	**$6,351,748**

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

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

		Six Months Ended June 30,	
(in thousands, except per share data)	Notes	**2023**	2022
Net sales	(4)	$980,255	$1,143,903
Cost of sales:			
Cost of sales		(330,645)	(369,130)
Acquisition-related intangible amortization		(32,084)	(30,416)
Total cost of sales		(362,729)	(399,546)
Gross profit		617,526	744,357
Operating expenses:			
Other operating income		265	118
Sales and marketing expense		(236,209)	(242,983)
Research and development expense		(102,322)	(91,990)
General and administrative expense		(61,136)	(66,038)
Restructuring, acquisition, integration and other, net		(10,313)	(10,500)
Other operating expense		(666)	(169)
Total operating expenses, net		(410,381)	(411,562)
Income from operations		207,145	332,795
Financial income		39,351	6,560
Financial expense		(29,037)	(28,052)
Other financial results	(7, 9)	53,533	133,640
Total financial income, net		63,847	112,148
Income before income tax expense		270,992	444,943
Income tax expense	(11)	(54,669)	(78,115)
Net income		**$216,323**	**$366,828**
Basic earnings per common share		$0.95	$1.61
Diluted earnings per common share		$0.94	$1.59
Weighted average shares outstanding:			
Basic		228,027	227,571
Diluted		230,560	230,229

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

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

(in thousands)	Notes	Six Months Ended June 30, 2023	Six Months Ended June 30, 2022
Net income		$216,323	$366,828
Other comprehensive (loss) income to be reclassified to profit or loss in subsequent periods:			
Foreign currency translation adjustments, net of $0 tax and $612 tax expense, respectively		(4,104)	(84,096)
(Losses) gains on cash flow hedges, net of $5,639 tax benefit and $3,668 tax expense, respectively	(9)	(16,217)	10,549
Reclassification adjustments on cash flow hedges, net of $4,699 tax expense and $4,361 tax benefit, respectively	(9)	13,513	(12,541)
Net investment hedge	(9)	(9,583)	20,676
Other comprehensive loss, after tax		(16,391)	(65,412)
Comprehensive income		**$199,932**	**$301,416**

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

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

(in thousands)	Notes	Six Months Ended June 30, 2023	2022
Cash flows from operating activities:			
Net income		$216,323	$366,828
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization		105,862	105,044
Non-cash impairments		—	153
Amortization of debt discount and issuance costs	(8)	17,161	16,650
Share-based compensation	(12)	22,008	23,249
Deferred income taxes		(10,411)	(11,316)
Other non-cash items, including fair value changes in derivatives		(53,284)	(122,801)
Changes in operating assets and liabilities:			
Accounts receivable		7,655	1,975
Inventories		(42,665)	(23,877)
Other current assets		(14,746)	8,319
Other non-current assets		819	263
Accounts payable		(16,465)	(8,453)
Accrued and other current liabilities		(67,269)	(1,887)
Other non-current liabilities		(801)	(13,981)
Income taxes		56,279	97,270
Interest paid		(8,219)	(11,610)
Interest received		37,363	4,728
Income taxes paid, net of refunds		(48,627)	(33,004)
Net cash provided by operating activities		200,983	397,550

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

(in thousands)	Notes	Six Months Ended June 30, 2023	2022
Cash flows from investing activities:			
Purchases of property, plant and equipment		(14,464)	(36,472)
Purchases of intangible assets	(6)	(55,073)	(39,552)
Development expenses	(6)	(2,288)	(4,281)
Purchases of unquoted debt securities	(7)	(714,149)	(385,503)
Proceeds from unquoted debt securities	(7)	678,978	224,751
Purchases of quoted debt securities	(7)	—	(267,611)
Purchases of unquoted equity securities	(7)	(1,540)	(1,233)
Proceeds from unquoted equity securities	(7)	76	275
Cash paid for acquisitions, net of cash acquired	(3)	(149,532)	(63,651)
Cash (paid) received for collateral asset	(9)	(21,866)	11,100
Other investing activities		—	107
Net cash used in investing activities		(279,858)	(562,070)
Cash flows from financing activities:			
Principal payments on leases		(15,202)	(13,811)
Proceeds from issuance of common shares		163	106
Tax withholding related to vesting of stock awards	(12)	(12,524)	(16,684)
Cash (paid) received for collateral liability	(9)	(12,939)	33,699
Cash paid for contingent consideration	(10)	—	(4,572)
Net cash used in financing activities		(40,502)	(1,262)
Effect of exchange rate changes on cash and cash equivalents		(1,660)	(8,058)
Net decrease in cash and cash equivalents		(121,037)	(173,840)
Cash and cash equivalents, beginning of period		730,271	879,884
Cash and cash equivalents, end of period		$609,234	$706,044

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

QIAGEN N.V. Condensed Consolidated Statements of Changes In Equity (Unaudited)

(in thousands)	Notes	Common Shares		Share premium	Retained earnings	Derivative hedge reserve	Pension reserve	Foreign currency translation	Treasury Shares		Total equity
		Shares	Amount						Shares	Amount	
Balance at December 31, 2021		230,829	$2,702	$1,877,704	$1,490,974	$1,245	($588)	($323,415)	(3,755)	($189,730)	$2,858,892
IAS 29 Hyperinflationary accounting	(13)	—	—	—	(30,359)	—	—	43,951	—	—	13,592
Balance at January 1, 2022		230,829	2,702	1,877,704	1,460,615	1,245	(588)	(279,464)	(3,755)	(189,730)	2,872,484
Net income		—	—	—	366,828	—	—	—	—	—	366,828
Other comprehensive income (loss)	(9)	—	—	—	—	18,684	—	(84,096)	—	—	(65,412)
Comprehensive income		—	—	—	366,828	18,684	—	(84,096)	—	—	301,416
Tax benefit of employee stock plans		—	—	(7,056)	—	—	—	—	—	—	(7,056)
Share-based payments	(12)	—	—	23,249	—	—	—	—	—	—	23,249
Employee stock plans		—	—	—	(53,117)	—	—	—	1,136	53,223	106
Tax withholding related to vesting of stock awards		—	—	—	—	—	—	—	(516)	(24,716)	(24,716)
Balance at June 30, 2022		**230,829**	**$2,702**	**$1,893,897**	**$1,774,326**	**$19,929**	**($588)**	**($363,560)**	**(3,135)**	**($161,223)**	**$3,165,483**
Balance at January 1, 2023		230,829	$2,702	$1,921,972	$1,981,498	($15,637)	$645	($341,699)	(3,113)	($160,188)	$3,389,293
Net income		—	—	—	216,323	—	—	—	—	—	216,323
Other comprehensive income (loss)	(9)	—	—	—	—	(12,287)	—	(4,104)	—	—	(16,391)
Comprehensive income		—	—	—	216,323	(12,287)	—	(4,104)	—	—	199,932
Tax benefit of employee stock plans		—	—	(5,239)	—	—	—	—	—	—	(5,239)
Share-based payments	(12)	—	—	22,008	—	—	—	—	—	—	22,008
Employee stock plans		—	—	—	(42,932)	—	—	—	840	43,095	163
Tax withholding related to vesting of stock awards		—	—	—	—	—	—	—	(374)	(17,184)	(17,184)
Balance at June 30, 2023		**230,829**	**$2,702**	**$1,938,741**	**$2,154,889**	**($27,924)**	**$645**	**($345,803)**	**(2,647)**	**($134,277)**	**$3,588,973**

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

QIAGEN N.V. Selected explanatory notes to the condensed consolidated financial statements for the six months ended June 30, 2023 (Unaudited)

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, 2023, we had more than 6,100 employees in over 35 locations worldwide.

2. Basis of Presentation and Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements were prepared in accordance with International Financial Reporting Standards (IFRS) for interim financial information under International Accounting Standards (IAS) 34 *Interim Financial Reporting* as endorsed by the European Union (EU). The condensed consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments, contingent consideration and financial assets that have been measured at fair value. In the opinion of management, all adjustments (which include only normal recurring adjustments) necessary for a fair presentation have been included. All amounts are presented in U.S. dollars rounded to the nearest thousand, unless otherwise indicated. These interim condensed consolidated financial statements have not been audited or reviewed.

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. Except for the adoption of new and amended standards and interpretations, these unaudited condensed consolidated financial statements are prepared following the same accounting policies used in and should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's Annual Report for the year ended December 31, 2022.

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 six months ended June 30, 2022, we recorded a combination of credit losses, write-offs and impairments related to our business in Russia totaling $4.0 million. These charges 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.

Beginning January 1, 2022, the results of our subsidiary in Turkey are reported under hyperinflationary accounting in accordance with IAS 29, *Financial Reporting in Hyperinflationary Economies*, as the prior three-years cumulative inflation rate exceeded 100%. Accordingly, the presentation of our consolidated financial statements as at December 31, 2022 included adjustments and reclassifications for changes in the general purchasing power of the Turkish lira with the application of IAS 29 applied prospectively effective January 1, 2022, as discussed further in Note 13 "Equity."

On January 3, 2023, we acquired Verogen, Inc., a leader in the use of next-generation sequencing (NGS) technologies to drive the future of human identification (HID) and forensic investigation. Verogen, a privately held company founded in 2017 and based in San Diego, California, supports the global human identification community with NGS tools and professional services to help resolve criminal and missing-persons cases. The acquisition is not significant to the overall condensed consolidated financial statements.

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 acquisition was not significant to the overall condensed consolidated financial statements.

Segment Reporting

We operate as one operating segment in accordance with IFRS 8 *Operating Segments*. Our chief operating decision maker (CODM) makes decisions based on the Company as a whole. In addition, we have a common basis of organization and types of products and services which derive revenues and consistent product margins. Accordingly, we operate and make decisions as one cash generating unit. We provide revenue information in our Management Report by customer class using assumptions for the allocation among the customer classes to allow better insight into our operations.

Estimates

The preparation of the condensed consolidated financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. While changing conditions in our global environment present additional uncertainty, we continue to use the best information available to form our estimates. Actual results may differ from these estimates.

In preparing these condensed consolidated financial statements, the significant judgments made by management in applying accounting policies and the key sources of estimating uncertainty were the same as those that applied to the consolidated financial statements for the year ended December 31, 2022.

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 at December 31, 2022.

New Accounting Standards and Interpretations Adopted in the Current Period

The International Accounting Standards Board (IASB) amended IAS 1, *Presentation of Financial Statements*, and IFRS Practice Statement 2, *Making Materiality Judgements*, to provide guidance on how to apply the concept of materiality to accounting policy disclosures. The amendments were effective for annual reporting periods beginning on or after January 1, 2023. The application of this guidance did not impact the condensed consolidated financial statements.

The IASB amended IAS 8, *Definition of Accounting Estimates*, clarifying how companies distinguish changes in accounting policies from changes in accounting estimates by establishing a new definition of 'accounting estimates' and providing guidance around accounting estimates. The amendments applied to changes in accounting policies and changes in accounting estimates that occur on or after January 1, 2023. The application of this guidance did not impact the condensed consolidated financial statements.

The IASB amended IAS 12, *Income Taxes,* which narrowed the scope of the initial recognition exception so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences. The amendments applied retrospectively for annual reporting periods beginning on or after January 1, 2023. The application of this guidance did not impact the condensed consolidated financial statements.

New Accounting Standards and Interpretations Not Yet Adopted

The following standards have been issued by the IASB, but have not been adopted as they are either not yet effective and/or have not yet been adopted by the EU:

- To promote consistency in application and clarify the requirements on determining if a liability is current or non-current, the IASB amended IAS 1 *Presentation of Financial Statements*. The amendments apply retrospectively for annual reporting periods beginning on or after January 1, 2024. Earlier application is permitted.
- In September 2022, the IASB issued amendments to IFRS 16 *Leases* which specifies the requirements that a seller-lessee must use in measuring the lease liability arising in a sale and leaseback transaction. The amendments apply retrospectively for annual reporting periods beginning on or after January 1, 2024. Earlier application is permitted

There are no new standards that are expected to have a material impact to the condensed consolidated financial

3. Acquisitions

Business Combinations

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

2023 Business Combinations

On January 3, 2023, we acquired 100% of the shares of Verogen, Inc., a leader in the use of next-generation sequencing (NGS) technologies to drive the future of human identification (HID) and forensic investigation. Verogen, a privately held company founded in 2017 and based in San Diego, California, supports the global human identification community with NGS tools and professional services to help resolve criminal and missing-persons cases. The cash consideration, net of cash acquired was $149.5 million. The acquisition is not significant to the overall condensed consolidated financial statements. As of June 30, 2023, the allocation of the purchase price was preliminary as we continue to gather information about the fair value of all assets and liabilities, including intangible assets acquired, and the related deferred taxes. 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 common share and therefore no pro forma information has been provided herein.

2022 Business Combinations

On May 11, 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, 2023, the purchase price allocation was final. The acquisition did not have a material impact to net sales, net income or earnings per common share and therefore no pro forma information has been provided herein.

4. Revenue

Contract Estimates

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

However, we have certain companion diagnostic co-development contracts to provide research and development activities in which our performance obligations extend over multiple years. As of June 30, 2023, we had $42.6 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, 2023 and December 31, 2022 totaled $15.3 million and $9.8 million, respectively, are included in 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, 2023 and December 31, 2022, contract liabilities totaled $82.5 million and $84.2 million, respectively, of which $68.4 million and $69.0 million, respectively, are included in other current liabilities, and $14.1 million and $15.2 million, respectively, are included in other non-current liabilities. During the six months ended June 30, 2023 and 2022, we satisfied the associated performance obligations and recognized revenue of $45.0 million and $40.1 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 six months ended June 30, 2023 and 2022:

	Six Months Ended June 30,	
(in thousands)	**2023**	2022
Consumables and related revenues	$469,196	$558,118
Instruments	40,864	53,027
Molecular Diagnostics	**$510,060**	**$611,145**
Consumables and related revenues	$395,925	$455,792
Instruments	74,270	76,966
Life Sciences	**$470,195**	**$532,758**
Total net sales	**$980,255**	**$1,143,903**

	Six Months Ended June 30,	
(in thousands)	**2023**	2022
Sample technologies	$338,084	$442,920
Diagnostic solutions	339,325	331,238
PCR / Nucleic acid amplification	151,327	220,970
Genomics / NGS	119,214	113,328
Other	32,305	35,447
Total net sales	**$980,255**	**$1,143,903**

	Six Months Ended June 30,	
(in thousands)	**2023**	2022
Americas	$509,645	$505,389
Europe, Middle East and Africa	306,059	409,726
Asia Pacific and Rest of World	164,551	228,788
Total net sales	**$980,255**	**$1,143,903**

5. Inventories

The components of inventories consist of the following as of June 30, 2023 and December 31, 2022:

(in thousands)	June 30, 2023	December 31, 2022
Raw materials	$96,138	$97,613
Work in process	96,140	85,488
Finished goods	199,238	175,386
Total inventories	**$391,516**	**$358,487**

6. Intangible Assets

The changes in intangibles assets in 2023 are summarized as follows:

(in thousands)	Goodwill	Other Intangible Assets
Balance at December 31, 2022	2,380,162	748,648
IAS 29 Hyperinflationary Accounting	(63)	—
Additions	—	60,948
Purchase adjustments	(480)	—
Acquisitions	95,136	58,000
Amortization	—	(66,656)
Foreign currency translation adjustments	9,224	7,468
Balance at June 30, 2023	**$2,483,979**	**$808,408**

During the six months ended June 30, 2023, certain fully amortized intangible assets totaling $12.6 million were retired.

Cash paid for purchases of intangible assets and development expenses in the accompanying condensed consolidated statement of cash flows during the six months ended June 30, 2023 totaled $57.4 million, of which $3.1 million related to current year payments for assets that were accrued as of December 31, 2022. Intangible additions of $60.9 million includes $6.7 million of additions which were previously recorded as prepayments.

7. Financial Assets and Equity Accounted Investments

Financial Assets

(in thousands)	June 30, 2023	December 31, 2022
Current financial assets:		
Unquoted debt securities	$722,352	$607,997
Quoted debt securities	—	79,600
Current financial assets	$722,352	$687,597
Non-current financial assets:		
Unquoted equity securities	$7,089	5,329
Total financial assets	**$729,441**	**$692,926**

Current Financial Assets

At June 30, 2023 and December 31, 2022, we held unquoted debt securities of $722.4 million and $608.0 million, respectively. At December 31, 2022, we had $79.6 million of U.S. Treasury marketable securities classified as quoted debt securities. These current financial assets are highly liquid deposits and fixed-income securities denominated in U.S. dollars consisting of commercial paper and money market deposits due from financial and nonfinancial institutions. Investments in commercial paper, a marketable debt security, are financial assets accounted for at fair value through profit and loss and are carried at fair market value. Interest income is calculated and accrued using the effective interest method. Money market deposits are interest-bearing deposit accounts, valued at amortized cost with interest income accrued as earned. All instruments are classified as current financial assets in the accompanying condensed consolidated balance sheet as they have an original maturity of less than one year. Interest income is determined using the effective interest rate method.

Non-current Financial Assets

At June 30, 2023 and December 31, 2022, we had investments in non-publicly traded companies that do not have readily determinable fair values with carrying amounts that totaled $7.1 million and $5.3 million, respectively, which are included in non-current financial assets in the accompanying condensed consolidated balance sheets. These investments are required to be accounted for at fair value through profit and loss unless the investment is not held for trading, and the holder elects at initial recognition to account for it at fair value through other comprehensive income. As this election has not been made, these investments are accounted for at fair value through profit and loss in other financial results.

The changes in these investments for the six months ended June 30, 2023 and 2022 are as follows:

(in thousands)	2023	2022
Balance at beginning of year	$5,329	$3,945
Cash investments in (receipts from) equity securities, net	283	(145)
Shares received in exchange for services	1,285	—
Foreign currency translation adjustments	192	(268)
Balance at end of period	**$7,089**	**$3,532**

Equity Accounted Investments

As of June 30, 2023, we had non-marketable investments that were accounted for as equity method investments with a total net carrying value of $19.9 million, of which $20.2 million is included in other non-current assets and $0.3 million, where we are committed to fund losses, is included in other non-current liabilities in the accompanying condensed consolidated balance sheet. During 2023 and 2022, we made additional cash payments of $1.2 million and $1.1 million, respectively, in equity accounted investments.

Our share of income of $0.7 million and $2.9 million during the six months ended June 30, 2023 and June 30, 2022, respectively, is included in other financial results in the accompanying condensed consolidated statements of income.

As of December 31, 2022, these investments totaled net $17.9 million, of which $18.2 million is included in other non-current assets and $0.3 million is included in other non-current liabilities.

8. Financial Debt

At June 30, 2023 and December 31, 2022, total non-current financial debt, net of debt issuance costs, consists of the following:

(in thousands)	**June 30, 2023**	December 31, 2022
0.500% Senior Unsecured Cash Convertible Notes due 2023	$396,970	$389,552
1.000% Senior Unsecured Cash Convertible Notes due 2024	473,564	464,331
0.000% Senior Unsecured Convertible Notes due 2027	443,552	443,285
German Private Placement (2017 Schuldschein)	118,914	116,699
German Private Placement (2022 Schuldschein)	401,035	393,532
Total current and non-current financial debt	1,834,035	1,807,399
Less: Current portion of financial debt	500,149	389,552
Total non-current financial debt	**$1,333,886**	**$1,417,847**

The notes are all unsecured obligations that rank pari passu.

No Contingent Conversion Conditions were triggered as of June 30, 2023.

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

	June 30, 2023				
				Fair Value	
(in thousands)	Principal Amount	Unamortized debt discount and issuance costs	Carrying Amount	Amount	Leveling
Cash Convertible Notes due 2023	$400,000	($3,030)	$396,970	$430,128	Level 1
Cash Convertible Notes due 2024	500,000	(26,436)	473,564	538,515	Level 1
Convertible Notes due 2027	445,949	(2,397)	443,552	444,470	Level 1
German Private Placement (2017 Schuldschein)	119,003	(89)	118,914	115,100	Level 2
German Private Placement (2022 Schuldschein)	402,039	(1,004)	401,035	387,296	Level 2
	$1,866,991	**($32,956)**	**$1,834,035**	**$1,915,509**	

(in thousands)	Principal Amount	Unamortized debt discount and issuance costs	Carrying Amount	Fair Value Amount	Fair Value Leveling
	December 31, 2022				
Cash Convertible Notes due 2023	$400,000	($10,448)	$389,552	$493,436	Level 1
Cash Convertible Notes due 2024	500,000	(35,669)	464,331	596,485	Level 1
Convertible Notes due 2027[1]	445,949	(2,664)	443,285	471,545	Level 1
German Private Placement (2017 Schuldschein)	116,821	(122)	116,699	112,401	Level 2
German Private Placement (2022 Schuldschein)	394,638	(1,106)	393,532	378,302	Level 2
	$1,857,408	**($50,009)**	**$1,807,399**	**$2,052,169**	

[1] The initial fair value liability of the embedded conversion options for the 2027 Notes was $54.1 million which simultaneously reduced the carrying value of the Convertible Notes as discussed further below.

Interest expense related to the convertible notes for the six months ended June 30, 2023 and 2022 was comprised of the following:

(in thousands)	Six Months Ended June 30, 2023	Six Months Ended June 30, 2022
Coupon interest	$3,500	$3,500
Amortization of original issuance discount	15,594	14,918
Amortization of debt issuance costs	1,329	1,287
Total interest expense related to the convertible notes	**$20,423**	**$19,705**

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.

Because the Convertible Notes contain an embedded conversion option, we have determined that the embedded conversion option is a derivative financial instrument, which is required to be separated from the Convertible Notes and accounted for separately as a derivative liability, with changes in fair value reported in our consolidated statements of income until the conversion option transaction settles or expires. The initial fair value liability of the embedded conversion options for the 2027 Notes was $54.1 million which simultaneously reduced the carrying value of the Convertible Notes. For further discussion of the derivative financial instruments relating to the Convertible Note, refer to Note 9 "Derivatives and Hedging."

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, 2023 or December 31, 2022.

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;

- 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.

For the 2023 Notes, the Contingent Conversion Period expired on March 13, 2023 and, as of March 31, 2023, the Contingent Conversion Conditions for the 2023 Notes could no longer be triggered. No Contingent Conversion Conditions were triggered for the 2023 Notes as of December 31, 2022.

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

The Contingent Conversion Conditions in the 2023 Notes and 2024 Notes noted above have been analyzed under IFRS 9, *Financial Instruments*, 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 IFRS 9, *Financial Instruments*, 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 9 "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 and Warrants are derivative financial instruments and are discussed further in Note 9 "Derivatives and Hedging."

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.

We issued Warrants as summarized in the table below. The number of warrants and exercise prices are subject to customary adjustments under certain circumstances.

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

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.

German Private Placement (2017 Schuldschein)

In 2017, we completed a German private placement bond (2017 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. In October 2022, we repaid $153.0 million for the four tranches that matured. The 2017 Schuldschein consists of one U.S. dollar and several 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 9 "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, 2023 totaled $3.0 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, 2023 and December 31, 2022 is as follows:

				Carrying Value (in thousands) as of	
Currency	Notional Amount	Interest Rate	Maturity	**June 30, 2023**	December 31, 2022
EUR	€64.0 million	Fixed 1.09%	June 2024	$69,510	$68,215
EUR	€31.0 million	Floating EURIBOR + 0.7%	June 2024	33,669	33,041
EUR	€14.5 million	Fixed 1.61%	June 2027	15,735	15,443
				$118,914	**$116,699**

German Private Placement (2022 Schuldschein)

In July and August 2022, we completed another German private placement bond (2022 Schuldschein) which was issued in several tranches totaling €370.0 million due in various periods through 2035. The 2022 Schuldschein consists of only euro-denominated tranches which have either a fixed or floating rate. All tranches except for the €70.0 million fixed 3.04% tranche due August 2035 are ESG-linked wherein the interest rate is subject to adjustment of +/- 0.025% if our ESG rating changes. The euro tranches are designated as a foreign currency non-derivative hedging instrument that qualifies as a net investment hedge as described in Note 9 "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, 2023 totaled $29.4 million of unrealized loss 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 issued is as follows:

				Carrying Value (in thousands) as of	
Currency	Notional Amount	Interest Rate	Maturity	**June 30, 2023**	December 31, 2022
EUR	€51.5 million	Floating 6M EURIBOR + 0.55%	July 2025	$55,860	$54,803
EUR	€62.0 million	Fixed 2.741%	July 2027	67,227	65,967
EUR	€29.5 million	Floating 6M EURIBOR + 0.70%	July 2027	31,987	31,388
EUR	€37.0 million	Fixed 3.044%	July 2029	40,114	39,365
EUR	€103.0 million	Floating 6M EURIBOR + 0.85%	July 2029	111,667	109,585
EUR	€9.5 million	Fixed 3.386%	July 2032	10,298	10,107
EUR	€7.5 million	Floating 6M EURIBOR + 1.0%	July 2032	8,130	7,979
EUR	€70.0 million	Fixed 3.040%	August 2035	75,752	74,338
				$401,035	**$393,532**

Revolving Credit Facility

Our credit facilities available and undrawn at June 30, 2023 total €427.0 million (approximately $464.0 million). This includes a €400.0 million syndicated ESG-linked revolving credit facility expiring December 2025 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, 2023. The credit facilities are for general corporate purposes and no amounts were utilized at June 30, 2023.

9. 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, 2023, cash collateral positions consisted of $8.8 million recorded in other current liabilities and $43.0 million recorded in other current assets in the accompanying condensed consolidated balance sheet. As of December 31, 2022, we had cash collateral positions consisting of $21.8 million recorded in other current liabilities and $21.1 million recorded in 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 (2017 Schuldschein) which was issued in 2017 in the total amount of $331.1 million as described in Note 8 "Financial Debts." Of the $331.1 million, which is held in both U.S. dollars and euros, €255.0 million was designated as the hedging instrument as of December 31, 2021 against a portion of our euro net investments in our foreign operations. As further described in Note 8 "Financial Debts," four tranches of the 2017 Schuldschein matured and were paid in October 2022 and two tranches of the 2017 Schuldschein matured and were paid during 2021. As a result, €109.5 million remained designated as a hedging instrument as of June 30, 2023. In July 2022, we issued an additional €370.0 million German private corporate bond (2022 Schuldschein) as described in Note 8 "Financial Debts" and it is designated in its entirety 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 net reserves in equity. Based on the spot rate method, the unrealized loss recorded in equity as of June 30, 2023 and December 31, 2022 is $26.4 million and $22.6 million, respectively. 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, 2023 and December 31, 2022.

Derivatives Designated as Hedging Instruments

Cash Flow Hedges

As of June 30, 2023 and December 31, 2022, 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, 2023, we expect approximately $1.5 million of derivative gains that are included in net reserves will be reclassified into income during the next 12 months. The cash flows derived from derivatives are classified in the condensed consolidated statements of cash flows in the same category as the condensed consolidated balance sheet accounts of the underlying items.

We use interest rate derivative contracts to align our portfolio of interest bearing assets and liabilities with our risk management objectives. Since 2015, we have been a 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. In September 2022, we entered into five new cross currency interest rate swaps through 2025 for a total notional amount of CHF 542.0 million which qualify for hedge accounting as cash flow hedges. We determined that no ineffectiveness exists related to these swaps. As of June 30, 2023 and December 31, 2022, interest receivables of $8.7 million and $5.5 million, respectively, are recorded in other current assets in the accompanying condensed consolidated balance sheets.

Derivatives Not Designated as Hedging Instruments

Call Options and Warrants

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 8 "Financial Debts." 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 non-current based upon the classification of the related debt. As of December 31, 2022, the 2023 Notes and the related call options have been reclassified as current.

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 and Warrants, for which our common shares are the underlying security, are derivative assets and liabilities, respectively, that require mark-to-market accounting treatment. These derivatives are measured and reported at fair value on a recurring basis, within Level 2 of the fair value hierarchy. The change in fair value of these instruments is recognized immediately in our condensed consolidated statements of income in other financial results.

The Warrants are more fully described in Note 8 "Financial Debts."

Cash Convertible Notes Embedded Cash Conversion Option

The embedded cash conversion option within the Cash Convertible Notes discussed in Note 8 "Financial Debts" 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 financial results 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 an aggregate notional value of $467.7 million at June 30, 2023, which expire at various dates through November 2023. At December 31, 2022, these arrangements had an aggregate notional value of $466.0 million, which expired at various dates through July 2023. 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 financial results.

Fair Values of Derivative Instruments

The following table summarizes the fair value amounts of derivative instruments as of June 30, 2023 and December 31, 2022. The current assets are included in other current assets and the current liabilities are included in other current liabilities in the accompanying condensed consolidated balance sheets.

	June 30, 2023		December 31, 2022	
(in thousands)	Current Asset	Non-current Asset	Current Asset	Non-current Asset
Assets:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge [(1)]	$—	$7,581	$—	$12,256
Total derivative instruments designated as hedges	$—	$7,581	$—	$12,256
Undesignated derivative instruments				
Equity options	$48,317	$90,035	$102,671	$119,098
Foreign exchange forwards and options	4,792	—	8,946	—
Total undesignated derivative instruments	$53,109	$90,035	$111,617	$119,098
Total derivative assets	**$53,109**	**$97,616**	**$111,617**	**$131,354**

	June 30, 2023		December 31, 2022	
(in thousands)	Current Liability	Non-current Liability	Current Liability	Non-current Liability
Liabilities:				
Derivative instruments designated as hedges				
Interest rate contracts - cash flow hedge [(1)]	$—	($54,162)	$—	($36,982)
Total derivative instruments designated as hedges	$—	($54,162)	$—	($36,982)
Undesignated derivative instruments				
Equity options	($48,343)	($90,376)	($102,896)	($119,736)
Warrants and embedded conversion option	(10,539)	(121,729)	(49,769)	(137,007)
Foreign exchange forwards and options	(4,616)	—	(8,356)	—
Total undesignated derivative instruments	($63,498)	($212,105)	($161,021)	($256,743)
Total derivative liabilities	**($63,498)**	**($266,267)**	**($161,021)**	**($293,725)**

[(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 six months ended June 30, 2023 and 2022:

	Six Months Ended June 30,	
	2023	2022
(in thousands)	Other financial results	Other financial results
Total amounts presented in the Condensed Consolidated Statements of Income in which the effects of cash flow and fair value hedges are recorded	$53,533	$133,640
Gains (Losses) on Derivatives in Cash Flow Hedges		
Interest rate contracts		
Amount of gain (loss) reclassified from net reserves	$18,212	($16,902)
Amounts excluded from effectiveness testing	—	—
Gains (Losses) on Derivatives in Fair Value Hedges		
Interest rate contracts		
Hedged item	—	1,916
Derivatives designated as hedging instruments	—	(1,916)
Gains (Losses) Derivatives Not Designated as Hedging Instruments		
Equity options	(83,418)	(130,846)
Cash convertible notes embedded cash conversion option	83,913	130,690
Warrants and embedded conversion option	54,508	133,215
Foreign exchange forwards and options	(5,730)	50,875
Total gains	**$67,485**	**$167,032**

10. 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 financial liabilities measured at fair value on a recurring basis as of June 30, 2023. It does not include fair value information for financial assets and financial liabilities carried at amortized cost. There were no transfers between levels in 2023.

	June 30, 2023			
(in thousands)	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets, current	$—	$327,352	$—	$327,352
Financial assets, non-current	—	—	7,089	7,089
Equity options	—	138,352	—	138,352
Foreign exchange forwards and options	—	4,792	—	4,792
Interest rate contracts - cash flow hedge	—	7,581	—	7,581
Total financial assets	**$—**	**$478,077**	**$7,089**	**$485,166**
Financial liabilities:				
Foreign exchange forwards and options	$—	($4,616)	$—	($4,616)
Interest rate contracts - cash flow hedge	—	(54,162)	—	(54,162)
Equity options	—	(138,719)	—	(138,719)
Warrants and embedded conversion option	—	(132,268)	—	(132,268)
Contingent consideration	—	—	(18,079)	(18,079)
Total financial liabilities	**$—**	**($329,765)**	**($18,079)**	**($347,844)**

The following table presents our fair value hierarchy for our financial assets and financial liabilities measured at fair value on a recurring basis as of December 31, 2022. It does not include fair value information for financial assets and financial liabilities carried at amortized cost. There were no transfers between levels in 2022.

	December 31, 2022			
(in thousands)	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets, current	$79,600	$592,997	$—	$672,597
Financial assets, non-current	—	—	5,329	5,329
Equity options	—	221,769	—	221,769
Foreign exchange forwards and options	—	8,946	—	8,946
Interest rate contracts - cash flow hedge	—	12,256	—	12,256
Total financial assets	**$79,600**	**$835,968**	**$5,329**	**$920,897**
Financial liabilities:				
Foreign exchange forwards and options	$—	($8,356)	$—	($8,356)
Interest rate contracts - cash flow hedge	—	(36,982)	—	(36,982)
Equity options	—	(222,632)	—	(222,632)
Warrants and embedded conversion option	—	(186,776)	—	(186,776)
Contingent consideration	—	—	(18,088)	(18,088)
Total financial liabilities	**$—**	**($454,746)**	**($18,088)**	**($472,834)**

Our financial assets and financial liabilities measured at fair value on a recurring basis consist of unquoted debt securities discussed in Note 7 "Financial Assets and Equity Accounted 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 8 "Financial Debts" 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 unquoted equity securities remeasured as of June 30, 2023 and December 31, 2022 which are classified within Level 3 in the fair value hierarchy.

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, the Warrants liability and the embedded cash conversion option liability. See Note 8 "Financial Debts" and Note 9 "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-current financial assets compose of unquoted equity securities for which we estimate the value based on valuation methods using the observable transaction price at the transaction date and other unobservable inputs. 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 7 "Financial Assets and Equity Accounted Investments" for the change in unquoted equity securities with Level 3 inputs during the six-month periods ended June 30, 2023 and 2022. For contingent consideration liabilities with Level 3 inputs, the following table summarizes the activity for the six-month periods ended June 30, 2023 and 2022, all of which is related to the 2018 acquisition of STAT-Dx:

(in thousands)	**2023**	**2022**
Balance at beginning of year	($18,088)	($24,100)
Changes in fair value	9	239
Payments	—	5,900
Balance at end of period	**($18,079)**	**($17,961)**

As of June 30, 2023, $18.1 million was accrued for contingent consideration, of which $8.3 million is included in other current liabilities and $9.8 million is included in other non-current liabilities in the accompanying condensed consolidated balance sheet.

The estimated fair value of non-current financial debts as disclosed in Note 8 "Financial Debts" 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 8 "Financial Debts" 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.

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

There were no adjustments in the six-month periods ended June 30, 2023 and 2022 for nonfinancial assets or liabilities required to be measured at fair value on a nonrecurring basis.

11. Income Taxes

The interim provision for income taxes is based upon the estimated annual effective tax rates for the year, applied to the current period ordinary income before tax plus the tax effect of any discrete items. Our operating subsidiaries are exposed to statutory tax rates ranging from zero to 35%. 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 six-month periods ended June 30, 2023 and 2022, our effective tax rates were 20.2% and 17.6%, 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 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 2011 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 2019 tax year. Our subsidiaries, with few exceptions, are no longer open to income tax examinations by tax authorities for years before 2018. The German tax authorities have commenced an audit for the 2017-2019 tax years in 2022.

As of June 30, 2023, 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.

12. Share-Based Payments

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 six-month period ended June 30, 2023, we granted 1.1 million stock awards compared to 0.8 million stock awards for the six-month period ended June 30, 2022.

At June 30, 2023, there was $86.7 million remaining in unrecognized compensation expense, less estimated forfeitures, related to stock awards which will be recognized over a weighted-average period of 1.83 years.

Share-Based Compensation Expense

For the six months ended June 30, 2023 and 2022, share-based compensation expense was as follows:

	Six Months Ended June 30,	
(in thousands)	**2023**	2022
Cost of sales	$1,456	$826
Research and development	3,308	3,046
Sales and marketing	6,344	7,482
General and administrative	10,900	11,895
Share-based compensation expense before taxes	22,008	23,249
Less: Income tax benefit	6,090	5,170
Net share-based compensation expense	**$15,918**	**$18,079**

13. Equity

Common Shares

The authorized classes of our shares consist of Common Shares (410 million authorized), Preference Shares (450 million authorized) and Financing Preference Shares (40 million authorized). All classes of shares have a par value of €0.01. No Financing Preference Shares or Preference Shares have been issued. Common shares are translated to U.S. dollars at the foreign exchange rates in effect when the shares are issued.

Share Repurchase Programs

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

Initial Application of IAS 29 Financial Reporting in Hyperinflationary Economies

Beginning January 1, 2022, the results of our subsidiary in Turkey are reported under hyperinflationary accounting in accordance with IAS 29, *Financial Reporting in Hyperinflationary Economies*, as the prior three-years cumulative inflation rate exceeded 100 percent. The hyperinflationary accounting effects of the initial application on the opening consolidated balance sheet as of January 1, 2022 were recorded in equity with cumulative inflationary losses decreasing retained earnings by $30.4 million and foreign currency translation effects of $44.0 million. The on-going effect of inflation is included in the consolidated statement of income as a non-monetary gain or loss. There was no material impact to the condensed consolidated financial statements for the six-month period ended June 30, 2023.

14. Earnings per Common Share

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

The following table for the six-month periods ended June 30, 2023 and 2022 summarizes the information used to compute earnings per common share:

	Six Months Ended June 30,	
(in thousands, except per share data)	**2023**	2022
Net income	$216,323	$366,828
Weighted average number of common shares used to compute basic earnings per common share	228,027	227,571
Dilutive effect of outstanding stock options and restricted stock units	2,533	2,650
Dilutive effect of outstanding warrants	—	8
Weighted average number of common shares used to compute diluted earnings per common share	230,560	230,229
Outstanding stock options and awards having no dilutive effect, not included in above calculation	—	249
Outstanding warrants having no dilutive effect, not included in above calculation	20,560	20,325
Basic earnings per common share	$0.95	$1.61
Diluted earnings per common share	$0.94	$1.59

For purposes of considering the 2027 Notes, as discussed further in Note 8 "Financial Debts," 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, 2022 through June 30, 2023, they were excluded from the diluted earnings per common share calculations in 2022 and 2023.

15. Commitments and Contingencies

Contingent Consideration Commitments

Pursuant to the purchase agreements for certain acquisitions, we could be required to make additional contingent cash payments for a previous business combination based on the achievement of certain FDA approval milestones. Potential milestone payments total $20.7 million, of which $8.9 million may be triggered by the end of 2023 and $11.8 million by the end of 2024. Of the total milestone payments, $8.3 million is included in other current liabilities and $9.8 million is included in other non-current liabilities in the accompanying condensed consolidated balance sheet as of June 30, 2023.

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. At the time product revenue is recognized, a provision for estimated future warranty costs is recorded in cost of sales based on historical experience. We periodically review the provision and adjust, if necessary, based on actual experience and estimated costs to be incurred. We believe our warranty reserves of $4.9 million as of June 30, 2023 and December 31, 2022 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, 2023, certain claims, lawsuits or legal proceedings arising out of the normal course of business have been filed or were pending against QIAGEN or our subsidiaries. These matters have arisen in the ordinary course and conduct of business, as well as through acquisition. Although it is not possible to predict the outcome of such litigation, we assess the degree of probability and evaluate the reasonably possible losses that we could incur as a result of these matters. We accrue for any estimated loss when it is probable that a liability has been incurred and the amount of probable loss can be estimated. 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, 2023 in other non-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. In July 2023, the parties agreed to settle and the settlement provides for a cross-licensing agreement between Bio-Rad and QIAGEN granting each company mutual rights to their respective digital PCR technologies.

Other litigation matters

For all other matters, management's best estimate of the liability amounts to $7.3 million and $6.5 million as accrued as of June 30, 2023 and December 31, 2022, respectively, in other current liabilities. The estimated range of possible losses for these other matters as of June 30, 2023 is between zero and $8.4 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.

Responsibility statement of the Managing Board to the condensed consolidated financial statements for the six months ended June 30, 2023 (unaudited)

Statement ex Article 5:25d Paragraph 2 sub (c) of the Dutch Financial Markets Supervision Act ('Wet op het financieel toezicht')

The Managing Board of QIAGEN declares that, to the best of its knowledge,:

- the condensed consolidated interim financial statements for the six months ended June 30, 2023, which have been prepared in accordance with IAS 34 *Interim Financial Reporting* as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the entities included in the consolidation taken as a whole;
- the interim management report for the six months ended June 30, 2023 includes a fair review of the information required pursuant to article 5:25d paragraphs 8 and 9 of the Dutch Financial Markets Supervision Act ('Wet op het financieel toezicht').

The Managing Board

Thierry Bernard	Roland Sackers
CEO	CFO

Venlo, August 11, 2023

Interim management report for the six months ended June 30, 2023 (Unaudited)

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 "Forward-Looking and Cautionary Statements" and "Risk Management" below.

Forward-Looking and Cautionary Statements

This report contains forward-looking statements that are subject to risks and uncertainties. These statements can be identified by the use of forward-looking terminology such as "believe," "hope," "plan," "intend," "seek," "may," "will," "could," "should," "would," "expect," "anticipate," "estimate," "continue" or other similar words. Such statements are based on management's current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. We caution investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements as a result of various factors, including, but not limited to, the following: risks associated with our expansion of operations, including the acquisition of new businesses; variability in our operating results from period to period; 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 on pages 42 to 59 of the 2022 Annual Report under "Risk Management."

Results of Operations

Selected Operating Performance

- While net sales from our non-COVID product portfolio grew 8%, total net sales declined 14% to $980.3 million in the first half of 2023 from $1.14 billion in the year-ago period, reflecting a 72% decline in net sales from COVID-19 products. Total net sales were adversely impacted by one percentage point from unfavorable currency movements against the U.S. dollar in the first half of 2023.
- The operating income margin declined to 21.1% in the first half of 2023 from 29.1% in the 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 including BLIRT S.A. and Verogen, Inc. which we acquired in May 2022 and January 2023, respectively.
- Net cash provided by operating activities decreased 49% to $201.0 million in the first half of 2023 from $397.6 million in the year-ago period. Cash flow results for 2023 included higher working capital requirements, in particular an increase in inventories to ensure product availability.

On January 3, 2023, we acquired Verogen, Inc., a leader in the use of next-generation sequencing (NGS) technologies to drive the future of human identification (HID) and forensic investigation. Verogen, a privately held company founded in 2017 based in San Diego, California, supports the global human identification community with NGS tools and professional services to help resolve criminal and missing-persons cases. The acquisition is not significant to the overall consolidated financial statements.

Six-Month Period Ended June 30, 2023 compared to Six-Month Period Ended June 30, 2022

Net Sales

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

(in millions)	Six Months Ended June 30, 2023	2022	
Product type	Net sales	Net sales	% change
Consumables and related revenues	$865.1	$1,013.9	-15 %
Instruments	115.1	130.0	-11 %
Net sales	**$980.3**	**$1,143.9**	**-14%**
Customer class			
Molecular Diagnostics	$510.1	$611.1	-17 %
Life Sciences	470.2	532.8	-12 %
Net sales	**$980.3**	**$1,143.9**	**-14%**
Non-COVID and COVID-19 product groups			
Non-COVID product groups	$891.0	$823.2	+8 %
COVID-19 product groups	89.2	320.7	-72 %
Net sales	**$980.3**	**$1,143.9**	**-14%**

Consumables and related revenues declined by 15% in the six months ended June 30, 2023, as compared to the prior year period, as lower COVID-19 sales impacted solid trends in the non-COVID portfolio. Instrument sales also declined by 11% in the six months ended June 30, 2023, as compared to the strong results in the year-ago period. Net sales were adversely impacted by one percentage point from unfavorable currency movements against the U.S. dollar in the first half of 2023.

	Six Months Ended June 30, 2023	2022	
Product group (in millions)	Net sales	Net sales	% change
Sample technologies	$338.1	$442.9	-24 %
Diagnostic solutions	339.3	331.2	+2 %
PCR / Nucleic acid amplification	151.3	221.0	-32 %
Genomics / NGS	119.2	113.3	+5 %
Other	32.3	35.4	-9 %
Net sales	**$980.3**	**$1,143.9**	**-14%**

Sample technologies represent products, including both COVID-19 and non-COVID products, involved in the first step in any molecular lab process. In the first half of 2023, sales of sample technologies declined by 24% compared to the prior year period due to the sharp decline in COVID-19 testing demand. Sales in the non-COVID product groups rose with the vast majority of sales related to DNA-based technologies. Sales of sample technologies were adversely impacted by unfavorable currency movements against the U.S. dollar by two percentage points in the first half of 2023.

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 first half of 2023 were 2% higher than the year-ago period, led by higher QuantiFERON latent TB sales. NeuMoDx sales grew outside of COVID-19 testing, while overall NeuMoDx sales declined against COVID-19 headwinds. Sales of diagnostic solutions were adversely impacted by two percentage points from unfavorable currency movements against the U.S. dollar in the first half of 2023.

PCR / Nucleic acid amplification involves research and applied PCR solutions and components. Sales of PCR / Nucleic acid amplification declined 32% in the six months ended June 30, 2023, on the decline in COVID-19 product group sales and included adverse impact of unfavorable currency movements against the U.S. dollar by two percentage points in the first half of 2023.

Genomics / NGS includes universal NGS solutions as well as the full QIAGEN Digital Insights portfolio. Sales in Genomics / NGS rose 5% in the six months ended June 30, 2023 and included adverse impact of unfavorable currency movements against the U.S. dollar by two percentage points in the first half of 2023.

	Six Months Ended June 30,		
	2023	2022	
Geographic region (in millions)	Net sales	Net sales	% change
Americas	$509.6	$505.4	+1 %
Europe, Middle East and Africa	306.1	409.7	-25 %
Asia Pacific, Japan and Rest of World	164.6	228.8	-28 %
Net Sales	**$980.3**	**$1,143.9**	**-14%**

The marginal increase in the **Americas** region during the first half of 2023 reflects the U.S. and QuantiFERON-TB sales, more than overcoming reduced pandemic sales. Higher sales were also seen in Brazil and Mexico compared to the year-ago period.

Net sales in the **Europe, Middle East and Africa (EMEA)** region during the first half of 2023 were 25% lower than the prior period due to the comparison with higher COVID-19 product sales in the prior period and also partially due to adverse impact of unfavorable currency movements against the U.S. dollar of two percentage points for the period then ended. Results in the EMEA region reflected growth in France, Turkey and the United Kingdom, while sales declined in Germany and the Netherlands compared to the year-ago period.

Net sales in the **Asia Pacific, Japan and Rest of World** region declined 28% in the six months ended June 30, 2023, due to the comparison with high COVID-19 product sales in various countries in the year-ago period. Sales in this region were adversely impacted by four percentage points from unfavorable currency movements against the U.S. dollar in the six months ended June 30, 2023.

Gross Profit

	Six Months Ended June 30,		
(in millions)	**2023**	2022	% change
Gross profit	$617.5	$744.4	-17%
Gross margin	63.0 %	65.1 %	

The gross margin in 2023 primarily reflects changes in individual product sales and mix. Generally, our consumables and related products have a higher gross margin than our instrumentation products and service arrangements. Fluctuations in the sales levels between periods can cause changes between periods. In the six months ended June 30, 2023, gross margin decreased in line with the significant decline in the overall sales level, which was mainly due to the sharp reduction in COVID-19 product group revenues. The gross margin in 2023 also includes costs for higher material and logistics costs over the year-ago period.

In the first half of 2023, the amortization expense on acquisition-related intangibles within cost of sales increased to $32.1 million compared to $30.4 million in the same period of 2022 and includes amortization related to Verogen acquired in January 2023. Our acquisition-related intangible amortization will increase in the event of future acquisitions.

Operating Expenses

	Six Months Ended June 30,				
	2023		2022		
(in millions)	Expenses	% of net sales	Expenses	% of net sales	% change
Sales and marketing	($236.2)	24.1 %	($243.0)	21.2 %	-3%
Research and development	(102.3)	10.4 %	(92.0)	8.0 %	+11%
General and administrative	(61.1)	6.2 %	(66.0)	5.8 %	-7%
Restructuring, acquisition, integration and other, net	(10.3)	1.1 %	(10.5)	0.9 %	-2%
Other operating income	0.3	0.0 %	0.1	0.0 %	+125%
Other operating expense	(0.7)	0.1 %	(0.2)	0.0 %	+294%
Total operating expenses, net	($410.4)	41.9 %	($411.6)	36.0 %	
Income from operations	$207.1	21.1 %	$332.8	29.1 %	

Sales and Marketing

Sales and marketing expenses decreased by 3% to $236.2 million during the six months ended June 30, 2023 compared to the prior year period, but rose to 24.1% of sales in 2023 from 21.2% in 2022. The overall decrease in sales and marketing expenses primarily reflects lower share-based compensation expense and favorable currency exchange impacts of $5.0 million in the first half of 2023. Sales and marketing expenses are primarily associated with personnel, commissions, advertising, trade shows, publications, freight and logistics expenses, and other promotional expenses. The increased use of digital customer engagement continue to build on the new habits of customers and enhance customer engagement with a focus on greater efficiency and effectiveness.

Research and Development

Research and development expense increased 11% to $102.3 million during the six months ended June 30, 2023 compared to the prior year period and rose to 10.4% of sales in 2023 from 8.0% in 2022. Research and development expense reflects our continued focus on our Five Pillars of Growth, including investments in NeuMoDx, QIAstat-Dx and QIAcuity and in the six months ended June 30, 2023 includes $1.5 million of favorable currency exchange movements. 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.

General and Administrative

General and administrative expenses decreased 7% to $61.1 million during the six months ended June 30, 2023 compared to the prior year period, but rose to 6.2% of sales in 2023 compared to 5.8% in 2022. These results reflect lower share-based compensation expense together with efficiency gains across many administrative functions as well as investments into our information technology systems (including an upgrade of the SAP enterprise resource planning system) and into cyber security measures. General and administrative costs include a favorable currency impact of $0.5 million in the first half of 2023. We expect future costs to increase due to higher licensing and information technology costs as well as increased cyber security costs.

Restructuring, Acquisition, Integration and Other, net

Restructuring, acquisition, integration and other, net expenses included costs related to our acquisitions of Verogen, Inc. in January 2023, BLIRT S.A. in May 2022 and impairments and charges related to our businesses in Russia, Ukraine and Belarus in the first half of 2022.

Financial Income (Expense)

(in millions)	Six Months Ended June 30, 2023	2022	% change
Financial income	$39.4	$6.6	+500 %
Financial expense	(29.0)	(28.1)	+4 %
Other financial results	53.5	133.6	-60 %
Total financial income, net	**$63.8**	**$112.1**	**-43%**

Financial income includes interest earned on cash, cash equivalents and current financial assets, income related to certain interest rate derivatives as discussed in Note 9 "Derivatives and Hedging" and other components including the interest portion of operating lease transactions. The increase in 2023 compared to the year-ago period is attributable to increasing interest rates and the duration and level of current financial assets held during the period.

Financial expense primarily relates to debt, discussed in Note 8 "Financial Debts" in the accompanying notes to the condensed consolidated financial statements. The 4% increase during the six months ended June 30, 2023 compared to the year-ago period reflects the issuance of German private placement bonds in July and August 2022 totaling €370.0 million.

Other financial results in the first half of 2023 primarily includes gains of $54.5 million related to the fair value change in the warrants and embedded conversion options as discussed in Note 8 "Financial Debts," partially offset by losses on foreign currency transactions and fair value changes in derivatives.

Other financial results in the first half of 2022 includes gains of $133.2 million related to the fair value change in the warrants and embedded conversion option as well as gains and losses on foreign currency transactions and fair value changes in investments and derivatives.

Provision for Income Taxes

(in millions)	Six Months Ended June 30, 2023	2022	% change
Income before income tax expense	$271.0	$444.9	-39%
Income tax expense	(54.7)	(78.1)	-30%
Net income	$216.3	$366.8	
Effective tax rate	20.2 %	17.6 %	

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 income or loss 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 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.

In future periods, our effective tax rate may fluctuate from similar or other factors as discussed in “Changes in tax laws or their application or the termination or reduction of certain government tax incentives, could adversely impact our overall effective tax rate, results of operations or financial flexibility” in Risk Management of the 2022 Annual Report.

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.

(in millions)	**June 30, 2023**	December 31, 2022
Cash and cash equivalents	$609.2	$730.3
Current financial assets	722.4	687.6
Total cash and cash equivalents and current financial assets	**$1,331.6**	**$1,417.9**
Working capital	$1,283.2	$1,339.8

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, 2023, cash and cash equivalents had decreased by $121.0 million from December 31, 2022, primarily as a result of net cash used in investing activities of $279.9 million and financing activities of $40.5 million partially offset by net cash provided by operating activities of $201.0 million as discussed in the Cash Flow Summary below. Current financial assets increased at June 30, 2023 to take advantage of higher interest rates.

Cash Flow Summary

	Six Months Ended June 30,	
(in millions)	**2023**	2022
Net cash provided by operating activities	$201.0	$397.6
Net cash used in investing activities	($279.9)	($562.1)
Net cash used in financing activities	($40.5)	($1.3)
Effect of exchange rate changes on cash and cash equivalents	($1.7)	($8.1)
Net decrease in cash and cash equivalents	($121.0)	($173.8)

Operating Activities

For the six months ended June 30, 2023, we generated net cash from operating activities of $201.0 million compared to $397.6 million in 2022. The decrease in net cash provided by operating activities is primarily the result of lower net income adjustments and increased working capital payments. While net income was $216.3 million for the six months ended June 30, 2023, non-cash components in income included $105.9 million of depreciation and amortization, $22.0 million of share-based compensation expense, and $17.2 million of amortization of debt discount and issuance costs. Operating cash flows include a net increase 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

Approximately $279.9 million of cash was used in investing activities during the six months ended June 30, 2023 compared to $562.1 million for the same period in 2022. Investing activities as of June 30, 2023 consisted principally of $714.1 million for purchases of unquoted debt securities, $149.5 million of net cash paid for the acquisition of Verogen, Inc., $55.1 million paid for intangible assets, $21.9 million paid to our derivative counterparties to collateralize our derivative liabilities with them and $14.5 million paid for purchases of property, plant and equipment. This was partially offset by $679.0 million received from the sale of unquoted debt securities. Cash used in investing activities during the six months ended June 30, 2022 included $385.5 million and $267.6 million in purchases of unquoted and quoted debt securities, respectively, $43.8 million paid for intangible assets and capitalized development expenses, $36.5 million paid for purchases of property, plant and equipment and $63.7 million net cash paid for the acquisition of BLIRT S.A. partially offset by $224.8 million from the sale of unquoted debt securities 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.

Financing Activities

Net cash used in financing activities totaled $40.5 million for the six months ended June 30, 2023 and includes $15.2 million in principal payments on operating leases, $12.9 million paid to our derivative counterparties to collateralize derivative assets that we hold with them and $12.5 million paid in connection with net share settlement for tax withholding related to the vesting of stock awards. Net cash used in financing activities was $1.3 million for the six months ended June 30, 2022 and included $16.7 million paid in connection with net share settlement for tax withholding related to the vesting of stock awards and $13.8 million in principal payments on operating leases partially offset by $33.7 million returned to us from our derivative counterparties in connection with cash we had provided to collateralize our derivative assets with them.

Other Factors Affecting Liquidity and Capital Resources

As of June 30, 2023, we carry a total of $1.83 billion of long-term debt, of which $500.1 million is current and $1.33 billion is non-current.

In July and August 2022, we completed a German private placement bond (2022 Schuldschein), which was issued in various tranches totaling €370.0 million ($371.5 million) due in various periods through 2032 as described more fully in Note 8 "Financial Debts." The interest rate is linked to our environmental, social and governance (ESG) performance. As of June 30, 2023, a total of $401.0 million is outstanding.

In December 2020, we issued $500.0 million aggregate principal amount of zero coupon Convertible Notes due in 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 8 "Financial Debts."

In November 2018, we issued $500.0 million aggregate principal amount of Cash Convertible Senior Notes due in 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 in 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.

In 2017, we completed a German private placement (2017 Schuldschein) consisting of various 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, 2023, a total of $118.9 million is outstanding.

In December 2020, we obtained a €400 million syndicated revolving credit facility with a contractual life of three years, and with the ability to extended twice by a one-year period. No amounts were utilized at June 30, 2023. 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 ESG performance. We have additional credit lines totaling €27.0 million with no expiration date, none of which were utilized as of June 30, 2023.

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 15 "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, current financial assets, 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 relating to interest rate and foreign exchange risks. 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 our Annual Report for the year ended December 31, 2022.

Contractual Obligations

There were no material changes at June 30, 2023 from the contractual obligations disclosed in our Annual Report for the year ended December 31, 2022.

Legal Proceedings

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

While no assurances can be given regarding the outcome of the proceedings described in Note 15, based on information currently available, we believe that the resolution of these matters is unlikely to have a material adverse effect on our financial position or results of future operations for QIAGEN N.V. as a whole. However, because of the nature and inherent uncertainties of litigation, should the outcomes be unfavorable, certain aspects of our business, financial condition, and results of operations and cash flows could be materially adversely affected.

Risk Management

Our risk management approach embodies the key elements of a sound risk management system to mitigate and manage business risks on an ongoing basis. Material risks that may affect our results of operations and financial position appear in QIAGEN's 2022 Annual Report. There have been no material changes from the risk factors disclosed under Risk Management in the 2022 Annual Report.

Outlook

The growth in our non-COVID portfolio in 2023 is expected to be driven by demand for highly recurring consumables, and complemented by instrument placements, among customers in the Life Sciences and Molecular Diagnostics customer classes. However, we expect an ongoing significant decline in COVID-19 product group sales amid a sharp slowdown in demand for testing. The total outlook for sales, which includes an overall decline from 2022, anticipates a continuation of current macro trends and ongoing volatility in certain regions while still expecting positive trends in a number of our end-markets. Currency movements against the U.S. dollar are expected to have an overall neutral impact on a full-year basis, despite an adverse impact in the first half of the year. We continue to implement our strategy based on "balance" and “focus.” Balance involves developing our portfolio to address more than 500,000 customers across the Life Sciences and Molecular Diagnostics customer classes, as well as to build out our global presence in markets around the world offering growth potential. Focus involves our Five Pillars of Growth strategy to make significant investments in the commercialization and development of targeted areas of our portfolio: (1) Sample technologies, (2) QuantiFERON, (3) QIAcuity, (4) NeuMoDx and (5) QIAcuity.

Signatures

Venlo, August 11, 2023

The Managing Board

Thierry Bernard	Roland Sackers
CEO	CFO